



The National Diet & Nutrition Survey: adults aged 19 to 64 years

User Guide

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Glossary of abbreviations, terms and survey definitions

Benefits (receiving)	Receipt of Working Families Tax Credit by the respondent or anyone in their household at the time of the interview, or receipt of Income Support, or (Income related) Job Seeker's Allowance by the respondent or anyone in their household in the 14 days prior to the date of interview.
BMI	See Body Mass Index
Body Mass Index	A measure of body 'fatness' which standardises weight for height: calculated as $[\text{weight}(\text{kg})/\text{height}(\text{m}^2)]$. Also known as the Quetelet Index.
COMA	The Committee on Medical Aspects of Food and Nutrition Policy.
CAPI	Computer assisted personal interviewing.
CASI	Computer assisted self-interviewing. The respondent is given the opportunity to enter their responses directly onto the laptop. This technique is used to collect data of a sensitive or personal nature, for example, contraception.
Cum %	Cumulative percentage (of a distribution).
Deft	Design factor; see Notes and Appendix D.
DH	The Department of Health.
Diary sample	Respondents for whom a seven-day dietary record was obtained.
Dna	does not apply.
Doubly labelled water (DLW)	A method for assessing total energy expenditure used to validate dietary assessment methods by comparison with estimated energy intake. The respondent drinks a measured dose of water labelled with the stable isotopes $^2\text{H}_2$ and ^{18}O and collects urine samples over the next 10 to 15 days. Energy expenditure is calculated from the excretion rates of the isotopes.
DRV	Dietary Reference Value. The term used to cover LRNI, EAR, RNI and safe intake. (See Department of Health. Report on Health and Social Subjects: 41. <i>Dietary Reference Values for Food Energy and Nutrients for the United Kingdom</i> . HMSO (London, 1991)).
EAR	The Estimated Average Requirement of a group of people for energy or protein or a vitamin or mineral. About half will usually need more than the EAR, and half less.
Economic activity status	Whether at the time of the interview the respondent was economically active, that is working or actively seeking work, or economically inactive, those neither working nor unemployed as defined by the International Labour Organisation (ILO) definition.

	Economically inactive includes full-time students, the retired, individuals who are looking after the home or family and those permanently unable to work due to ill health or disability.
EAATAC	The erythrocyte aspartate aminotransferase activation coefficient, an index of vitamin B ₆ status.
EGRAC	The erythrocyte glutathione reductase activation coefficient, an index of riboflavin status.
ETKAC	The erythrocyte transketolase activation coefficient, an index of thiamin status.
ETK-B	The erythrocyte transketolase basal activity.
Extrinsic sugars	Any sugar which is not contained within the cell walls of a food. Examples are sugars in honey, table sugar and lactose in milk and milk products.
GHS	The General Household Survey; a continuous, multi-purpose household survey, carried out by the Social Survey Division of ONS on behalf of a number of government departments.
GSH-Px	The erythrocyte glutathione peroxidase activity.
HDL cholesterol	High density lipoprotein cholesterol.
HNR	Medical Research Council Human Nutrition Research, Cambridge.
Household	The standard definition used in most surveys carried out by Social Survey Division, ONS, and comparable with the 1991 Census definition of a household was used in this survey. A household is defined as a single person or group of people who have the accommodation as their only or main residence and who either share one main meal a day or share the living accommodation. (See McCrossan E. <i>A Handbook for interviewers</i> . HMSO: London 1991.)
HRP	Household Reference Person. This is the member of the household in whose name the accommodation is owned or rented, or is otherwise responsible for the accommodation. In households with a <i>sole</i> householder that person is the household reference person, in households with <i>joint</i> householders the person with the <i>highest income</i> is taken as the household reference person, if both householders have exactly the same income, the <i>older</i> is taken as the household reference person. This differs from Head of Household in that female householders with the highest income are now taken as the HRP, and in the case of joint householders, income then age, rather than sex then age is used to define the HRP.
HSfE	Health Survey for England.
Intrinsic sugars	Any sugar which is contained within the cell wall of a food.

Lc	low calorie.
LDL (-calc) cholesterol	Low density lipoprotein cholesterol. LDL cholesterol was not measured in this survey. Total serum cholesterol minus <i>HDL cholesterol</i> is taken as an approximation of LDL cholesterol, uncorrected for triglycerides. For brevity the term LDL (-calc) cholesterol is used for non-HDL cholesterol.
LRNI	The Lower Reference Nutrient Intake for protein or a vitamin or mineral. An amount of nutrient that is enough for only the few people in the group who have low needs.
MAFF	The Ministry of Agriculture, Fisheries and Food.
Manual social class	Respondents living in households where the household reference person was in an occupation ascribed to <i>Social Classes III manual, IV or V</i> .
MAP	Mean arterial pressure.
MCV	Mean corpuscular volume.
Mean	The average value.
Median	see Percentiles.
MET	Metabolic equivalent. For adults, metabolic equivalents are taken as numerically equivalent to energy expenditure. For an average adult, 1 MET is equal to 60kcal/hour or 1 kcal/min.
MRC	The Medical Research Council.
Na	not available, not applicable.
NDNS	The National Diet and Nutrition Survey.
Nlc	not low calorie.
NFS	National Food Survey.
NMES	See Non-milk extrinsic sugars.
No.	Number (of cases).
Non-manual social class	Respondents living in households where the household reference person was in an occupation ascribed to <i>Social Class I, II or III non-manual</i> .
Non-milk extrinsic sugars	Extrinsic sugars, except lactose in milk and milk products. Non-milk extrinsic sugars are considered to be a major contributor to the development of dental caries.
NSP	Non-starch polysaccharides. A precisely measurable component of food. A measure of 'dietary fibre'.

ONS	Office for National Statistics.
PAF	Postcode Address File; the sampling frame for the survey.
Para-amino benzoic acid (PABA) -check	Para-amino benzoic acid (PABA) is actively absorbed and excreted, so can be used to check the 24-hour urine collection to verify completeness. The PABA-check validation requires the respondent to take three tablets of 80mg PABA with meals on the day of the 24-hour urine collection. Provided that at least 85% of the PABA dose is then recovered in the urine collection, this is deemed to be a valid 24-hour collection.
Percentiles	The percentiles of a distribution divide it into equal parts. The median of a distribution divides it into two equal parts, such that half the cases in the distribution fall, or have a value, above the median, and the other half fall, or have a value below the median.
Physical activity sample	Those respondents for whom a seven-day physical activity diary was obtained.
Plasma 25-hydroxyvitamin D; plasma 25-OHD	The biochemical index of vitamin D.
Plasma ascorbate	The biochemical index of vitamin C.
Portion	A portion of fruit or vegetables is equivalent to 80g consumed weight.
PSU	Primary Sampling Unit; for this survey, postcode sectors.
PUFA	Polyunsaturated fatty acid.
Quetelet index	See Body Mass Index.
Region	Based on the Standard regions and grouped as follows: Scotland Northern North Yorkshire and Humberside North West Central, South West and Wales East Midlands West Midlands East Anglia South West Wales London and South East London South East The regions of England are as constituted after local government

reorganisation on 1 April 1974. The regions as defined in terms of counties are listed in Chapter 2 of the Technical report.

Responding sample	Respondents who completed the dietary interview and may/may not have co-operated with other components of the survey.														
RNI	The Reference Nutrient Intake for protein or a vitamin or a mineral. An amount of the nutrient that is enough, or more than enough, for about 97% of the people in a group. If average intake of a group is at the RNI, then the risk of deficiency in the group is small.														
SD/Std Dev	Standard deviation. An index of variability which is calculated as the square root of the variance and is expressed in the same units used to calculate the <i>mean</i> .														
se	Standard error. An indication of the reliability of an estimate of a population parameter, which is calculated by dividing the <i>standard deviation</i> of the estimate by the square root of the sample size.														
Social class	Based on the Registrar General's Standard Occupational Classification, Volume 4, TSO (2001). Social class was ascribed on the basis of the occupation of the household reference person. The classification used in the tables is as follows: <table> <tr> <th>Description</th><th>Social Class</th></tr> <tr> <td><i>Non-manual</i></td><td></td></tr> <tr> <td>Professional and intermediate</td><td>I and II</td></tr> <tr> <td>Skilled occupations, non-manual</td><td>III non-manual</td></tr> <tr> <td><i>Manual</i></td><td></td></tr> <tr> <td>Skilled occupations, manual</td><td>III manual</td></tr> <tr> <td>Partly-skilled and unskilled occupations</td><td>IV and V</td></tr> </table>	Description	Social Class	<i>Non-manual</i>		Professional and intermediate	I and II	Skilled occupations, non-manual	III non-manual	<i>Manual</i>		Skilled occupations, manual	III manual	Partly-skilled and unskilled occupations	IV and V
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<i>Manual</i>															
Skilled occupations, manual	III manual														
Partly-skilled and unskilled occupations	IV and V														
TIBC	Total iron-binding capacity.														
Wave; Fieldwork wave	The 3-month period in which fieldwork was carried out. Wave 1: July to September 2000 Wave 2: October to December 2000 Wave 3: January to March 2001 Wave 4: April to June 2001														
WHO	World Health Organization.														

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1 Background, purpose and research design

This chapter describes the background to the National Diet and Nutrition Survey (NDNS) of adults aged 19 to 64 years, its main aims and the overall sample and research designs and methodologies. The next chapter covers response to the survey and the appendices give a more detailed account of the various methodologies for the different components of the survey.

Results from this NDNS will be published in four volumes with a separate summary volume. They will cover food and nutrient intake data derived from the analyses of dietary reports, and data on nutritional status from physical measurements, including anthropometric data, blood pressure, physical activity and the analyses of the blood and urine samples¹.

1.1 The National Diet and Nutrition Survey Programme

The National Diet and Nutrition Survey programme is a joint initiative between the Food Standards Agency and the Department of Health (DH). The programme was established in 1992 by the Ministry of Agriculture, Fisheries and Food (MAFF) and DH, following the successful completion and evaluation of the benefits of the first survey of this type, of the diet and nutritional status of British adults aged 16 to 64 years carried out in 1986/87 (1986/87 Adults Survey)². MAFF's responsibility for the NDNS programme transferred to the Food Standards Agency on its establishment in April 2000.

The NDNS programme aims to provide comprehensive, cross-sectional information on the dietary habits and nutritional status of the population of Great Britain. The results of the surveys within the programme are used to develop nutrition policy at a national and local level and to contribute to the evidence base for Government advice on healthy eating.

The NDNS programme is intended to:

- provide detailed quantitative information on the food and nutrient intakes, sources of nutrients and nutritional status of the population under study as a basis for Government policy;
- describe the characteristics of individuals with intakes of specific nutrients that are above and below the national average;
- provide a database to enable the calculation of likely dietary intakes of natural toxicants, contaminants, additives and other food chemicals for risk assessment;

- measure blood and urine indices that give evidence of nutritional status or dietary biomarkers and to relate these to dietary, physiological and social data;
- provide height, weight and other measurements of body size on a representative sample of individuals and examine their relationship to social, dietary, health and anthropometric data as well as data from blood analyses;
- monitor the diet of the population under study to establish the extent to which it is adequately nutritious and varied;
- monitor the extent of deviation of the diet of specified groups of the population from that recommended by independent experts as optimum for health, in order to act as a basis for policy development;
- help determine possible relationships between diet and nutritional status and risk factors in later life;
- assess physical activity levels of the population under study; and
- provide information on oral health in relation to dietary intake and nutritional status.

The NDNS programme is divided into four separate surveys planned to be conducted at about three-yearly intervals. Each survey is intended to have a nationally representative sample of a different population age group: children aged 1½ to 4½ years; young people aged 4 to 18 years; people aged 65 years and over, and adults aged 19 to 64 years. The Reports of the NDNS of children aged 1½ to 4½ years, of people aged 65 and over, and of young people aged 4 to 18 years were published in 1995, 1998 and 2000 respectively^{3, 4, 5}.

1.2 The need for a survey of adults

The last national survey of diet and nutrition in adults was the Dietary and Nutritional Survey of British Adults carried out in 1986/87, thereafter referred to as the 1986/87 Adults Survey. The changes in eating habits and lifestyles noted in that survey have continued throughout the intervening years. Increasing numbers of people are travelling and taking holidays abroad, and with increased multi-culturism this has led to a greater variety of foods available. Increasing demands on people's time and longer working hours have led to greater demand and availability of pre-prepared and convenience foods. There has also been an increase in eating out of the home. There is a need, therefore, to assess the impact of such changes on diet and nutrition among adults, to update the findings of the 1986/87 Adults Survey and to complete the NDNS cycle by conducting a survey on adults aged 19 to 64 years.

One of the major uses of the NDNS data is for food chemical risk assessment. The availability of up-to-date data on food consumption is important to ensure that estimates of dietary exposure to food chemicals are as accurate as possible.

The Food Standards Agency and DH commissioned the Social Survey Division of the Office for National Statistics (ONS) and the Medical Research Council Human Nutrition Research, Cambridge (HNR) to carry out this survey of adults. Staff at HNR were responsible for obtaining ethics approval for the survey from the Multi-centre Research Ethics Committee (MREC) and National Health Service Local Research Ethics Committees (LRECs). They were also responsible for recruiting the blood takers (phlebotomists), and dealing with those aspects of the survey concerned with the venepuncture procedure and urine samples, and for the analysis of the blood and urine samples that were collected. A survey doctor was employed by HNR principally to liaise with and deal with questions from LRECs, to provide support for ONS fieldworkers and the phlebotomists in the event of any medical problem arising, to report all clinically significant blood results and blood pressure along with any abnormal blood pressure and blood results to the respondent and the respondent's GP (if appropriate). The survey doctor was also available to answer any questions from respondents on the venepuncture, urine collection and blood pressure procedures⁶. Professor Angus Walls from the University of Newcastle-Upon-Tyne Dental School provided training and support in the oral health component. ONS, as the lead contractor, was responsible for all other aspects of the dietary and oral health components of the survey, including sample and survey design, recruitment and training of fieldworkers, data collection and analysis.

1.3 The aims of the survey

The survey was designed to meet the overall aims of the NDNS programme in providing detailed information on the current dietary behaviour, nutritional status and oral health of adults living in private households in Great Britain.

The survey design needed to incorporate methods for collecting detailed information on the respondent's household circumstances, general dietary behaviour and health status, on the quantities of foods consumed, and on physical activity levels, anthropometric measures, blood pressure levels and blood and urinary analytes. Additionally an oral health component was needed to collect information on oral health behaviour and on the number of teeth and amalgam fillings⁷.

1.4 The sample design and selection

A nationally representative sample of adults aged 19 to 64 years living in private households was required. It was originally estimated that an achieved sample of about 2,000 respondents was needed for analysis and to ensure comparisons could be made with the 1986/87 Adults Survey.

As in previous surveys in the NDNS series, fieldwork was required to cover a 12-month period, to cover any seasonality in eating behaviour and in the nutrient content of foods, for example, full fat milk. The 12-month fieldwork period was divided into four fieldwork waves, each of three months duration⁸. The fieldwork waves were:

Wave 1: July to September 2000

Wave 2: October to December 2000

Wave 3: January to March 2001

Wave 4: April to June 2001

Where there was more than one adult between the ages of 19 and 64 years living in the same household, only one was selected at random to take part in the survey. As well as reducing the burden of the survey on the household, and therefore reducing possible detrimental effects on co-operation and data quality, this reduces the clustering of the sample associated with similar dietary behaviour within the same household and improves the precision of the estimates.

The sample was selected using a multi-stage random probability design with postal sectors as first stage units. The sampling frame included all postal sectors within mainland Great Britain, and selections were made from the small users' Postcode Address File. The frame was stratified by 1991 Census variables.

A total of 152 postal sectors was selected as first stage units, with probability proportional to the number of postal delivery points, and 38 sectors were allocated to each of the four fieldwork waves. The allocation took account of the need to have approximately equal numbers of households in each wave of fieldwork, and for each wave to be nationally representative. From each postal sector 40 addresses were randomly selected⁹.

Eligibility was defined as being aged between 19 and 64 and not pregnant or breastfeeding at the time of the doorstep sift. The diet and physiology of pregnant or breastfeeding women is likely to be so different from those of other similarly aged women as to possibly distort the

results. Further, as the number of pregnant or breastfeeding women identified within the overall sample of 2000 would not be adequate for analysis as a single group, it was decided that they should be regarded as ineligible for interview.

A more detailed account of the sample design is given in Appendix D. True standard errors and design factors for the main classificatory variables used in the analysis of the survey data are given in each of the individual volumes.

1.5 The components of the survey

These were as follows:

- an initial face-to-face interview using computer assisted personal interviewing methods (CAPI) to collect information about the respondent's household, their usual dietary behaviour, including foods avoided and reasons for doing so, use of salt at the table and in cooking, the use of artificial sweeteners and consumption of herbal teas, smoking and drinking habits, their health status, their use of fluoride and dietary supplements, herbal remedies and medicines, socio-economic characteristics, and for women in defined age groups, use of contraceptives, menopausal state and use of hormone replacement therapy;
- a seven-day weighed intake dietary record of all the food and drink consumed by the respondent both in and out of the home;
- a record of the number of bowel movements the respondent had over the seven-day dietary recording period;
- a seven-day physical activity diary collected over the same period as the dietary record;
- anthropometric measurements: standing height, body weight, waist and hip circumferences;
- blood pressure measurements;
- 24 hour collection of urine;
- if consent was given, a venepuncture procedure to collect a sample of blood for analysis of nutritional status indices;
- a short post-dietary record interview, using CAPI, to collect information on any unusual circumstances or illness during the period which might have affected eating behaviour;
- self-completion Psychological Restraint Questionnaire (Eating Habits questionnaire) to assess under-reporting asked at post-dietary record interview;

- self count of teeth and amalgam fillings;
- a face-to-face interview, using CAPI, to collect information on the respondent's oral health behaviour⁷;
- collection of a sample of tap water from the respondent's home for analysis of fluoride¹⁰.

While the aim was to achieve co-operation with all the various components, the survey design allowed for the respondent to participate in only some components.

Ethics approval was gained for the feasibility and mainstage survey from a Multi-centre Research Ethics Committee (MREC) and National Health Service Local Research Ethics Committees (LRECs) covering each of the 152 sampled areas (see *Appendix N* for further details of the ethics approval procedures).

As a token of appreciation a gift voucher for £10 was given to the respondent if the dietary record was kept for the full seven days¹¹. Each respondent was also given a record of his or her anthropometric and blood pressure measurements. Results of a number of the blood analyses were also reported to the respondent at approximately 6 weeks and 12 months after the interview (see *Appendix L*).

Copies of the fieldwork documents and the interview questions are given in Appendix A.

Feasibility work carried out between September and December 1999 by the Social Survey Division of ONS and the Medical Research Council Human Nutrition Research tested all the components of the survey and made recommendations for revisions for the mainstage. For a subgroup of the feasibility study sample the validity of the dietary recording methodology was tested using the doubly labelled water methodology to compare energy expenditure against reported energy intake. Further details of the design and results of the feasibility study are presented as Appendix C.

The results of the feasibility study need to be regarded with some caution. Restrictions placed on recruitment procedures by the MREC resulted in a much reduced response rate. It is, therefore, possible that those who did co-operate in the feasibility study were characteristically different from the general population, for example, in that they were more interested in their diet and had more time to give to the survey.

1.6 Fieldwork

Over the fieldwork period a total of 88 ONS interviewers worked on the survey, the majority working in at least two waves. All the interviewers working on the survey had been fully trained by the Social Survey Division of ONS and most had experience of working on other surveys in the NDNS programme, or of other surveys involving record keeping such as the National Food Survey (NFS)¹².

Each interviewer attended a five-day residential briefing before starting fieldwork. The briefing was conducted by research and other professional staff from the Social Survey Division of ONS, from HNR, and staff from the Food Standards Agency and DH. Professor Angus Walls from Newcastle-Upon-Tyne Dental School instructed interviewers on the rationale and protocol for the self-count of teeth and amalgam fillings. Prior to the residential briefing each interviewer was required to keep and code his or her own three-day weighed intake record. Following the residential briefing all interviewers were required to complete a post-briefing exercise. This involved asking a friend or relative to complete a three-day weighed intake diary, and the interviewer coding the diary. Successful completion of this exercise was a requirement for beginning fieldwork.

At the briefing interviewers were trained in all aspects of the survey and received individual feedback from the nutritionists on their record-keeping and coding. The main components covered by the training were:

- the sample and selecting the respondent;
- obtaining consents;
- the questionnaire interview, in particular how to deal with certain 'sensitive' topics;
- completing the weighed intake dietary record;
- checking, probing and coding the dietary record;
- collecting the physical activity information;
- techniques for making the anthropometric measurements and measuring blood pressure;
- the record of bowel movements;
- the 24-hour urine sample;
- collecting the tap water sample;
- the procedures for obtaining a blood sample;
- the oral health interview, in particular instructions on completing the self-count of teeth and amalgam fillings.

Emphasis was placed on the need for accuracy in recording and coding and in measurement techniques. Practical sessions gave interviewers the opportunity to practice the anthropometric measurements, coding food items, completing and checking diaries, and the self-count of teeth and amalgam fillings.

Phlebotomists attended for the last two days of the residential briefings (see *Appendix N*).

In addition to the residential briefings, written instructions were provided for all interviewers and for the phlebotomists who would be taking the blood samples. Interviewers working on non-sequential fieldwork waves were recalled for a one-day refresher briefing to maintain the accuracy of diary and brand coding and anthropometric and blood pressure measurement techniques.

In order that appropriate official bodies and personnel were informed about the nature of the survey, letters were sent by ONS, prior to the start of fieldwork, to Chief Constables of Police, Directors of Social Services and Public Health and to Chief Executives in Health Authorities with responsibility for one or more of the selected fieldwork areas (postal sectors). The letters gave information on when and where the survey would take place, what was involved in the survey and asked that appropriate personnel at a more local level be informed. Copies of these letters are reproduced in Appendix B.

In keeping with SSD normal fieldwork procedures, a letter was sent to each household in the sample in advance of the interviewer calling, telling them briefly about the survey (see *Appendix A*).

1.7 Plan of the report

Given the wealth of data collected in this NDNS, it was decided to publish the findings in a number of separate topic reports rather than one substantive report. This has the advantage of making some data available much earlier than it would otherwise be, and allows those with specific interests to select the volume(s) most appropriate for their needs.

These methodology chapters and appendices have not been published as a separate volume. They appear here on the Food Standards Agency website and a summary is included in each published volume. The next chapter in this report gives response data for the various components in the survey and describes the characteristics of the responding sample. This report then describes the methodologies and procedures used in the survey, including the seven-day weighed intake record (*Appendix F*), the physical activity diary (*Appendix I*), anthropometry and blood pressure measurements (*Appendix J*), obtaining the urine and tap water samples (*Appendix P*) and the venepuncture procedure (*Appendix O*).

Details of the weighing and recording procedures and subsequent coding and editing of the dietary records are given, including details of the procedures for collecting information about items consumed out of the home. The purpose and choice of anthropometric measurements made and the techniques and instruments used are reported. The reasons for the choice of blood pressure monitor are discussed and the protocol for taking the measurements is described. The purpose of the venepuncture procedure and the protocol is described. An account of the laboratory processing procedures and the quality control methods and data are given in Appendix O. Appendix P explains the reasons why a 24-hour urine collection was made and gives details of the equipment used.

The substantive results from the survey are presented in four separate volumes, with a fifth summary volume. The first three volumes are primarily concerned with food and nutrient intake data derived from the analyses of the dietary records and the results are presented for different socio-demographic groups in the overall responding sample, for example by age group, sex, region and household receipt of certain state benefits. In all volumes the data presented are based on the samples of respondents co-operating with the relevant aspect of the survey rather than those who completed all components.

The first volume covers the types and quantities of foods consumed by the different socio-demographic groups. The second volume reports on energy intakes, intakes of carbohydrates, protein and alcohol and of fats and fatty acids. The third volume reports on average daily intakes of vitamins and minerals, from food sources alone and from all

sources, including any dietary supplements being taken. The chapter on minerals also includes results from the analyses of the urine samples. Throughout the second and third volumes actual intakes are compared with dietary reference values, where appropriate.

The fourth volume covers physical measurements, that is the anthropometric data and derived indices, blood pressure measurement and the analyses of the blood samples. The anthropometric data (height, weight, waist and hip circumferences, and derived indices) and blood pressure data are compared with measurements recorded on other surveys. Other characteristics of the respondent associated with the anthropometric measurements and blood pressure measurements are assessed in regression analyses. The results from the analyses of the samples of blood are presented and, where relevant, the associations between dietary intakes and blood levels are examined, for example plasma vitamin C with fruit and vegetable consumption. The fourth volume also includes information on the physical activity results from the physical activity diaries.

In each volume, where appropriate, results are compared with those from other surveys including the 1986/87 Adults Survey (see *Appendix S* for a summary).

A fifth volume will provide a summary of the findings in the other four substantive results volumes.

Inevitably, given the volume of data collected in the survey and the potential range of analyses, the individual volumes can only present initial findings. They are therefore largely concerned with providing basic descriptive statistics for the variables measured and their association with social, demographic and behavioural characteristics of the sample population. It has only been possible to present a limited amount of data on the associations between the dietary, physiological, biochemical and activity data.

Like previous surveys in the NDNS programme, a copy of the survey database, containing the full data set will be deposited with The Data Archive at the University of Essex following publication of the final summary volume. Independent researchers who wish to carry out their own analyses should apply to the Archive for access¹³.

References and endnotes

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- ¹ The volumes in the series cover:
- (i) Types and quantities of foods consumed, to be published Autumn 2002;
 - (ii) Macronutrient intakes (energy, protein, carbohydrates, fats and fatty acids and alcohol), to be published early 2003;
 - (iii) Micronutrient intakes (vitamins and minerals, including analysis of urinary analytes), to be published Spring 2003;
 - (iv) Nutritional status (blood pressure, anthropometry, blood analytes and physical activity), to be published Summer 2003;
 - (v) Summary report, providing a summary of the key findings from the four volumes, to be published Autumn 2003.
- ² Gregory J, Foster K, Tyler H, Wiseman M. *The Dietary and Nutritional Survey of British Adults*. HMSO (London, 1990).
- ³ Gregory JR, Collins DL, Davies PSW, Hughes JM, Clarke PC. *National Diet and Nutrition Survey: children aged 1½ to 4½ years. Volume 1: Report of the diet and nutrition survey*. HMSO (London, 1995).
- ⁴ Finch S, Doyle W, Lowe C, Bates CJ, Prentice A, Smithers G, Clarke PC. *National Diet and Nutrition Survey: people aged 65 years and over. Volume 1: Report of the diet and nutrition survey*. TSO (London, 1998).
- ⁵ Gregory JR, Lowe S, Bates CJ, Prentice A, Jackson LV, Smithers G, Wenlock R, Farron M. *National Diet and Nutrition Survey: young people aged 4 to 18 years. Volume 1: Report of the diet and nutrition survey* TSO (London, 2000).
- ⁶ Further details of the role and responsibilities of the survey doctor are given in Appendix O.
- ⁷ Unlike the other NDNS surveys respondents were not asked to participate in a full dental examination. The oral component comprised an oral health interview and a self tooth and amalgam filling count. More details are provided in Appendix R.
- ⁸ Because in some cases fieldwork extended beyond the end of the three-month fieldwork wave or cases were re-allocated to another fieldwork wave, cases have been allocated to a wave for analysis purposes as follows. Any case started more than four weeks after the end of the official fieldwork wave has been allocated to the actual quarter in which it started. For example, all cases allocated to Wave 1 and started July to October 2000 appear as Wave 1 cases. Any case allocated to Wave 1 and started in November 2000 or later appears in a subsequent wave; for example a case allocated to Wave 1 which started in November 2000 is counted as Wave 2. All cases in Wave 4 (April to June 2001) had been started by the end of July 2001.
- ⁹ Initially 30 addresses were selected within each postal sector. Results from Wave 1 indicated a higher level of age-related ineligibles than expected and a much lower response rate. In order to increase the actual number of diaries completed and to give interviewers enough work an additional 10 addresses were selected for Waves 2, 3 and 4.
- ¹⁰ Analysis of the fluoride from the tap water samples will not be reported on in any of the four volumes of this NDNS.
- ¹¹ Gift vouchers were from WH Smith Ltd.
- ¹² Department for Environment, Food & Rural Affairs. *National Food Survey 2000*. TSO (London, 2001).

For further information about the archived data contact:

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Response to the survey and characteristics of the interviewed sample

2.1 Introduction

This chapter gives details of response to each of the main components of the survey and describes the main characteristics of the responding sample (those who completed the dietary interview) and the diary sample (those who completed a full seven-day dietary record). Where possible the characteristics of the sample are compared to those of the population as a whole, using population estimates, or with data from the 2000 General Household Survey (2000 GHS)¹. The General Household Survey is a large-scale household survey that provides comparative data across a range of subject areas, including socio-demographic characteristics, access to amenities and consumer durables, and consumption of alcohol. Data from the 2000 GHS for 19 to 64 year olds are used for comparative purposes throughout the NDNS published volumes where appropriate.

This chapter begins by looking at response rates to the survey and co-operation with the different survey components and discusses issues relating to non-response. It then looks at the demographic profile of respondents in relation to population estimates and describes the weighting of the data. Characteristics of the respondents are then considered in relation to the main survey classificatory variables to identify interactions that may assist in the interpretation of results in the individual reports, where data are generally tabulated against each classificatory variable independently. A more detailed description of the characteristics of the sample is shown only for those who completed a dietary record, as most of the analyses in the substantive reports are based on these respondents.

2.2 Response to the survey and the different components

Table 2.1 shows overall response to this NDNS, and Tables 2.2 to 2.8 show response to the different components of the survey. Issues arising from levels of response are discussed in Section 2.3.

2.2.1 Response to the survey

Table 2.1 shows response to the survey overall and by fieldwork wave². Of the 5,673 addresses³ issued to the interviewers, 35% were ineligible for the survey. This high rate of ineligibility is mainly due to the exclusion of those aged under 19 years and those aged 65 or over. The total number of ineligible cases includes refusals and non-contacts where the interviewer was able to establish that all members of the household were outside the eligible age range. The survey also excluded pregnant or breast-feeding women. Their dietary needs and physiological status differ from those of other women, and in a sample of this size, they would not form a large enough group for separate analysis. Pregnant women and people outside the age range for the survey together accounted for 68% of the ineligible cases. The remaining ineligible addresses were institutions, business addresses, demolished or empty premises.

Just over one-third, 37%, of the eligible sample refused outright to take part in the survey. This includes 3% who, in response to the advance letter, contacted head office directly, refusing to take part. The remaining refusals were made at the time of the interviewer's visit and included refusals made by the household as a whole, and by the selected respondent. A third of those who refused to take part said they were too busy, 29% said they couldn't be bothered, and 15% that they didn't believe in surveys⁴. Only 2% of the eligible sample were not contacted. The low level of non-contacts is likely to be the result of the three-month field period for each wave of the survey, during which several attempts were made to establish eligibility and contact with all sampled households. In addition addresses returned as non-contacts were reissued to interviewers working in subsequent waves of fieldwork where further attempts were made to establish contact.

All those who completed a dietary record, and/or co-operated with other components of the survey, including the anthropometric measurements and urine and blood samples, had already co-operated with the dietary interview. Among those who took part in the survey, a distinction is made between those who completed the dietary interview, with or without a dietary record or other components, the 'responding sample', and those who completed a dietary interview and the dietary record, the 'diary sample'. Overall, 61% of the eligible sample, 2,251 respondents, completed the dietary interview.



(Table 2.1)

2.2.2 Response to the seven-day dietary record

As Table 2.1 shows, 47% of the eligible sample completed a full seven-day dietary record, resulting in 1,724 diaries. The proportion completing the dietary record was 45% in Wave 1, 44% in Wave 2, 46% in Wave 3 and 50% in Wave 4.

Table 2.2 shows response by sex and age of the respondent and by the social class of the household reference person (HRP) (see 2.4.2 for definition). Overall, 77% of those who completed the dietary interview also completed the dietary record. The proportion who completed the diary was lowest among men and women aged 19 to 24 years, 71% of men and 72% of women, and highest among the oldest age group, 78% for both sexes. Seventy-eight per cent of respondents in households where the social class of the HRP was non-manual and 76% of those with a manual home background completed the diary.

2.2.3 Co-operation with the anthropometric measurements and blood pressure

Each respondent taking part in the survey, regardless of whether they completed a dietary record, was asked to consent to having measurements taken of their standing height, body weight, waist and hip circumferences, and blood pressure. Details of the procedures are given in Appendix J.

Tables 2.3 to 2.5 show response to the various measurements by fieldwork wave, sex and age of the respondent, and the social class of the HRP. Response rates are calculated as percentages of the responding sample and the diary sample. The response is based on the number of cases where measurements were recorded. This may be slightly lower than the number of respondents measured or willing to co-operate as in some cases there were difficulties in taking the measurements.

Overall, measurements were taken for 77% to 80% of the responding sample and 93% to 95% of the diary sample, depending on the measurement. Co-operation with the measurements tended to be lowest among the youngest group of men and women, and highest among those aged 35 to 49 years, and lower among those with a manual home background than those with a non-manual home background. Co-operation with the measurements tended to be lower in Waves 3 and 4, than in Waves 1 and 2. For

example, 98% of those who completed a dietary record in Wave 1 had their blood pressure measured, compared with 88% of Wave 3 diary respondents.

(Tables 2.3 to 2.5)

2.2.4 Co-operation with the urine and blood samples

All respondents taking part in the survey were asked to consent to making a 24-hour urine collection and to a venepuncture procedure. Details of the consent and the procedures are given in Appendices P and N.

Table 2.6 shows the proportion of respondents who consented to making a 24-hour urine collection and the proportion of cases where a sample was obtained⁵. Overall, 66% of the responding sample and 83% of the diary sample consented to making a 24-hour urine collection. A urine sample was obtained for 91% of those who consented to making the 24-hour urine collection (60% of the responding and 76% of the diary samples). A urine sample was obtained from a lower proportion of the youngest group of men than from those aged 35 to 49 years, 44% and 66% of the responding sample respectively. The proportions of the responding and diary sample consenting to making a urine collection and from whom a urine sample was obtained were lower in Waves 3 and 4 than in Waves 1 and 2. For example, 61% of the Wave 3 and 63% of the Wave 4 responding sample consented to making a urine collection compared with 70% of the Wave 1 and 74% of the Wave 2 responding sample.

Table 2.7 shows the proportion of respondents consenting to the venepuncture procedure, the proportion of cases where venepuncture was attempted and the proportion of cases where a sample was obtained.

Overall, 63% of the responding sample and 78% of the diary sample consented to having a blood sample taken. Venepuncture was attempted for 97% of those who consented to the procedure (61% of the responding and 76% of the diary samples). Reasons for the venepuncture procedure not being attempted, when prior consent had been given, included being unable to find a suitable vein. A blood sample was obtained for 95% of those who consented to provide a blood sample (60% of the responding and 74% of the diary samples). A lower proportion of the Wave 3 diary sample consented to

a blood sample, had a blood sample attempted, and had a blood sample taken than in Wave 1.

(Tables 2.6 and 2.7)

2.2.5 Co-operation with self-tooth count

All respondents taking part in the survey who had all or some of their own natural teeth were asked to carry out a self-tooth count. Details of the instructions given to respondents and the procedures are given in Appendix R.

Table 2.8 shows that, overall, 80% of the responding sample and 96% of the diary sample completed the self-tooth count.

(Table 2.8)

2.3 Non-response and weighting the data

As shown in Table 2.1, 61% of the eligible sample completed the dietary interview, and 47% completed the dietary record. In the Dietary and Nutritional Survey of British Adults (1986/87 Adults Survey), 84% of the eligible sample completed the dietary interview, and 70% completed the dietary record⁶. It is recognised that there has been a general fall in response to government social surveys, particularly over the last decade⁷. However, the level of refusal to this NDNS was higher than expected and steps were taken throughout fieldwork to improve response. From Wave 2, this included increasing the number of addresses in each quota from 30 to 40, to increase the actual number of diaries completed. Non-productive cases were re-issued to interviewers working in subsequent waves⁸ to improve the chances of making contact, establishing eligibility and gaining participation. This was particularly effective in reducing the non-contact rate and identifying further ineligible households, and also in gaining co-operation to at least some of the components of the survey. Interviewer training was developed to further address response issues, and interviewers were provided with general guidance on approaching and explaining the survey to respondents. Increased support was provided to both the interviewers and their managers, and included providing more detailed progress reports to managers and using NDNS trained interviewers not working in that wave to assist and support those that were. Changes were also made to working arrangements, and interviewers were given permission to work on Sundays and place diaries at the weekend.

The combination of these measures increased the proportion of the eligible sample that completed the dietary interview, such that in Wave 4, 67% of the eligible sample completed the dietary interview compared with 60% in Wave 1, 56% in Wave 2 and 59% in Wave 3. There was also an increase in the proportion completing the dietary record, from 44% in Wave 2 to 50% in Wave 4. As mentioned in Sections 2.2.3 and 2.2.4, response to some of the other components of the survey was lower in Waves 3 and 4 than in Waves 1 and 2. This suggests that in the early waves of fieldwork, respondents who agreed to participate in the survey tended to participate in all the components, and that the increase in response seen in later waves is not applicable to all components of the survey, with more attrition after the dietary interview in later waves than in earlier waves.

Despite the improvements in response seen in Wave 4, response over the whole survey was still low. As non-response increases, the potential for bias in the remaining data increases as there is the possibility that little, if any, data are collected on particular groups within the population. Where particular groups are less likely than others to participate in the survey this leads to differential non-response, in that, particular groups are more likely to be represented in the data than others. Differential non-response is a feature in most social surveys⁹.

Concerns about the potential impact of non-response and non-response bias led to the Statistical Methodology Division at the Office for National Statistics commissioning an independent study of these issues and their impact on the usability of the data from this NDNS. This study was carried out by Professor Chris Skinner and Dr David Holmes at the University of Southampton¹⁰. The aim was to investigate the implications of non-response for survey estimates, and to consider whether analysis of these NDNS data should be modified in any way to allow for the potential impact of the non-response, for example through weighting or by limiting the type of analyses undertaken. The study considered possible non-response bias by looking at a number of demographic and nutritional variables and their relationship to non-participation in the survey. Non-contacts and refusals were considered separately. The study concluded that there was no evidence to suggest serious non-response bias in the NDNS data. However, this finding should be interpreted with caution as the bias estimates were based upon

assumptions about the total refusals and non-contacts for which there is very little information. The authors then considered steps that could be taken to adjust for the effects of non-response and recommended weighting the data, for unequal sampling probabilities, as only one eligible respondent is selected to participate from each household, and for differential non-response. From their analyses there is evidence of differential non-response by both region and age group, and the authors recommended population-based weighting of the NDNS data by age, sex and region¹¹. The full report is presented in Appendix E and further details of the weighting of the data are given in Appendix D.

Table 2.9 shows the sex, age and regional distributions of the responding and diary samples and population estimates for Great Britain¹². This table shows that the sex and age distributions of the responding and diary samples differ from what would be expected from population estimates. For example, 45% of the responding and 44% of the diary sample are men, whereas from population estimates we would expect men to comprise 50% of the sample. Compared with population estimates, there is an under representation of men and women aged 19 to 24 years and an over representation of women aged 35 to 49. From population estimates we would expect 12% of the sample to be aged 19 to 24 years, however, only 8% of men and 9% of women in the responding and 8% of both men and women in the diary sample were in this age group. This under representation of younger people may in part be explained by the exclusion from the sampling frame of institutional addresses, such as educational establishments, and the exclusion of pregnant women. In both of the regions shown¹¹ there is an under representation of men and of those aged 19 to 24 years compared with population estimates. For example, 15% of men in the responding sample and 14% of those in the diary sample were living in Scotland and the Northern region, whereas from population estimates we would expect 17%.

Without weighting for these differential response effects, estimates for different groups, for example, mean daily intake of energy in different social class groups, would be biased estimates, because in particular they under represent men and the youngest age group. To correct for this the data presented in this report have been weighted using a combined weight based on a weighting factor for differential sampling probabilities and weighting for differential non-response. In line with the recommendations in the review

carried out by the University of Southampton, weighting factors were derived to compensate for differential non-response by comparing the proportions, by sex, age and region, taking part in the survey with the corresponding proportion in the population using population estimates. Weighting factors are calculated separately for the responding and diary sample and for the sample co-operating with each of the different survey components. Further details of the weighting procedures are given in Appendix D.

Table 2.10 shows the sex, age and regional distribution of the responding and diary samples before and after weighting. After weighting the responding and diary samples comprise 48% men and 52% women¹³. The proportion of men and women aged 19 to 24 years has increased from 8% and 9% to 13% and 12% respectively.

The greater number of cases processed in Wave 4, the result of reissued cases from earlier waves and the steps outlined above to improve response, resulted in 34% of the dietary records being completed in this wave. This compares with 19% of diaries being completed in Wave 1, 22% in Wave 2, and 25% in Wave 3. Fieldwork for surveys in the NDNS programme has always been carried out over a 12-month period to ensure that any seasonality in eating behaviour and seasonality in the nutrient composition of certain foods is adequately covered. The disproportionate number of diaries completed in the different waves has, therefore, implications in terms of any seasonality effects. In considering whether to weight for wave of completion to control for any seasonality effects, we examined the demographic profile of diary respondents by wave and the effect of weighting for differential non-response. The demographic profile of Wave 4 diary respondents suggests that not only were a higher number of diaries completed in this wave, but the differential non-response experienced in earlier waves was not so apparent. The weighting by sex, age and region has therefore a greater effect on Wave 1 than on Wave 4 and reduces the non-response bias that was particularly evident in Wave 1. It was not, therefore, considered necessary to also weight for wave of completion.

(Tables 2.9 and 2.10)

2.4 Characteristics of the respondents and the main classificatory variables

The following sections describe the characteristics of the respondents in relation to the main survey classificatory variables. Where possible comparative data from the 2000 GHS are presented. The following sections present weighted data, bases in the tables are weighted bases scaled back to the number of cases in the responding and diary samples.

2.4.1 Region

Respondents were classified according to the standard region in which they lived¹⁴. The distributions of the responding sample and the diary samples are compared in Table 2.11 with data from the 2000 GHS. The sample size within each of the standard regions shown is too small to allow significant differences to be identified in results presented at this level of disaggregation. To provide adequate numbers for analysis the standard government regions have been aggregated into four broad regions – Scotland; Northern; Central and South West regions of England and Wales; and London and the South East. A map showing the standard and aggregated regions and a list of the counties they contain is shown in Figure 2.1.

Table 2.11 shows the regional distribution of the responding and diary samples compared to the 2000 GHS, and Table 2.12 the regional composition of the diary sample by sex and age of the respondent. Overall, 8% of the diary sample were living in Scotland, 27% in the Northern region, 36% in Central and South West regions of England and in Wales and 30% in London and the South East.

(Tables 2.11 and 2.12)

2.4.2 Social class

Throughout the reports of this survey analysis using social class information is based on the social class of the household reference person (HRP). Generally, within all government social surveys, HRP is now used instead of head of household (HOH). HRP is preferred because it is available for the largest number of cases, and is less dependent on age and sex differences between respondents. It is more useful as a generalised indicator of the economic position of a household and allows comparisons with other data sources. The main changes from the HOH definition are that female

householders are defined as the HRP, and in the case of joint householders, income then age, rather than sex then age is used to define the HRP. This means that more women are defined as the HRP than would have been defined as the HOH¹⁵. Social class was derived for the HRP from occupation information collected during the dietary interview¹⁶.

In order to provide adequate numbers for some of the analyses the standard categories for social class were collapsed into three groups as follows:

Non-manual	Social Classes I and II – professional, managerial and technical professions; Social Class IIINM – skilled non-manual occupations.
Manual	Social Class IIIM – skilled manual occupations; Social Classes IV and V – unskilled occupations.
Unclassified	those who were not allocated a social class either because their job was inadequately described, they were a member of the armed forces, had never worked, or where it was not known whether they had ever worked.

Table 2.13 shows the social class distribution of the HRP for the responding and diary samples and the 2000 GHS. The majority of the HRPs in both the responding and diary samples, 54% and 56%, were classified as being from non-manual social classes (social classes I and II, and III non-manual). Over two-fifths of the HRPs were classified as being from social class I and II, 42% of the responding and 43% of the diary sample respectively, and 18% of both samples from social classes IV and V. A lower proportion of NDNS respondents than 2000 GHS respondents were in a household where the HRP was classified as from social class III non-manual, 12% of the responding and 13% of the diary sample compared with 16% of the 2000 GHS sample. Among the diary sample, a higher proportion of HRPs were classified as from social classes I and II than in the 2000 GHS.

Table 2.14 shows the HRP social class distribution by sex and age of the respondent for the diary sample. Overall, 57% of men and 55% of women who completed the dietary record were from households where the HRP was classified as from a non-manual social class.

Table 2.15 shows the social class distribution of the HRP by region for the diary sample and for the 2000 GHS. Over two-thirds, 68%, of diary respondents living in London and the South East were in a household where the HRP was classified as being from a non-manual social class compared with about half of diary respondents living in Scotland (49%), Northern (49%), and Central and South West regions of England and in Wales (53%). Less than a third, 30%, of those in London and the South East had a manual home background compared with 43% of those in Central and South West regions of England and in Wales, and 48% and 50% of those in Scotland and the Northern region respectively.

(Tables 2.13 to 2.15)

2.4.3 Household composition

At the dietary interview, information was collected about all members of the respondent's household. Table 2.16 shows the number of adults per household for the responding and diary samples. The majority of respondents lived in a household containing two adults, 57% of the responding sample and 58% of the diary sample. A further 16% of the responding sample and 15% of the diary sample lived in a household where they were the only adult, while 10% lived in a household containing four or more adults.

Information on members of the household was also used to classify respondents according to household composition. The five household types are:

- 1 respondents living alone;
- 2 those living with a spouse/partner with no dependent children;
- 3 those living with a spouse/partner with dependent children;
- 4 those living with no spouse/partner and no dependent children, but with other adults; and
- 5 those living with no spouse/partner, with dependent children.

Dependent children are defined as children of the respondent who are under the age of 16, or aged 16 to 18 and in full-time education. As with the 1986/87 Adults Survey, there were insufficient numbers of men living with dependent children but no spouse/partner to be identified separately. Therefore, for men category five is merged with category three.

Table 2.17 shows the household composition of the responding and diary samples for men and women separately. The majority of respondents were married or living with a spouse/partner, either with or without dependent children. Of the responding sample, 40% were living with a spouse/partner with no dependent children, and 29% were living with a spouse/partner with dependent children. One eighth (12%) of the sample were living alone, this compares with 7% in the 1986/87 Adults Survey. Lone parents represented 4% of the sample, the same proportion as in the 1986/87 Adults Survey. The remaining 14% were living with other adults but not with a spouse/partner. This includes respondents who were living with their parents and those living with other unrelated adults.

As Table 2.18 shows there were differences in the distributions of household composition by the age of the respondent (diary sample). Nearly three-quarters of men and women aged 50 to 64 years were living with a spouse/partner and no dependent children, a higher proportion than in any other age group. Additionally, a higher proportion of women aged 50 to 64 years were living alone than those aged 25 to 49 years, 17% and 8% respectively. Seventy-one per cent of men and 38% of women aged 19 to 24 years were living with other adults, a higher proportion than in any other age group. Men aged 25 to 34 years were also more likely than those aged 35 to 64 years to be living with other adults. Men aged 35 to 49 years were more likely than the youngest group of men to be living with a spouse, and a higher proportion of both men and women aged 25 to 49 were living with a dependent child (with or without spouse/partner) compared to the youngest and oldest groups.

(Tables 2.16 to 2.18)

2.4.4 Employment Status

Occupation information collected during the dietary interview was used to derive employment status of the respondent. As shown in Table 2.19 only 3% of the responding and diary samples (and 2000 GHS) were classified as unemployed. In the

1986/87 Adults Survey the proportion classified as unemployed was 7%. The most likely reason for the lower proportion in this NDNS is the change in the economic climate between surveys, with the general level of unemployment being much higher in the mid-late 1980's than in 2000/2001. The small number of respondents classified as unemployed would make it impossible to check reliably for significant differences between, for example, estimates of nutrient intake by employment status. It was decided therefore to use economic activity as a more appropriate indicator. This categorises unemployed and working respondents as economically active and others as economically inactive. Economically inactive includes, for example, those who are retired and those who are at home looking after children.

Nearly 80% of respondents were categorised as economically active. Men were more likely than women to be economically active, among the responding sample 88% compared with 72%. Among women respondents, looking after the family/home was the main reason for being economically inactive.

Table 2.20 shows economic activity status of the respondent by sex, age and region for the diary sample. Over 90% of men aged 19 to 49 years were economically active compared with 76% of those aged 50 to 64 years. The proportion of women classified as economically active decreased from 84% of those aged 19 to 24 years to 55% of the oldest group. It is likely that the oldest age group will include those, especially men, who have taken early retirement, and will to some extent reflect generational differences in patterns of women working. Within each age group a lower proportion of women were economically active than men. Seventy-four per cent of respondents in Scotland were economically active, 76% of those in the Northern region, 81% of those in Central and South West regions of England and in Wales and 83% of those in London and the South East.

(Tables 2.19 and 2.20)

2.4.5 Household income and receipt of benefits

The composition of an individual's diet is influenced by a variety of factors and there is a growing literature that shows income is an important consideration in an individual's decisions about diet, particularly when resources are limited¹⁷. Detailed information

about income was not collected in the survey as it might have affected co-operation with other components. Instead, the respondent was asked to choose from a prompt card the range of the household's gross weekly or annual income¹⁸. Information was also collected on whether anyone in the household was currently in receipt of certain state benefits – Working Families Tax Credit, Income support, and (Income-related) Job Seeker's Allowance.

Gross weekly household income

Table 2.21 shows gross weekly household income by sex and age of the respondent. The age distribution within income group varies. The proportion of men and women in the youngest and oldest age groups living in a household in the lowest income band is greater than the proportion living in a household in the highest income band. For example, among men living in a household with an income of less than £160 per week 18% were aged 19 to 24 and 35% aged 50 to 64 years. In the highest income group, £600 or more per week, the proportions were 9% and 27% respectively.

Household receipt of benefits

Overall, 16% of the responding sample and 15% of the diary sample were living in households in receipt of one or more of the prompted state benefits. For those who kept the dietary record, 5% of households were receiving Working Families Tax Credit, 8% Income Support, and 3% Job Seeker's Allowance.

Proportionally, half as many men as women were in households in receipt of Income Support, 6% and 12% of the responding sample respectively. Men were also less likely to be in households in receipt of any of the prompted benefits, 14% and 18% of the responding sample.

Table 2.23 shows that the proportion of respondents living in households in receipt of benefits declined with age, but only significantly for women, from 28% of those aged 19 to 24 years to 10% of those aged 50 to 64 years. The relationship between the age of the respondent and receipt of benefits should be borne in mind when interpreting nutrient intake and other data from the survey which appear to show differences associated with the receipt of benefits.

A lower proportion of diary respondents in London and the South East were in households in receipt of at least one of the prompted benefits, 12%, compared with diary respondents living in the Northern region, 19%.

(Tables 2.21 to 2.23)

2.4.6 Educational attainment

Information was collected during the dietary interview about the highest education qualification level attained by the respondent. Overall, 18% of the responding and 19% of the diary sample had a degree or equivalent, a similar proportion had no qualifications.

Over a fifth, 22%, of men in the responding and diary samples has a degree level qualification compared with 14% of women in the responding sample and 15% in the diary sample. Men were also more likely to have a higher education qualification below degree level.

Table 2.25 shows that the proportion of the diary sample who had no qualifications increased with age from 8% of those aged 19 to 24 years to 31% of those aged 50 to 64 years. Those aged 35 to 49 years were more likely than those aged 19 to 24 to have a higher education qualification (below degree level), and were also more likely than those aged 25 to 34 years to have no qualifications.

(Tables 2.24 and 2.25)

2.4.7 Main diary keeper

Although it was intended that the respondent would keep their own diary, it was recognised that they might not be the person responsible for the preparation of meals in the household. If, for example, the respondent's spouse did most of the cooking and food preparation (s)he was also instructed in how to use the food scales and make entries in the diary.

Overall, in 88% of cases the respondent was the main diary keeper. There were differences by sex, with 79% of men being the main diary keeper compared with 96% of women. Spouses/partners and other relatives in the household were the main diary keepers for a higher proportion of men than women.

For men, but not women, the identity of the main diary keeper varied by age. Nearly one quarter, 23%, of men aged 50 to 64 years said their spouse/partner was the main diary keeper, whereas for 18% of men aged 19 to 24 years the main diary keeper was another relative in the household. Indeed, men aged 19 to 24 were less likely than all other age groups to have had a spouse/partner as the main diary keeper. The main diary keeper was the respondent for a higher proportion of men aged 35 to 49 years than for the oldest men. These differences are likely to be the result of the different life situations of these age groups, with the younger men less likely to be married and still living at home, and also generational differences with the spouses of older men doing most of the cooking.

(Table 2.26)

2.4.8 Unwell

At the end of the seven-day recording period, respondents completing the dietary diary were asked whether they had been unwell during the period of the record and, if they had, whether this had affected their eating habits. In particular, respondents were asked whether they had suffered from diarrhoea, been sick or vomited, ill with cold or flu, ill with asthma, or been ill in any other way.

Table 2.27 shows that overall 19% of respondents had been unwell during the recording week, but only 11% said that their eating had been affected. Women were more likely than men to say that they had felt unwell and their eating had been affected, 14% and 8% respectively.

(Table 2.27)

2.4.9 Prescribed medicines

At the interview at the end of the recording period respondents were asked if they had taken prescribed medicines during the diary-keeping period. Those who did not keep a diary were asked if they were currently taking prescribed medicines. Table 2.28 shows that a significantly higher proportion of women reported taking a prescribed medicine, 47% compared with 23% of men. Among women, 2% said they were taking prescribed folic acid, 28% of women aged under 50 years said they were taking the contraceptive

pill, injections or implants, and 31% of women aged 40 years and over said they were using hormone-replacement therapy (HRT).

The proportion of men taking a prescribed medicine increased with age from 8% of those aged 19 to 24 years to 40% of men aged 50 to 64. Among women prescribed medicine taking, including the oral contraceptive, HRT and folic acid, decreased from 53% of those aged 19 to 24 years to 38% of those aged 35 to 49 years before increasing again to 57% among the oldest age group. The proportion that reported taking the contraceptive pill decreased with age with a corresponding increase in the proportion using HRT.

(Table 2.28)

2.4.10 Smoking behaviour

All respondents were asked if they smoked cigarettes and if so how many they smoked daily. Respondents were classified as non-smokers, light smokers (smoking fewer than 20 cigarettes daily), and heavy smokers (smoking 20 or more cigarettes a day)¹⁹. The prevalence of smoking is of particular interest in relation to blood pressure and to the results of the blood and urine sample analyses. Results are therefore reported here for the total responding sample.

Approximately two-thirds, 68%, of all respondents said they were non-smokers. Four-fifths of the oldest men, and nearly three-quarters of the oldest women, were non-smokers compared with just over half of the youngest group of men and women. There was a corresponding decrease with age for both men and women in the proportion who were classified as light smokers, from 41% and 35% of those aged 19 to 24 years to 8% and 17% of the oldest group of men and women. There were no significant differences in the proportion of heavy smokers by age for men or women.

(Table 2.29)

References and endnotes

- ¹ Walker A, Maher J, Coulthard M, Goddard E and Thomas M. *Living in Britain – Results from the 2000 General Household Survey*. TSO (London, 2001).
The General Household Survey (GHS) is a multi-purpose continuous survey carried out by the Social Survey Division of the Office for National Statistics (ONS) which collects information on a range of topics from people living in private households in Great Britain. The 2000 GHS was carried out between April 2000 and March 2001, the set sample size was 13,250, and the response rate was 67%. Comparison data is from households containing at least one person aged 19 to 64 years: 8,221 households and 11,400 individuals unweighted, and 19,572,762 households, 34,733,471 individuals weighted and grossed.
- ² In response tables 'fieldwork wave' is defined as the wave in which the case was completed.
- ³ Initially 1140 addresses were issued per wave. This was increased from Wave 2 to 1520 addresses, 40 in each quota of work. In Wave 3, 27 addresses were withdrawn. These were unapproachable due to access restrictions in place at the time because of the foot and mouth outbreak.
- ⁴ The reasons for refusing were asked of those who refused at the doorstep or during the dietary interview. This was not asked of those who refused directly to HQ. Respondents could give up to three reasons for refusing.
- ⁵ Response rates are based on those who consented to making a 24-hour urine collection, and those for whom a sample was obtained. Samples were taken from the full 24-hour collection. Not all the samples were analysed – some were damaged, or deteriorated in transit. Details of the numbers of urine samples analysed and reported on are given in Chapter 3 'Minerals and urinary analytes' of Volume 3 'Micronutrient intake'.
- ⁶ Gregory J, Foster K, Tyler H, Wiseman M. *The Dietary and Nutritional Survey of British Adults*. HMSO (London, 1990).
- ⁷ Martin J, Matheson J. Responses to declining response rates on government surveys. *Survey Methodology Bulletin* 1999; **45**: 33-37.
- ⁸ Addresses that were returned to the office coded as refusals or non-contacts were considered for reissue. Where it was thought that a non-productive case might result in at least a dietary interview, for example where the selected respondent said they were too busy at the time of the original call but would be available at a later date, these addresses were issued to interviewers working in subsequent waves of fieldwork.
- ⁹ Elliot D. *Weighting for non-response - a survey researcher's guide*. OPCS (London, 1991).
- ¹⁰ The full report appears as Appendix E of the Technical Report. The evaluation completed by the University of Southampton was undertaken before the end of fieldwork. The data that appear in their report and supporting tables do not therefore represent the final response figures as shown in Table 2.1.
- ¹¹ The report by the University of Southampton suggested two regional post-strata within

-
- age/sex groups: Scotland versus the rest. However, given the small numbers in age-sex group cells within the sample in Scotland, ONS methodologists suggested two regional strata of: Scotland and Northern region; Central and South West regions of England and Wales and London and the South East.
- ¹² Population estimates are based on data from the Labour Force Survey December 2000 to February 2001 adjusted to the private household population.
- ¹³ As the population based weighting is calculated for age-sex groups within region, the resulting proportions will not be exactly as the distribution of the population for sex, age or region alone.
- ¹⁴ The majority of surveys undertaken by SSD code region to the 12 Government Office Regions (GOR). To maintain consistency with previous NDNS surveys, region has been coded to the 11 Standard Statistical Regions (SSR). In respect of the four regions used in analyses of the data, using SSR instead of GOR makes very little difference. A small number of respondents that were classified as living in London and the South East using SSR would have been coded as living in Central and South West regions of England and in Wales using the GOR definition.
- ¹⁵ Estimates of the proportions of households in which the reference person changes under the new definition are between 11% (Omnibus Survey) and 14% (GHS). Households consisting of a single adult or a sole male householder will not change and in many other households the new definition in practice results in the same person being selected. Part of the change is due to sole female householders who are living with a non-householder partner being defined as the HRP but not the HOH (5% Omnibus Survey, 4% GHS estimates). The remainder is due to the use of income (or age) to choose between joint householders resulting in a different person being selected.
- ¹⁶ The classification of social class is based on the Registrar General's Standard Occupation Classification (1990). In April 2002 ONS moved to a new socio-economic classification, National Statistics Socio-economic Classification (NS-SEC) which is based on the Standard Occupation Classification 2000. An NS-SEC user manual was published on the National Statistics website in March 2001.
- ¹⁷ Department of Health. *Low Income Food Nutrition and Health: Strategies for Improvement. A report from the low income project team to the Nutrition Task Force.* Department of Health (London, 1996).
- ¹⁸ The respondent was asked to indicate the gross income for the household. It is possible that the respondent may not have been aware of the income levels of other people in the household and may, therefore, have guessed the level for the household. Household income figures are therefore an estimate of household income.
- ¹⁹ The classification of smokers is based on the classification used in the 2000 GHS.

Table 2.1 Response to the dietary interview and 7-day dietary record by wave of fieldwork*

Unweighted data		Numbers and percentages								
	Wave of fieldwork								All	
	Wave 1 : July to September		Wave 2 : October to December		Wave 3 : January to March		Wave 4 : April to June			
Set sample = 100%	1098	100	1397	100	1450	100	1728	100	5673	100
Ineligible	382	35	514	37	515	36	558	32	1969	35
Eligible sample = 100%	716	100	883	100	935	100	1170	100	3704	100
Non-contacts	12	2	24	3	23	2	30	3	89	2
Refusals	271	38	369	42	364	39	360	31	1364	37
Co-operation with:										
dietary interview	433	60	490	56	548	59	780	67	2251	61
seven-day dietary record	325	45	385	44	429	46	585	50	1724	47

* For productive cases, fieldwork wave is defined as the wave (quarter) in which the dietary interview took place; for unproductive cases, fieldwork wave is the wave in which the case was issued (or reissued).

Table 2.2 Co-operation with the 7-day dietary record by sex and age of respondent and social class of household reference person

Unweighted data		Numbers and percentages	
Sex and age of respondent and social class of household reference person	Dietary interview	7-day dietary diary	
	No.	No.	as % of responding sample
Men aged (years):			
19-24	86	61	71
25-34	219	160	73
35-49	394	303	77
50-64	309	242	78
All	1008	766	76
Women aged (years):			
19-24	109	78	72
25-34	277	211	76
35-49	487	379	78
50-64	370	290	78
All	1243	958	77
Social class of household reference person			
Non-manual	1243	970	78
Manual	944	713	76
All	2251	1724	77

Table 2.3 Co-operation with anthropometric measurements and blood pressure by wave of fieldwork*

Unweighted data					Numbers and percentages
Measurement	Wave of fieldwork				All
	Wave 1 : July to September	Wave 2 : October to December	Wave 3 : January to March	Wave 4 : April to June	
Weight					
measurements made	356	405	431	609	1801
<i>as % of responding sample</i>	82	83	79	78	80
<i>as % of diary sample</i>	97	96	92	94	95
Height					
measurements made	356	402	432	610	1800
<i>as % of responding sample</i>	82	82	79	78	80
<i>as % of diary sample</i>	97	96	92	94	95
Hip and waist circumferences					
measurements made	354	402	425	602	1783
<i>as % of responding sample</i>	82	82	78	77	79
<i>as % of diary sample</i>	97	96	91	93	94
Blood pressure					
measurements made	347	395	407	590	1739
<i>as % of responding sample</i>	80	81	74	76	77
<i>as % of diary sample</i>	98	95	88	91	93

* Fieldwork wave is defined as the wave (quarter) in which the case was issued (or reissued) for interview.

Table 2.4 Co-operation with anthropometric measurements and blood pressure by sex and age of respondent

Unweighted data						Numbers and percentages				
Measurement	Men aged (years):				All men	Women aged (years):				All women
	19-24	25-34	35-49	50-64		19-24	25-34	35-49	50-64	
Weight										
measurements made	65	171	329	250	815	83	213	396	294	986
as % of responding sample	76	78	84	81	81	76	77	81	80	79
as % of diary sample	93	94	97	94	95	87	94	96	94	94
Height										
measurements made	65	172	328	249	814	83	216	393	294	986
as % of responding sample	76	78	83	81	81	76	78	81	80	79
as % of diary sample	93	94	96	94	95	87	95	96	94	94
Hip and waist circumferences										
measurements made	64	170	328	246	808	82	213	387	293	975
as % of responding sample	74	78	83	80	80	75	77	80	79	78
as % of diary sample	93	94	96	93	94	87	94	94	94	94
Blood pressure										
measurements made	62	169	323	244	798	81	209	374	277	941
as % of responding sample	72	77	82	79	79	74	75	77	75	76
as % of diary sample	90	94	96	93	94	87	92	92	91	91

Table 2.5 Co-operation with anthropometric measurements and blood pressure by social class of household reference person

Unweighted data

Measurement	Social class of household reference person		All*
	Non- manual	Manual	
Weight			
measurements made	1026	738	1801
as % of responding sample	82	78	80
as % of diary sample	96	94	95
Height			
measurements made	1024	738	1800
as % of responding sample	82	78	80
as % of diary sample	96	94	95
Hip and waist circumferences			
measurements made	1018	729	1783
as % of responding sample	82	77	79
as % of diary sample	95	94	94
Blood pressure			
measurements made	992	712	1739
as % of responding sample	80	75	77
as % of diary sample	94	92	93

* Includes those who could not be allocated to a social class, either because their job was inadequately described, they were a member of the armed forces, had never worked, or it was not known whether they had ever worked.

Table 2.6 Co-operation with the 24-hour urine collection by wave of fieldwork, sex and age of respondent and social class of household reference person

Unweighted data	Numbers and percentages						
	Consent obtained:			Samples obtained:			
	No.	As percentage of:		No.	As percentage of:		
		responding sample	diary sample		responding sample	diary sample	consenting sample
Fieldwork wave							
Wave 1	304	70	88	275	64	81	90
Wave 2	362	74	89	344	70	84	95
Wave 3	334	61	76	299	55	69	90
Wave 4	491	63	80	440	56	72	90
Sex and age of respondent							
Men aged (years):							
19-24	46	54	75	38	44	62	83
25-34	131	60	76	120	55	70	92
35-49	282	72	89	259	66	82	92
50-64	211	68	84	199	64	79	94
All	670	66	84	616	61	77	92
Women aged (years):							
19-24	67	62	74	57	52	65	85
25-34	178	64	81	158	57	72	89
35-49	331	68	83	299	61	75	90
50-64	245	66	82	228	62	77	93
All	821	66	82	742	60	74	90
Social class of household reference person							
Non-manual	841	68	83	777	62	77	92
Manual	619	66	83	556	59	75	90
All	1491	66	83	1358	60	76	91

Table 2.7 Co-operation with blood sample by wave of fieldwork, sex and age of respondent and social class of household reference person

Unweighted data	Numbers and percentages										
	Consent obtained:			Venepuncture attempted:				Blood sample obtained:			
	No.	as percentage of:		No.	as percentage of:			No.	as percentage of:		
		responding sample	diary sample		responding sample	diary sample	consenting sample		responding sample	diary sample	consenting sample
Fieldwork wave											
Wave 1	290	67	83	284	66	82	98	278	64	78	96
Wave 2	328	67	81	320	65	79	98	311	64	77	95
Wave 3	325	59	72	315	58	71	97	313	57	70	96
Wave 4	476	61	77	460	59	75	97	442	57	72	93
Sex and age of respondent											
Men aged (years):											
19-24	49	57	74	48	56	72	98	48	56	72	98
35-34	125	57	72	121	55	70	97	119	54	69	95
35-49	262	66	82	256	65	80	98	253	64	79	97
50-64	205	66	81	197	64	78	96	194	63	77	95
All	641	64	79	622	62	77	97	614	61	76	96
Women aged (years):											
19-24	61	56	72	58	53	70	95	54	50	65	89
35-34	163	59	74	161	58	73	99	158	57	72	97
35-49	319	66	79	313	64	77	98	305	63	75	96
50-64	235	64	79	225	61	76	96	213	58	72	91
All	778	63	77	757	61	75	98	730	59	73	94
Social class of household reference person											
Non-manual	809	65	79	785	63	77	97	765	62	75	95
Manual	579	61	77	764	60	75	132	550	58	73	95
All	1419	63	78	1379	61	76	97	1344	60	74	95

Table 2.8 Co-operation with self-tooth count by wave of fieldwork, sex and age of respondent and social class of household reference person

Unweighted data

Numbers and percentages

Respondents who had some/all of their own natural teeth

	Self-tooth count undertaken		
	No.	as percentage of:	
		responding sample	diary sample
Fieldwork wave			
Wave 1	326	79	97
Wave 2	400	85	96
Wave 3	432	82	96
Wave 4	579	77	95
Sex and age of respondent			
Men aged (years):			
19-24	65	76	97
25-34	169	78	96
35-49	320	83	96
50-64	235	83	96
All	789	81	96
Women aged (years):			
19-24	85	78	92
25-34	215	78	96
35-49	380	80	95
50-64	268	82	98
All	948	80	96
Social class of household reference person			
Non-manual	991	82	96
Manual	704	80	96
All with some/all own teeth	1737	80	96

Table 2.9 Region, sex and age of respondent for responding and diary samples compared with population estimates

Unweighted data				Percentages		
Age of respondent (years)	Region and sex of respondent					
	Men		All men	Women		All women
	Scotland and Northern	Rest of Great Britain		Scotland and Northern	Rest of Great Britain	
Responding sample						
19-24	10	8	8	8	9	9
25-34	20	22	22	23	22	22
35-49	38	37	39	40	38	39
50-64	32	30	31	28	30	30
Base	347	661	1008	452	791	1243
All ages	15%	29%	45%	20%	35%	55%
Diary sample						
19-24	8	8	8	8	8	8
25-34	20	21	21	23	21	22
35-49	40	39	40	41	39	40
50-64	32	31	32	28	31	30
Base	248	518	766	326	632	958
All ages	14%	30%	44%	19%	37%	56%
Population estimates						
19-24	12	12	12	12	12	12
25-34	24	25	24	23	24	24
35-49	36	36	36	36	36	36
50-64	28	28	28	29	29	28
Base	5909644	11611211	17520855	5862948	11406263	17269211
All ages	17%	33%	50%	17%	33%	50%

* Population projections based on data from Labour Force Survey December 2000 to February 2001 adjusted to private household population.

Table 2.10 Region, sex and age of respondent for responding and diary samples

												Percentages	
Age of respondent (years)	Region and sex of respondent												
	Men				All men		Women				All women		
	Scotland and Northern		Rest of Great Britain				Scotland and Northern		Rest of Great Britain				
	Unweighted	Weighted	Unweighted	Weighted			Unweighted	Weighted	Unweighted	Weighted			Unweighted	Weighted
Responding sample													
19-24	10	13	8	13	8	13	8	10	9	12	9	12	
25-34	20	24	22	28	22	26	23	24	22	24	22	24	
35-49	38	35	37	27	39	30	40	36	38	35	39	36	
50-64	32	28	30	32	31	30	28	30	30	28	30	29	
Base	347	401	661	687	1008	1088	452	385	791	778	1243	1163	
All ages	15%	18%	29%	30%	45%	48%	20%	17%	35%	35%	55%	52%	
Diary sample													
19-24	8	11	8	14	8	13	8	10	8	13	8	12	
25-34	20	24	21	28	21	26	23	24	21	24	22	24	
35-49	40	36	39	27	40	30	41	37	39	35	40	36	
50-64	32	29	31	31	32	30	28	30	31	29	30	29	
Base	248	299	518	533	766	833	326	295	632	595	958	891	
All ages	14%	17%	30%	31%	44%	48%	19%	17%	37%	34%	56%	52%	

Table 2.11 Regional distribution of responding and diary samples compared to 2000 GHS*

Region	Percentages		
	Responding sample	Diary sample	2000 GHS*
Scotland	8	8	9
North	6	5	6
Yorkshire & Humberside	9	9	9
North West	12	12	11
Northern	27	27	26
East Midlands	6	6	7
East Anglia	6	6	4
West Midlands	10	10	9
South West	9	10	9
Wales	5	4	5
Central, South West and Wales	35	36	34
London	10	10	13
Rest of South East	20	20	19
London and South East	30	30	32
<i>Base</i>	<i>2251</i>	<i>1724</i>	<i>11400</i>

* 2000 General Household Survey: weighted data for respondents aged 19 to 64 years.

Table 2.12 Region by sex and age of respondent

Diary sample										Percentages
Region	Men aged (years):				All men	Women aged (years):				All women
	19-24	25-34	35-49	50-64		19-24	25-34	35-49	50-64	
Scotland	6	6	10	9	8	7	10	7	6	7
Northern	24	28	33	25	28	21	23	27	28	26
Central, South West and Wales	38	38	29	38	35	41	38	36	35	37
London and the South East	32	29	28	28	29	31	29	30	31	30
<i>Base</i>	<i>108</i>	<i>219</i>	<i>253</i>	<i>253</i>	<i>833</i>	<i>104</i>	<i>210</i>	<i>318</i>	<i>259</i>	<i>891</i>

Table 2.13 Social class of household reference person by sex of respondent for responding and diary samples compared with 2000 GHS

Social class of household reference person	Percentages					
	Responding sample		All	Diary sample		2000 GHS*
	Men	Women		Men	Women	
I and II	43	42	42	44	42	43
III non-manual	13	12	12	13	12	13
III manual	26	23	24	24	24	24
IV and V	17	19	18	17	18	18
Never worked/ inadequate information**	2	4	3	2	3	3
<i>Base</i>	<i>1088</i>	<i>1163</i>	<i>2251</i>	<i>833</i>	<i>891</i>	<i>1724</i>
						<i>6411</i>

* 2000 General Household Survey: weighted data from a subsample of households contained at least one adult aged 19 to 64 years.

** Includes those who could not be allocated to a social class, either because their job was inadequately described, they were a member of the armed forces, had never worked, or it was not known whether they had ever worked.

Table 2.14 Social class of household reference person by sex and age of respondent

Diary sample										Percentages
Social class of household reference person	Men aged (years):				All men	Women aged (years):				All women
	19-24	25-34	35-49	50-64		19-24	25-34	35-49	50-64	
Non-manual	44	57	58	61	57	50	56	55	56	55
Manual	44	41	42	39	41	38	41	43	43	42
Unclassified*	12	2	1	-	2	12	3	2	1	3
<i>Base</i>	<i>108</i>	<i>219</i>	<i>253</i>	<i>253</i>	<i>833</i>	<i>104</i>	<i>210</i>	<i>318</i>	<i>259</i>	<i>891</i>

* Includes those not assigned a social class because their job was inadequately described, they were a member of the armed forces, had never worked or it was not known whether they had ever worked.

Table 2.15 Social class of household reference person by region compared with 2000 GHS

Diary sample						Percentages				
Social class of household reference person	NDNS				All	2000 GHS*				All
	Scotland	Northern	Central, South West and Wales	London and the South East		Scotland	Northern	Central, South West and Wales	London and the South East	
Non-manual	49	49	53	68	56	56	48	52	66	56
Manual	48	50	43	30	41	41	49	46	32	42
Unclassified**	3	2	4	2	3	3	3	3	2	3
<i>Base</i>	<i>131</i>	<i>463</i>	<i>621</i>	<i>508</i>	<i>1724</i>	<i>561</i>	<i>1655</i>	<i>2181</i>	<i>2014</i>	<i>6411</i>

* 2000 General Household Survey: weighted data from a subsample of households contained at least one adult aged 19 to 64 years.

** Includes those not assigned a social class because their job was inadequately described, they were a member of the armed forces, had never worked or it was not known whether they had ever worked.

Table 2.16 Number of adults per household by sex of respondent for responding and diary samples

Number of adults in respondent's household	Percentages					
	Responding sample		All	Diary sample		All
	Men	Women		Men	Women	
One	13	18	16	13	17	15
Two	60	55	57	60	56	58
Three	16	18	17	17	17	17
Four or more	10	10	10	11	9	10
Base	1088	1163	2251	833	891	1724

Table 2.17 Household composition by sex of respondent for responding and diary samples

Household composition	Percentages					
	Responding sample		All	Diary sample		All
	Men	Women		Men	Women	
Living alone	13	11	12	12	11	11
Living with spouse/partner:						
no dependent children	41	39	40	40	41	40
with dependent children	30	29	29	30	29	30
Living with no spouse/partner:						
no dependent children, with others	17	12	14	18	11	14
with dependent children*	-	8	4	-	8	4
<i>Base</i>	<i>1088</i>	<i>1163</i>	<i>2251</i>	<i>833</i>	<i>891</i>	<i>1724</i>

* Due to small numbers in the sample, men living with no spouse/partner and with dependent children are all included in the category 'Living with spouse/partner, with dependent children'.

Table 2.18 Household composition by sex and age of respondent

Diary sample										Percentages
Household composition	Men aged (years):				All men	Women aged (years):				All women
	19-24	25-34	35-49	50-64		19-24	25-34	35-49	50-64	
Living alone	6	12	12	15	12	9	8	8	17	11
Living with spouse/partner:										
no dependent children	12	26	31	74	40	32	25	28	73	41
with dependent children	10	40	52	9	30	11	41	50	2	29
Living with no spouse/partner:										
no dependent children, with others	71	22	6	3	18	38	12	5	7	11
with dependent children*	-		-	-	-	11	14	9	1	8
<i>Base</i>	<i>108</i>	<i>219</i>	<i>253</i>	<i>253</i>	<i>833</i>	<i>104</i>	<i>210</i>	<i>318</i>	<i>259</i>	<i>891</i>

* Due to small numbers in the sample, men living with no spouse/partner and with dependent children are all included in the category 'Living with spouse/partner, with dependent children'.

Table 2.19 Employment status of respondent by sex for responding and diary samples compared with 2000 GHS*

Employment status of respondent	Percentages							
	Responding sample		All	Diary sample		All	2000 GHS*	
	Men	Women		Men	Women		Men	Women
Employment status (economically active)								
Working	84	69	76	84	70	77	80	68
Unemployed	4	3	3	4	2	3	4	2
Economically inactive	12	28	21	12	27	20	15	29
<i>Base</i>	<i>1088</i>	<i>1163</i>	<i>2251</i>	<i>833</i>	<i>891</i>	<i>1724</i>		<i>5913</i>
								<i>11,400</i>

* 2000 General Household Survey: weighted data for respondents aged 19 to 64 years.

Table 2.21 Gross weekly household income by sex and age of respondent

Diary sample							Percentages
Sex and age of respondent (years)	Gross weekly household income						All
	Less than £160	£160 to less than £280	£280 to less than £400	£400 to less than £600	£600 or more	Not answered*	
Men aged (years):							
19-24	18	15	10	17	9	[2]	13
25-34	25	19	33	25	28	-	26
35-49	22	22	32	28	36	[2]	30
50-64	35	45	24	30	27	[7]	30
<i>Base</i>	<i>79</i>	<i>74</i>	<i>124</i>	<i>219</i>	<i>326</i>	<i>11</i>	<i>833</i>
Women aged (years):							
19-24	22	5	12	12	9	[11]	12
25-34	20	28	27	20	25	[2]	24
35-49	23	35	32	40	42	[3]	36
50-64	34	33	30	28	24	[14]	29
<i>Base</i>	<i>102</i>	<i>145</i>	<i>128</i>	<i>189</i>	<i>296</i>	<i>31</i>	<i>891</i>

* Figures in [] are actual numbers and not percentages.

Table 2.22 Benefits being received by the household* for responding and diary samples by sex

Benefits being received by the household	Responding sample		All	Diary sample		All
	Men	Women		Men	Women	
Receiving:						
Working Families Tax Credit**	6	6	6	6	5	5
Income Support***	6	12	9	6	11	8
(Income-related) Job Seeker's Allowance***	3	2	2	3	2	3
At least one of the above	14	18	16	13	17	15
<i>Base</i>	<i>1088</i>	<i>1163</i>	<i>2251</i>	<i>833</i>	<i>891</i>	<i>1724</i>

* Receipt of benefits was asked of respondent about themselves, their partner or anyone else in the household.

** Asked if anyone is currently receiving.

*** Asked if anyone has received in the 14 days prior to placement interview.

Table 2.23 Whether respondent's household * is in receipt of benefits by sex and age of respondent and region

Diary sample		Percentages	
Sex and age of respondent and region	% receiving benefits	Base	
Men aged (years):			
19-24	15	108	
25-34	15	219	
35-49	15	253	
50-64	10	253	
All	13	833	
Women aged (years):			
19-24	28	104	
25-34	19	210	
35-49	17	318	
50-64	10	259	
All	17	891	
Region			
Scotland	18	131	
Northern	19	463	
Central, South West and Wales	14	621	
London and the South East	12	508	
All	15	1724	

* Receipt of benefits was asked of the respondent about themselves, their partner or anyone else in the household.

Table 2.24 Respondent's highest educational qualification level by sex for responding and diary samples

Respondent's highest educational qualification level	Percentages					
	Responding sample		All	Diary sample		All
	Men	Women		Men	Women	
Degree or equivalent	22	14	18	22	15	19
Higher education below degree level	16	12	14	17	11	14
GCE 'A' level or equivalent	12	11	11	12	11	12
GCSE Grades A-C or equivalent	25	33	29	26	34	30
GCSE Grades D-G or equivalent	6	8	7	6	7	7
Other qualifications	3	3	3	3	4	3
No qualifications	16	20	18	14	18	16
<i>Base</i>	<i>1086</i>	<i>1162</i>	<i>2248</i>	<i>832</i>	<i>891</i>	<i>1723</i>

Table 2.25 Respondent's highest educational qualification level by age of respondent

Diary sample	Percentages				
Respondent's highest educational qualification level	Age of respondent (years):				All
	19-24	25-34	35-49	50-64	
Degree or equivalent	15	22	20	16	19
Higher education below degree level	7	15	16	13	14
GCE 'A' level or equivalent	17	12	12	8	12
GCSE Grades A-C or equivalent	40	37	30	19	30
GCSE Grades D-G or equivalent	11	4	5	9	7
Other qualifications	2	3	4	3	3
No qualifications	8	7	13	31	16
<i>Base</i>	<i>212</i>	<i>429</i>	<i>571</i>	<i>511</i>	<i>1723</i>

Table 2.26 Main diary keeper by sex and age of respondent

Those who completed a dietary record and post-diary interview										Percentages	
Main diary keeper	Men aged (years):				All men	Women aged (years):				All women	All
	19-24	25-34	35-49	50-64		19-24	25-34	35-49	50-64		
Respondent	78	79	84	73	79	90	99	97	95	96	88
Respondent's spouse/partner	2	17	15	23	16	7	1	2	5	3	9
Other relative in household	18	4	-	0	4	3	1	0	-	1	2
Other person	2	1	1	3	2	-	-	1	0	0	1
<i>Base</i>	<i>108</i>	<i>214</i>	<i>251</i>	<i>249</i>	<i>822</i>	<i>104</i>	<i>209</i>	<i>312</i>	<i>258</i>	<i>883</i>	<i>1707</i>

Table 2.27 Percentage of diary sample whose eating was affected by their being unwell by age and sex of respondent

Those who completed a dietary record and post-diary interview										Percentages	
Whether respondent was reported as being unwell	Men aged (years):				All men	Women aged (years):				All women	All
	19-24	25-34	35-49	50-64		19-24	25-34	35-49	50-64		
Unwell during recording period and:											
eating affected	13	8	7	5	8	15	15	14	14	14	11
eating not affected	7	4	8	10	7	7	10	9	7	10	8
Not unwell during recording period	80	88	85	85	85	78	75	78	79	77	81
<i>Base</i>	<i>108</i>	<i>215</i>	<i>251</i>	<i>250</i>	<i>824</i>	<i>104</i>	<i>210</i>	<i>314</i>	<i>258</i>	<i>886</i>	<i>1708</i>

Table 2.28 Percentage of respondents taking prescribed medicines by age and sex of respondent

Respondent completing post-diary interview*				Percentages
Sex and age of respondent	Percentage taking:			All prescribed medicines
	prescribed folic acid**	contraceptives***	HRT****	
Men aged (years)				
19-24	-	-	-	8
25-34	-	-	-	10
35-49	-	-	-	22
50-64	-	-	-	40
All men	-	-	-	23
Women aged (years)				
19-24	1	54	-	53
25-34	1	36	-	45
35-49	2	14	34	38
50-64	2	-	30	57
All women	2	28	31	47
Base*	1164	822	389	1933

* Includes those who did not complete a dietary diary.

** Asked of all women in dietary interview.

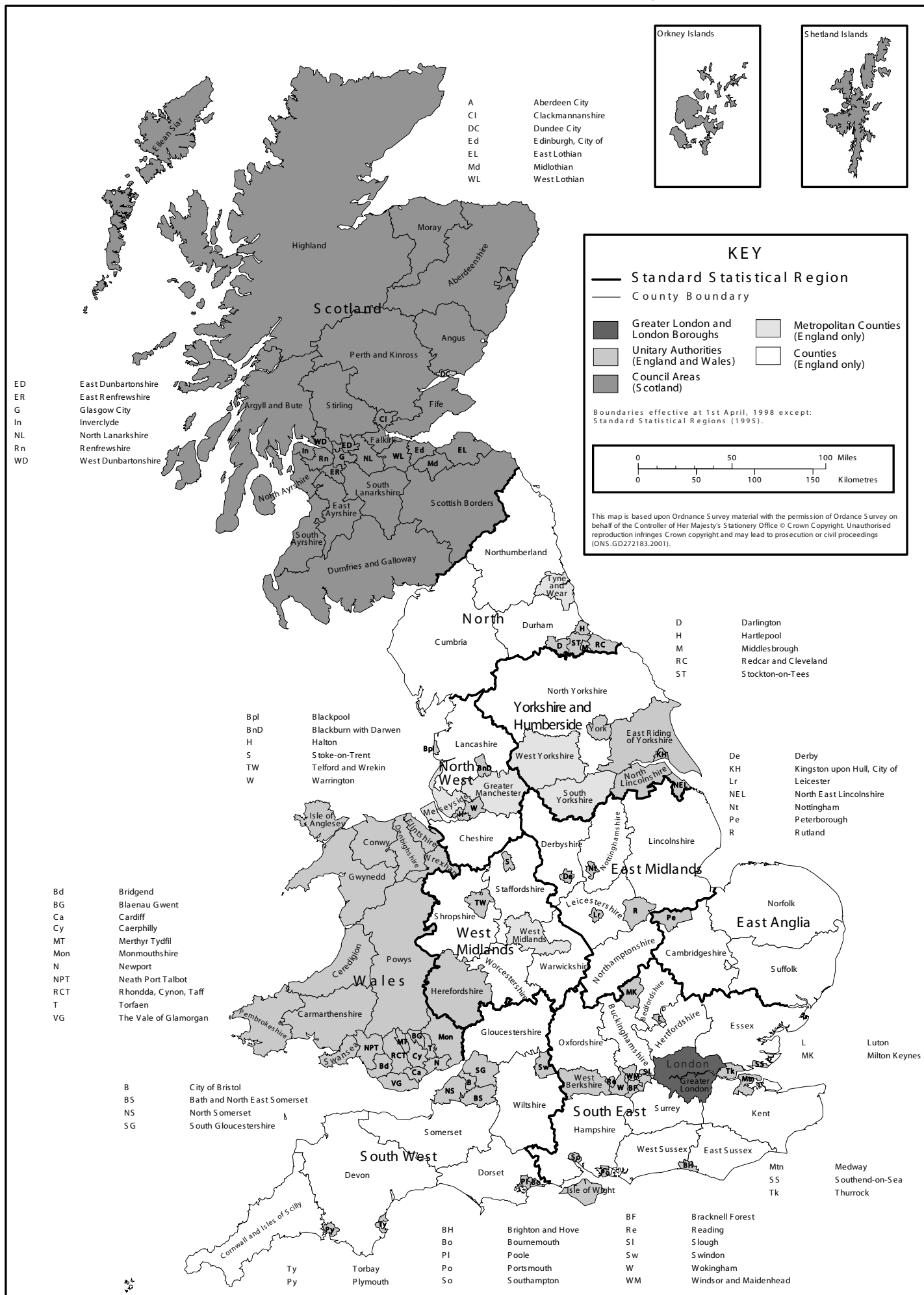
*** Asked of women aged under 50 years in dietary interview. Includes oral contraceptive, injections and implants.

**** Asked of women aged 40 years and over in dietary interview. Includes oral and topical HRT injections and implants.

Table 2.29 Smoking behaviour by sex and age of respondent for responding and diary samples

Responding sample											Percentages
Smoking behaviour	Men aged (years):				All men	Women aged (years):				All women	All
	19-24	25-34	35-49	50-64		19-24	25-34	35-49	50-64		
Non-smoker	51	64	68	80	68	54	65	70	73	68	68
Light smoker - fewer than 20 cigarettes per day	41	24	17	8	19	35	28	21	17	23	21
Heavy smoker - 20 or more cigarettes per day	8	12	15	12	12	11	8	9	10	9	11
<i>Base</i>	<i>142</i>	<i>287</i>	<i>330</i>	<i>330</i>	<i>1088</i>	<i>136</i>	<i>275</i>	<i>415</i>	<i>337</i>	<i>1163</i>	<i>2251</i>

Great Britain: Standard Statistical Regions, Counties and Unitary Authorities



Appendix A Fieldwork documents *(see also Appendices B and K)*

Sample

Advance letter	-
Multi-household selection sheet (example)	H1
Kish Grid	K1 & K2

Respondent information leaflets

General	L1
Physical measurements and blood sample	L2

Interview

Main interview questionnaire	-
Prompt cards	-
Vitamin and mineral supplements	V1
Self-completion Dutch Eating Behaviour Questionnaire ¹	S1

Dietary elements

Home Food and Drink Diary	E1
Diary of activities and eating and drinking away from home	E2
Pocket notebook and diary	P3
How to use the scales for weighing	W1
Check list for recording in the Home Record	W2

Interviewer documents

Food descriptions prompt card	F1
Eating pattern check sheet	F2
Workplace/college catering questionnaire	F3
Guide weights card	F5
Flags check card	F6
Dietary assessment schedule	F7
Letter to employer re: visit to collect information	F8

Coding documents

Index to food code list	FC1
Food code list	FC2
Food source codes	FC8

Oral health

Counting your teeth and fillings	D7
Leaflet	D8

Bowel movements

Bowel movements card ²	B1
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Blood pressure

Reporting raised blood pressure instructions	BP1
Letter to GP reporting raised blood pressure	BP2

Physical measurements

Measurements schedule ³	M1
Respondent's record card	M2

Endnotes

- ¹ The Dutch Eating Behaviour Questionnaire (Eating Habits questionnaire) was available as computer assisted self-interviewing or as a paper questionnaire. The questionnaire is reproduced here as part of the main interview questionnaire.
- ² Bowel movements away from home were recorded in the Eating Away from Home Diary.
- ³ The interviewer recorded the measurements in this paper document at the time they were made. They were subsequently entered into the CAPI program.

(ovσ)

Social Survey Division
Tel: 020 7533 5465
Date as postmark

Dear Resident

NATIONAL DIET AND NUTRITION SURVEY OF ADULTS

I am writing to ask for your help with a very important survey of adult nutrition which will shortly be carried out.

The main aim of the survey is find out what people are eating these days to provide us with a better understanding of the relationship between what people eat and their health.

This research is being carried out by the **Office for National Statistics** (ONS) together with the Medical Research Council **Human Nutrition Research** (HNR) on behalf of the Food Standards Agency and the Department of Health.

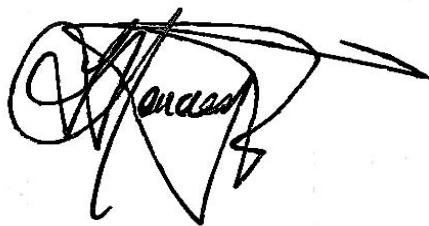
Your address has been selected at random and one of our interviewers will contact you in the near future to tell you much more about the study, and may also select, again at random, one adult from your household whom we would like to take part. You may want to show this letter to other people in your household just in case the interviewer calls when you are not at home. If you happen to be busy when the interviewer calls, he/she will be happy to call again when it suits you. All our interviewers carry an official identification card which includes their photograph and the National Statistics logo as it appears at the top of this letter. Everything you tell us will be treated in confidence.

As with all our surveys we rely on people's voluntary co-operation; this is essential if our work is to be successful and the results of this study are to be an accurate account of people's nutrition and health in Great Britain today. We have, in the past, carried out similar research on different groups in the population, and those who have taken part have found it an interesting experience. I am sure that you will find it interesting and do hope that you will be able to help us.

If you have any questions that you would like to ask before our interviewer calls please call 020 7533 5465 (direct line).

Thank you in advance for your help.

Yours sincerely



Lynne Henderson
Principal Researcher
National Diet and Nutrition Survey (NDNS)



NATIONAL DIET AND NUTRITION SURVEY OF ADULTS AGED 19 TO 64 YEARS

MULTI-HOUSEHOLD
SELECTION SHEET (A)

TO BE RETURNED TO TITCHFIELD

H1

Serial number

LIST OF HOUSEHOLDS

H/HOLD No	DESCRIPTION OF HOUSEHOLDS EG. LOCATION AND SURNAMES	NO OF H/HOLDS FOUND AT ADDRESS	INTERVIEW AT H/HOLD	OUTCOME CODE
(1)	(2)	(3)	(4)	(5)
1		1	1	
2		2	1	
3		3	1	
4		4	4	
5		5	1	
6		6	6	
7		7	4	
8		8	7	
9		9	8	
10		10	3	
11		11	8	
12		12	3	
13		13	5	
14		14	11	
15		15	3	

IF MORE THAN 15 HOUSEHOLDS PLEASE TURN OVER

Procedure:

1. Note down the households on the table above. This must be done systematically. If numbered, then list in numerical order (ie, flat 1,2,3, etc). Otherwise start at the lowest floor and work in a clockwise direction.
2. Ring the number of households found at column 3. Read column 4 to identify which households are selected for interview. Ring the selected household number in column 1.
3. Return this household selection sheet to Room 5002, Titchfield.

FOR USE ON THE NDNS SURVEY ONLY
NOTE: YOU ONLY SELECT ONE HOUSEHOLD

H/HOLD No	DESCRIPTION OF HOUSEHOLDS EG. LOCATION AND SURNAMES	NO OF H/HOLDS FOUND AT ADDRESS	INTERVIEW AT H/HOLD	OUTCOME CODE
(1)	(2)	(3)	(4)	(5)
16		16	1	
17		17	12	
18		18	14	
19		19	1	
20		20	2	
21		21	19	
22		22	11	
23		23	17	
24		24	12	
25		25	18	
26		26	18	
27		27	8	
28		28	12	
29		29	15	
30		30	7	

IF MORE THAN 30 HOUSEHOLDS PLEASE RING RESEARCH: 020 7533 5385

NATIONAL DIET AND NUTRITION SURVEY OF ADULTS AGED 19 TO 64 YEARS

IN CONFIDENCE

Area No	Address No	Check Letter	Wave Number

K1

Interviewer's Name _____

Auth No

--	--	--	--

Doorstep selection

Please complete for all eligible households. Only list eligible adults aged 19 to 64. Do not list women who are pregnant, potentially pregnant or breastfeeding.

(a) Pers Ring	(b)	(c) M F	(d) Age	(e) Number adults, starting with the eldest
01		1 2		
02		1 2		
03		1 2		
04		1 2		
05		1 2		
06		1 2		
07		1 2		
08		1 2		
09		1 2		
10		1 2		
11		1 2		
12		1 2		
13		1 2		
14		1 2		

If two or more adults are listed in the box above, use the K2 Kish Grid to select the respondent and ring selected respondent in column (e).

PA322

NATIONAL DIET AND NUTRITION SURVEY OF ADULTS AGED 19 TO 64 YEARS

KISH GRID [K2]

	Number of eligible adults in household												
	2	3	4	5	6	7	8	9	10	11	12	13	14
Address													
1	1	1	2	1	2	5	7	3	2	6	9	7	1
2	2	3	1	2	4	3	6	8	4	4	1	9	13
3	2	2	3	5	3	7	5	1	10	7	12	4	9
4	1	2	4	4	5	2	8	6	3	11	8	5	3
5	2	1	2	3	1	4	1	2	1	3	6	12	8
6	1	3	1	1	6	1	3	7	9	5	2	11	4
7	1	2	3	3	4	6	4	9	6	2	5	8	6
8	2	1	4	4	1	7	2	4	8	8	11	2	12
9	1	3	4	5	3	1	4	5	5	10	7	6	11
10	2	3	1	2	5	6	7	8	7	9	10	13	2
11	2	2	3	4	2	3	5	4	6	1	4	10	14
12	1	1	2	2	6	5	2	1	5	5	3	1	5
13	2	1	4	1	4	4	1	7	2	8	11	3	7
14	1	2	2	3	1	2	3	2	10	4	10	5	10
15	2	3	3	5	5	2	8	3	7	6	5	10	14
16	1	2	1	3	3	1	6	5	3	10	1	1	5
17	1	1	3	5	6	4	8	9	4	7	9	9	6
18	2	3	4	4	2	7	2	6	9	3	4	2	13
19	2	3	1	1	2	3	7	8	8	1	2	3	4
20	1	2	2	2	5	5	3	2	1	2	8	12	10
21	2	1	2	4	3	6	1	1	10	11	7	8	7
22	1	2	4	5	4	2	5	6	8	9	6	4	8
23	2	3	3	2	1	7	4	7	9	4	12	13	9
24	1	1	1	3	6	3	6	5	6	2	3	11	3
25	2	3	1	1	4	4	8	3	1	9	5	6	1
26	1	1	3	1	5	6	2	9	5	10	12	7	2
27	1	2	4	2	1	5	5	4	3	5	6	4	11
28	2	3	2	5	2	1	3	8	7	8	7	5	12
29	2	1	1	3	6	5	7	9	4	6	10	1	12
30	1	2	4	4	3	1	4	4	2	7	9	11	11
31	1	3	2	5	4	3	8	6	1	4	11	9	7
32	2	1	3	4	6	1	5	3	9	2	8	12	4
33	1	1	2	1	2	5	7	3	2	6	9	7	1
34	2	3	1	2	4	3	6	8	4	4	1	9	13
35	2	2	3	5	3	7	5	1	10	7	12	4	9
36	1	2	4	4	5	2	8	6	3	11	8	5	3
37	2	1	2	3	1	4	1	2	1	3	6	12	8
38	1	3	1	1	6	1	3	7	9	5	2	11	4
39	1	2	3	3	4	6	4	9	6	2	5	8	6
40	2	1	4	4	1	7	2	4	8	8	11	2	12



Adults aged 19 to 64 years

This survey is being carried out by the Social Survey Division of the Office for National Statistics in collaboration with the Medical Research Council's Human Nutrition Research unit in Cambridge. The study is being conducted on behalf of the Food Standards Agency and the Department of Health in England, Wales and Scotland.

This leaflet tells you more about why the survey is being done.

Agreeing to take part in the survey is voluntary. You may withdraw at any time should you change your mind.

What is it about?

Over the past twenty years or so there has been a considerable increase in the range of foods available in the shops. For many people this has meant changes in the kinds of foods they eat and their eating styles.

We have been asked to carry out a large national survey to find out, in detail, about the eating habits of people aged 19 to 64 years in Great Britain. Everyone taking part will first be asked to take part in an interview, carried out by one of our trained interviewers. The interview is designed to collect information on general eating habits and health, along with some basic information about the individual and their household.

People will then be asked if they would keep a record for 7 days of everything that they eat and drink, while they are at home and when they are out. As a small token of our appreciation our interviewer will give everyone who keeps the 7-day food diary a gift voucher for £10 as soon as the diary is finished.

We would also like to collect information about the people themselves, not only their age and sex, but also their eating patterns and, if they agree to our doing so, some physical measurements, such as their height and weight, blood pressure and information about their level of physical activity as well as their dental health. People will also be asked if they are willing to make a collection of their urine and if they will provide a small sample of blood.

It is not intended that individuals taking part benefit directly from the survey. Rather, the information collected, together with information about the foods eaten and physical activity, will provide a better understanding about the relationship between diet and health among the adult population of Great Britain.

All the measurements, including height, weight and blood pressure will be taken by our interviewers who have been carefully trained. The blood sample will be taken by qualified people who are particularly skilled in blood taking.

Why have we come to your household?

The households in this survey have been chosen by taking a random sample of addresses from the Post Office's list of addresses throughout the country. We then approach the people who happen to live at those addresses.

Some people think either that they or their family are not typical enough to be of any help in the survey or that they are very different from other people and they would distort the survey findings. The important thing to remember is that the community consists of a great many different types of people and families and we need to represent them all in our survey. We would therefore greatly appreciate it if everyone we approach agrees to take part.

Is the survey confidential?

Yes – the survey is confidential and used for statistical research purposes only. Access to the completed questionnaires and diaries is restricted to the Social Survey Division of ONS and the Food Standards Agency. The names and addresses of co-operating households are always kept separate from any other information given to us during this survey. Furthermore, names and addresses will not be released to the Food Standards Agency, or to any government department. The survey results will not be presented in a form which can be associated with names and addresses. No survey results are ever made available to local authorities, members of the public or the press where it is thought that individuals or households might stand a small chance of being identified.

Is the survey compulsory?

No. As with all our surveys we rely on people's voluntary help, which is essential if our work is to be successful. We would like as many people as possible to agree to help with all parts of the survey, but if some people prefer not to take part in some aspects then the rest of the information they provide is still extremely valuable. Also, anyone may withdraw from participation at any time.

We hope this leaflet answers some of the questions you might have and that it shows the importance of the survey. The interviewer will leave another leaflet with you which tells you more about the measurements we are making and the blood sample.

Your help is very much appreciated.

If you have any questions, or would like further information, or have any concerns, please contact either Michaela Pink (Survey Manager) or Lynne Henderson (Project Manager) at:

**Social Survey Division
Office for National Statistics
1 Drummond Gate
London SW1V 2QQ**

Telephone 020 7533 5465/5385

Government departments carry their own risks. Participants in the survey would, with respect to claims against DH, The Food Standards Agency, National Statistics or The Medical Research Council, be in the same position as if public liability insurance had been taken out. Initial contact address as above.



Adults aged 19 to 64 years

This survey is being carried out by the Social Survey Division of the Office for National Statistics in collaboration with the Medical Research Council's Human Nutrition Research Unit in Cambridge, for the Food Standards Agency and the Department of Health (in England, Wales and Scotland).

This leaflet tells you more about the measurements we are making along with blood and urine samples.

As with all other parts of the survey, agreeing to each of the physical measurements, the urine collection and the blood sample is voluntary.

You may withdraw at any time.

If the survey is to be successful then we need as many people as possible to help with all these aspects, but we understand if some people are unwilling to take part in some aspects. The information these people give is still extremely valuable to us.

Height, weight and other measurements

Obviously what people eat affects their weight so we are interested in people's weight. By itself though, weight is of limited use because taller people will probably weigh more anyway. Hence we need to know about weight in relation to size and the amount of muscle and fat. We will need to measure weight, height, and waist and hip circumference, which are all useful indicators of body size.

It is also interesting to look at any relationship which might exist between diet and blood pressure. If you agree, your blood pressure will be measured and the results sent to your GP immediately after the interviewer's visit. Although you can be told the results, the interviewer will not be able to interpret them for you; your GP would be able to give you more information about the blood pressure results in relation to other information he/she already has about your general health. Your GP might use blood pressure results in medical reports about you, but only with your permission.

Blood sample

The analysis of the blood will tell us a great deal about people's health and give us further information on their diet.

A small amount of blood (no more than five or six teaspoons or 30ml) is taken from the arm, using new, sterile equipment, by a qualified person. The blood is sent to laboratories in Cambridge, Southampton and Great Ormond Street Hospital in London, for a number of analyses, including measurements of haemoglobin, vitamins and minerals. Further information about what is measured and how the blood sample is taken is given in separate leaflets.

Urine sample

We would like each person taking part in the survey to collect their urine over a 24-hour period, at a time that is convenient to them. This can be analysed to tell us the level of salt in their diet which cannot accurately be measured from information collected in the food diary. We need a full collection of urine rather than a single sample as the level of salt in urine fluctuates according to what was eaten at the last meal; a collection over 24 hours gives much more reliable information on the usual levels of salt in a person's diet.

We will provide all the equipment for making the collection, which will be sterile and used only once. The collection container will contain a small amount of preservative.

The interviewer will give you an information sheet telling you exactly how to make a 24 hour collection of your urine, and answering some of the questions you may have. You will also be given a record sheet to keep during the collection.

Flagging on the NHSCR

The Department of Health and the Food Standards Agency would like to be able to find out something about what eventually happens to the people who take part in this survey; in particular: how old they are when they die, the cause of their deaths, and if they are ever diagnosed as having cancer. Information on these events will allow the Department of Health and the Food Standards Agency to look at the results from this survey and see whether diet and the other aspects of their health which are being measured are eventually related to age at death, cause of death and the likelihood of getting cancer. The National Health Service Central Register (NHSCR) already keeps a record of everyone who is in the National Health Service.

We would like your agreement to having your name 'flagged' on the Register so that in the future we can be told about any deaths and cancer registrations of individuals who took part in this survey. This means your existing record will have an electronic code attached indicating that you took part. This code will be attached to your name until you die. Flagging your name on the NHSCR will NOT mean you are contacted again in connection with this survey, and information from the flagging will not identify individuals but will be presented

as tables of results in any future reports. You are not obliged to have your name flagged. We ask for your signed permission to do this.

Is the survey confidential?

Yes – the survey is confidential and used for statistical research purposes only. Access to the completed questionnaires and diaries is restricted to the Social Survey Division of ONS and the Food Standards Agency. The names and addresses of co-operating households are always kept separate from any other information given to us during this survey. Furthermore, names and addresses will not be released to the Food Standards Agency, or to any government department. The survey results will not be presented in a form which can be associated with names and addresses. No survey results are ever made available to local authorities, members of the public or the press where it is thought that individuals or households might stand a small chance of being identified.

We hope this leaflet answers some of the questions you might have.

Your help is very much appreciated.

If you have any questions, would like further information, or have any concerns, please contact either Michaela Pink (Survey Manager) or Lynne Henderson (Project Manager) at:

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The National Statistics logo shows that the statistics meet the recognised standards of reliability and quality.

L2

NATIONAL DIET AND NUTRITION SURVEY: ADULTS AGED 19 to 64 YEARS

Dietary interview

COMPLETE FOR EACH RESPONDENT

Areacode Information already entered

Address Information already entered

Hhld Information already entered

Wave Information already entered

IntDate Enter the date on which first interview started
__ . __ . ____ (date variable format)

Dvhsize **All (variable computed in the CAPI program)**

Number of people living in the household

1. .10

HOUSEHOLD BOX

INFORMATION TO BE COLLECTED FOR EACH PERSON IN THE HOUSEHOLD

Name00..10 **All**

RECORD NAME RESPONDENT IS KNOWN BY.
FOR SUBSEQUENT MEMBERS OF HOUSEHOLD
RECORD THE NAME OF NEXT HOUSEHOLD MEMBER

Sex00..10 **All**

CODE SEX OF EACH PERSON IN HOUSEHOLD

1. Male
2. Female

Birth00..10 **All**

What is your/is..... date of birth?

__ . __ . ____ (date variable format)

Ageif00..10 **If don't know or refusal at Birth00..10**

What was your/was age last birthday?

0..97

Marsta00..10

Are you/is

1. Single, that is, never married,
2. Married and living with your husband/wife,
3. Married and separated from your husband/wife,
4. Divorced,
5. Or widowed?

Livewi00..10

If NOT code 2 at Marst00..10

May I just check, are you/is..... living with someone in the household as a couple?

1. Yes
2. No
3. SPONTANEOUS ONLY - same sex couple

Hhdlr00..10

If Dvhsiz > 1

ASK OR RECORD

In whose name is the accommodation owned or rented?

1. This person alone
2. This person jointly
5. NOT owner/renter

DvMarD00..10

Variable computed in the CAPI program

De factor marital status

1. Married
2. Cohabiting
3. Single
4. Widowed
5. Divorced
6. Separated
7. Same sex couple

Respdnt

All

CODE WHICH MEMBER OF THE HOUSEHOLD IS THE RESPONDENT

1..10

HOH

All

ASK OR RECORD

Which member of your household is the head of the household?

1..10

HiHNum

If code 3 at Hhdlr00..10

You have told me that...jointly own or rent the accommodation.
Which of you/ who has the highest income (from earnings, benefits,
pensions and any other sources)?

THESE ARE THE JOINT HOUSEHOLDERS

ENTER PERSON NUMBER - IF TWO OR MORE HAVE SAME
INCOME, ENTER 11

1..11

JntEldA

If code 11 at HiHNum

ENTER PERSON NUMBER OF THE ELDEST JOINT
HOUSEHOLDER FROM THOSE WITH THE SAME HIGHEST
INCOME

ASK OR RECORD

1..10

JntEldB

If don't know or refusal at HiHNum

ENTER PERSON NUMBER OF THE ELDEST JOINT
HOUSEHOLDER

ASK OR RECORD

1..10

DVHRPNum

Variable computed in the CAPI program

Person number of household reference person

1..10

R00..100

If NPerson >1

I would now like to ask how the other people in your household are related to each other

CODE RELATIONSHIP - ISS

1. Spouse
2. Cohabitee
3. Son/daughter (incl. adopted)
4. Step-son/daughter
5. Foster child
6. Son-in-law/daughter-in-law
7. Parent/guardian
8. Step-parent
9. Foster parent
10. Parent-in-law
11. Brother/sister (incl. adopted)
12. Step-brother/sister
13. Foster brother/sister
14. Brother/sister-in-law
15. Grand-child
16. Grand-parent
17. Other relative
18. Other non-relative

Preg

Women

May I just check – are you pregnant or is there any possibility that you could be pregnant or are you breastfeeding at the moment?

1. Yes
2. No

Term

If code 1 at Preg

YOU SHOULD FINISH THIS INTERVIEW NOW.
RESPONDENT IS/MAY BE PREGNANT AND THEREFORE
INELIGIBLE FOR THIS SURVEY.

IF PREGNANT RESPONDENT IS ONLY ELIGIBLE HOUSEHOLD
MEMBER CODE OUTCOME – INELIGIBLE

IF OTHER HOUSEHOLD MEMBERS ARE ELIGIBLE RESELECT
PERSON FOR INTERVIEW USING K1 AND K2. BEGIN INTERVIEW
AGAIN WITH NEW RESPONDENT.

Work

All

Can I just check, have you done any paid or voluntary work in the last four weeks, either as an employee or as self-employed?

1. Yes
2. No

DurIntr Now I'd like to ask you some questions about the place where you live.

Coast **All**

ASK OR RECORD

Can I check, do you live within 5 miles of the coast?

1. Yes
2. No

Kitchen **All**

Do you have a kitchen, that is a separate room in which you cook?

1. Yes
2. No

ShareKit **If code 1 at Kitchen**

Do you share the kitchen with any other household?

1. Yes
2. No

Meal **If code 2 at Kitchen**

Are you able to cook a hot meal in this accommodation?

1. Yes
2. No

CONSUMER DURABLES

All

Does your household have any of the following items in your (part of the) accommodation?

INCLUDE ITEMS STORED AND UNDER REPAIR

Fridge Refrigerator?

1. Yes
2. No

Freezer Deep freezer or fridge freezer?

1. Yes
2. No

Microw Microwave oven?

1. Yes
2. No

CarVan**All**

Is there a car or van normally available for use by you or any members of your household?

INCLUDE ANY PROVIDED BY EMPLOYERS IF NORMALLY AVAILABLE FOR PRIVATE USE BY RESPONDENT OR MEMBERS OF THE HOUSEHOLD.

EXCLUDE VEHICLES USED SOLELY FOR THE CARRIAGE OF GOODS.

1. Yes
2. No

CarNo**If code 1 at CarVan**

How many cars or vans are normally available?

1. 1
2. 2
3. 3 or more

DRINKING**IntroDri**

I'd like to ask you some questions about different kinds of beverages and non-alcoholic drinks that you might have.

Milk**All**

Nowadays, do you have milk as a drink?

INCLUDE ANY DRINK WHERE MILK IS PRIMARY INGREDIENT
E.G. MILKSHAKE, HOT CHOCOLATE MADE WITH MILK (NOT WATER)

1. Yes
2. No

Mlktyp**If code 1 at Milk**

What kind of milk do you usually have as a drink these days?

PROMPT AS NECESSARY
CODE ALL THAT APPLY

1. Whole cow's milk
2. Semi-skimmed cow's milk
3. Skimmed cow's milk
4. Powdered milk
5. Soya alternative (soya milk)
6. Sheep's milk
7. Goat's milk
8. Doesn't have any milk
9. Other (Specify at next question)

MlktypA**If code 9 at Kind**

SPECIFY THE OTHER KIND(S) OF MILK

MilkPud**All**

Do you usually have milk on cereal or in milk puddings?

1. Yes
2. No

MilkPudA**If code 1 at MilkPud**

What kind of milk do you usually have on cereal and in puddings these days?

PROMPT AS NECESSARY
CODE ALL THAT APPLY

1. Whole cow's milk
2. Semi-skimmed cow's milk
3. Skimmed cow's milk
4. Powdered milk
5. Soya milk
6. Sheep's milk
7. Goat's milk
8. Doesn't have any milk
9. Other (Specify at next question)

MlkTypB**If code 9 at MilkPudA**

SPECIFY OTHER KIND(S) OF MILK

Tea

All

Do you drink tea?

DO NOT INCLUDE HERBAL TEAS

1. Yes
2. No

TeaSwee

If code 1 at Tea

Do you usually take sugar in tea, sweeten it with artificial sweetener, or do you drink tea without sugar or sweetener?

Include lemon tea with 'Drinks tea unsweetened'

1. Sugar in tea
2. Artificial sweetener in tea
3. Drinks tea unsweetened

TArtifQ

**If code 1 at Tea
And code 2 at TeaSwee**

How many tablets or teaspoons of artificial sweetener do you usually take in a cup or mug of tea?

1. Half
2. One
3. One and a half
4. Two
5. Three
6. More than three

TeaNo

If code 1 at Tea

On average, how many cups or mugs of tea do you drink per day?

IF LESS THAN ONE CODE AS 0

0..97

HerbT

All

May I check, do you drink herbal teas, green teas or herbal drinks?

1. Yes
2. No

IntherbT	<p>If code 1 at HerbT</p> <p>I'd like to collect some information about the brand names and flavours of all the herbal teas, green teas and herbal drinks you are drinking at the moment.</p>
Hbrand1..6	<p>If code 1 at HerbT</p> <p>What brands of herbal tea, green tea or herbal drink are you drinking at the moment?</p> <p>RECORD FULL BRAND NAME OF ALL HERBAL TEAS/DRINKS</p>
Htype1..6	<p>If code 1 at HerbT</p> <p>What flavour is that (herbal tea, green tea or herbal drink)?</p> <p>RECORD FLAVOUR FOR EACH HERBAL TEA/DRINK</p>
Brand1..6	<p>If code 1 at HerbT</p> <p>ENTER BRAND CODE FOR EACH HERBAL TEA/DRINK</p> <p>00001..99997</p>
Coffee	<p>All</p> <p>Do you drink coffee?</p> <ol style="list-style-type: none"> 1. Yes 2. No
CofSwee	<p>If code 1 at Coffee</p> <p>Do you usually take sugar in coffee, sweeten it with artificial sweetener, or do you drink coffee without sugar or sweetener?</p> <ol style="list-style-type: none"> 1. Sugar in coffee 2. Artificial sweetener in coffee 3. Drinks coffee unsweetened
CArtifQ	<p>If code 1 at Coffee AND code 2 at Cofswhee</p> <p>How many tablets or teaspoons of artificial sweetener do you usually take in a cup or mug of coffee?</p> <ol style="list-style-type: none"> 1. Half 2. One 3. One and a half 4. Two 5. Three 6. More than three

CoffNo

If code 1 at Coffee

On average how many cups or mugs of coffee do you drink per day?

IF LESS THAN ONE CODE AS 0

0..97

IntroArt

All

Some people use artificial sweeteners when they are preparing different kinds of foods. I'd now like to ask you some questions about whether artificial sweeteners are used in the cooking or preparation of some of the foods you might eat.

Cook

All

(Apart from in tea and coffee) do you (or does anyone else) use artificial sweeteners to sweeten any of your food, either at the table or in cooking?

1. Yes
2. No

CookInt

If code 1 at Cook

For the next few questions I'll be listing some different types of foods. If you eat them at all, I'd like to know whether you use artificial sweetener to sweeten them.

YOU MAY NEED TO SPEAK TO THE PERSON IN THE HOUSEHOLD WHO USUALLY PREPARES THE FOOD.

Cook1

If code 1 at Cook

Do you or does anyone else use an artificial sweetener, either at the table or in cooking, to sweeten...

...stewed or cooked fruit?

1. Yes used
2. Not used
3. SPONTANEOUS: Not eaten

Cook2

...fresh fruit?

1. Yes used
2. Not used
3. SPONTANEOUS: Not eaten

Cook3 ...breakfast cereals?

1. Yes used
2. Not used
3. SPONTANEOUS: Not eaten

Cook4 ...homemade cakes, biscuits or pastry?

1. Yes used
2. Not used
3. SPONTANEOUS: Not eaten

Cook5 ...drinks other than tea or coffee?

1. Yes used
2. Not used
3. SPONTANEOUS: Not eaten

Cook6 ...any other food or drink?

1. Yes
2. Not

CookOth **If code 1 at Cook AND code 1 at Cook6**

Specify other food or drink

Sbrand1..6 **If code 2 at TeaSwee OR code 2 at CofSwee OR code 1 at Cook**

FOR EACH ARTIFICIAL SWEETENER USED

What brands of artificial sweetener are you using to sweeten your food and drinks at the moment?

RECORD FULL NAME OF ALL ARTIFICIAL SWEETENER(S)

Stype1..6 **If code 2 at TeaSwee OR code 2 at CofSwee OR code 1 at Cook**

FOR EACH ARTIFICIAL SWEETENER USED

What form does that artificial sweetener take?

1. Tablet (INCLUDE MINICUBES)
2. Liquid
3. Granulated

CodeSw1..6 **If code 2 at TeaSwee OR code 2 at CofSwee OR code 1 at Cook**

FOR EACH ARTIFICIAL SWEETENER USED
ENTER THE BRAND CODE FOR THIS PRODUCT

00001..99997

Dvartif **Variable computed in the CAPI program**

Respondent uses artificial sweetener

1. Yes
2. No

SALT

IntrSalt **All**

Now I'd like to ask you a few questions about whether salt, including sea salt, or a salt alternative is added to your food at all.

SaltCook **All**

Do you or does anybody else add salt, or a salt alternative, to your food during cooking?

SALT INCLUDES SEA SALT
PROMPT EACH TYPE OF SALT

1. Yes, adds salt (INCLUDES SEA SALT)
2. Yes, uses 'Lo-Salt' or salt alternative (NOT SEA SALT)
3. No, does not use salt in cooking
4. Other (Specify at next question)

SaltA **If code 4 at SaltCook**

SPECIFY OTHER SALT ADDED DURING COOKING

SaltTab1 **All**

At the table, do you add salt to your food ..

RUNNING PROMPT

1. usually
2. occasionally
3. rarely
4. or never?

SaltTab2**If codes 1 to 3 at SaltTab1**

And can I check, what kind of salt do you add to your food at the table?

1. Salt (INCLUDES SEA SALT)
2. 'Lo-Salt' or a salt alternative (NOT SEA SALT)
3. Other (Specify at next question)

SaltB**If code 3 at SaltTab2**

SPECIFY OTHER SALT ADDED AT TABLE

SIZE OF APPETITE**Appet****All**

How would you describe your appetite? Do you have...

RUNNING PROMPT

1. a good appetite
2. an average appetite
3. or a poor appetite for someone of your age?

FOOD FREQUENCIES

Intrfreq

All

I would now like to ask you about some foods and drinks which you may have. As I read out each type of food or drink, I'd like you to tell me about how often, on average, you have it, choosing your answers from this card.

SHOW CARD A

1. Never
2. Less than once a month
3. At least once a month – but less often than once a week
4. At least once a week - but not most days
5. Most days – but not every day
6. Once a day
7. More than once a day

PROMPT EACH FOOD LISTED

FOR SEASONAL FOODS ADD: 'at this time of year'

Freqof1. .31

Sweet biscuits

Cakes

Sheep or goat's milk, including in cooking and in tea or coffee

Soya-based alternatives to meat and dairy products, such as TVP, soya bean curd or tofu, soya alternative to milk and soya yoghurt

Soya oil, including in cooking, but not mixed with oil

Sunflower oil, including in cooking, but not mixed with oil

Rapesead oil, including in cooking, but not mixed oil

Olive oil, including in cooking, but not mixed oil?

Ice-cream, including low fat and non-dairy ice-cream, ice-cream desserts such as Viennetta and arctic roll and ice-cream lollies such as Solero and Magnum

Ice lollies not including ice-cream lollies

Beef and beef products, including beef joints and minced beef, cooked and canned beef, corned beef and beef in burgers, pies, sausages and other products

Liver and liver products including liver pate and liver sausage

Other offal apart from liver, such as kidney

Lettuce, of any variety, at this time of year

Nuts and nut products, including peanut butter and nut roast

Fruit juice, not including fruit drinks or squash

Diet fizzy drinks, not including mineral water

Other diet or low calorie soft fruit drinks, such as diet squashes and low calorie ready-to-drink drinks

Fizzy drinks, not including mineral water

Other non-diet soft drinks, such as squashes and ready-to-drink drinks

Chocolate confectionery

Sugar-free confectionery, that is confectionery that is labelled sugar-free (do not include sugar-free chewing gum or diabetic confectionery at this question)

Sugar confectionery (do not include chocolate confectionery previously mentioned)

Sugar-free chewing gum

Non sugar-free chewing gum

New potatoes with the skins on

Other potatoes, cooked in any way, with the skins on

Unpeeled carrots, raw or cooked

Fresh apples, with the peel left on, raw or cooked

Fresh pears, with the peel left on, raw or cooked

The peel of fresh citrus fruit, such as lemons, oranges, tangerines and limes, not including in purchased marmalade (Include peel used in cooking or homemade marmalade).

VEGETARIANISM

Vegi

All

Can I check, are you vegetarian or vegan?

1. Yes
2. No

VegiA

If code 1 at Vegi

I'd like to know what types of food you avoid. Do you avoid?

CODE ALL THAT APPLY

1. Red meat
2. White meat
3. Fish
4. Eggs
5. Milk
6. Other dairy products, such as butter and cheese
7. All animal products
8. Avoids other foods (Specify at next question)

Vegifood

If code 8 at VegiA

SPECIFY OTHER FOOD(S) AVOIDED

Vegiwhy

If code 1 at Vegi

Why did you become a vegetarian/vegan?

CODE ALL THAT APPLY

1. Moral or ethical reasons (including cruelty to animals)
2. Religious reasons
3. Health reasons
4. Preference (does not like the taste of meat)
5. Cost or convenience
6. Other (Specify at next question)

Vegiwhy0

If code 6 at Vegiwhy

SPECIFY OTHER REASON(S) FOR BECOMING
VEGETARIAN/VEGAN

Veginfo**If code 1 at Vegi**

Have you ever obtained information about a vegetarian/vegan from...?

CODE ALL THAT APPLY

RUNNING PROMPT

1. a doctor
2. a dietician or nutritionist
3. Vegetarian Society/Vegan Society?
4. Other (Specify at next question)

5. Has not obtained any information

Veginfot**If code 8 at Veginfo**

SPECIFY OTHER SOURCE OF INFORMATION

Avoid**All**

Are there any other foods that you avoid because you are allergic to them, or for religious, health or other reasons? We do not need to know about foods that the respondent avoids because they do not like them.

1. Yes
2. No

Which1..10**Code 1 at Avoid**

Which food(s) do you avoid?

WhyAv1..10**Code 1 at Avoid**

FOR EACH ITEM AVOIDED ASK:

Why do you never eat (ITEM NEVER EATEN)?

CODE ALL THAT APPLY

1. Allergy
2. Religious reasons
3. Health reasons
4. Vegetarian/vegan
5. Can't afford it
6. Can't get it (in this area)
7. Other (Specify at next question)

OthAv1..10**If code 8 at WhyAv1..10**

SPECIFY OTHER REASON

AlleDr1..10

If code 1 at WhyAv1..10

FOR EACH FOOD ITEM WITH ALLERGY ASK:

Has this allergy been diagnosed by a doctor?

1. Yes
2. No

SLIMMING

Slim

All

Can I just check, are you dieting to lose weight at the moment?

1. Yes
2. No

ORGANIC FOODS AND DRINKS

Introrg

All

A lot of shops and supermarkets nowadays are selling foods which are labelled as 'organic' or 'organically grown'. The next set of questions is about organic food.

Organic

All

What do you understand by the term 'organic' or 'organically grown'?

1. Grown without pesticides
2. Grown without artificial (or chemical) fertilisers
3. Grown without pesticides and without artificial (or chemical) fertilisers
4. Free range
5. A health food (healthier or better for you)
6. Something else (including no antibiotics or hormones, or fresh or naturally grown fruit and vegetables)
7. Don't know, don't understand

OrgUnd

If code 6 at Organic

SPECIFY OTHER ANSWER(S)

OrgBuy

All

Do you buy any 'organic' foods for yourself or does anyone ever buy them for you?

1. Yes
2. No

Orgwhat**If code 1 at OrgBuy**

I'd like you to look at the foods listed on this card. Which of them do you buy or do you have bought for you as organic products?

1. Fresh fruit, or fruit juice
2. Dried fruit
3. Nuts
4. Potatoes
5. Vegetables or salad (including celery), dried beans or lentils
6. Breakfast cereals
7. Other cereal products, eg bread, rice, pasta
8. Meat, including chicken
9. (Free range) eggs
10. Milk
11. Other dairy products
12. Crisps or savoury snacks
13. Biscuits and cakes, including cereal crunchy bars
14. Confectionery

OrgOth**If code 1 at OrgBuy**

Do you buy any other organic foods for yourself or does anyone buy any for you?

1. Yes
2. No

OrgSpec1. .3**If code 1 at OrgOth**

What else do you buy?

OrgOft1. .3**If code 1 at OrgOth**

ASK FOR EACH OTHER ORGANIC ITEM BOUGHT

Do you buy (ANSWER AT ORGSPEC) for yourself always, often or only sometimes?

1. Always
2. Often
3. Sometimes

FREE FOODS

Allot

All

Do you grow your own fruit and vegetables, either in your garden or on an allotment?

INCLUDE SALAD VEGETABLES AND HERBS GROWN IN THE GARDEN/ALLOTMENT

EXCLUDE HERBS GROWN ON THE WINDOW-LEDGE

EXCLUDE PRODUCE GROWN IN THE GARDEN OF A FRIEND OR RELATIVE

1. Yes
2. No

AllotA

If code 1 at Allot

Do you grow them using pesticides?

1. No, never
2. Yes, sometimes
3. Yes, always

AllotB

If code 1 at Allot

Do you grow them using any artificial (or chemical) fertilisers?

1. No, never
2. Yes, sometimes
3. Yes, always

Free

All

Apart from food you grow yourself, do you ever eat any 'free foods'?
By 'free' I mean food you have picked or got yourself, such as fish, berries, mushrooms, windfall apples?

'Free foods' can be defined as food collected from the wild, so do not include homegrown foods or foods grown on an allotment. Therefore, windfall apples from own or neighbour's garden or mushrooms etc grown at home are NOT included.

1. Yes
2. No

FreeName**If code 1 at Free**

What 'free' foods do you eat?

CODE ALL THAT APPLY

1. Game (rabbit, partridge, pheasant etc.)
2. Venison
3. Berries
4. Other fruit (apples, pears etc.)
5. Fungi (mushrooms)
6. Freshwater Fish
7. Shellfish
8. Other sea fish
9. Other (Specify at next question)

FreeOth**If code 9 at FreeName**

SPECIFY OTHER 'FREE' FOODS

Farm**All**

Do you buy any foods directly from a farm?

INCLUDE FOODS SOLD BY FARM NOT NECESSARILY
PRODUCED THERE

1. Yes
2. No

Farmspec**If code 1 at Farm**

What kinds of foods do you buy directly from a farm?

CODE ALL THAT APPLY

1. Offal, such as liver and kidney
2. Other meat
3. Fish
4. Milk
5. Other dairy (yogurt, cheese, butter)
6. Eggs
7. Fruit
8. Potatoes
9. Other vegetables
10. Other (Specify at next question)

Farmoth**If code 10 at Farmspec**

SPECIFY OTHER FOODS BOUGHT FROM A FARM

Animals**All**

Do you or does anyone in your household keep hens or other animals to provide you with food?

1. Yes
2. No

Animfood**If code 1 at Animals**

What kinds of food do these animals provide?

CODE ALL THAT APPLY

1. Eggs
2. Milk or milk products
3. Meat
4. Honey
5. Other (Specify at next question)

OthAnim**If code 5 at Animfood**

SPECIFY OTHER FOOD(S) FROM KEPT ANIMALS

STORE CUPBOARD

StorInt

All

I'd like you to think now about different foods that come in cans.
How long, on average, would you keep...

PROMPT EACH FOOD ITEM

.....in an opened can before eating them?

SHOW CARD C

1. More than a week
2. No more than four or five days
3. No more than two or three days
4. No more than one day
5. Use on same day

6. SPONTANEOUS: Never stored in an open can
7. SPONTANEOUS: Not eaten/drunk

Cans1

Baked beans

Cans2

Canned tomatoes

Cans3

Other canned vegetables

Cans4

Spaghetti

Cans5

Canned fruit

Cans6

Canned soup

Cans7

Canned fish, for example sardines, tuna

DIETARY SUPPLEMENTS

SupplInt

The next section is about any dietary supplements that you might take.

FolicA

Women

At present, are you being prescribed folic acid in any form, including as part of a multivitamin or multimineral supplement?

IF TAKING NON-PRESCRIBED FOLIC ACID SUPPLEMENTS,
INCLUDE THESE IN VITAMIN/MINERAL SUPPLEMENTS SECTION

1. Yes, being prescribed
2. No, not being prescribed
3. Doesn't know/not sure
4. SPONTANEOUS: Taking non-prescribed folic acid

Vitamin**All**

Are you taking any extra vitamins, minerals, including fluoride, or other dietary supplements or any herbal preparations, including any which are not prescribed by your doctor?

INCLUDE PRESCRIBED AND NON-PRESCRIBED SUPPLEMENTS
E.G. VITAMIN DROPS, MULTIVITAMIN TABLETS, IRON TABLETS;
EXCLUDE DRINKS, YOGURTS OR FOODS FORTIFIED WITH
VITAMINS

1. Yes
2. No

VitIntro**If code 1 at Vitamin**

ASK RESPONDENT FOR SUPPLEMENT CONTAINERS

VitName1..10**If code 1 at Vitamin**

RECORD FULL NAME, INCLUDING BRAND AND STRENGTH OF
EACH SUPPLEMENT

VitForm1..10**If code 1 at Vitamin**

RECORD FORM OF EACH SUPPLEMENT

1. Tablets
2. Capsules
3. Drops
4. Liquid / syrup
5. Powder

VitDose1..10**If code 1 at Vitamin**

RECORD DOSE TAKEN OF EACH SUPPLEMENT
: NO. OF TABLETS, DROPS, 5 ml SPOONS

01. .10

VitFreq1..10**If code 1 at Vitamin**

CODE FREQUENCY EACH SUPPLEMENT TAKEN: NO. OF
TIMES AND PERIOD

1. Less than one a day
2. Once a day
3. Twice a day
4. Three times a day
5. Four times a day
6. Five times a day

VitLic1..10

If code 1 at Vitamin

RECORD PRODUCT LICENCE NO. (IF ANY) OF EACH
SUPPLEMENT

ENTER 0 IF NONE AVAILABLE

- - - - / - - - - (product licence variable format)

VitCate1..10

If code 1 at Vitamin

CODE CATEGORY FOR EACH SUPPLEMENT

1. Fluoride only
2. Cod liver oil and other fish-based supplements
3. Evening primrose oil type supplements
4. Vitamin C only
5. Other single vitamins NOT vitamin C
6. Vitamins A, C and D only
7. Vitamins with iron
8. Iron only
9. Non-prescribed folic acid
10. Multivitamins and multiminerals
11. Multivitamins NO minerals
12. Minerals ONLY; NOT fluoride or iron ONLY
13. Ginseng
14. Ginkgo
15. Garlic
16. St John's Wort
17. Saw Palmetto
18. Aloe
19. Red Clover
20. Hawthorne
21. Echinacea
22. Goldenseal
23. Echinacea & Goldenseal
24. Other (Specify at next question)

VitOth1..10

If code 24 at Vitcate1..10

SPECIFY OTHER KIND FOR EACH SUPPLEMENT

LEVEL OF PHYSICAL ACTIVITY

ExerInt Now I'd like to ask you about how physically active you are.

Active **If code 1 at Work**

Thinking about your (main) job in general, and including voluntary work, would you say that you are...

RUNNING PROMPT

1. very physically active,
2. fairly physically active,
3. not very physically active,
4. or not at all physically active in your job?

Compact **All**

(And) in general and including things you do in your free time, compared to other people of your age would you describe yourself as.....

RUNNING PROMPT

1. very physically active,
2. fairly physically active,
3. not very physically active,
4. or not at all physically active?

MEDICAL HISTORY

Introill Now I'd like to ask you some questions about your general health.

Illness **All**

Do you have any long-standing illness, disability or infirmity? By long-standing I mean anything that has troubled you over a period of time or that is likely to affect you over a period of time.

1. Yes
2. No

IllnessA **If code 1 at Illness**

What is the matter with you?

LimitAct **If code 1 at Illness**

Does this illness or disability (Do these illnesses or disabilities) limit your activities in any way?

1. Yes
2. No

Cutdown**All**

Now I'd like you to think about the two weeks ending yesterday. During those two weeks, did you have to cut down on any of the things you usually do about the house, (or at work/college) or in your free time because of (a condition you have just told me about or any other) illness or injury?

1. Yes
2. No

NDayCutD**If code 1 at Cutdown**

How many days was this in all during these last two weeks, including Saturdays and Sundays?

1. .14

CutMatt**If code 1 at Cutdown**

What was the matter with you?

Accid**All**

In the past 12 months, that is since ..., have you had any kind of accident as a result of which you saw a doctor or went to the hospital as an outpatient or inpatient?

1. Yes
2. No

Operat**All**

Can I check, in the last 12 months, since ..., have you had a surgical operation of any sort?

1. Yes
2. No

Hospit**All**

During the past 12 months, that is since ..., have you stayed in hospital as an inpatient, overnight or longer?

INTERVIEWER: EXCLUDE GOING TO HOSPITAL TO GIVE BIRTH

1. Yes
2. No

Antihyp

All

Can I just check, are you currently taking any medicines prescribed by your doctor to lower your blood pressure?

1. Yes
2. No

Edent

All

Do you have any of your own natural teeth?

1. Yes
2. No

Dentist

All

In general, would you say that you see a dentist NOWADAYS for regular check-ups, occasional check-ups or only when you are having trouble with your teeth?

1. Regular check-ups
2. Occasional check-ups
3. Only when having trouble with teeth
4. Never see dentist/not registered with dentist

SMOKING

SmokIntr

All

The next section consists of a series of questions about smoking.

SmokEver

All

Have you ever smoked a cigarette, a cigar or a pipe?

1. Yes
2. No

SmokeNow

If code 1 at SmokEver

Do you smoke cigarettes at all nowadays?

1. Yes
2. No

DlySmoke	<p>If code 1 at SmokEver AND SmokeNow</p> <p>About how many cigarettes a day do you usually smoke on weekdays?</p> <p>IF LESS THAN ONE A DAY, CODE 0</p>
WEndSmok	<p>If code 1 at SmokEver AND SmokeNow</p> <p>About how many cigarettes a day do you usually smoke at weekends?</p> <p>IF LESS THAN ONE A DAY, CODE</p>
CigType	<p>If code 1 at SmokEver AND SmokeNow</p> <p>Do you mainly smoke filter-tipped cigarettes, plain or untipped cigarettes, or hand-rolled cigarettes?</p> <ol style="list-style-type: none"> 1. Filter-tipped cigarettes 2. Plain or untipped cigarettes 3. Hand-rolled cigarettes
CigEver	<p>If code 1 at SmokEver AND NOT code 1 at SmokeNow</p> <p>Have you ever smoked cigarettes regularly?</p> <ol style="list-style-type: none"> 1. Yes 2. No
CigUsed	<p>If code 1 at Cigever</p> <p>About how many cigarettes did you smoke IN A DAY when you smoked them regularly?</p> <p>IF LESS THAN ONE A DAY, CODE 0</p>
CigStop	<p>If code 1 at CigEver</p> <p>How long ago did you stop smoking cigarettes regularly?</p> <ol style="list-style-type: none"> 1. Less than 6 months ago 2. 6 months but less than a year ago 3. 1 year but less than 2 years ago 4. 2 years but less than 5 years ago 5. 5 years but less than 10 years ago 6. 10 years or more ago

DRINKING - ALCOHOL

Drinks

All

The next set of questions is about what you drink - that is, if you do drink alcohol.

Do you ever drink alcohol nowadays, including drinks you brew or make at home?

1. Yes
2. No

DrinkAny

If code 2 at Drinks

Could I just check, do you never have an alcoholic drink nowadays, or do you have an alcoholic drink very occasionally, perhaps for medicinal purposes or on special occasions like Christmas or New Year?

1. Very occasionally
2. Never

Shandy

If code 1 at Drinks OR code 1 at DrinkAny

SHOW CARD D

How often have you had a drink of SHANDY, excluding bottles or cans, during the last 12 months, that is since ...?

1. Almost every day
2. Five or six days a week
3. Three or four days a week
4. Once or twice a week
5. Once or twice a month
6. Once every couple of months
7. Once or twice a year
8. Not at all in the last 12 months

ShandyQ

If code 1 at Drinks OR code 1 at DrinkAny AND NOT Code 8 at Shandy

How much SHANDY, excluding bottles or cans, have you usually drunk on any one day during the last 12 months, (that is since ...)?

CODE NUMBER OF HALF-PINTS

1. .97

Beer

If code 1 at Drinks OR code 1 at DrinkAny

SHOW CARD D

How often have you had a drink of BEER, LAGER, STOUT or CIDER during the last 12 months, that is since ...?

1. Almost every day
2. Five or six days a week
3. Three or four days a week
4. Once or twice a week
5. Once or twice a month
6. Once every couple of months
7. Once or twice a year
8. Not at all in the last 12 months

BeerM

If code 1 at Drinks OR code 1 at DrinkAny AND NOT code 8 at Beer

How much BEER, LAGER, STOUT or CIDER have you usually drunk on any one day during the last 12 months?

CODE MEASURES THAT YOU ARE GOING TO USE.
CODE ALL THAT APPLY. PROBE IF NECESSARY.

1. half pints
2. small cans
3. large cans
4. bottles
5. other (SPECIFY AT NEXT QUESTION)

BeerQ

If code 1 at Drinks OR code 1 at DrinkAny AND NOT code 8 at Beer AND NOT code 5 at BeerM

ASK OR CODE

How many (units at BeerM) have you usually drunk on any one day during the last 12 months, that is since ...?

CODE THE NUMBER OF (units at BeerM)

1. .97

XBeerQ	<p>If code 1 at Drinks OR code 1 at DrinkAny AND NOT code 8 at Beer AND code 5 at BeerM</p> <p>SPECIFY OTHER AMOUNT OF BEER/LAGER/STOUT/CIDER USUALLY DRUNK ON ANY ONE DAY DURING THE LAST 12 MONTHS, THAT IS SINCE ...</p>
Spirits	<p>If code 1 at Drinks OR code 1 at DrinkAny</p> <p>SHOW CARD D</p> <p>How often have you had a drink of SPIRITS or LIQUEURS, such as gin, whisky brandy, rum, vodka, advocaat or cocktails during the last 12 months, that is since ...?</p> <ol style="list-style-type: none"> 1. Almost every day 2. Five or six days a week 3. Three or four days a week 4. Once or twice a week 5. Once or twice a month 6. Once every couple of months 7. Once or twice a year 8. Not at all in the last 12 months
SpiritsQ	<p>If code 1 at Drinks OR code 1 at DrinkAny AND NOT code 8 at Spirits</p> <p>How much SPIRITS or LIQUEURS (such as gin, whisky, brandy, rum, vodka, advocaat or cocktails) have you usually drunk on any one day during the last 12 months, that is since ...?</p> <p>CODE THE NUMBER OF SINGLES - COUNT DOUBLES AS TWO SINGLES OR CODE 97 AND SPECIFY AT NEXT QUESTION.</p> <p>01..97</p>
XSpiritQ	<p>If code 1 at Drinks OR code 1 at DrinkAny AND NOT code 8 at Spirits AND 97 at SpiritsQ</p> <p>SPECIFY AMOUNT OF SPIRITS OR LIQUEURS (SUCH AS GIN, WHISKY, BRANDY, RUM, VODKA, ADVOCAAT OR COCKTAILS) USUALLY DRUNK ON ANY ONE DAY DURING THE LAST 12 MONTHS, THAT IS SINCE ...</p>
Sherry	<p>If code 1 at Drinks OR code 1 at DrinkAny</p> <p>SHOW CARD D</p> <p>How often have you had a drink of SHERRY or MARTINI, including port, vermouth, cinzano and dubonnet during the last 12 months, that is since ...?</p> <ol style="list-style-type: none"> 1. Almost every day 2. Five or six days a week 3. Three or four days a week 4. Once or twice a week 5. Once or twice a month 6. Once every couple of months 7. Once or twice a year 8. Not at all in the last 12 months

SherryQ

If code 1 at Drinks OR code 1 at DrinkAny AND NOT code 8 at Sherry

How much SHERRY or MARTINI (including port, vermouth, cinzano and dubonnet) have you usually drunk on any one day during the last 12 months, that is since ...?

CODE THE NUMBER OF GLASSES OR CODE 97 AND SPECIFY AT NEXT QUESTION.

1. .97

XSherryQ

If code 1 at Drinks OR code 1 at DrinkAny AND NOT code 8 at Sherry AND 97 at SherryQ

SPECIFY AMOUNT OF SHERRY OR MARTINI (INCLUDING PORT, VERMOUTH, CINZANO AND DUBONNET) USUALLY DRUNK ON ANY ONE DAY DURING THE LAST 12 MONTHS, THAT IS SINCE ...

Wine

If code 1 at Drinks OR code 1 at DrinkAny

SHOW CARD D

How often have you had a drink of WINE, including babycham and champagne, during the last 12 months, that is since ...?

1. Almost every day
2. Five or six days a week
3. Three or four days a week
4. Once or twice a week
5. Once or twice a month
6. Once every couple of months
7. Once or twice a year
8. Not at all in the last 12 months

WineQ

If code 1 at Drinks OR code 1 at DrinkAny AND NOT code 8 at Wine

How much WINE (including babycham and champagne) have you usually drunk on any one day during the last 12 months, that is since ...?

CODE THE NUMBER OF GLASSES OR CODE 97 AND SPECIFY AT NEXT QUESTION.

1 BOTTLE = 6 GLASSES, 1 LITRE = 8 GLASSES.

1. .97

XWineQ

If code 1 at Drinks OR code 1 at DrinkAny AND NOT code 8 at Wine AND 97 at WineQ

SPECIFY AMOUNT OF WINE (INCLUDING BABYCHAM AND CHAMPAGNE) USUALLY DRUNK ON ANY ONE DAY DURING THE LAST 12 MONTHS, THAT IS SINCE ...

AlcPop**If code 1 at Drinks OR code 1 at DrinkAny**

SHOW CARD D

How often have you had a drink of ALCOPOPS, that is alcoholic lemonade, alcoholic cola or other alcoholic fruit- or herb-flavoured drinks, such as Hooch, Two Dogs, Alcola, Moscow Mule and V2, during the last 12 months, that is since ...?

1. Almost every day
2. Five or six days a week
3. Three or four days a week
4. Once or twice a week
5. Once or twice a month
6. Once every couple of months
7. Once or twice a year
8. Not at all in the last 12 months

AlcPopQ**If code 1 at Drinks OR code 1 at DrinkAny AND NOT code 8 at AlcPop**

How much ALCOPOPS (ie alcoholic lemonade, alcoholic cola or other alcoholic fruit- or herb-flavoured drinks) have you usually drunk on any one day during the last 12 months, that is since ...?

CODE THE NUMBER OF BOTTLES OR CODE 97 AND SPECIFY AT NEXT QUESTION.

1..97

XAlcPopQ**If code 1 at Drinks OR code 1 at DrinkAny AND NOT code 8 at AlcPop AND 97 at AlcPopQ**

SPECIFY AMOUNT OF ALCOHOLIC LEMONADE, ALCOHOLIC COLA AND OTHER ALCOHOLIC FRUIT- AND HERB-FLAVOURED DRINKS USUALLY DRUNK ON ANY ONE DAY DURING THE LAST 12 MONTHS, THAT IS SINCE ...

ORAL CONTRACEPTIVES AND MENOPAUSE/HRT - SELF-COMPLETION

Women

SelfIntC

The next set of questions is for you to fill in yourself on the computer. I will show you how to answer the first two questions and then I'll be here if you need any help.

The next section is about some medicines that are sometimes prescribed to women, such as the contraceptive pill and HRT or hormone replacement therapy.

1. CASI self-completion accepted and completed
2. Completed by interviewer
3. Section refused

Woman AND NOT code 3 at SelfIntC AND aged under fifty

OralC

Are you currently taking the contraceptive pill or having a contraceptive injection or implant?

1. Yes
2. No

Woman AND NOT code 3 at SelfIntC AND aged under fifty AND code 1 at OralC

OralBran

What is the brand name of your contraceptive?

OralType

Woman AND NOT code 3 at SelfIntC AND aged under fifty AND code 1 at OralC

What kind of contraceptive is this?

1. Injection
2. Mini pill (progestogen only)
3. Combined pill
4. Implant (Norplant)
5. Not sure

Menopaus

Woman AND NOT code 3 at SelfIntC AND aged forty and over

Have you started or had the menopause (change of life) yet?

INCLUDE EARLY OR SURGICAL MENOPAUSE, E.G. AS A RESULT OF HYSTERECTOMY.

1. Yes
2. No
3. Not sure

HRT

**Woman AND NOT code 3 at SelfIntC AND aged forty and over
AND code 1 OR 3 at Menopaus**

Are you currently taking or having any type of HRT, that is hormone replacement therapy?

INCLUDE PRESCRIBED HRT EVEN IF ONLY TAKEN
OCCASIONALLY

1. Yes
2. No

Thank you for answering our questions. Please hand the laptop back to the interviewer.

EDUCATION

All

EducInt

I'd now like to ask you a couple of questions about your education.

EducAge

How old were you when you finished your continuous full-time education?

1. Not yet finished
2. 14
3. 15
4. 16
5. 17
6. 18
7. 19
8. 20
9. 21 or over
10. No formal education

HiQual

I would now like to ask you about education and work-related training. Please look at this card and tell me whether you have any of the qualifications listed. Start at the top of the list and tell me the first one you come to that you have passed.

SHOW CARD E
CODE FIRST THAT APPLIES

1. Degree
2. Teaching qualifications
3. HNC/HND, BEC/TEC Higher, BTEC Higher
4. City and Guilds Full Technological Certificate
5. Nursing qualifications (SRN, SCM, RGN, RM, RHV, Midwife)
7. ONC/OND/BEC/TEC NOT Higher
8. City and Guilds Advanced/Final
9. 'O' Level passes (Grade A to C if after 1975)
10. GCSE (Grades A to C)
11. CSE (Grade 1)
12. SCE Ordinary (Bands A to C)
13. Standard Grade (Levels 1 to 3)
14. SLC Lower
15. SUPE Lower or ordinary
16. School certificate or Matric
17. City and Guilds Craft/Ordinary level
18. CSE Grades 2 to 5
19. GCE 'O' Level (Grades D&E if after 1975)
20. CSE (Grades D,E,F,G)
21. SCE Ordinary (Bands D & E)
22. Standard Grade (Level 4, 5)
23. Clerical or commercial qualifications
24. Apprenticeship
25. CSE Ungraded
26. Other qualifications (Specify at next question)
27. No formal qualifications

QualOth

If code 26 at HiQual

SPECIFY OTHER QUALIFICATION

NATIONAL IDENTITY AND ETHNICITY

All

Birth11

In which country were you born?

1. England
2. Scotland
3. Wales
4. Northern Ireland
5. Outside UK

Ethnic

SHOW CARD F

To which of these groups do you consider you belong?

1. White
2. Black - Caribbean
3. Black - African
4. Black - Other Black groups
5. Indian
6. Pakistani
7. Bangladeshi
8. Chinese
9. None of these

HOUSING TENURE

All

TenIntro

The next section includes some more questions about your household.

HLong

Enter the number of completed years at the address.

Note that question relates to address rather than place - respondent could have moved address within same place.

1. Less than 12 months
2. 12 months but less than 2 years
3. 2 years but less than 3 years
4. 3 years but less than 5 years
5. 5 years but less than 10 years
6. 10 years but less than 20 years
7. 20 years or more

HMnths	<p>If code 1 at HLong</p> <p>How many months have you lived here? 1..12</p>
Acomtyp	<p>All</p> <p>RECORD OR ASK IS THE HOUSEHOLD'S ACCOMMODATION...</p> <p>IF THE H'HOLD OCCUPIES A FLAT IN A CONVERTED HOUSE, CODE 2</p> <ol style="list-style-type: none"> 1. a house or bungalow 2. a flat or maisonette 3. a room or rooms 4. other?
Hsetyp	<p>If code 1 at Acomtyp</p> <p>RECORD OR ASK A semi-detached house is one of a pair which are joined together. A house at the end of a terrace must be coded 3 even if there are only three houses in the terrace.</p> <p>Houses which are joined only by a garage (link-detached) should be coded detached.</p> <ol style="list-style-type: none"> 1. detached 2. semi-detached 3. or terraced/end of terrace?
Flattyp	<p>If code 2 at Acomtyp</p> <p>RECORD OR ASK IS IT...</p> <ol style="list-style-type: none"> 1. a purpose built block 2. a converted house/some other kind of building?
OthActyp	<p>If code 3 at Acomtyp</p> <p>RECORD OR ASK IS IT...</p> <ol style="list-style-type: none"> 1. a caravan, mobile home or houseboat 2. some other kind of accommodation?

OwnHome**All**

Does your household own or rent this accommodation?

PROMPT AS NECESSARY

1. Owns - with mortgage /loan
2. Owns - outright
3. Rents - Local Authority/new town
4. Rents - Housing Association
5. Rents - privately unfurnished
6. Rents - privately furnished
7. Rents - from employer
8. Rents - other with payment
9. Rent free

HOUSEHOLD INCOME**FCredit****All**

Can I just check, are you (and your partner or anyone else in your household) currently receiving Working Families Tax Credit?

1. Yes
2. No

ISupp**All**

And have you (or your partner or anyone else in your household) drawn Income Support at any time within the last 14 days?

1. Yes
2. No

ISeek**All**

And have you (or your partner or anyone else in your household) drawn (Income-related) Job Seeker's Allowance at any time within the last 14 days?

1. Yes
2. No

GIncome

All

SHOWCARD G

Could you please look at this card and tell me which group represents the gross income of the whole household. Please include income from all sources before any compulsory deductions such as income tax, national insurance and superannuation contributions.

SHOW CARD G

REMIND RESPONDENT WHO IS INCLUDED IN THE HOUSEHOLD

PER WEEK PER YEAR

less than £40	01	less than £2,000
£40 - less than £80	02	£2,000 - less than £4,000
£80 - less than £120	03	£4,000 - less than £6,000
£120 - less than £160	04	£6,000 - less than £8,000
£160 - less than £200	05	£8,000 - less than £10,000
£200 - less than £240	06	£10,000 - less than £12,000
£240 - less than £280	07	£12,000 - less than £14,000
£280 - less than £350	08	£14,000 - less than £18,000
£350 - less than £400	09	£18,000 - less than £20,000
£400 - less than £500	10	£20,000 - less than £25,000
£500 - less than £600	11	£25,000 - less than £30,000
£600 or more	12	£30,000 or more

WORK/EMPLOYMENT HISTORY: ASKED FOR RESPONDENT, HEAD OF HOUSEHOLD (if not already asked as respondent), AND HOUSEHOLD REFERENCE PERSON (if not already asked as respondent or HOH)

Wrking

Did *respondent/HOH/HRP* do any paid work in the 7 days ending Sunday the, either as an employee or self employed?

1. Yes
2. No

SchemeET

If respondent/HOH/HRP is under 63 years OR Male and under 65 years AND code 2 at wrking

Were you on a government scheme for employment training?

1. Yes
2. No

JbAway

If code 2 at Wrking AND if code 2 at SchemeET

Did you have a job or business that you were away from?

1. Yes
2. No
3. Waiting to take up a new job/business already obtained

OwnBus

If code 2 at Wrking AND if code 2 at SchemeET AND code 2 or 3 at JbAway

Did you do any unpaid work in that week for any business that you own?

1. Yes
2. No

RelBus

If code 2 at Wrking AND if code 2 at SchemeET AND code 2 or 3 at JbAway AND code 2 at OwnBus

...or that a relative owns?

1. Yes
2. No

Looked	<p>If code 2 at Wrking AND if code 2 at SchemeET AND code 2 at JbAway AND code 2 at RelBus</p> <p>Thinking of the 4 weeks ending Sunday the ..., were you looking for any kind of paid work or government training scheme at any time in those 4 weeks?</p> <ol style="list-style-type: none"> 1. Yes 2. No 3. Waiting to take up a new job or business already obtained
StartJ	<p>If code 2 at Wrking AND if code 2 at SchemeET AND code 1 or 3 at Looked/code 3 at JbAway</p> <p>If a job or a place on a government scheme had been available in the week ending Sunday the ..., would you have been able to start within 2 weeks?</p> <ol style="list-style-type: none"> 1. Yes 2. No
YInAct	<p>If code 2 at Wrking AND if code 2 at SchemeET AND code 2 at Looked/code 2 at StartJ</p> <p>What was the main reason you did not seek any work in the last 4 weeks/would not be able to start in the next 2 weeks?</p> <ol style="list-style-type: none"> 1. Student 2. Looking after the family/home 3. Temporarily sick or injured 4. Long-term sick or disabled 5. Retired from paid work 6. None of these
Dviloresh/ Dvilohoh/ Dvilohih	<p>Record All</p> <p>DV for ilo (respondent/HOH/HRP) in employment - 3 categories</p> <ol style="list-style-type: none"> 1. InEmp 2. Unemp 3. EcInAct
Dviloresh2/ Dvilohoh2/ Dvilohih2	<p>Record All</p> <p>DV for ilo (respondent/HOH/HRP) in employment - 4 categories</p> <ol style="list-style-type: none"> 1. InEmpXuf 2. UFW 3. Unemp 4. EcInAct
Everwk	<p>If code 2 OR 3 at Dviloresh/hoh/hih</p>

Have you ever had a paid job, apart from casual or holiday work?

1. Yes
2. No

DtJbL

If code 1 at Everwk

When did you leave your last PAID job?

DATE

DVJb12ML

Record if code 2 or 3 at Dviloires/hoh/hih

DV for unemployed/inactive but has worked in last 12 months

1. Worked in last 12 months
2. NOT worked in last 12 months

JOB DETAILS: ASKED FOR RESPONDENT/HEAD OF HOUSEHOLD (if not already asked as respondent)/HOUSEHOLD REFERENCE PERSON (if not already asked as respondent/HOH).

IndD

If code 1 at Everwk OR code 1 at Dviloires/hoh/hih

CURRENT OR LAST JOB

What did the firm/organisation you worked for mainly make or do (at the place where you worked)?

DESCRIBE FULLY - PROBE MANUFACTURING or PROCESSING or DISTRIBUTING ETC. AND MAIN GOODS PRODUCED, MATERIALS USED, WHOLESALE or RETAIL ETC.

OccT

If code 1 at Everwk OR code 1 at Dviloires/hoh/hih

What was your (main) job?

OccD

If code 1 at Everwk OR code 1 at Dviloires/hoh/hih

CURRENT OR LAST JOB

What did you mainly do in your job?

CHECK SPECIAL QUALIFICATIONS/TRAINING NEEDED TO DO THE JOB

Stat

If code 1 at Everwk OR code 1 at Dviloires/hoh/hih

Were you working as an employee or were you self-employed?

1. Employee
2. Self-employed

Manage**If code 1 at Stat**

Did you have any managerial duties, or were you supervising any other employees?

1. Manager
2. Foreman/supervisor
3. Not manager/supervisor

EmpNo**If code 1 at Stat**

How many employees were there at the place where you worked?

1. 1-24
2. 25 or more

Solo**If code 2 at Stat**

Were you working on your own or did you have employees?

1. on own/with partner(s) but no employees
2. with employees

SENo**If code 2 at Stat AND code 2 at Solo**

How many people did you employ at the place where you worked?

1. 1-24
2. 25 or more

Oempstat

Record if code 1 at Everwk OR code 1 at Dviloresh /Dvilohoh /Dvilohih (variable computed in the CAPI program)

If code 3 or -8 at Manage, or -8 at Stat 1
Employee (not foreman or manager)

If code 2 at Manage 2
Foreman or supervisor

If code 1 at Solo 3
Self employed - no employees

If code 1 at SeNo 4
Self employed - 1 to 24 employees

If code 2 at SeNo 5
Self employed - 25 or more employees

If code 1 at Manage and code 1 at EmpNo..... 6
Manager - 1 to 24 employees in establishment

If code 1 at Manage code 2 at EmpNo 7
Manager - 24 or more employees in establishment

FtPtWk

If code 1 at Everwk OR code 1 at Dviloires/hoh/hih

In your (main) job were you working full or part-time?

1. full time
2. or part time?

If code 1 at Dviloire2/ho2/hi2 AND code 1 at Stat

EmpStY

In which year did you start working continuously for your current employer?

1900..2005

SEmpStY

If code 1 at Dviloire2/ho2/hi2 AND NOT code 1 at Stat

In which year did you start working continuously as a self-employed person?

1900..2005

JobstM

If code 1 at Dviloire2/ho2/hi2 OR SempSty = response

...and which month in (year in EmpSty/SempStY) was that?

1. January
2. February
3. March
4. April
5. May
6. June
7. July
8. August
9. September
10. October
11. November
12. December

EverOT	<p>If code 1 at Dviloreshoh/hih AND ((code 1 at Wrking) OR (code 1 at JbAway)) OR code 1 at SchemeET</p> <p>Do you ever do any work which you would regard as paid or unpaid overtime?</p> <p>1. Yes 2. No</p>
Totus1	<p>If code 1 at Dviloreshoh/hih AND ((code 2 at EverOT) OR (code 1 at OwnBus)) OR code 1 at RelBus</p> <p>How many hours per week do you usually work in your (main) job/business – please exclude mealbreaks?</p> <p>0.00..97. 00</p>
Usuhr	<p>If code 1 at Dviloreshoh/hih AND code 1 at EverOT</p> <p>Thinking of your (main) job/business, how many hours per week do you usually work – please exclude mealbreaks and overtime?</p> <p>0.00..97. 00</p>
PotHr	<p>If code 1 at Dviloreshoh/hih AND code 1 at EverOT</p> <p>How many hours PAID overtime do you usually work per week?</p> <p>0.00..97.00</p>
UotHr	<p>If code 1 at Dviloreshoh/hih AND code 1 at EverOT</p> <p>How many hours UNPAID overtime do you usually work per week?</p> <p>0.00..97.00</p>
DVTotHrU	<p>Variable computed in the CAPI program</p> <p>Total usual hours</p> <p>0.00..97.00</p>
AgreeHrs	<p>If code 1 at Dviloreshoh/hih AND code 1 at EverOT</p> <p>Your total usual hours come to DVTotHrU. Is that about right, or not?</p> <p>1. Yes 2. No</p>

END OF DIETARY INTERVIEW

All

PlaceX

INTERVIEWER: YOU HAVE NOW REACHED THE END OF THE PLACEMENT INTERVIEW.
(IF DIETARY DIARIES REFUSED TRY TO CONTINUE WITH PICK-UP INTERVIEW)

All

Oral

INTERVIEWER: NOW INSTRUCT RESPONDENT ON HOW TO CONDUCT SELF-TOOTH COUNT AND LEAVE WRITTEN INSTRUCTIONS WITH THEM (DOCUMENT D7).

All

Comdiary

INTERVIEWER: DID THE RESPONDENT COMPLETE A 7-DAY DIETARY DIARY?

1. YES, FULL 7 day dietary diary kept
2. YES, but NOT COMPLETE 7 day diary
3. NO, dietary diary not kept

POST DIETARY RECORDING PERIOD INTERVIEW

If code 1 OR 2 at Comdiary

WhoW

ASK OR RECORD

Who weighed and recorded the food and drink entered in the diary?
Please include all those people who did any weighing and recording.

CODE ALL THAT APPLY

1. Respondent
2. Respondent's spouse/partner
3. Other relative in household
4. Other (SPECIFY AT NEXT QUESTION)

WWOth1

If code 1 OR 2 at Comdiary AND code 4 at WhoW

SPECIFY OTHER WHO WEIGHED OR RECORDED

WMain

If code 1 OR 2 at Comdiary AND WhoW > 1

ASK OR RECORD

Who did MOST OF the weighing and recording?

1. Respondent
2. Respondent's spouse/partner
3. Other relative in household
4. Other (SPECIFY AT NEXT QUESTION)

WWOth2

If code 1 OR 2 at Comdiary AND code 4 at WMain

SPECIFY OTHER WHO WEIGHED OR RECORDED

UsuBis

If code 1 OR 2 at Comdiary

During the 7 days that you were weighing and recording your food, do you think you had more, less or about the same amount of BISCUITS as usual?

1. More
2. Less
3. Same
4. Never eats item

UsuConf

If code 1 OR 2 at Comdiary

During the 7 days that you were weighing and recording your food, do you think you had more, less or about the same amount of CONFECTIONERY as usual?

1. More
2. Less
3. Same
4. Never eats item

UsuCrisp**If code 1 OR 2 at Comdiary**

(During the 7 days that you were weighing and recording your food,) do you think you had more, less or about the same amount of CRISPS as usual?

1. More
2. Less
3. Same
4. Never eats item

UsuDrink**If code 1 OR 2 at Comdiary**

(During the 7 days that you were weighing and recording your food, do you think you had more, less or about the same amount of) DRINKS (as usual?)

QUESTION EXCLUDES ALCOHOLIC DRINKS

1. More
2. Less
3. Same
4. Never eats item

UsuSnak**If code 1 OR 2 at Comdiary**

(During the 7 days that you were weighing and recording your food, do you think you had more, less or about the same amount of) SNACKS (as usual?)

BY SNACKS WE MEAN FOOD EATEN BETWEEN MEALS

1. More
2. Less
3. Same
4. Never eats item

Portion**If code 1 OR 2 at Comdiary**

On the whole, do you think you had...

RUNNING PROMPT

1. bigger
2. smaller
3. or the same size portions as usual while you were keeping the diary?

EatOut**If code 1 OR 2 at Comdiary**

During the 7 days do you think you ate out of the home, including at work/college...

RUNNING PROMPT

1. more often
2. less often
3. or about the same as usual?

Probs**If code 1 OR 2 at Comdiary**

Did you have any problems with the weighing and recording of what you had to eat and drink during the 7 day recording period?

1. Yes
2. No

WhProb**If code 1 OR 2 at Comdiary AND code 1 at Probs**

What were these problems?

Unwell**If code 1 OR 2 at Comdiary**

While you were keeping the diary, were you unwell at all?

1. Yes
2. No

Illnesses during diary keeping**Sick0..4****If code 1 OR 2 at Comdiary AND code 1 at UnWell ask for each of the following**

- 0 =** Diarrhoea
1 = Sick or vomiting
2 = Cold or flu (include sore throat, runny nose, tonsils with temperature, chest infection, cough, snuffles)
3 = Asthma
4 = Ill in any other way (Specify at next question; include off food; headache; feverish)

Have you been ill with (ILLNESS)?

Yes 1
No 2

b. Which100..106	If code 1 at Sick0
Which107..113	If code 1 at Sick1
Which114..120	If code 1 at Sick2
Which121..127	If code 1 at Sick3
Which128..134	If code 1 at Sick4

On which day(s) were you unwell with (ILLNESS)?

CODE ALL THAT APPLY

1. Day 1
2. Day 2
3. Day 3
4. Day 4
5. Day 5
6. Day 6
7. Day 7

c. Which000..007	If code 1 at Sick0
Which008..015	If code 1 at Sick1
Which016..023	If code 1 at Sick2
Which024..031	If code 1 at Sick3
Which032..039	If code 1 at Sick4

On which day(s) did (ILLNESS) affect your eating habits?

CODE ALL THAT APPLY

1. Day 1
2. Day 2
3. Day 3
4. Day 4
5. Day 5
6. Day 6
7. Day 7
8. Did not affect eating habits

OthIII	If code 1 at Sick4 (ill in any other way)
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SPECIFY OTHER ILLNESS

Unusual	If code 1 OR 2 at Comdiary
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Were there any (other) unusual circumstances which affected your eating habits while you were keeping the diary?

1. Yes
2. No

UnWhat	If code 1 OR 2 at Comdiary AND code 1 at Unusual
---------------	---

What has been different about your eating habits over these days?

Say	<p>If code 1 OR 2 at Comdiary</p> <p>Is there anything you would like to say about the diary you kept?</p> <ol style="list-style-type: none"> 1. Yes (SPECIFY AT NEXT QUESTION) 2. No
SayWhat	<p>If code 1 OR 2 at Comdiary AND code 1 at Say</p> <p>ENTER COMMENTS ABOUT DIARY HERE</p>
	<p>Working during diary-keeping period</p> <p>All</p>
WrkWek	<p>Did you do any paid or voluntary work during the dietary diary-keeping period?</p> <ol style="list-style-type: none"> 1. Yes 2. No
PhyWkNo	<p>If code 1 at WrkWek</p> <p>Did you have one or two jobs, including paid and voluntary work, during that period?</p> <ol style="list-style-type: none"> 1. .2
OccAct0..1	<p>If code 1 at WrkWek</p> <p>(For each job) what kind of tasks did you do on a day-to-day basis?</p> <p>PROBE WHETHER JOB INVOLVES - MAINLY SITTING AND/OR USE OF LIGHT TOOLS OR... MAINLY STANDING AND/OR WALKING OR... MAINLY WALKING, LIFTING OR CARRYING LIGHT LOADS OR... MAINLY HARD PHYSICAL LABOUR</p>
OactCod0..1	<p>If code 1 at WrkWek</p> <p>HOME CODING TASK</p> <p>FOR EACH JOB :</p> <p>ENTER THE OCCUPATION ACTIVITY CODE FOR THE RESPONDENT'S JOB (TO INCLUDE PAID AND VOLUNTARY WORK)</p> <ol style="list-style-type: none"> 1. Very light/light work 2. Moderate work 3. Hard work

UPhysWk**If code 1 at WrkWek**

Thinking about the time you spent at work, and including any voluntary work, during the 7 days that you were weighing and recording, do you think you did more, less or about the same amount of physical activity than you usually do?

1. More than usual
2. Less than usual
3. Same as usual

UPhys**All**

(During the 7 days that you were weighing and recording your food/And thinking about the time that you were not at work), do you think you did more, less or about the same amount of physical activity than you usually do?

1. More than usual
2. Less than usual
3. Same as usual

EATING HABITS

All

IntroPsysc

THE NEXT SET OF QUESTIONS ARE ABOUT EATING BEHAVIOUR.

THIS IS A SELF-COMPLETION SECTION.

ASK RESPONDENT WHETHER LIKE TO SELF-COMplete ON LAPTOP OR ON PAPER Q'RE.

BE SURE TO INSTRUCT RESPONDENT TO COMPLETE THIS SET OF QUESTIONS IN ONE SITTING.

ALL ARE OPINION QUESTIONS.

SelfInt

All

The next set of questions is for you to fill in yourself on the computer..

1. CASI self-completion accepted and completed
2. Self-completion completed on paper
3. Section refused

If NOT code 3 at SelfInt

Irritate

Do you have a desire to eat when you are irritated?

1. Never
2. Seldom
3. Sometimes
4. Often
5. Very Often

Taste

If food tastes good to you, do you eat more than usual?

1. Never
2. Seldom
3. Sometimes
4. Often
5. Very Often

Nothing

Do you have a desire to eat when you have nothing to do?

1. Never
2. Seldom
3. Sometimes
4. Often
5. Very Often

Weight	When you have put on weight, do you eat less than you usually do?
	<ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Depress	Do you have a desire to eat when you are depressed or discouraged?
	<ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Smell	If food smells and looks good, do you eat more than usual?
	<ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Refuse	How often do you refuse food or drink offered because you are concerned about your weight?
	<ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Lonely	Do you have a desire to eat when you are feeling lonely?
	<ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Delish	If you see or smell something delicious do you have a desire to eat it?
	<ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often

Letdown	<p>Do you have a desire to eat when somebody lets you down?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
EatLess	<p>Do you try to eat less at mealtimes than you would like to eat?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Straight	<p>If you have something delicious to eat, do you eat it straight away?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Cross	<p>Do you have a desire to eat when you are cross?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Exactly	<p>Do you watch exactly what you eat?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Baker	<p>If you walk past the baker, do you have the desire to buy something delicious?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often

Unpleas	<p>Do you have the desire to eat when something unpleasant is about to happen?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Slimming	<p>Do you deliberately eat foods that are slimming?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Others	<p>If you see others eating, do you also want to eat?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
DayAfter	<p>When you have eaten too much, do you eat less than usual the following day?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Worried	<p>Do you get the desire to eat when you are anxious, worried or tense?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Resist	<p>Can you resist eating delicious food?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often

- Heavy** Do you deliberately eat less in order not to become heavier?
1. Never
 2. Seldom
 3. Sometimes
 4. Often
 5. Very Often
- GoWrong** Do you have a desire to eat when things are going against you or when things have gone wrong?
1. Never
 2. Seldom
 3. Sometimes
 4. Often
 5. Very Often
- Cafe** If you walk past a snack bar or a cafe, do you have the desire to buy something delicious?
1. Never
 2. Seldom
 3. Sometimes
 4. Often
 5. Very Often
- Upset** Do you have a desire to eat when you are emotionally upset?
1. Never
 2. Seldom
 3. Sometimes
 4. Often
 5. Very Often
- Snack** How often do you try not to eat between meals because you are watching your weight?
1. Never
 2. Seldom
 3. Sometimes
 4. Often
 5. Very Often

OthEat	<p>Do you eat more than usual when you see others eating?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Bored	<p>Do you have a desire to eat when you are bored or restless?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Evening	<p>How often in the evenings do you try not to eat because you are watching your weight?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Fright	<p>Do you have a desire to eat when you are frightened?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
WeightA	<p>Do you take your weight into account with what you eat?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
Disap	<p>Do you have a desire to eat when you are disappointed?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often

Prepare	<p>When preparing a meal, are you inclined to eat something?</p> <ol style="list-style-type: none"> 1. Never 2. Seldom 3. Sometimes 4. Often 5. Very Often
	ORAL HEALTH
IntOral	<p>All</p> <p>YOU ARE ABOUT TO ENTER THE ORAL HEALTH SECTION.</p>
TthCo	<p>All</p> <p>HAS THE RESPONDENT CARRIED OUT THE SELF-TOOTH COUNT?</p> <ol style="list-style-type: none"> 1. Yes 2. No
NumTeeth	<p>If code 1 at TthCo</p> <p>ENTER NUMBER OF OWN NATURAL TEETH COUNTED BY RESPONDENT.</p> <p>0..34</p> <p>All</p>
OralInt	<p>The next section is all about your oral and dental health.</p>
AnyOwn	<p>All</p> <p>ASK OR RECORD Do you have any of your own, natural, teeth?</p> <ol style="list-style-type: none"> 1. Yes 2. No
DentUse	<p>All</p> <p>Do you use a denture at all?</p> <ol style="list-style-type: none"> 1. Yes 2. No

UpDent	<p>If code 1 at DentUse</p> <p>Talking first of all just about your upper jaw... ... do you wear a denture in the upper jaw?</p> <ol style="list-style-type: none"> 1. Yes 2. No
UpType	<p>If code 1 at DentUse AND code 1 at UpDent</p> <p>Is it a complete denture (one that replaces all of your natural teeth in that jaw) or is it a partial denture (where there are still some natural teeth left in the upper jaw, but the denture fills some of the gaps)?</p> <ol style="list-style-type: none"> 1. Complete denture 2. Partial denture
LowDent	<p>If code 1 at DentUse</p> <p>Thinking now just about your lower jaw... ... do you wear a denture in the lower jaw?</p> <ol style="list-style-type: none"> 1. Yes 2. No
LowType	<p>If code 1 at DentUse AND code 1 at LowDent</p> <p>Is it a complete denture (one that replaces all of your natural teeth in that jaw) or is it a partial denture (where there are still some natural teeth left in the upper jaw, but the denture fills some of the gaps)?</p> <ol style="list-style-type: none"> 1. Complete denture 2. Partial denture
CompDent	<p>If code 1 at UpType OR code 1 at LowType</p> <p>The next few questions are about your complete denture(s).</p>
LNatU	<p>If code 1 at UpType</p> <p>How long is it since the last of your natural teeth in your upper jaw were removed?</p> <p>CODE RESPONSE IN YEARS (0-65)</p> <p>0..65</p>
EatDent	<p>If code 1 at UpType</p> <p>And, in general, do you wear your upper denture for eating?</p> <ol style="list-style-type: none"> 1. Yes 2. No

LNatL

If code 1 at LowType

How long is it since the last of your natural teeth in your lower jaw were removed?

CODE RESPONSE IN YEARS (0-65)

0..65

EatDentL

If code 1 at LowType

And, in general, do you wear your lower denture for eating?

1. Yes
2. No

ComfDen

If code 1 at UpType OR code 1 at LowType

SHOW CARD H

How satisfied are you with the overall COMFORT of your complete dentures. Are you...

READ OUT SHOW CARD H

1. Very satisfied
2. Fairly satisfied
3. Fairly unsatisfied
4. Very unsatisfied
5. Can't Say

ChanInt

If code 1 at UpType OR code 1 at LowType

Now I am going to read out some changes which some people sometimes notice when they start to wear complete dentures. For each change could you tell me whether or not it has applied to you since you first started wearing a complete denture.

SlowD

If code 1 at UpType OR code 1 at LowType

Would you say that wearing a complete denture has made you eat more slowly than before?

1. Yes
2. No
3. Can't Say

CantEat

If code 1 at UpType OR code 1 at LowType

Do you ever find that difficulties with your complete denture(s) make you unable to eat food which is offered to you?

1. Yes
2. No
3. Can't Say

PartDent	<p>If code 2 at UpType OR code 2 at LowType</p> <p>The next few questions are about your partial denture(s)</p>
LongPU	<p>If code 2 at UpType</p> <p>Thinking about the denture in your UPPER jaw... How long have you had your present denture in your upper jaw?</p> <p>CODE RESPONSE IN YEARS (0-65)</p> <p>0..65</p>
EatPU	<p>If code 2 at UpType</p> <p>In general, do you wear the denture in your upper jaw for eating?</p> <ol style="list-style-type: none"> 1. Yes 2. No
LongPL	<p>If code 2 at LowType</p> <p>Thinking about the denture in your LOWER jaw... How long have you had your present denture in your lower jaw?</p> <p>CODE RESPONSE IN YEARS (0-65)</p> <p>0..65</p>
EatPL	<p>If code 2 at LowType</p> <p>In general, do you wear the denture in your lower jaw for eating?</p> <ol style="list-style-type: none"> 1. Yes 2. No
ReasonP	<p>If code 2 at UpType OR code 2 at LowType</p> <p>Now I am going to read out some reasons why people choose to wear a partial denture. For each reason, please could you say whether or not it applies to you?</p> <p>Which, if any, of the following reasons for wearing a partial denture apply to you?</p>
Appear	<p>If code 2 at UpType OR code 2 at LowType</p> <p>I wear a partial denture because it improves my appearance</p> <ol style="list-style-type: none"> 1. Yes 2. No

HelpEat	<p>If code 2 at UpType OR code 2 at LowType</p> <p>I wear a partial denture because it helps me to eat</p> <ol style="list-style-type: none"> 1. Yes 2. No
Recmend	<p>If code 2 at UpType OR code 2 at LowType</p> <p>I wear a partial denture because my dentist recommended it</p> <ol style="list-style-type: none"> 1. Yes 2. No
ComfPD	<p>If code 2 at UpType OR code 2 at LowType</p> <p>SHOW CARD H</p> <p>How satisfied are you with the overall COMFORT of your partial denture(s)?</p> <p>READ OUT SHOW CARD H</p> <ol style="list-style-type: none"> 1. Very satisfied 2. Fairly satisfied 3. Fairly unsatisfied 4. Very unsatisfied 5. Can't Say
Sensit	<p>If code 1 at AnyOwn</p> <p>In the past 6 months have you experienced sensitive teeth when eating or drinking anything cold, hot or sweet?</p> <ol style="list-style-type: none"> 1. Yes 2. No
SenOf	<p>If code 1 at AnyOwn AND code 1 at Sensit</p> <p>SHOW CARD I</p> <p>Have you experienced this problem very often, quite often, sometimes or hardly ever in the past 6 months?</p> <ol style="list-style-type: none"> 1. Very often 2. Quite often 3. Sometimes 4. Hardly ever
MildDis	<p>If code 1 at AnyOwn</p> <p>In the past 6 months have you experienced any other MILD discomfort with your teeth?</p> <ol style="list-style-type: none"> 1. Yes 2. No

MildOft**If code 1 at AnyOwn AND code 1 at MildDis**

SHOW CARD I

Have you experienced this problem very often, quite often, sometimes or hardly ever in the past 6 months?

1. Very often
2. Quite often
3. Sometimes
4. Hardly ever

SevDis**If code 1 at AnyOwn**

In the past 6 months have you experienced any toothache or SEVERE discomfort with your teeth?

1. Yes
2. No

SevOft**If code 1 at AnyOwn AND code 1 at SevDis**

SHOW CARD I

Have you experienced this problem very often, quite often, sometimes or hardly ever in the past 6 months?

1. Very often
2. Quite often
3. Sometimes
4. Hardly ever

Stuck**If code 1 at AnyOwn OR code 1 at DentUse**

In the past 6 months have you experienced any difficulties due to food getting stuck between teeth or under dentures?

1. Yes
2. No

StikDis**If (code 1 at AnyOwn) OR (code 1 at DentUse) AND code 1 at Stuck**

SHOW CARD J

And in the past 6 months has food sticking between teeth or under dentures caused you ...

READ OUT SHOW CARD J

1. A great amount of discomfort
2. A fair amount of discomfort
3. A little discomfort
4. No discomfort

ListA	<p>All</p> <p>In the past 6 months since ... have you experienced any of the following problems with your mouth, teeth or dentures? Please say 'yes' or 'no' for each problem I read out.</p>
JawPain	<p>All</p> <p>A pain in your jaw joint</p> <ol style="list-style-type: none"> 1. Yes 2. No
LooseD	<p>If code 1 at DentUse</p> <p>A loose or ill-fitting denture</p> <ol style="list-style-type: none"> 1. Yes 2. No
LoseTth	<p>If code 1 at AnyOwn</p> <p>A loose natural tooth</p> <ol style="list-style-type: none"> 1. Yes 2. No
ChipTth	<p>If code 1 at AnyOwn</p> <p>A broken or chipped natural tooth</p> <ol style="list-style-type: none"> 1. Yes 2. No <p>All</p>
DryMth	<p>Dryness in your mouth</p> <ol style="list-style-type: none"> 1. Yes 2. No
Ulcer	<p>Sore spots or ulcers</p> <ol style="list-style-type: none"> 1. Yes 2. No

JawDis**If code 1 At JawPain**

SHOW CARD J

How much discomfort has a pain in your jaw joint caused you in the last 6 months?

PROMPT AS NECESSARY: Would you say it caused you a great amount of discomfort, a fair amount of discomfort, a little discomfort or no discomfort

1. A great amount of discomfort
2. A fair amount of discomfort
3. A little discomfort
4. No discomfort

JawAct**If code 1 At JawPain**

Did you take any action to treat this problem?

1. Yes
2. No

LosDDis**If code 1 at LooseD**

SHOW CARD J

How much discomfort has a loose or ill-fitting denture caused you in the last 6 months?

PROMPT AS NECESSARY: Would you say it caused you a great amount of discomfort, a fair amount of discomfort, a little discomfort or no discomfort

1. A great amount of discomfort
2. A fair amount of discomfort
3. A little discomfort
4. No discomfort

LosDAct**If code 1 at LooseD**

Did you take any action to treat this problem?

1. Yes
2. No

LosTDis**If code 1 at LoseTth**

SHOW CARD J

How much discomfort has a loose natural tooth caused you in the last 6 months?

PROMPT AS NECESSARY: Would you say it caused you a great amount of discomfort, a fair amount of discomfort, a little discomfort or no discomfort

1. A great amount of discomfort
2. A fair amount of discomfort
3. A little discomfort
4. No discomfort

LosTAct**If code 1 at LoseTth**

Did you take any action to treat this problem?

1. Yes
2. No

ChipDis**If code 1 at ChipTth**

SHOW CARD J

How much discomfort has a broken or chipped natural tooth caused you in the last 6 months?

PROMPT AS NECESSARY: Would you say it caused you a great amount of discomfort, a fair amount of discomfort, a little discomfort or no discomfort

1. A great amount of discomfort
2. A fair amount of discomfort
3. A little discomfort
4. No discomfort

ChipAct**If code 1 at ChipTth**

Did you take any action to treat this problem?

1. Yes
2. No

DryDis**If code 1 at DryMth**

SHOW CARD J

How much discomfort has dryness in your mouth caused you in the last 6 months?

PROMPT AS NECESSARY: Would you say it caused you a great amount of discomfort, a fair amount of discomfort, a little discomfort or no discomfort

1. A great amount of discomfort
2. A fair amount of discomfort
3. A little discomfort
4. No discomfort

DryAct**If code 1 at DryMth**

Did you take any action to treat this problem?

1. Yes
2. No

UlcDis**If code 1 at Ulcer**

SHOW CARD J

How much discomfort has sore spots or ulcers caused you in the last 6 months?

PROMPT AS NECESSARY: Would you say it caused you a great amount of discomfort, a fair amount of discomfort, a little discomfort or no discomfort

1. A great amount of discomfort
2. A fair amount of discomfort
3. A little discomfort
4. No discomfort

UlcAct**If code 1 at Ulcer**

Did you take any action to treat this problem?

1. Yes
2. No

All**DryEat**

Does your mouth ever feel dry when you are eating a meal?

1. Yes
2. No
3. Can't Say

SipWatr	<p>Do you sip water or other liquid to help you swallow dry foods?</p> <ol style="list-style-type: none"> 1. Yes 2. No 3. Can't Say
Saliva	<p>Does the amount of saliva in your mouth seem to be...</p> <p>RUNNING PROMPT</p> <ol style="list-style-type: none"> 1. too little 2. too much 3. or don't you notice it?
EatInt	<p>SHOW CARD K</p> <p>I would now like to ask you about how well you are able to eat food nowadays. I will ask you separately about biting, chewing and swallowing.</p>
Bite	<p>In general, how well are you able to BITE food that you eat nowadays? Would you say you have no difficulty, a little difficulty, a fair amount of difficulty, or a great amount of difficulty biting food?</p> <ol style="list-style-type: none"> 1. No difficulty 2. A little difficulty 3. A fair amount of difficulty 4. A great amount of difficulty
Chew	<p>And in general, how well are you able to CHEW food that you eat nowadays? Would you say that you have no difficulty, a little difficulty, a fair amount of difficulty, or a great amount of difficulty chewing food?</p> <ol style="list-style-type: none"> 1. No difficulty 2. A little difficulty 3. A fair amount of difficulty 4. A great amount of difficulty
Swallow	<p>And in general, how well are you able to SWALLOW food that you eat nowadays? Would you say that you have no difficulty, a little difficulty, a fair amount of difficulty, or a great amount of difficulty swallowing food?</p> <ol style="list-style-type: none"> 1. No difficulty 2. A little difficulty 3. A fair amount of difficulty 4. A great amount of difficulty

CardL

If aged 45 or over or respondent has fewer than 21 natural teeth

SHOW CARD L

Now I am going to read out a list of different types of food and I would like you to tell me for each one whether you could eat it easily, with some difficulty, or not at all. It doesn't matter whether or not you like the types of food or ever choose to eat it nowadays. We are interested in how well you could eat it if you wanted to.

'EAT' MEANS BITE, CHEW AND SWALLOW. WE ARE NOT INTERESTED IN HOW WELL PEOPLE CAN DIGEST THESE FOODS.

SliceB

If aged 45 or over or respondent has fewer than 21 natural teeth

Could you eat sliced bread easily, with some difficulty or not at all?

1. Could eat easily
2. Could eat with some difficulty
3. Could not eat at all

CrustyB

If aged 45 or over or respondent has fewer than 21 natural teeth

Could you eat crusty bread easily, with some difficulty or not at all?

1. Could eat easily
2. Could eat with some difficulty
3. Could not eat at all

Toast

If aged 45 or over or respondent has fewer than 21 natural teeth

Could you eat toast easily, with some difficulty or not at all?

1. Could eat easily
2. Could eat with some difficulty
3. Could not eat at all

Cheese

If aged 45 or over or respondent has fewer than 21 natural teeth

Could you eat cheese easily, with some difficulty or not at all?

1. Could eat easily
2. Could eat with some difficulty
3. Could not eat at all

Tomat

If aged 45 or over or respondent has fewer than 21 natural teeth

Could you eat tomatoes easily, with some difficulty or not at all?

1. Could eat easily
2. Could eat with some difficulty
3. Could not eat at all

Carrot

If aged 45 or over or respondent has fewer than 21 natural teeth

Could you eat raw carrots easily, with some difficulty or not at all?

1. Could eat easily
2. Could eat with some difficulty
3. Could not eat at all

Potato

If aged 45 or over or respondent has fewer than 21 natural teeth

Could you eat roast potatoes easily, with some difficulty or not at all?

1. Could eat easily
2. Could eat with some difficulty
3. Could not eat at all

Greens	<p>If aged 45 or over or respondent has fewer than 21 natural teeth</p> <p>Could you eat cooked green vegetables easily, with some difficulty or not at all?</p> <ol style="list-style-type: none"> 1. Could eat easily 2. Could eat with some difficulty 3. Could not eat at all
Lettuce	<p>If aged 45 or over or respondent has fewer than 21 natural teeth</p> <p>Could you eat lettuce easily, with some difficulty or not at all?</p> <ol style="list-style-type: none"> 1. Could eat easily 2. Could eat with some difficulty 3. Could not eat at all
Meats	<p>If aged 45 or over or respondent has fewer than 21 natural teeth</p> <p>Could you eat sliced cooked meats easily, with some difficulty or not at all?</p> <ol style="list-style-type: none"> 1. Could eat easily 2. Could eat with some difficulty 3. Could not eat at all
Steak	<p>If aged 45 or over or respondent has fewer than 21 natural teeth</p> <p>Could you eat well-done steaks easily, with some difficulty or not at all?</p> <ol style="list-style-type: none"> 1. Could eat easily 2. Could eat with some difficulty 3. Could not eat at all
Apples	<p>If aged 45 or over or respondent has fewer than 21 natural teeth</p> <p>Could you eat apples easily, with some difficulty or not at all?</p> <ol style="list-style-type: none"> 1. Could eat easily 2. Could eat with some difficulty 3. Could not eat at all
Orange	<p>If aged 45 or over or respondent has fewer than 21 natural teeth</p> <p>Could you eat oranges easily, with some difficulty or not at all?</p> <ol style="list-style-type: none"> 1. Could eat easily 2. Could eat with some difficulty 3. Could not eat at all

Nuts **If aged 45 or over or respondent has fewer than 21 natural teeth**

Could you eat nuts easily, with some difficulty or not at all?

1. Could eat easily
2. Could eat with some difficulty
3. Could not eat at all

Crisps **If aged 45 or over or respondent has fewer than 21 natural teeth**

Could you eat crisps easily, with some difficulty or not at all?

1. Could eat easily
2. Could eat with some difficulty
3. Could not eat at all

Choco **If aged 45 or over or respondent has fewer than 21 natural teeth**

Could you eat chocolates easily, with some difficulty or not at all?

1. Could eat easily
2. Could eat with some difficulty
3. Could not eat at all

Eatfod **If aged 45 or over or respondent has fewer than 21 natural teeth
AND could not eat at least one of the foods SliceB to Choco**

Can you only eat soft or mashed foods or can you eat other foods as well?

1. only soft or mashed foods
2. other foods as well
3. can only take liquids/cannot eat even soft or mashed foods

All

SeeDent In general, would you say that you see a dentist NOWADAYS for regular check-ups, occasional check-ups or only when you are having trouble with your teeth?

1. Regular check-ups
2. Occasional check-ups
3. Only when having trouble with teeth
4. Never see dentist/not registered with dentist

LastDent	<p>When did you last see a dentist for an examination or treatment?</p> <ol style="list-style-type: none"> 1. In last six months 2. More than six months, up to a year ago 3. More than a year, up to 2 years 4. More than 2, up to 3 years ago 5. More than 3, up to 5 years ago 6. More than 5, up to 10 years 7. More than 10, up to 20 years ago 8. More than 20 years ago 9. Have never seen dentist 10. Can't say
BrandA	<p>What brand of toothpaste are you using at the moment?</p> <p>ASK TO SEE TOOTHPASTE AND RECORD FULL BRAND NAME. IF MORE THAN ONE BRAND BEING USED RECORD DETAILS OF MAIN BRAND.</p>
Brand	<p>CODE WHETHER TOOTHPASTE CONTAINS FLUORIDE AND TYPE OF FLUORIDE: CODE ALL THAT APPLY</p> <ol style="list-style-type: none"> 1. Sodium monofluorophosphate 2. Sodium fluoride 3. Stannous fluoride 4. None of the above
MonCon	<p>If code 1 at Brand</p> <p>BEFORE ENTERING THE MONOFLUOROPHOSPHATE CONTENT PLEASE INDICATE HOW YOU WISH TO RECORD THE MONOFLUOROPHOSPHATE CONTENT...</p> <ol style="list-style-type: none"> 1. As a percent (range 0.00 to 99.99) 2. As PPM (Parts per million) 3. Monofluorophosphate content not shown
MonPer	<p>If code 1 at Brand AND code 1 at MonCon</p> <p>ENTER SODIUM MONOFLUOROPHOSPHATE CONTENT AS A PERCENT</p> <p>0.00..99.99</p>
MonPPM	<p>If code 1 at Brand AND code 2 at MonCon</p> <p>ENTER SODIUM MONOFLUOROPHOSPHATE CONTENT AS PPM (PARTS PER MILLION)</p> <p>0..9998</p>

SFluCon	<p>If code 2 at Brand</p> <p>BEFORE ENTERING THE SODIUM FLUORIDE CONTENT PLEASE INDICATE HOW YOU WISH TO RECORD THE SODIUM FLUORIDE CONTENT...</p> <ol style="list-style-type: none"> 1. As a percent (range 0.00 to 99.99) 2. As PPM (Parts per million) 3. Sodium fluoride content not shown
SFluPer	<p>If code 2 at Brand AND code 1 at SFluCon</p> <p>ENTER SODIUM FLUORIDE CONTENT AS A PERCENT</p> <p>0.00..99.99</p>
SFluPPM	<p>If code 2 at Brand AND code 2 at SFluCon</p> <p>ENTER SODIUM FLUORIDE CONTENT AS PPM (PARTS PER MILLION)</p> <p>0..9999</p>
StanCon	<p>If code 3 at Brand</p> <p>BEFORE ENTERING THE STANNOUS FLUORIDE CONTENT PLEASE INDICATE HOW YOU WISH TO RECORD THE STANNOUS FLUORIDE CONTENT...</p> <ol style="list-style-type: none"> 1. As a percent (range 0.00 to 99.99) 2. As PPM (Parts per million) 3. Stannous fluoride content not shown
StanPer	<p>If code 2 at Brand AND code 1 at SFluCon</p> <p>ENTER STANNOUS FLUORIDE CONTENT AS A PERCENT</p> <p>0.00..99.99</p>
StanPPM	<p>If code 2 at Brand AND code 2 at SFluCon</p> <p>ENTER STANNOUS FLUORIDE CONTENT AS PPM (PARTS PER MILLION)</p> <p>0..9999</p>

PRESCRIBED MEDICINE

All

PMedPick

Has the respondent taken any prescribed medicines since the start of the record keeping period?

ELSE IF DIETARY DIARY REFUSED ASK:

Are you currently taking any prescribed medicines?

1. Yes
2. No

PMedRec

If code 1 at PMedPick

PLEASE MAKE SURE YOU RECORD DETAILS OF ALL PRESCRIBED MEDICINES TAKEN DURING DIETARY DIARY RECORD KEEPING PERIOD.
RECORD DETAILS IN MEASUREMENTS SCHEDULE [M1].



National Diet and Nutrition Survey

Adults Aged 19-64 Years

2000/2001

Prompt Cards

CARD A

- 1 Never**
- 2 Less than once a month**
- 3 At least once a month – but less often than once a week**
- 4 At least once a week – but not most days**
- 5 Most days – but not every day**
- 6 Once a day**
- 7 More than once a day**

CARD B

- 1 Fresh fruit or fruit juice**
- 2 Dried fruit**
- 3 Nuts**
- 4 Potatoes**
- 5 Vegetables or salad (including celery), dried beans or lentils**
- 6 Breakfast cereals**
- 7 Other cereal products, e.g. bread, rice and pasta**
- 8 Meat (including chicken)**
- 9 (Free range) eggs**
- 10 Milk**
- 11 Other dairy products**
- 12 Crisps or savoury snacks**
- 13 Biscuits and cakes (including organic cereal bars)**
- 14 Confectionery**

CARD C

- 1 More than a week**
- 2 No more than four or five days**
- 3 No more than two or three days**
- 4 No more than one day**
- 5 Use on same day**

CARD D

- 1 Almost every day**
- 2 Five or six days a week**
- 3 Three or four days a week**
- 4 Once or twice a week**
- 5 Once or twice a month**
- 6 Once every couple of months**
- 7 Once or twice a year**
- 8 Not at all in the last 12 months**

CARD E

- 1 Degree, or degree level qualification**
- 2 Teaching qualification**
- 3 HNC/HND, BEC/TEC Higher, BTEC Higher**
- 4 City and Guilds Full Technological Certificate**
- 5 Nursing qualifications (SRN, SCM, RGN, RM, RHV, Midwife)**
- 6 'A' Levels/SCE higher**
- 7 ONC/OND/BEC/TEC NOT higher**
- 8 City and Guilds Advanced/Final Level**
- 9 'O' Level passes (Grade A-C if after 1975)**
- 10 GCSE (grades A-C)**
- 11 CSE Grade 1**
- 12 SCE ordinary (Bands A-C)**
- 13 Standard Grade (Level 1-3)**
- 14 SLC Lower**
- 15 SUPE Lower or Ordinary**
- 16 School Certificate or Matric**

Cont'd on next page

CARD E

- 17 City and Guilds Craft/Ordinary level**
- 18 CSE grades 2-5**
- 19 GCE 'O' level (grades D & E if after 1975)**
- 20 GCSE (Grades D, E, F, G)**
- 21 SCE ordinary (Bands D & E)**
- 22 Standard Grade (Level 4, 5)**
- 23 Clerical or Commercial qualifications**
- 24 Apprenticeship**
- 25 CSE Ungraded**
- 26 Other qualifications- *please tell the interviewer***
- 27 No formal qualifications**

CARD F

- 1 White**
- 2 Black- Caribbean**
- 3 Black- African**
- 4 Black- other Black groups**
- 5 Indian**
- 6 Pakistani**
- 7 Bangladeshi**
- 8 Chinese**
- 9 None of these**

CARD G

Gross household income

PER WEEK	Group	PER YEAR
Less than £40	01	Less than £2,000
£40 – less than £80	02	£2,000 – less than £4,000
£80 – less than £120	03	£4,000 – less than £6,000
£120 – less than £160	04	£6,000 – less than £8,000
£160 – less than £200	05	£8,000 – less than £10,000
£200 – less than £240	06	£10,000 – less than £12,000
£240 – less than £280	07	£12,000 – less than £14,000
£280 – less than £350	08	£14,000 – less than £18,000
350 – less than £400	09	£18,000 – less than £20,000
£400 – less than £500	10	£20,000 – less than £25,000
£500 – less than £600	11	£25,000 – less than £30,000
£600 or more	12	£30,000 or more

Oral Health Section

CARD H

- 1 Very satisfied**
- 2 Fairly satisfied**
- 3 Fairly unsatisfied**
- 4 Very unsatisfied**
- 5 Can't say**

CARD I

- 1 Very often**
- 2 Quite often**
- 3 Sometimes**
- 4 Hardly ever**

CARD J

- 1 A great amount of discomfort**
- 2 A fair amount of discomfort**
- 3 A little discomfort**
- 4 No discomfort**

CARD K

- 1 No difficulty**
- 2 A little difficulty**
- 3 A fair amount of difficulty**
- 4 A great amount of difficulty**

CARD L

- 1 Could eat easily**
- 2 Could eat with some difficulty**
- 3 Could not eat at all**

NDNS: Adults Aged 19 to 64 Years

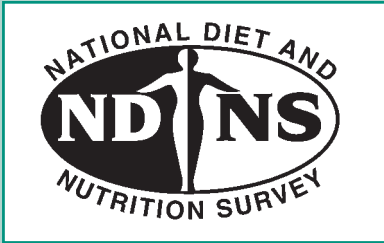
CATEGORIES FOR DIETARY SUPPLEMENTS IN THE INTERVIEW

Code and category	Examples
1 Fluoride ONLY	Tablets or drops
2 Cod liver oil and other fish-based supplements	Cod liver oil and orange syrup Cod liver oil with vitamins A,D,E Halibut liver oil Haliborange fish oil plus vitamins
3 Evening primrose oil type supplements	Evening primrose oil with added vitamins Starflower oil Wheatgerm oil
4 Vitamin C ONLY	Vitamin C tablets, capsules or powder; any strength
5 Other single vitamins, NOT vitamin C, NOT folic acid	e.g. Vitamin E
6 Vitamins A,C and D only	e.g. Haliborange vitamins A,C and D tablets
7 Vitamins with iron	One or more vitamins with iron e.g. Sanatogen multivitamins with iron
8 Iron ONLY	NO other vitamins or minerals
9 Folic acid ONLY - NOT prescribed	Folic acid tablets or capsules; any strength e.g. Holland and Barrett folic acid tablets
10 Multivitamins and multiminerals	One or more vitamins with one or more minerals, EXCEPT iron ONLY e.g. Boot's zinc and vitamin C Sanatogen multivitamins and multiminerals Selenium A,C,E
11 Multivitamins, NO minerals	Two or more vitamins, NOT A,C,D ONLY e.g. Sanatogen multivitamins Vitamin B complex
12 Minerals ONLY; NOT fluoride or iron ONLY	One or more minerals, NO vitamins e.g. multimineral tablets

(PTO)

Code and category	Examples
13 Ginseng	e.g. Holland and Barrett high strength ginseng tablets Red Kooga ginseng tablets Herbal Authority (alcohol free) Siberian ginseng drops
14 Ginkgo	e.g. Good n' Natural ginkgo tablets Boots ginkgo biloba tablets
15 Garlic	e.g. Holland and Barrett garlic capsules Kwai garlic tablets
16 St John's Wort	e.g. Herb Tech St John's wort capsules Kira St John's wort tablets Herbal Authority (alcohol free) St John's wort drops
17 Saw Palmetto	e.g. Good n' Natural saw palmetto concentrate capsules Bioforce saw palmetto complex drops
18 Aloe	e.g. Holland and Barrett 100% natural aloe vera juice Holland and Barrett high strength aloe vera tablets
19 Red Clover	e.g. Good n' Natural red clover blossoms capsules
20 Hawthorne	e.g. Good n' Natural hawthorne berries capsules
21 Echinacea	e.g. Herbal Authority (alcohol free) echinacea drops Good n' Natural echinacea capsules
22 Goldenseal	e.g. Good n' Natural (wild) goldenseal root capsules Good n' Natural goldenseal root drops
23 Echinacea and Goldenseal	e.g. Herb Tech echinacea / goldenseal complex capsules Herbal Authority (alcohol free) echinacea / goldenseal drops
24 Other	

Confidential



National Diet and Nutrition Survey: Adults Aged 19-64 Years

serial number label

Home food and drink diary

Please weigh and record in this diary everything
you eat and drink at home

Thank you

Start date

Finish date



Office for National Statistics
Social Survey Division
1 Drummond Gate
London SW1V 2QQ
Tel: 0171 533 5465/5321



PA322
E1

How to complete your home food and drink diary

Please make sure you read these instructions carefully before starting the weighing and recording.

To help you we have provided a card with a few tips on weighing and recording. But, before you start, the interviewer will go through with you what you need to do and will always help you with any problems you have. If you are unsure how to record something in the diary then please make as many notes as possible on the back of the relevant page, where there is space for you to do so – the interviewer can then help to sort it out when she or he next visits.

For each page

Please make sure you always start a new page whenever you start a new day's recording and please also make sure that you use a new line for each item eaten or drunk.

Please don't forget to enter the date and the day of the week and circle the recording day (whether it is the first day of recording, the second day etc). It would also help us to know how you are feeling each day. Simply tick whether you feel well or unwell. If you have been unwell, please say whether or not it affected your eating.

Column A

Before you weigh your food or drink we need to know:

- the weight of the empty plate, cup or other container that you use to eat or drink out of - in grams - using the food scales provided;
- the time you actually ate the weighed food and whether that was am or pm;
- whether you ate the food at home or elsewhere and
- who weighed the food - yourself or someone else?

Please record this information in the green shaded area of column A.

Column B

Please write down the brand name for each food or drink item. This is the name of the company that makes the product. The name should appear on the label or packaging of the item e.g. Heinz, Nestlé, Cadbury, Tesco, Sainsbury's, Asda.

Fresh meat and fish, fresh fruit and vegetables and foods that do not come pre-wrapped - loose cheese and cooked meats, for example - will not have a brand name written on them. In these cases simply leave column B blank.

Column C

Please describe each item in detail including whether it is:

- fresh
- frozen
- dried
- canned
- low fat/low calorie
- what flavour?
- whether sweetened
- how it was cooked (baked, fried, grilled etc)
- if fried what kind of fat/oil was the food fried in?

Also, tell us how many of the same items were weighed together, for example 2 pork sausages fried in sunflower oil or 2 Shredded Wheat.

Use as many lines as you need to describe the item fully.

Recipes

If the item was home-made, like Shepherd's pie or lasagne, then please weigh the serving on your plate and then, on the back of the page, write down all of the things that went into the recipe along with the quantities. For example, 400g minced lean beef, 1 small tin tomatoes, 1lb potatoes etc.

Column D

If the food item is a fresh fruit or vegetable please ring one of the codes in this column to tell us whether it was home-grown or not. Ring '1' if it was home grown or '2' if it was not home-grown. By home-grown we mean grown in the garden where you live or on an allotment that you own or rent.

Column E

Please record the weight of *each* item of food or drink on the plate or in the cup. As with the weight of the container itself we would like the amount recorded in grams using the food scales provided.

Column F

If you do not eat everything on your plate or drink everything in your cup then we need to know the weight of what is left over. This might be bones from meat or fish, or stones or peel from fruit or nuts, or just some of the food or drink that you didn't want. Please weigh the same plate or container with the leftovers on it and record the weight on the 'empty container' line (green coloured), in column F. Then put a tick in column F next to every item left on the plate or in the container.

Column G

If you cannot weigh the leftover food or drink because you have spilled it, someone else has eaten or drunk it (or perhaps your dog has eaten it!) then you will not be able to weigh it as a leftover. If this happens, try to estimate how much you have spilt or lost and write it in column G against the food or drink lost. For example, "about half spilt", "2 chips fed to dog".

We would appreciate as much information as possible in order to help our nutritionists, who will be coding your diary back in the office. Many thanks for your help.

Example page

Today is Today's date is Recording day: 0 ☒ 1 2 3 4 5 6 7 Today, are you: well ☒ unwell ☐
(ring one) (tick one)
Did being unwell affect your eating today: yes ☐ no ☐

serial number label

A		B		C		D		E		F		G		Office use only							
		Brand name (except for fresh produce)		Food and drink Please describe each item in detail		If fresh fruit or vegetable was it home grown (Ring one)		Weight served (grams)		Weight leftover (grams) Total weight of plate and leftovers. Please also tick all items left		Losses not weighed Tick items and estimate how much		Estimated weight? <i>Tick if yes</i>		Brand		Food		Food source	
Weight of empty container		400.g		Empty container (plate - cup - bowl)										442.g							
Time eaten (delete am/pm as appropriate)		8.35 am / pm		Nestlé		2 Shredded wheat		1 2		44.g		✓									
				Unigate		Semi-skimmed milk - pasteurised		1 2		100.g		✓									
Where eaten (Ring one)		at home 1 other place 2		Silver spoon		Sugar - granulated		1 2		12.g		✓									
				1 med banana - weighed without skin				1 2		100.g											
Who weighed (Ring one)		self 1 other person 2						1 2		.g											
								1 2		.g											
								1 2		.g											
Weight of empty container		220.g		Empty container (plate - cup - bowl)										.g							
Time eaten (delete am/pm as appropriate)		9.10 am / pm		Maxwell House		Coffee granules		1 2		2.g											
						Hot water		1 2		260.g											
Where eaten (Ring one)		at home 1 other place 2		Unigate		Semi-skimmed milk - pasteurised		1 2		40.g											
								1 2		.g											
Who weighed (Ring one)		self 1 other person 2						1 2		.g											
								1 2		.g											
								1 2		.g											
Weight of empty container		.g		Empty container (plate - cup - bowl)										.g							
Time eaten (delete am/pm as appropriate)		9.15 am / pm		Boots		1 vitamin C tablet - 300mg concentration		1 2		1.g											
						Sip of water		1 2		5.g											
Where eaten (Ring one)		at home 1 other place 2						1 2		.g											
								1 2		.g											
Who weighed (Ring one)		self 1 other person 2						1 2		.g											
								1 2		.g											
Weight of empty container		176.g		Empty container (plate - cup - bowl)										.g							
Time eaten (delete am/pm as appropriate)		11.30 am / pm		Hovis		4 slices white bread		1 2		144.g				✓ Left 2 crusts							
				Flora light		Spread		1 2		28.g				✓							
Where eaten (Ring one)		at home 1 other place 2		Safeway		English cheddar cheese		1 2		90.g											
						2 sliced tomatoes		1 2		170.g											
Who weighed (Ring one)		self 1 other person 2		Branston		Sandwich pickle		1 2		30.g											
								1 2		.g											
								1 2		.g											

Interviewer notes

Please start a new page when you start a new day recording

Today is

.....day

Today's date is

Recording day:

0

1

2

3

4

5

6

7

Today, are you:

well

unwell

Did being unwell affect your eating today:

yes

no

serial number label

A			B		C		D		E	F		G	Office use only							
			Brand name (except for fresh produce)		Food and drink Please describe each item in detail		If fresh fruit or vegetable was it home grown (Ring one) Yes No		Weight served (grams)	Weight leftover (grams) Total weight of plate and leftovers. Please also tick all items left		Losses not weighed Tick items and estimate how much	Estimated weight? <i>Tick if yes</i>	Brand	Food		Food source			
Weight of empty container		g		Empty container (plate - cup - bowl)									g					
Time eaten (delete am/pm as appropriate)		 am / pm				1 2	g											
							1 2		.....g										
Where eaten (Ring one)			at home 1 other place 2				1 2	g											
							1 2		.....g										
Who weighed (Ring one)			self 1 other person 2				1 2	g											
							1 2		.....g										
Weight of empty container		g		Empty container (plate - cup - bowl)									g					
Time eaten (delete am/pm as appropriate)		 am / pm				1 2	g											
							1 2		.....g										
Where eaten (Ring one)			at home 1 other place 2				1 2	g											
							1 2		.....g										
Who weighed (Ring one)			self 1 other person 2				1 2	g											
							1 2		.....g										
Weight of empty container		g		Empty container (plate - cup - bowl)									g					
Time eaten (delete am/pm as appropriate)		 am / pm				1 2	g											
							1 2		.....g										
Where eaten (Ring one)			at home 1 other place 2				1 2	g											
							1 2		.....g										
Who weighed (Ring one)			self 1 other person 2				1 2	g											
							1 2		.....g										
Weight of empty container		g		Empty container (plate - cup - bowl)									g					
Time eaten (delete am/pm as appropriate)		 am / pm				1 2	g											
							1 2		.....g										
Where eaten (Ring one)			at home 1 other place 2				1 2	g											
							1 2		.....g										
Who weighed (Ring one)			self 1 other person 2				1 2	g											
							1 2		.....g										
Weight of empty container		g		Empty container (plate - cup - bowl)									g					
Time eaten (delete am/pm as appropriate)		 am / pm				1 2	g											
							1 2		.....g										
Where eaten (Ring one)			at home 1 other place 2				1 2	g											
							1 2		.....g										
Who weighed (Ring one)			self 1 other person 2				1 2	g											
							1 2		.....g										
Weight of empty container		g		Empty container (plate - cup - bowl)									g					
Time eaten (delete am/pm as appropriate)		 am / pm				1 2	g											
							1 2		.....g										
Where eaten (Ring one)			at home 1 other place 2				1 2	g											
							1 2		.....g										
Who weighed (Ring one)			self 1 other person 2				1 2	g											
							1 2		.....g										
Weight of empty container		g		Empty container (plate - cup - bowl)									g					
Time eaten (delete am/pm as appropriate)		 am / pm				1 2	g											
							1 2		.....g										
Where eaten (Ring one)			at home 1 other place 2				1 2	g											
							1 2		.....g										
Who weighed (Ring one)			self 1 other person 2				1 2	g											
							1 2		.....g										

Have you included everything you ate and drank today? Use the back of this page for any notes, recipes and queries

Recipe information

Please use this side of the page to write down the ingredients in any home-made recipe. The ingredients do not have to be weighed separately, but if you could estimate the quantities of each item used, including any liquid, that would be very helpful.

For example: 2 onions, 1lb leeks, 2 large potatoes, 1/2 pint semi-skimmed milk, 1 pint of chicken stock.

Name of the home-made dish

When eaten: Day Date

Time eaten: am / pm

Quantity of ingredients please give full details	Ingredients please give full details
<div>PRACTICE PAGE</div>	
Cooking method:	

Notes and queries Please use this box for any notes, queries or extra information

FOR OFFICE USE Interviewer, please use this space to note down nutritional information from the packets of any new products

Please start a new page when you start a new day recording

Today is

.....day

Today's date is

Recording day:

0

1

2

3

4

5

6

7

Today, are you:

well

unwell

Did being unwell affect your eating today:

yes

no

serial number label

A	B	C	D	E	F	G	Office use only			
	Brand name (except for fresh produce)	Food and drink Please describe each item in detail	If fresh fruit or vegetable was it home grown (Ring one) Yes No	Weight served (grams)	Weight leftover (grams) Total weight of plate and leftovers. Please also tick all items left	Losses not weighed Tick items and estimate how much	Estimated weight? <i>Tick if yes</i>	Brand	Food	Food source
Weight of empty container	.....g	Empty container (plate - cup - bowl)				.....g				
Time eaten (delete am/pm as appropriate) am / pm			1 2	.....g						
			1 2	.....g						
			1 2	.....g						
Where eaten (Ring one)	at home 1		1 2	.....g						
	other place 2		1 2	.....g						
Who weighed (Ring one)	self 1		1 2	.....g						
	other person 2		1 2	.....g						
			1 2	.....g						
Weight of empty container	.....g	Empty container (plate - cup - bowl)				.....g				
Time eaten (delete am/pm as appropriate) am / pm			1 2	.....g						
			1 2	.....g						
			1 2	.....g						
Where eaten (Ring one)	at home 1		1 2	.....g						
	other place 2		1 2	.....g						
Who weighed (Ring one)	self 1		1 2	.....g						
	other person 2		1 2	.....g						
			1 2	.....g						
Weight of empty container	.....g	Empty container (plate - cup - bowl)				.....g				
Time eaten (delete am/pm as appropriate) am / pm			1 2	.....g						
			1 2	.....g						
			1 2	.....g						
Where eaten (Ring one)	at home 1		1 2	.....g						
	other place 2		1 2	.....g						
Who weighed (Ring one)	self 1		1 2	.....g						
	other person 2		1 2	.....g						
			1 2	.....g						
Weight of empty container	.....g	Empty container (plate - cup - bowl)				.....g				
Time eaten (delete am/pm as appropriate) am / pm			1 2	.....g						
			1 2	.....g						
			1 2	.....g						
Where eaten (Ring one)	at home 1		1 2	.....g						
	other place 2		1 2	.....g						
Who weighed (Ring one)	self 1		1 2	.....g						
	other person 2		1 2	.....g						
			1 2	.....g						

Have you included everything you ate and drank today? Use the back of this page for any notes, recipes and queries

Recipe information

Please use this side of the page to write down the ingredients in any home-made recipe. The ingredients do not have to be weighed separately, but if you could estimate the quantities of each item used, including any liquid, that would be very helpful.

For example: 2 onions, 1lb leeks, 2 large potatoes, 1/2 pint semi-skimmed milk, 1 pint of chicken stock.

Name of the home-made dish

When eaten: Day Date

Time eaten: am / pm

Quantity of ingredients please give full details	Ingredients please give full details
Cooking method:	

Notes and queries

Please use this box for any notes, queries or extra information

FOR OFFICE USE

Interviewer, please use this space to note down nutritional information from the packets of any new products

Please start a new page when you start a new day recording

Today is

.....day

Today's date is

Recording day:

0

1

2

3

4

5

6

7

Today, are you:

well

unwell

Did being unwell affect your eating today:

yes

no

serial number label

A		B	C		D	E	F	G	Office use only			
		Brand name (except for fresh produce)	Food and drink Please describe each item in detail		If fresh fruit or vegetable was it home grown (Ring one) YesNo	Weight served (grams)	Weight leftover (grams) Total weight of plate and leftovers. Please also tick all items left	Losses not weighed Tick items and estimate how much	Estimated weight? Tick if yes	Brand	Food	Food source
Weight of empty container		.....g	Empty container (plate - cup - bowl)					.....g				
Time eaten (delete am/pm as appropriate)	..... am / pm				12	.....g						
					12	.....g						
					12	.....g						
Where eaten (Ring one)	at home	1			12	.....g						
	other place	2			12	.....g						
Who weighed (Ring one)	self	1			12	.....g						
	other person	2			12	.....g						
					12	.....g						
Weight of empty container		.....g	Empty container (plate - cup - bowl)					.....g				
Time eaten (delete am/pm as appropriate)	..... am / pm				12	.....g						
					12	.....g						
					12	.....g						
Where eaten (Ring one)	at home	1			12	.....g						
	other place	2			12	.....g						
Who weighed (Ring one)	self	1			12	.....g						
	other person	2			12	.....g						
					12	.....g						
Weight of empty container		.....g	Empty container (plate - cup - bowl)					.....g				
Time eaten (delete am/pm as appropriate)	..... am / pm				12	.....g						
					12	.....g						
					12	.....g						
Where eaten (Ring one)	at home	1			12	.....g						
	other place	2			12	.....g						
Who weighed (Ring one)	self	1			12	.....g						
	other person	2			12	.....g						
					12	.....g						
Weight of empty container		.....g	Empty container (plate - cup - bowl)					.....g				
Time eaten (delete am/pm as appropriate)	..... am / pm				12	.....g						
					12	.....g						
					12	.....g						
Where eaten (Ring one)	at home	1			12	.....g						
	other place	2			12	.....g						
Who weighed (Ring one)	self	1			12	.....g						
	other person	2			12	.....g						
					12	.....g						

Have you included everything you ate and drank today? Use the back of this page for any notes, recipes and queries

Recipe information

Please use this side of the page to write down the ingredients in any home-made recipe. The ingredients do not have to be weighed separately, but if you could estimate the quantities of each item used, including any liquid, that would be very helpful.

For example: 2 onions, 1lb leeks, 2 large potatoes, 1/2 pint semi-skimmed milk, 1 pint of chicken stock.

Name of the home-made dish

When eaten: Day Date

Time eaten: am / pm

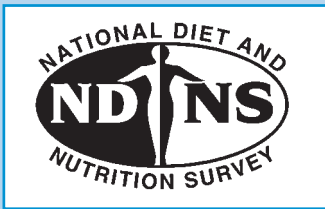
Quantity of ingredients please give full details	Ingredients please give full details
Cooking method:	

Notes and queries

Please use this box for any notes, queries or extra information

FOR OFFICE USE

Interviewer, please use this space to note down nutritional information from the packets of any new products



National Diet and Nutrition Survey: Adults Aged 19-64 Years

serial number label

Confidential

Diary of activities and eating and drinking away from home

Start date

Finish date

What time did you go to bed on the last day you kept the diary?

hours

minutes

am / pm



Office for National Statistics
Social Survey Division
1 Drummond Gate
London SW1V 2QQ
Tel: 0171 533 5465/5321



PA322
E2

How to complete your Activity diary

Please make sure you read these instructions carefully before you start the recording. The interviewer will go through with you what you need to do and will always help you with any problems you have.

The interviewer will ask you to keep this diary for the same week that you keep your Home food and drink diary.

There are three activity pages for each day, but, depending on what you are doing each day, you may find that you do not need to fill anything in on some pages. Please leave these pages blank. If you are unsure about how or whether to record something, then note it down in the spaces for 'other similar activities' at the bottom of the activities pages and ask the interviewer when she or he next visits.

The first page for each day
Please make sure you fill in one of these pages for each day, just before you go to bed. Don't forget to enter the date and the day of the week and circle the recording day (whether it is the first day of recording, the second day etc).

Question 1
Please write in the boxes what time you went to bed last night, and ring whether it was am or pm.

Question 2
Please write in the boxes what time you got up today, and ring whether it was am or pm.

Question 3
Please ring 'Yes' or 'No' in answer to the question about whether you went to work today, including any unpaid work that you did. If the answer to this question is 'Yes', please write in how long you worked today - to the nearest 10 minutes - in your main job at **Question 3a**. You should not include any lunch or other breaks in this. If you are not sure which is your main job, the interviewer will be able to help you.

If you have a second job, at **Question 3b** please write in how long you worked in your second job today, again excluding any breaks.

Question 4
Please ring 'Yes' or 'No' in answer to the question about whether you went to college today. If the answer to this question is 'Yes', please fill in how long you were at college at **Question 4a**, to the nearest 10 minutes. Only include the time you were actually studying or attending lectures, seminars etc.

Question 5
If you spent any other time sleeping today, including napping, please write how long you were sleeping, to the nearest 10 minutes.

Question 6
Please tick one box to show whether you think you were more active than usual today, about as active as usual, or less active than usual today.

The second page for each day

Column A
Column A shows a list of different household activities as well as two different paces at which people walk. If you did not do any of these activities on any particular day, then simply leave this page blank for that day. You only need to tell us about activities that you did for 10 minutes or longer. You do not need to tell us about any activities you have done as part of your job.

Column B
Please give a brief description of the activity.

Column C
If you did any walking today, please record how long, to the nearest 10 minutes, you were walking at an average pace or strolling in the first row of the table, and/or walking briskly in the second row of the table.

Then, if you did any of the other activities listed, please write in how long you spent doing them, again to the nearest 10 minutes. Please only include the time you were actually active. For example, if you spent the day looking after the children, only include the time you spent actually carrying them/pushing the pushchair/in active play under 'Active caring'.

Other similar activities
There is space at the bottom of the table for you to tell us about any similar activities that you have done today that are not listed. Please tell us what the activity was in Column A, give a brief description of the activity in Column B and say how long you spent doing the activity, to the nearest 10 minutes, in Column C.

The third page for each day
Don't forget to record the day, date and recording day at the top of the page.

Column A
Column A shows a list of different types of activities. It may be that you did not do any of these activities; if this is the case, then simply leave this page blank. You only need to tell us about activities that you did for 10 minutes or longer. Again, you do not need to tell us about about any activities you have done as part of your job.

Column B
If you did any of these activities today, please record how long you actually spent doing them, to the nearest 10 minutes, in Column B. It is important that you only include the time you spent actually doing the activity, not, for example, the time you spent getting changed for a sport, or the time you spent sitting or standing at the bar in a nightclub.

Column C
Please ring 'Yes' or 'No' in answer to the question: 'Did doing this activity make you out of breath or sweaty?'.

Other similar activities
At the bottom of the page, there is space for you to tell us about any similar activities you have done today that are not included on the list. Please give a brief description of the activity in Column A, fill in how long you spent doing the activity in Column B and say whether doing the activity made you 'out of breath or sweaty' in Column C.

How to complete your Eating and drinking away from home diary

Please make sure you read these instructions carefully before you start the recording. The interviewer will go through with you what you need to do and will always help you with any problems you have. You might find that you need additional pages – the interviewer will be able to supply you with these.

The interviewer will ask you to keep this diary for the same week that you keep your Home food and drink diary.

For each page

Please make sure you always start a new page whenever you start a new day’s recording and please also make sure that you use a new line for each item eaten or drunk. Don't forget to enter the day of the week, the date and circle the recording day at the top of the page.

Column A

Please write in the time you ate the item. Don't forget to say if it was am or pm.

Column B

Please record the brand name, or the shop name for an 'own brand' item. Please keep the empty packet or container in the carrier bag that the interviewer has given you. Leave this column blank if the item was not pre-packed.

Column C

Please try to give as much information as possible about the item in this column.

Column D

Please write down the weight on the packet and/or the size and/or the number of items.

Column E

If you did not eat or drink all of the item, please describe how much of it you left.

Column F

Please record where you were when you ate or drank the item, for example, at work, at a friend's house, at a restaurant or on the bus.

Column G

If you bought the item, please record the name of the shop, café, restaurant, pub, canteen etc. If you didn't buy it, please say whether you brought it from home or who supplied it.

Column H

Please record the cost of the item, as accurately as possible.

Many thanks for your help.

Please use this page to write any more notes about what you have eaten or drunk or the activities you have done, or to make a note of anything you want to ask the interviewer.

The ‘ruler’ around the edge of the page is to help you estimate the size of food items

1cm
2cm
3cm
4cm
5cm
6cm
7cm
8cm
9cm
10cm
11cm
12cm
13cm
14cm
15cm
16cm
17cm
18cm

1cm 2cm 3cm 4cm 5cm 6cm 7cm 8cm 9cm 10cm 11cm 12cm 13cm 14cm 15cm 16cm 17cm 18cm 19cm 20cm 21cm 22cm 23cm 24cm 25cm 26cm 27cm

1cm
2cm
3cm
4cm
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6cm
7cm
8cm
9cm
10cm
11cm
12cm
13cm
14cm
15cm
16cm
17cm
18cm

Today is day

Today's date is

Recording day (ring one): 1 2 3 4 5 6 7

serial number label

1 What time did you go to bed last night? am / pm
Hours Minutes

2 What time did you get up today? am / pm
Hours Minutes

3 Did you go to work today? (including unpaid work) (ring one)
Yes → Go to question 3a
No → Go to question 4

3a How long did you work today (including unpaid work), in your main job? (Please exclude any lunch break)

Hours Minutes

3b If you have a second job (including unpaid work), how long did you work today in your second job? (Please exclude any lunch break)

Hours Minutes

4 Did you go to college today? (excluding evening classes) (ring one)
Yes → Go to question 4a
No → Go to question 5

4a How long were you at college today?
Hours Minutes

5 Did you spend any other time sleeping during today? If so, how long?
Hours Minutes

6 Thinking about the activities you have done today, would you say that today you have been... (tick one box)
more active than usual ☐
about as active as usual ☐
or less active than usual? ☐

On this page please tell us how long you spent *doing* these activities today. Only count the activities you did for periods of 10 minutes or more. Please record only the time you spent actually *doing* the activity - try to be as accurate as possible and record to the nearest 10 minutes. You do not need to tell us about any activities you did as part of your job.

A	B	C	
How long did you spend today?	Please give some details about the activity	Hours	Minutes
Walking at an average pace			
Walking briskly			
Light housework, such as dusting, ironing, laundry, washing up, tidying up, cooking, light shopping			
Heavy housework, such as moving heavy furniture, spring cleaning, scrubbing floors, cleaning windows, carrying a heavy load			
Light gardening, such as pruning, watering, potting			
Heavy gardening, such as digging, clearing rough ground, chopping wood, mowing a large area with a hand mower			
Light DIY, such as wiring, plumbing, light carpentry			
Heavy DIY, such as refitting a kitchen or bathroom, laying concrete, sawing wood			
Active caring, such as pushing a pushchair/pram, lifting another person or child, active play with child. Please include only the time you were active			
Have you done any other activities like these? If so, please write them in the space below.	Please give some details about the activity	Hours	Minutes

Today isday

Today's date is

serial number label

Recording day (ring one): 1 2 3 4 5 6 7

On this page please tell us how long you spent *doing* these activities today. Only count the activities you did for periods of 10 minutes or more. Please record only the time you spent actually *doing* the activity - try to be as accurate as possible and record to the nearest 10 minutes. You do not need to tell us about any activities you did as part of your job.

A	B		C
How long did you actually spend doing this today?	Hours	Minutes	Did doing this activity make you <i>out of breath</i> or <i>sweaty</i> ?
Swimming			Yes / No
Cycling			Yes / No
Jogging/Running/Athletics			Yes / No
Dancing - disco, line or step dancing			Yes / No
Aerobics/Step Aerobics/Keep fit/Gymnastics			Yes / No
Weight-training/Work out in gym			Yes / No
Circuit training			Yes / No
Golf			Yes / No
Badminton			Yes / No
Tennis, NOT table tennis			Yes / No
Squash			Yes / No
Yoga/Tai Chi			Yes / No
Football (soccer), including refereeing			Yes / No
Netball/Hockey/Ice-skating			Yes / No
Rugby			Yes / No
Cricket			Yes / No
Rounders/Softball			Yes / No
Judo/Jujitsu/Karate/Kick boxing/Tae kwan do			Yes / No
Have you done any other activities like these? If so, please write them in the space below.	Hours	Minutes	Did doing this activity make you <i>out of breath</i> or <i>sweaty</i> ?
			Yes / No
			Yes / No
			Yes / No

Now please turn over the page and tell us about what you have had to eat and drink while you have been out of your home today...

A	B	C	D	E	F	G	H
Time eaten or drunk am / pm	Brand name <i>(unless fresh food)</i>	Full description of the food/drink	Amount/size/weight/quantity of item	Amount/size/quantity of leftovers	Where were you when you ate the item? <i>eg work, café, restaurant, in the street, friend's home</i>	Where did you get the item from? <i>Please give the name of the shop, café, pub etc or say if you brought the item from home</i>	What was the cost of the item £ : p

Notes:

Today isday

Today's date is

Recording day (ring one): 1 2 3 4 5 6 7

serial number label

A	B	C	D	E	F	G	H
Time eaten or drunk am / pm	Brand name <i>(unless fresh food)</i>	Full description of the food/drink	Amount/size/weight/quantity of item	Amount/size/quantity of leftovers	Where were you when you ate the item? <i>eg work, café, restaurant, in the street, friend's home</i>	Where did you get the item from? <i>Please give the name of the shop, café, pub etc or say if you brought the item from home</i>	What was the cost of the item £ : p

Notes:

A	B	C	D	E	F	G	H
Time eaten or drunk am / pm	Brand name <i>(unless fresh food)</i>	Full description of the food/drink	Amount/size/weight/quantity of item	Amount/size/quantity of leftovers	Where were you when you ate the item? <i>eg work, café, restaurant, in the street, friend's home</i>	Where did you get the item from? <i>Please give the name of the shop, café, pub etc or say if you brought the item from home</i>	What was the cost of the item £ : p

Notes:



PA322
P3

Adults aged 19 to 64 years

Private

Pocket notebook

Recording week

Start day

Finish day

Whose diary

NDNS pocket notebook

This notebook is for you to keep with you when you are not at home.

You can use it to make notes each day about things you have had to eat and drink while you have been out. There are some pages at the back of the notebook to make notes about any activities you have done during the day.

The headings are just a reminder about some of the details we need, but you can make whatever notes you find useful.

Please remember to copy all the details into your *Diary of Activities* and *Eating and Drinking Away from Home* at the end of each day.

.....day

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

[illegible]

DAY 1

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

[illegible]

.....day

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

[illegible]

DAY 2

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

.....day

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

[illegible]

DAY 3

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

.....day

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

DAY 4

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

.....day

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

[illegible]

DAY 5

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

The first step in the process of developing a business plan is to conduct a thorough market research. This involves identifying the target market, understanding the needs and preferences of the customers, and analyzing the competitive landscape. Market research can be conducted through various methods, including surveys, interviews, focus groups, and secondary research. The goal is to gather valuable insights that will inform the business strategy and help in making informed decisions.

Once the market research is complete, the next step is to define the business goals and objectives. These should be specific, measurable, achievable, relevant, and time-bound (SMART). The goals should align with the overall vision and mission of the business. For example, a business goal could be to increase sales by 10% within the next six months. Objectives, on the other hand, are the specific actions that need to be taken to achieve these goals. For instance, one objective could be to launch a new marketing campaign to reach a wider audience.

The third step in developing a business plan is to create a detailed financial plan. This involves estimating the costs of the business, determining the revenue streams, and calculating the profit margins. The financial plan should include a budget, a cash flow statement, and a break-even analysis. It is important to be realistic in the financial projections and to consider various scenarios, including best-case, worst-case, and most-likely scenarios. The financial plan will provide a clear picture of the financial health of the business and help in identifying potential risks and opportunities.

After the financial plan is developed, the next step is to create a marketing and sales strategy. This involves identifying the target market segments, selecting the appropriate marketing channels, and developing a sales plan. The marketing strategy should focus on building brand awareness, generating leads, and converting them into customers. The sales strategy should outline the sales process, including prospecting, presenting, and closing deals. It is important to have a clear understanding of the competitive advantage and to tailor the marketing and sales efforts to the specific needs of the target market.

The final step in developing a business plan is to create an operational plan. This involves detailing the day-to-day activities of the business, including production, distribution, and customer service. The operational plan should include a timeline, a list of resources, and a clear assignment of responsibilities. It is important to ensure that the operational plan is feasible and that all necessary resources are in place. The operational plan will provide a roadmap for the business and help in monitoring progress and making adjustments as needed.

In conclusion, developing a business plan is a complex but essential process. It involves conducting thorough market research, defining clear goals and objectives, creating a detailed financial plan, developing a marketing and sales strategy, and creating an operational plan. By following these steps, entrepreneurs can gain a comprehensive understanding of their business and increase their chances of success. A well-developed business plan serves as a valuable tool for securing funding, guiding decision-making, and tracking progress over time.

.....day

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

[illegible]

DAY 6

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

.....day

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

[illegible]

DAY 7

Eating and drinking when not at home

What? When? Where eaten? Quantity? Cost? Where from?

[illegible]

Activities

Which day? What was the activity? For how long?

[illegible]

Activities

Which day? What was the activity? For how long?

No.	Name	Sex	Age	Occupation	Education	Religion	Marital Status	Family Size	Income	Assets	Debt	Notes
1	John Doe	Male	35	Teacher	High School	Protestant	Married	4	\$25,000	House, Car	\$10,000	
2	Jane Smith	Female	28	Nurse	College	Catholic	Single	2	\$30,000	House, Car	\$5,000	
3	Robert Johnson	Male	45	Engineer	University	Jewish	Married	3	\$40,000	House, Car, Investment	\$15,000	
4	Emily White	Female	22	Student	College	Muslim	Single	1	\$15,000	House	\$2,000	
5	Michael Brown	Male	50	Retired	High School	Buddhist	Married	5	\$20,000	House, Car	\$8,000	
6	Sarah Green	Female	30	Manager	College	Hindu	Married	3	\$35,000	House, Car, Investment	\$12,000	
7	David Lee	Male	40	Doctor	University	Protestant	Married	4	\$50,000	House, Car, Investment	\$20,000	
8	Lisa King	Female	25	Teacher	College	Catholic	Single	2	\$28,000	House, Car	\$6,000	
9	James Hall	Male	55	Farmer	High School	Protestant	Married	6	\$18,000	House, Land	\$4,000	
10	Alice Taylor	Female	38	Accountant	College	Jewish	Married	3	\$32,000	House, Car, Investment	\$11,000	
11	Thomas Wilson	Male	42	Engineer	University	Muslim	Married	4	\$45,000	House, Car, Investment	\$18,000	
12	Olivia Moore	Female	27	Designer	College	Hindu	Single	2	\$38,000	House, Car, Investment	\$13,000	
13	Benjamin Clark	Male	52	Retired	High School	Buddhist	Married	5	\$22,000	House, Car	\$9,000	
14	Grace Adams	Female	32	Manager	College	Protestant	Married	3	\$36,000	House, Car, Investment	\$12,000	
15	Christopher Baker	Male	48	Doctor	University	Catholic	Married	4	\$55,000	House, Car, Investment	\$22,000	
16	Victoria Evans	Female	24	Student	College	Jewish	Single	1	\$16,000	House	\$2,500	
17	William Scott	Male	58	Farmer	High School	Muslim	Married	7	\$19,000	House, Land	\$5,000	
18	Isabella Hill	Female	33	Accountant	College	Hindu	Married	3	\$34,000	House, Car, Investment	\$11,000	
19	Jonathan King	Male	43	Engineer	University	Protestant	Married	4	\$48,000	House, Car, Investment	\$19,000	
20	Charlotte Green	Female	26	Designer	College	Catholic	Single	2	\$39,000	House, Car, Investment	\$14,000	
21	Samuel White	Male	53	Retired	High School	Buddhist	Married	6	\$21,000	House, Car	\$7,000	
22	Ava Brown	Female	31	Manager	College	Hindu	Married	3	\$37,000	House, Car, Investment	\$12,000	
23	Lucas Black	Male	49	Doctor	University	Protestant	Married	4	\$52,000	House, Car, Investment	\$21,000	
24	Madison Gray	Female	23	Student	College	Catholic	Single	1	\$17,000	House	\$3,000	
25	Henry Gold	Male	59	Farmer	High School	Jewish	Married	8	\$20,000	House, Land	\$6,000	
26	Evelyn Silver	Female	34	Accountant	College	Muslim	Married	3	\$35,000	House, Car, Investment	\$12,000	
27	Isaac Copper	Male	44	Engineer	University	Hindu	Married	4	\$49,000	House, Car, Investment	\$20,000	
28	Abigail Iron	Female	29	Designer	College	Protestant	Single	2	\$40,000	House, Car, Investment	\$15,000	
29	Julian Lead	Male	54	Retired	High School	Catholic	Married	7	\$23,000	House, Car	\$10,000	
30	Harper Zinc	Female	35	Manager	College	Jewish	Married	3	\$41,000	House, Car, Investment	\$16,000	
31	Leo Nickel	Male	51	Doctor	University	Muslim	Married	5	\$53,000	House, Car, Investment	\$23,000	
32	Penelope Tin	Female	30	Designer	College	Hindu	Single	2	\$42,000	House, Car, Investment	\$17,000	
33	Maxwell Platinum	Male	56	Retired	High School	Protestant	Married	8	\$24,000	House, Car	\$11,000	
34	Scarlett Gold	Female	36	Accountant	College	Catholic	Married	4	\$43,000	House, Car, Investment	\$18,000	
35	Victor Silver	Male	57	Engineer	University	Jewish	Married	6	\$54,000	House, Car, Investment	\$24,000	
36	Chloe Copper	Female	37	Designer	College	Muslim	Single	3	\$44,000	House, Car, Investment	\$19,000	
37	Sebastian Iron	Male	52	Retired	High School	Hindu	Married	9	\$25,000	House, Car	\$12,000	
38	Aria Zinc	Female	38									

Activities

Which day? What was the activity? For how long?

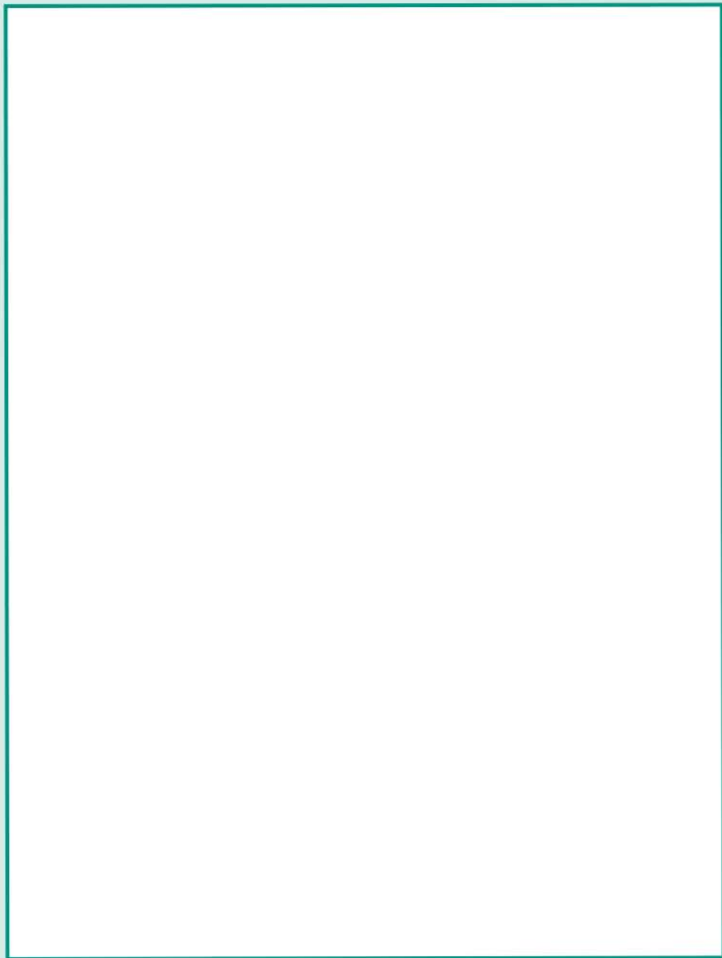
[illegible]

Activities

Which day? What was the activity? For how long?

[illegible]

Notes

A large, empty rectangular box with a thin teal border, occupying the left half of the page below the 'Notes' header. It is intended for taking notes.

serial number label

Social Survey Division
ONS
1 Drummond Gate
London
SW1V 2QQ

HOW TO USE THE SCALES FOR WEIGHING

Turn the scales on and wait until they show '0 g' on the display. The scales are now ready for use.

Weigh the container that you are going to put the food or drink in and record the weight in the diary.

Leave the container on the scales and press 'ZERO' or 'TARA' (depending on the scales you are using) to set the scales back to '0 g'.

Put your first item of food on the plate on the scales, and write down the weight and description in the diary.

Leave the plate on the scales and press 'ZERO' or 'TARA' again to set the scale back to '0' again.

Repeat the same procedure until you have weighed all the items that are going to be served on the same plate.

Take the plate off the scales.

Press OFF to switch off the scales.

Here is an example of how to weigh a glass of squash and record it in the diary:

- turn on the scales; wait until '0 g' appears;
- weigh the glass; write down the weight;
- press 'ZERO' or 'TARA' to zero the scales and then remove the glass;
- add the squash to the glass; do NOT add the water yet;
- put the glass containing the squash back on the scales;
- write down the weight and description of the squash in the diary;
- press 'ZERO' or 'TARA' to zero the scales and then remove the glass and add the water;
- put the glass and the made-up squash back on the scales;
- write down the weight of the water (and the description - 'tap water') in the diary;
- remove the glass of made-up squash;
- press 'OFF' to switch off the scales.

NOTE: always make sure that the scales show '0 g' BEFORE taking a container, such as a glass or plate or bowl, from the scales. When you do this they will show a negative number, for example '-125 g', until you put the plate back on.

CHECK LIST FOR RECORDING IN THE HOME RECORD

EACH PAGE SHOULD HAVE:

- the day and date
- a tick to show whether you were well or unwell
- if unwell a tick to show whether being unwell affected your eating

WHEN RECORDING:

- start a new page for a new day
- weigh the empty plate or container first
- write down the time the food/drink item was eaten, and whether am or pm, in Column A
- start each new food/drink item on a new line; you can use more than one line to describe an item

REMEMBER:

- record all drinks, including tap water, and drinks in bed and during the night
- record all vitamin and mineral supplements, including fluoride supplements
- record all medicines
- record all condiments - sauce, pickle, salad cream, etc. - used at the table (except salt and pepper)
- for fresh fruit and vegetables ring one code in Column D to show whether or not they were home grown
- weigh the plate with all the leftovers on it and write this in Column F on the '**empty container line**'
- put a tick in Column F against every item on the plate that was left over
- if anything was lost or spilt and could not be re-weighed put a tick against the item in Column G and describe about how much was lost
- use the back of the diary page to write down recipes, notes and anything you are unsure about

NDNS: Adults Aged 19 to 64 Years

FOOD CODE LIST INDEX

FOOD TYPE

Page

Alcoholic beverages

Beers and lagers
Cider and perry
Alcoholic soft drinks
Liqueurs and spirits
Tonic water
Wine and fortified wine

Beverages (including tea and coffee)

Beverages, e.g. Horlicks, not tea or coffee
Bottled and tap water
Coffee and tea
Fruit and vegetable juices
Soft drinks - description of classification (main groups)
Carbonated, canned, soft drinks
Carbonated, not canned, soft drinks
Concentrated soft drinks (containing some fruit juice)
Ready-to-drink still drinks
Ribena
Tonic water
Mineral water and mineral based drinks

Biscuits

Bread

Bread and rolls - description of classification (main groups)
Bread and rolls - white
Bread and rolls - wholemeal
Bread and rolls - softgrain
Other bread

Butter, margarine and spreads

Cakes, buns and pastries

Buns and pastries
Cakes
Fruit pies

Cereals and cereal products (including pasta, rice and pizza)

Breakfast cereals

Cereals - barley, bran, dumplings, etc.

Pasta

Pizza

Rice

Confectionery and savoury snacks, including crisps

Confectionery - chocolate

Confectionery - sugar

Crisps and savoury snacks

Nuts and seeds, including fruit and nut mixes

Eggs and egg dishes

Eggs

Egg dishes

Fish, fish dishes and fish products

Fish, coated or fried; fish products

Fish, oily, including canned

Other white fish; fish dishes

Shellfish

Fruit

Fruit, canned in juice

Fruit, canned in syrup

Fruit, not canned

Meat, meat dishes, meat products and offal

Bacon

Beef

Beef dishes

Burgers, grill steaks and kebabs

Chicken

Chicken dishes, including canned chicken

Ham

Lamb

Lamb dishes

Liver and liver dishes, liver pate and liver sausage

Meat - other; meat products

Meat pies and pastries, including chicken pies

Offal and offal products

Pork

Pork dishes

Poultry and game; not chicken/turkey

Sausages

Turkey

Turkey products and dishes

Veal and veal dishes

Milk

Milk based drinks, e.g. milk shake

Milk, includes bottles and cartons

Other milk, e.g. soya milk, condensed milk

Milk products

Cheese

Cheese dishes

Cream, including imitation cream

Fromage frais

Other dairy desserts, e.g. creme caramel, egg custard

Yogurt

Yogurt products, e.g. yogurt drinks, frozen yogurts

Puddings, including ice cream

Ice cream

Milk puddings - cereal based

Sponge puddings

Other puddings, e.g. cheesecake, crumble

Sauces, soups, pickles, gravies and condiments

Sauces, pickles, gravies and condiments

Soups

Sugars, preserves and sweet sauces

Preserves, e.g. jam, marmalade

Sugar and artificial sweeteners

Sweet spreads, fillings and icings

Vegetables

Fried or roast potatoes and potato products

Potato chips

Potatoes - other, e.g. boiled, baked, potato salads and dishes

Vegetables, not potatoes

Vegetable dishes, including baked beans

Vitamin and mineral supplements and medicine

Vitamin and mineral supplements - medicines; oil/syrup form

Vitamin and mineral supplements - tablet or capsule form

NDNS: Adults Aged 19 to 64 Years

FOOD SOURCE CODES

Food source codes are only required for food eaten out of the home.

Codes:

1. All food derived from the household food supply that is eaten outside the home, e.g. a packed lunch.
2. Food obtained from the work/college canteen, including vending machines in the canteen.
3. Food obtained from, and eaten at, a commercial catering establishment, e.g. restaurant, pub, café, fast food outlets. Includes any foods eaten on the premises of such establishments, e.g. a burger bought at, and eaten in, the cinema.
4. Takeaway food - food obtained from a commercial eating establishment but NOT eaten on the premises; food from a retail outlet NOT eaten at home. Food eaten on the move, e.g. a hot-dog bought from a stand and eaten in the park. Includes sandwich from a sandwich bar eaten in the office.
5. Other source - any food which cannot be allocated codes 1-4 . Includes food given to the respondent by someone else. Includes tea/coffee from office coffee club.

The codes should be assigned to foods in priority order:

1. the source of the food, i.e. where the food was obtained from;
2. where the food was eaten.

Examples

Biscuits brought into office by colleague - code 5

sandwich from sandwich bar eaten in office - code 4

Takeaway meal purchased and taken round friend's house to eat - code 4

Flag any queries or entries you cannot code.

ALCOHOLIC BEVERAGES

BEERS AND LAGERS

- 2363 Beer: best bitter, canned, e.g. Marston's pedigree, Whitbread Trophy, Tankard, Courage best bitter, John Smith's Extra Smooth, Tetley's. ~ 4.3% ABV
- 8336 Beer: best bitter, draught or bottled, e.g. Marston's pedigree, Whitbread Trophy, Tankard, Courage best bitter, John Smith's Extra Smooth, Tetley's. NOT canned ~ 4.3% ABV
- 9247 Beer, homemade
- 2362 Beer: non-premium bitters; pale ale; mild; light ale; canned, e.g. Boddingtons; Younger's Tartan; Courage mild ~ 3.8% ABV
- 8335 Beer: non-premium bitters; pale ale; mild; light ale; draught or bottled, e.g. Boddingtons, Younger's Tartan, Courage mild. NOT canned ~ 3.8% ABV
- 2366 Beer: real ales or extra strong bitters, canned, e.g. Caffreys, Old Speckled Hen strong ale, Bishop's Finger, Young's Special bitter, Greene King's Abbot, Wadworth's 6X, Ruddle's County, Theakston's Old Peculiar, Newcastle Brown, barley wine ~ 4.8% ABV
- 8338 Beer: real ales or extra strong bitters, draught or bottled, e.g. Caffreys, Old Speckled Hen strong ale, Bishop's Finger, Young's Special bitter, Greene King's Abbot, Wadworth's 6X, Ruddle's County, Theakston's Old Peculiar, Newcastle Brown, barley wine. NOT canned ~ 4.8% ABV
- 2364 Beer: strong bitter, canned, e.g. Guinness bitter NOT stout, McEwan's Export, Director's bitter, draught Bass, Stag bitter ~4.3% ABV
- 8337 Beer: strong bitter, draught or bottled, e.g. Guinness bitter NOT stout, McEwan's Export, Director's bitter, draught Bass, Stag bitter. NOT canned ~ 4.3% ABV
- 2367 Beer: others, unspecified, canned
- 8339 Beer: others, unspecified, NOT canned
- 2370 Lager: continental type, canned, e.g. Colt 45, Stella Artois, Labatts Ice, Red Stripe, Foster's Export, Foster's Ice, Bud Ice, Kronenbourg, Grolsch, Budweiser, Molson, Schlitz, Pacifico ~ 5.1% ABV
- 8342 Lager: continental type, draught or bottled, e.g. Colt 45, Stella Artois, Labatts Ice, Red Stripe, Foster's Export, Foster's Ice, Bud Ice, Kronenbourg, Grolsch, Budweiser, Molson, Schlitz, Pacifico, Beck's. NOT canned ~ 5.1% ABV
- 2372 Lager, low carbohydrate pils type, canned, e.g. Pils, Lowenbrau, Heldenbrau, Miller's Lite, Pilsner type lager ~ 4.3% ABV
- 8344 Lager, low carbohydrate pils type, draught or bottled, e.g. Pils, Lowenbrau, Heldenbrau, Miller's Lite, Pilsner type lager. NOT canned ~ 4.3% ABV
- 2368 Lager: non premium lager, canned, e.g. Heineken, Carlsberg, Kestrel, Hofmeister, Skol ~3.3% ABV
- 8340 Lager: non premium lager, draught or bottled, e.g. Heineken, Carlsberg, Kestrel, Hofmeister, Skol. NOT canned ~3.3% ABV
- 2369 Lager: premium lager, canned, e.g. Tennent's, Carling Black Label ~ 4.1% ABV

BEERS AND LAGERS

- 8341 Lager: premium lager, draught or bottled, e.g. Tennent's, Carling Black Label. NOT canned ~ 4.1% ABV
- 2371 Lager: special strong brew lager, canned, e.g. Carlsberg Special Brew, Heldenbrau Extra Special ~ 8.7% ABV
- 8343 Lager: special strong brew lager, draught or bottled, e.g. Carlsberg Special Brew, Heldenbrau Extra Special. NOT canned ~ 8.7% ABV
- 2374 Lager, unspecified, canned. NOT low carbohydrate, low alcohol or alcohol free ~ 3.7% ABV
- 8346 Lager, unspecified, draught or bottled. NOT low carbohydrate, low alcohol or alcohol free. NOT canned ~ 3.7% ABV
- 2376 Stout, canned, e.g. Guinness (NOT Guinness Foreign Extra stout), Murphys Irish stout, Young's luxury double chocolate stout ~ 4% ABV
- 2377 Stout, extra strong, canned, e.g. Guinness Foreign Extra stout ~ 7.2% ABV
- 2375 Stout, canned, e.g. Mackeson ~ 3.3% ABV
- 8348 Stout, draught or bottled, e.g. Guinness (NOT Guinness Foreign Extra stout), Murphys Irish stout, Young's luxury double chocolate stout. NOT canned ~ 4% ABV
- 8334 Stout, extra strong, draught or bottled, e.g. Guinness Foreign Extra stout. NOT canned ~ 7.2% ABV
- 8347 Stout, draught or bottled, e.g. Mackeson. NOT canned ~ 3.3% ABV

LOW ALCOHOL AND ALCOHOL FREE BEER AND LAGER

- 9221 Bitter, low alcohol, canned, e.g. Swan light ~ 0.8% ABV
- 9251 Bitter, low alcohol, e.g. Swan light. NOT canned ~ 0.8% ABV
- 2373 Lager, alcohol free, canned, e.g. Barbican, Kaliber 0% ABV
- 8345 Lager, alcohol free, e.g. Barbican, Kaliber. NOT canned 0% ABV
- 9220 Lager, low alcohol, canned ~ 0.6% ABV
- 9250 Lager, low alcohol, NOT canned ~ 0.6 % ABV
- 2378 Shandy, i.e. half lemonade and half ale. NOT canned, NOT bottled ~ 3% ABV

CIDER AND PERRY

- 8351 Babycham; perry. NOT canned
- 2379 Cider, dry, canned
- 8350 Cider, dry, draught or bottled. NOT canned
- 2380 Cider, sweet or medium, canned
- 8349 Cider, sweet or medium, NOT canned

BEERS AND LAGERS, CIDER AND PERRY, LOW ALCOHOL

- 6998 Cider, vintage, canned
PA322

6999 Cider, vintage, NOT canned

LOW ALCOHOL AND ALCOHOL FREE CIDER AND PERRY

9222 Low alcohol cider, canned

9252 Low alcohol cider. NOT canned

ALCOHOLIC SOFT DRINKS

5142 Alcoholic soft drinks, fruit flavoured, includes wine, beer and cider based drinks. NOT containing spirits. Includes alcoholic lemonade.

5396 Alcoholic soft drinks, spirit based, e.g. Smirnoff Mule, Metz, Barking Frog, Jammin, Source

5507 Alcoholic soft drinks, other or unspecified, includes sodas, e.g. Sub Zero and Aqua V

LIQUEURS

2396 Advocaat

2398 Cherry brandy

2397 Cream Liqueurs, e.g. Bailey, Greensleeves, Carolan

2401 Curacao

2400 High strength liqueurs, e.g. Pernod, Drambuie, Cointreau, Grand Marnier, Southern Comfort, Ouzo, Sloe gin

2399 Medium strength liqueurs, e.g. Tia Maria, De Kuyper liqueurs, Creme de Menthe

2406 Pimms

2407 Snowball, bottled

SPIRITS

2402 70% proof spirits, e.g. whisky, gin, brandy, rum, vodka, Bacardi, Malibu

TONIC WATER

B 8379 Tonic Water - Slimline, canned

B 8380 Tonic Water - Slimline, NOT canned

B 8332 Tonic Water; NOT slimline, canned

B 8378 Tonic Water; NOT slimline, NOT canned

CIDER AND PERRY ALCOHOLIC SOFT DRINKS, LIQUEURS, SPIRITS AND TONIC WATER

WINE

- 9246 Homemade wine, any type
- 9869 Tonic Wine, e.g. Sanatogen
- 2382 Wine, red, canned
- 8352 Wine, red. NOT canned
- 2384 Wine, rosé, canned
- 8353 Wine, rosé, NOT canned
- 2386 Wine, white, dry, canned
- 8354 Wine, white, dry. NOT canned
- 9596 Wine, white, low alcohol
- 2385 Wine, white, medium, canned
- 8355 Wine, white, medium, NOT canned
- 2388 Wine, white, sparkling, canned
- 8357 Wine, white, sparkling. NOT canned
- 2387 Wine, white, sweet, canned
- 8356 Wine, white, sweet. NOT canned

FORTIFIED WINE

- 7768 Egg nog, drink with egg, whole milk , sugar and rum
- 2394 Martini; Cinzano; Campari; Riccadonna (dry or extra dry)
- 2395 Martini; Cinzano; Riccadonna (sweet); Dubonnet, sweet
- 2390 Port
- 2391 Sherry, dry
- 2392 Sherry, medium
- 2393 Sherry, sweet; ginger wine
- 9283 Vermouth, dry only
- 9354 Vermouth, sweet only
- 2389 Wine, Champagne

WINE AND FORTIFIED WINE

8150 Wine, alcohol free, e.g. Blush

9596 Wine, white, low alcohol, e.g. Lambrusco

LOW ALCOHOL AND ALCOHOL FREE WINE

BEVERAGES (INCLUDING TEA AND COFFEE)

BEVERAGES (DRY WEIGHT)

- 5106 Water used to make up instant beverages, e.g. Horlicks, Ovaltine, drinking chocolate etc. (NOT instant coffee or tea or dried milk).
- 7053 Barley cup, DRY WEIGHT
- 9506 Bournvita, DRY WEIGHT, NOT low in fat, NOT instant
- 8311 Bournvita, low fat: DRY WEIGHT, instant
- 649 Build-Up drink, DRY WEIGHT
- 7890 Cadbury's Highlights, instant low calorie chocolate drink with artificial sweetener, DRY WEIGHT
- 7890 Chocolate based instant drinks with artificial sweetener, DRY WEIGHT, e.g. Ovaltine Options, (Choc-N-Orange, Choc-a-Mint, Choc-a-Mocha, Choc-o-nut), Sainsbury's Duos, Nestlé Chocolite, Tesco low calorie hot chocolate drink
- 2303 Cocoa powder, DRY WEIGHT
- 9308 Cold relief powders with added vitamin C, DRY WEIGHT e.g. Lemsip
- 2305 Complan, DRY WEIGHT
- 2309 Drinking chocolate, DRY WEIGHT, not instant, not reduced fat. Includes Nesquik Hot Chocolate Drink
- 2632 Drinking chocolate, instant, DRY WEIGHT, e.g. Cadbury's Chocolate Break. NOT fat reduced
- 2633 Drinking chocolate, instant, fat reduced or low fat, DRY WEIGHT
- 9369 Drinking chocolate, reduced fat, DRY WEIGHT, e.g. Sainsbury's, Tesco, Boots, Impress. NOT instant
- Drinking chocolate from vending machine, as served: see 'Milk Based Drinks'
- 9278 Horlicks chocolate malted food drink, DRY WEIGHT. NOT instant Horlicks
- 9277 Horlicks low fat, instant, chocolate, DRY WEIGHT
- 2310 Horlicks malted food drink; DRY WEIGHT. NOT chocolate Horlicks, NOT instant Horlicks.
- 2635 Horlicks powder, instant, low fat, NOT chocolate, DRY WEIGHT
- 9368 Instant malted drinks, DRY WEIGHT, own brand only, e.g. Tesco, Safeway, Sainsbury's. NOT fortified with vitamins or minerals; NOT chocolate; NOT Horlicks or Ovaltine
- 9308 Lemsip, DRY WEIGHT
- 9367 Malted drinks, DRY WEIGHT, own brand only, e.g. Tesco, Safeway, Sainsbury's, Boots. NOT fortified with vitamins or minerals; NOT chocolate; NOT instant malted drinks; NOT Horlicks or Ovaltine
- Milk, canned: see "Other Milk"
- 2311 Milk shake powder, DRY WEIGHT, e.g. Nesquik

BEVERAGES

2301 Milo chocolate flavoured malt drink, DRY WEIGHT

2313 Ovaltine, NOT Ovaltine instant, NOT Ovaltine Options, DRY WEIGHT

2670 Ovaltine, instant, low fat, NOT Ovaltine options, DRY WEIGHT

7890 Ovaltine Options, chocolate based instant drinks, DRY WEIGHT

649 Slender slimming drink, DRY WEIGHT

BEVERAGES

BOTTLED WATER, STILL OR CARBONATED, NOT SWEETENED

- B 5151 Amé sparkling drink with herbs and vitamins
- B 8329 Herbal tonics; water with herbs; e.g. Aqua Libra. NOT with added fruit juice.
- B 8381 Mineral water, carbonated, flavoured. NO added sugar.
- B 8333 Mineral water, still or carbonated. NOT flavoured.

TAP WATER ONLY

See also: FOOD CODES FOR TAP WATER CARD FC7

- 5000 Tap water; non-bottled water; filtered water, soda water
NOT used as a diluent. Includes water drunk to swallow tablets.
- 5101 Water used to dilute concentrated soft drinks (not low calorie) only
- 5102 Water used to dilute concentrated low calorie / diet soft drinks only
- 5103 Water used to make up instant coffee
- 5104 Water used to make up instant tea
- 5105 Water used to make up dried milk
- 5106 Water used to make up instant beverages, e.g. Horlicks, Ovaltine,
drinking chocolate etc. (NOT instant coffee or tea or dried milk).
- 5106 Water used to make up powdered medicines or dietary supplements

WATER

COFFEE AND TEA

COFFEE

- 5103 Water used to make up instant coffee
- 2844 Cappuccino, instant, with whitener, NO sugar, DRY WEIGHT
- 6840 Cappuccino, instant, with whitener and sugar, DRY WEIGHT
- 2304 Coffee and chicory essence, e.g. Camp
- 2307 Coffee, fresh, strong infusion. NOT decaffeinated
- 8312 Coffee, fresh, strong infusion, decaffeinated
- 8313 Coffee, fresh, NOT strong infusion, decaffeinated
- 2306 Coffee, fresh, NOT strong infusion. NOT decaffeinated
- 2636 Coffee, from vending machine, with whitener, NO sugar, as served
- 2637 Coffee, from vending machine, with whitener and sugar, as served
- 8314 Coffee, instant, decaffeinated, powder or granules, DRY WEIGHT
- 2308 Coffee, instant, powder or granules, DRY WEIGHT

TEA

- 5104 Water used to make up instant tea
- 2638 Tea, from vending machine, with whitener, no sugar, as served
- 2639 Tea, from vending machine, with whitener and sugar, as served
- 2316 Tea, instant freeze dried; lemon tea; DRY WEIGHT. NOT Typhoo QT
- 8318 Tea, instant with milk powder added, DRY WEIGHT, e.g. Typhoo QT
- 8317 Tea, NOT strong infusion, decaffeinated
- 2315 Tea, NOT strong infusion, NOT decaffeinated
- 2314 Tea, strong infusion. NOT decaffeinated
- 8316 Tea, strong infusion, decaffeinated

HERBAL FRUIT TEA (MADE UP WEIGHT)

- B 5340 Tea, fruit only, as served, not with milk
- B 7000 Tea, herb only, as served, not with milk
- B 5341 Tea, herb and fruit mix, as served, not with milk

FRUIT AND VEGETABLE JUICES

REMEMBER:

PASTEURISED juices

- come in tall purpak cartons
- have a short shelf life
- are refrigerated

FRESHLY SQUEEZED juices

- come in cartons or bottles
- will be described as freshly squeezed
- have a short shelf life
- are refrigerated

UHT/LOGLIFE juices

- come in tetrabrik cartons
- are not refrigerated

FRUIT OR VEGETABLE JUICE, CANNED, UNSWEETENED

- B 2317 Apple juice, canned, unsweetened, e.g. Appletise, Shloer, Kiri
- B 2328 Grapefruit juice, canned
- B 8450 Mixed fruit juice, canned, 100 % fruit juice, e.g. "Real"
- B 2336 Orange juice, canned
- B 2343 Pineapple juice, canned
- B 2355 Tomato juice, canned

FRUIT JUICE, SWEETENED

- B 2326 Grapefruit juice, canned, sweetened
- B 2327 Grapefruit juice, not canned, sweetened
- B 2334 Orange juice, canned, sweetened
- B 2335 Orange juice, not canned, sweetened
- B 2341 Pineapple juice, canned, sweetened
- B 2342 Pineapple juice, not canned, sweetened

FRUIT OR VEGETABLE JUICE, NOT CANNED, UNSWEETENED

- B 2318 Apple juice, pasteurised only. NOT canned
- B 2319 Apple juice, UHT or Longlife. NOT pasteurised. NOT canned
- B 2361 Carrot juice. NOT canned
- B 2325 Grape juice. NOT canned
- B 2329 Grapefruit juice, pasteurised. NOT canned
- B 2330 Grapefruit juice, UHT or Longlife. NOT pasteurised.. NOT canned
- 2064 Lemons, juice only, no peel or flesh or leftover peel and flesh weighed; includes Jif lemon juice, etc. NOT canned
- 2065 Limes, fresh juice only
- B 8604 Mango juice. NOT canned
- B 2357 Mixed fruit juice, 100% juice, e.g. Real. NOT canned. NO sugar or water
- B 2339 Orange juice, freshly squeezed, includes home-squeezed orange juice. NOT pasteurised, UHT or Longlife. NOT canned
- B 2359 Orange juice, frozen, concentrated. NOT canned
- B 2360 Orange juice, frozen, made up. NOT canned
- B 2337 Orange juice, pasteurised. NOT canned
- B 2338 Orange juice, UHT or Longlife. NOT canned. NOT pasteurised.
- B 2344 Pineapple juice, pasteurised. NOT canned
- B 2345 Pineapple juice, UHT or Longlife. NOT canned. NOT pasteurised.
- B 8640 Prune juice. NOT canned. Unsweetened
- B 9350 Redcurrant juice, homemade, fresh. NOT canned
- B 2356 Tomato juice. NOT canned
- B 1944 Vegetable juice, NOT canned. NOT 100% carrot juice; NOT 100% tomato juice

FRUIT AND VEGETABLE JUICES

SOFT DRINKS

THIS SECTION IS DIVIDED INTO THE FOLLOWING SUB-SECTIONS:

- A. CARBONATED DRINKS
- B. CONCENTRATED FRUIT DRINKS (CONTAINING SOME FRUIT JUICE)
- C. READY TO DRINK STILL DRINKS
- D. RIBENA
- E. TONIC WATER
- F. MINERAL WATERS AND MINERAL WATER BASED DRINKS

SOFT DRINKS

A. CARBONATED SOFT DRINKS

This sub-section is divided into the following groups:

- A1. Carbonated, *canned*, not diet or low calorie
- A2. Carbonated, *canned*, **diet; low calorie; sugar free**
- A3. Carbonated, not canned, not diet or low calorie
- A4. Carbonated, not canned, **diet; low calorie; sugar free**

A1. CARBONATED, CANNED, NOT DIET OR LOW CALORIE

- B 2641 Apple juice drink, canned e.g. Tango Apple. NOT Appletise, Shloer, Kiri
- B 2317 Apple juice, unsweetened, canned e.g. Appletise, Shloer, Kiri. NOT Tango Apple
- B 5947 Boots high energy drink ONLY
- B 7900 Carbonated beverages, not containing fruit juice, canned e.g. ginger beer/ale, orangeade, limeade, cherryade, Sprite, cream soda, Dr Pepper. NOT Cola, tonic water, Irn Bru lemonade or 7-Up.
- B 7894 Cola, any flavour, canned; includes cherry, strawberry or tropical cola. NOT caffeine free
- B 8320 Cola; cherry cola; caffeine free, canned e.g. Caffeine Free Coke, Caffeine Free Cherry Coke
- B 2404 Fruit juice drink, canned, containing at least 50% juice, e.g. Britvic 55, Rawlings 60. NOT juice drink (less than 50% juice)
- B 8328 Fruit Juice drink; fruit drink; fruit crush, canned; containing less than 50% fruit juice, e.g. Tango (NOT Tango Apple), Sunkist, Lilt, Citrus Spring, Fanta, Gini, Orangina, Vimto, Rio, own brand sparkling fruit crush. NOT apple juice drink; NOT Britvic 55; NOT carbonated fruit juice
- B 8324 Irn Bru, canned
- B 2321 Lemonade, canned. NOT still lemonade. Includes traditional and old fashioned lemonade. NOT 7-Up or Sprite
- B 2403 Lucozade, canned. NOT Lucozade with orange, lemon or tropical barley
- B 8515 Lucozade, canned. Orange, lemon or tropical barley
- B 5468 Lucozade sport, isotonic lucozade, canned
- B 5545 Red bull energy drink ONLY
- B 5545 Redcard energy drink (Britvic) ONLY
- B 2321 Shandy, canned
- B 2843 V energy drink, fortified with guarana and B vitamins ONLY
- B 5947 Virgin fruit flavoured high energy drink ONLY
- B 9991 7-Up only, canned

CARBONATED, CANNED SOFT DRINKS

A2. CARBONATED, CANNED, DIET; LOW CALORIE; SUGAR FREE

- B 8362 Apple juice drink, canned, low calorie, e.g. Diet Kiri, low calorie Tango Apple
- B 7902 Carbonated beverages, canned, not containing fruit juice, low calorie, e.g. diet ginger beer/ale, diet limeade, diet orangeade, diet cherryyade, Dr Pepper Diet, diet Sprite. NOT cola, tonic water, Irn Bru, lemonade or 7-Up Light.
- B 8322 Cola; cherry cola, canned, low calorie, caffeine free e.g. Caffeine Free Diet Coke, Caffeine Free Diet Pepsi, Caffeine Free, Diet Cherry Cola.
- B 7896 Cola; cherry cola, canned, low calorie, NOT caffeine free, e.g. Diet Coke, Diet Cherry Cola, Diet Pepsi, Pepsi Max, Tab Clear
- B 8326 Diet Irn Bru, canned
- B 8360 Fruit juice drink; fruit drink; fruit crush, canned, containing fruit juice, low calorie, e.g. Diet Sunkist, Diet Fanta, Diet Gini, Diet Tango (NOT Tango Apple), Diet Lilt, Diet Orangina, Diet Rio, Diet Vimto, Hero Lite, own brand Diet fruit crush. NOT Diet apple juice drink; NOT 7-Up Light
- B 7898 Lemonade, canned, diet; low calorie; sugar free; no added sugar. Includes traditional and old fashioned lemonade. NOT 7-Up or Sprite
- B 7327 Lucozade light, canned
- B 9992 7-Up Light only, canned

CARBONATED, CANNED, DIET SOFT DRINKS

A3. CARBONATED, NOT CANNED, NOT DIET OR LOW CALORIE

- B 5151 Amé sparkling juice drink ONLY
- B 2320 Apple juice drink, NOT canned e.g. Tango Apple. NOT Appletise, Shloer, Kiri
- B 2319 Apple juice, unsweetened, NOT canned e.g. Appletise, Shloer, Kiri. NOT Tango Apple
- B 7901 Carbonated beverages, NOT containing fruit juice, NOT canned e.g. ginger beer/ale, limeade, orangeade, cherryade, Sprite, Cream Soda, Dr Pepper. NOT cola, tonic-water, Irn Bru, 7-Up or lemonade.
- B 7895 Cola, any flavour including cherry, strawberry and tropical cola, NOT canned e.g. Coca Cola, Pepsi Cola. NOT caffeine free cola
- B 8321 Cola; cherry cola; caffeine free, NOT canned e.g. Caffeine Free Coke, Caffeine free Cherry Coke.
- B 2340 Fruit juice drink, containing at least 50 % juice, NOT canned e.g. Britvic 55, Rawlings 60, Aqualibra. NOT juice drink (less than 50% juice)
- B 2320 Grape juice drink, NOT canned e.g. Shloer, Grapetize
- B 8325 Irn Bru, NOT canned
- B 8444 Juice drink; fruit drink; fruit crush, containing fruit juice, NOT canned e.g. Tango (NOT Tango Apple), Sunkist, Citrus spring, Fanta, Gini, Lilt, Orangina, Rio, Schweppes Sparkling Fruit Juice drinks, Tesco Hi Juice, Vimto, own brand sparkling fruit crush. NOT apple, pear or grape juice drink; NOT Britvic 55; NOT carbonated fruit juice
- B 2322 Lemonade, NOT canned. NOT 7 Up or Sprite.
- B 2333 Lucozade, NOT canned. NOT Lucozade with orange, lemon or tropical barley.
- B 8490 Lucozade, NOT canned. Orange, lemon or tropical barley
- B 7910 Pear juice drink, NOT canned e.g. Shloer. NOT Shloer apple juice
- B 2322 Shandy, NOT canned
- B 2853 Supermalt/Mighty Malt premium, non-alcoholic energy malt drink with B vitamins ONLY
- B 9993 7-Up only, NOT canned

CARBONATED, NOT CANNED SOFT DRINKS

A4. CARBONATED, NOT CANNED, DIET; LOW CALORIE; SUGAR FREE

- B 8457 Apple juice drink, low calorie, NOT canned e.g. Diet Kiri, low calorie Tango Apple
- B 7903 Carbonated beverages, not containing fruit juice, low calorie, NOT canned e.g. diet ginger beer/ale, diet limeade, diet cherryade, diet Sprite, Dr Pepper Diet. NOT cola, tonic water, Irn Bru, 7-Up Light or lemonade.
- B 7897 Cola, NOT canned e.g. Diet Coke, Diet Pepsi, Pepsi Max, Tab Clear. NOT caffeine free cola
- B 8323 Cola, caffeine free, NOT canned e.g. Caffeine free diet Coke, Caffeine Free Diet Pepsi.
- B 8445 Fruit Juice drink; fruit drink; fruit crush, containing fruit juice, low calorie, NOT canned e.g. Diet Sunkist, Diet Fanta, Diet Gini, Diet Tango (NOT Tango Apple), Diet Lilt, Diet Orangina, Diet Vimto, Diet Rio, own brand diet sparkling fruit crush. NOT low calorie apple juice drink; NOT 7-Up Light.
- B 8327 Irn Bru Diet, NOT canned
- B 7899 Lemonade, diet, low calorie or sugar free, NOT canned. NOT 7 Up Light or Diet Sprite.
- B 8331 Lucozade light, NOT canned
- B 9994 7-Up Light only, NOT canned

CARBONATED, NOT CANNED, DIET SOFT DRINKS

B: CONCENTRATED SOFT DRINKS (CONTAINING SOME FRUIT JUICE)

This section is divided into the following groups:

- B1 Concentrated High juice drinks and high juice squashes (labelled as "High Juice")
- B2 Concentrated fruit drinks, juice drinks, cordials and squashes, NOT diet; low calorie; no added sugar; sugar free, low sugar
- B3 Concentrated fruit drinks, juice drinks, cordials and squashes, diet; low calorie; no added sugar; sugar free, low sugar
- (Ribena - see section D)

B1: CONCENTRATED HIGH JUICE DRINK; HIGH JUICE SQUASH

- 5101 Water used to dilute concentrated soft drinks (not low calorie) only; NOT to dilute fruit juice
- B 7911 High juice drink; high juice squash, any fruit except blackcurrant, NOT diet or low calorie
- B 7913 High juice drink; high juice squash, containing blackcurrant, NOT diet or low calorie
- B 9995 High juice drink; high juice squash, *reduced sugar*, any fruit except blackcurrant, e.g. high juice squash lite. NOT diet or low calorie
- B 5425 High juice drink, high juice squash, *reduced sugar*, containing blackcurrant, NOT diet or low calorie

B2: CONCENTRATED FRUIT DRINKS; FRUIT JUICE DRINKS; CORDIALS; SQUASHES, NOT DIET OR LOW CALORIE OR NO ADDED SUGAR, SUGAR FREE OR LOW SUGAR

- 5101 Water used to dilute concentrated soft drinks (not low calorie) only; NOT to dilute fruit juice
- B 8491 Barley water, any fruit. NOT low calorie; NOT Robinson's fruit break drinks
- B 7919 C-Vit, multivitamin drink with calcium, blackcurrant. Includes C-Vit *reduced sugar* cordial
- B 6826 Drink; cordial not containing fruit juice e.g. Belvoir elderflower, ginger or pink ginger cordials, peppermint cordial
- B 2351 Economy, value, savers fruit drink; fruit juice; fruit cordial; squash; fruit crush, any fruit except blackcurrant e.g. Sainsbury's economy orange drink
- B 7915 Fruit drink; fruit juice drink; fruit cordial; squash, containing blackcurrant, NOT low calorie, *Sainsbury's, Waitrose, Safeway, St Michael own brands ONLY*. NOT Sainsbury's economy or Safeway Savers
- B 9996 Fruit drink; fruit juice drink; fruit cordial; squash, containing blackcurrant, NOT low calorie, *any other brand not specified at 7915 EXCEPT Robinsons original fruit concentrates*
- B 2349 Fruit drink; fruit juice drink; fruit cordial; squash, any fruit except blackcurrant, NOT low calorie, *Sainsbury's, Waitrose, Safeway, St Michael own brands, Vimto mixed fruit cordial ONLY*. NOT Sainsbury's economy or Safeway Savers

CONCENTRATED SOFT DRINKS

- B 9997 Fruit drink; fruit juice drink; fruit cordial; squash, any fruit except blackcurrant, NOT low calorie, *any other brand not specified at 2349, EXCEPT Robinsons original fruit concentrates*
- B 2331 Lime juice cordial
- B 6961 Robinsons original fruit concentrates ONLY
- B 2348 Rosehip syrup
- B 9995 Squash, *reduced sugar*, any fruit except blackcurrant. NOT diet or low calorie squash
- B 2651 Super-concentrated crush; drink, any fruit e.g. Teisseire Sirop de Fruits

B3: CONCENTRATED FRUIT DRINK; FRUIT JUICE DRINK; FRUIT CORDIAL; SQUASH; DIET; LOW CALORIE; NO ADDED SUGAR; SUGAR FREE; LOW SUGAR

- 5102 Water used to dilute low calorie/diet soft drinks only
- B 9998 Barley water, diet; low calorie; no added sugar; sugar free, low sugar, containing blackcurrant, e.g. Robinsons fruit break, no added sugar
- B 5110 Barley water, diet; low calorie; no added sugar; sugar free, low sugar, any fruit except blackcurrant e.g. Robinsons fruit break, no added sugar
- B 8464 Fruit drink; fruit juice drink; fruit cordial; squash; fruit crush, low calorie; sugar free; diet; no added sugar, low sugar, containing blackcurrant e.g. Sainsbury's apple and blackcurrant, no added sugar. NOT Robinsons Special R
- B 2351 Fruit drink; fruit juice drink; fruit cordial; squash; fruit crush, low calorie; sugar free; diet; no added sugar, low sugar, any fruit except blackcurrant e.g. Sainsbury's strawberry drink no added sugar, Tesco mixed fruit no added sugar. NOT Robinsons Special R
- B 6963 Robinsons Special R ONLY

C: READY TO DRINK STILL DRINKS

This section is divided into the following groups

- C1 High juice drinks; ready to drink (labelled as "high juice") (must contain fruit juice)
- C2 Fruit juice drinks, fruit drinks, ready to drink (must contain fruit juice)
NOT low calorie. NOT carbonated
- C3 Fruit juice drinks; fruit drinks, ready to drink (must contain fruit juice)
low calorie; diet; no added sugar; sugar free. NOT carbonated
- C4 Fruit flavour drinks ready to drink (not containing fruit juice). NOT carbonated

(Carbonated drinks: see Section A; Ribena: see section D)

C1: READY TO DRINK HIGH JUICE DRINK, CONTAINS FRUIT JUICE

- B 7914 High juice drink; NOT low calorie or diet, containing blackcurrant
- B 7912 High juice drink, NOT low calorie or diet, any fruit except blackcurrant

C2: FRUIT JUICE DRINK, FRUIT DRINK, CONTAINS FRUIT JUICE, READY TO DRINK, NOT LOW CALORIE, NOT CARBONATED

- B 8691 Apple drink; juice drink. Includes Sainsbury's *low sugar* apple juice drink. NOT low calorie or 'no added sugar' NOT Ribena. NOT Robinsons Fruit Shoot
- B 8455 Blackcurrant drink or containing blackcurrant; juice drink. Includes Sainsbury's *low sugar* blackcurrant juice drink. NOT low calorie or 'no added sugar' NOT Ribena. NOT Robinsons Fruit Shoot
- B 8453 Citrus orange; grapefruit; lemon; pineapple drink or juice drink. Includes Sainsbury's *low sugar* orange or strawberry juice drinks. NOT low calorie or 'no added sugar'. NOT Robinsons Fruit Shoot
- B 7920 C-Vit, multi-vitamin drink with calcium, blackcurrant. Includes C-Vit *reduced sugar* blackcurrant
- B 7918 C-Vit, multi-vitamin drink with calcium, orange or orange and peach
- B 2985 Fruit juices/smoothies, with vitamin B and kava kava, e.g. Be Happy
- B 2358 Mixed fruit; summer fruit drink or juice drink, NOT low calorie or 'no added sugar' NOT Ribena. NOT Robinsons Fruit Shoot
- B 6957 Robinsons Fruit Shoot ONLY, NOT low calorie or 'no added sugar'
- B 5111 Still lemonade, not low calorie
- B 2985 Smoothies, with vitamin B and kava kava, e.g. Be Happy
- B 6827 Sunny Delight fruit juice drink

READY-TO-DRINK STILL DRINKS

C3: FRUIT JUICE DRINK; FRUIT DRINK; CONTAINS FRUIT JUICE; READY TO DRINK, LOW CALORIE; DIET; NO ADDED SUGAR; SUGAR FREE NOT CARBONATED

- B 8474 Blackcurrant drink or juice drink, low calorie; diet; no added sugar; sugar free, NOT Ribena. NOT Robinsons Fruit Shoot
- B 8029 Mixed fruit, summer fruits drink or juice drink, low calorie; diet; no added sugar; sugar free e.g. Oasis Light. NOT Robinsons Fruit Shoot
- B 8472 Orange; grapefruit; lemon; pineapple drink or juice drink, low calorie; diet; no added sugar; *sugar free*. NOT Robinsons Fruit Shoot
- B 6959 Robinsons Fruit Shoot ONLY, low calorie; diet; no added sugar; sugar free

C4: FRUIT FLAVOUR DRINK, ANY FLAVOUR, NOT CONTAINING JUICE, READY TO DRINK

- B 5112 Fruit flavour drink, any flavour, *not containing juice*, NOT low calorie
- B 5113 Fruit flavour drink, any flavour, *not containing juice*, low calorie; diet; no added sugar; sugar free

D: RIBENA

This section is divided into the following groups:

- D1 concentrated Ribena
- D2 ready to drink Ribena
- D3 carbonated Ribena

D1: CONCENTRATED RIBENA

- B 5498 Ribena original blackcurrant juice drink, concentrated. NOT Ribena Light or no added sugar.
- B 8791 Ribena strawberry juice drink, concentrated. NOT Ribena Light or no added sugar.
- B 5499 Ribena Light blackcurrant juice drink, concentrated, lower sugar. NOT no added sugar
- B 5500 Ribena no added sugar, concentrated blackcurrant juice drink. Includes Ribena Toothkind. NOT Ribena Light

D2: READY TO DRINK RIBENA

- B 5501 Ribena blackcurrant juice drink, ready to drink
NOT Ribena Light or no added sugar; NOT carbonated
- B 5502 Ribena Juice drink, ready to drink, orange, orange and apricot or orange tropical
- B 5503 Ribena Juice drink, ready to drink, apple, forest fruit, raspberry or strawberry
NOT blackcurrant or orange and apricot Ribena
- B 5504 Ribena Light blackcurrant juice drink, ready to drink, low sugar
NOT carbonated, NOT no added sugar Ribena
- B 5505 Ribena no added sugar, blackcurrant juice drink, ready to drink. Includes Ribena Toothkind
NOT Ribena Light
- B 5502 Ribena Smoothie, juice drink with cream, ready to drink, orange and pineapple

D3: CARBONATED RIBENA

- B 4729 Diet Ribena Spark, low calorie, sparkling, blackcurrant flavour, vitamin C drink, canned
- B 5116 No added sugar Ribena Spring, blackcurrant juice drink made with spring water, canned, low calorie
- B 7907 Ribena Spark, sparkling, blackcurrant flavour, vitamin C drink, canned.
NOT diet Ribena; NOT sparkling Ribena Spring
- B 5115 Sparkling Ribena Spring, blackcurrant juice drink, made with spring water, canned, not low calorie
- B 5506 Ribena Twist, low calorie lightly sparkling spring water, any flavour.

E. TONIC WATER

- B 8332 Tonic Water; NOT slimline, canned
- B 8378 Tonic Water; NOT slimline, NOT canned
- B 8379 Tonic Water - Slimline, canned
- B 8380 Tonic Water - Slimline, NOT canned

F. MINERAL WATER AND MINERAL WATER BASED DRINKS

- B 8333 Bottled water, still or carbonated, not sweetened or flavoured
- B 8381 Bottled water, still or carbonated, flavoured not sweetened e.g. Perrier twist of lemons (no artificial sweetener)
- B 5253 Mineral water based drinks, light or low calorie, still or carbonated, sweetened with artificial sweeteners e.g. Caledonian clear light, Sainsbury's diet elderflower juice drink, Sainsbury's sparkling peach flavoured water, Sainsbury's spring water, Strathmore Clear
- B 5343 Mineral water based drinks, still or carbonated, sweetened with sugar e.g. Caledonian Clear, Calm and Clear, Sainsbury's elderflower juice drink, Sainsbury's Mirelle

TONIC WATER AND MINERAL WATER

BISCUITS

- 8191 All butter biscuits, e.g. Petit Beurre, including own brand. NOT shortbread
- 348 Amaretti biscuits
- 274 Bath Olivers; Water biscuits
- 3802 Brandy snaps
- 7649 Bread sticks, Grissini
- R 305 Caramel shortcake, homemade, i.e. shortbread with caramel layer and chocolate topping
- 8672 Caramel shortcake, purchased, i.e. shortbread with caramel layer and chocolate topping
- 8192 Carob half coated biscuits
- 5770 Cereal bar, fruit filled, fortified with vitamins and minerals, e.g. Kellogg's Nutri-Grain
- R 312 Coconut cornflake tray, made with margarine (NOT polyunsaturated), sugar, cornflakes, coconut
- 251 Cheese biscuits, e.g. Cheddars any flavour, Cheeselets, Cheese thins, KP cheese biscuits, McVities MiniCheddars, Walkers Say Cheese, Crawford's 'Cheese Snips', Golden Wonder 'Preludes', including own brand
- 252 Cheese sandwich biscuits, e.g. Tuc with 'real cheese' filling, including own brand
- 7656 Chewy cereal snack bars with any additions, e.g. Cluster, Harvest Chewy bars, Jordans Chewy bars, McVities Solar, own brand. NOT Tracker bars, NOT original crunchy bars, NOT Harvest Crunch
- 7665 Crunchy cereal bars, e.g. Jordans original crunchy, Jordans Oat Bran Bars, Harvest Crunch, including own brand
- 7665 Crunchy bars, original, e.g. Jordans, Harvest Crunch, own brand
- 253 Chocolate biscuits, full coated, containing biscuit filling only, e.g. Breakaway, United, chocolate fingers (plain, milk or white chocolate), fully coated digestives, includes McVities Gold Bar
- 8193 Chocolate biscuits, full coated, containing biscuit and cream filling, e.g. Hob Nob bars, Club biscuits, Penguins, Yoyos, Trio, Cadburys Vanilla Creole, Toffee pops
- 8194 Chocolate biscuits, full coated, containing wafer and cream, e.g. Taxi, Club wafer. NOT Kit Kat
- 7662 Chocolate chip cookies, e.g. Simmers chocolate chip & ginger, Crawford's Mini Cookies, including own brand
- 7663 Chocolate chip cookies with nuts, e.g. Boosters, Maryland Maxi
- 8195 Chocolate coated biscuits, containing marshmallows, e.g. Teacakes, Wagon Wheels
- R 310 Chocolate krispie cakes, made with Rice Krispies and Cornflakes
- 8204 Chocolate semi-sweet biscuits, half coated, e.g. Burton's Royal Tea
- 254 Chocolate short or sweet biscuits, half coated, e.g. Cadburys Animals and Burton's Cartoonies, Cadbury's Signatures. NOT half coated semi-sweet biscuits; NOT half coated chocolate digestives; NOT half coated chocolate digestives with oats; NOT Jaffa Cakes
- 7651 Coconut cookies, not iced, purchased, e.g. Mr Men and Little Misses cookies

BISCUITS

- 7650 Cornish wafers, e.g. Jacobs
- 7654 Crackers, savoury with additions, e.g. sesame seeds and or poppy seeds. NOT Ryvita
- 255 Cream cracker biscuits. NOT wholemeal
- 7652 Cream crackers, wholemeal, e.g. Farmhouse-type, Jacobs brown wheat, includes Hovis crackers
- 268 Cream sandwich biscuits, e.g. custard creams, bourbons, coconut creams, digestive creams. NOT crunch creams; NOT wholemeal; NOT jam sandwich biscuits or wafer cream sandwich biscuits
- 256 Crispbreads, e.g. Ryvita (wheat and rye), Energen. NOT High Fibre Ryvita; NOT starch reduced Energen
- 258 Crispbreads, extra light, e.g. Krispen, Crackerbread, Cracottes, French Toasts, Dutch Crispbakes
- 7325 Crispbreads, rye, high fibre, e.g. High Fibre Ryvita
- 7653 Crispbreads, rye, with sesame seeds only, e.g. Ryvita with sesame seeds
- 257 Crispbreads, starch reduced, e.g. Energen
- 8196 Crunch biscuit. NOT cream filled; NOT crunchy cereal bars
- 8197 Crunch biscuit, half coated with chocolate. NOT crunchy cereal bars
- 8198 Crunch biscuit, with cream filling. NOT crunchy cereal bars
- R 319 Date and krispie crunch, made with margarine (NOT polyunsaturated), sugar, dates, Rice Krispies
- 260 Digestive, chocolate half-coated; NOT chocolate Hob-nobs
- 9472 Digestives, half coated with chocolate, reduced fat, e.g. McVities Light Homewheat
- 8989 Digestives, sweetmeal or wheatmeal, plain, reduced fat
- 259 Digestives, sweetmeal or wheatmeal, plain. NOT reduced sugar; NOT reduced fat; NOT Hob Nobs; NOT digestives with oats, NOT digestive creams
- 8199 Digestives, sweetmeal or wheatmeal, plain, reduced sugar, e.g. Sainsbury's reduced sugar wheatmeal digestive. NOT Hob Nobs; NOT digestives with oats
- 276 Digestives, wholemeal
- 7658 Digestives with oats, chocolate, half-coated, e.g. Hob-nobs, Rustics, Oatbakes. NOT wholemeal digestives
- 7659 Digestives with oats and fruit, e.g. Snapjacks, Rustics
- 7657 Digestives with oats, plain, e.g. Hob-nobs, Rustics, Oatbakes, Snapjacks. NOT wholemeal digestives
- R 321 Digestive nut crunch, made with butter, digestive biscuits, nuts and condensed milk
- 7660 Digestives with oats, fruit and chocolate, half-coated, e.g. Snapjacks
- 7664 Fig rolls, any type, including banana and date bars
- R 357 Flapjacks, homemade (made with oats, margarine (NOT polyunsaturated), syrup and sugar)
- 261 Flapjacks, purchased. NOT homemade, NOT cereal crunch bars
- R 330 Florentines, i.e. nuts, dried fruit, butter, chocolate

BISCUITS

- 5594 Fruit biscuits, low fat, e.g. McVities Go Ahead Fruit Ins
- 262 Fruit biscuits, NOT wholemeal. e.g. Fruit shortcake, Shrewsbury, Jaspers
- 281 Fruit and nut biscuits
- 8484 Garibaldi biscuits
- R 7667 Gingernut biscuits, homemade (made with SR flour, B.soda, syrup, margarine (NOT polyunsaturated), sugar and salt)
- 263 Gingernut biscuits, purchased. NOT homemade
- R 264 Homemade biscuits, e.g. Easter biscuits (made with margarine (NOT polyunsaturated), flour, sugar and egg). NOT wholemeal; NOT shortbread, gingernuts or melting moments
- R 7666 Homemade biscuits, wholemeal (made with wholemeal flour, margarine (NOT polyunsaturated), sugar and egg). NOT wholemeal shortbread
- 8200 Honey biscuits, e.g. McVities Happy Bears
- 8201 Iced biscuits; iced rings; party rings
- 7661 Jaffa cakes, any flavour
- 8541 Jam and cream filled biscuits, e.g. Jacobs Happy Faces
- 265 Jam filled biscuits, e.g. Jammie Dodgers
- 279 Krackawheat
- R 348 Macaroons, almond. NOT coconut
- 8166 Marshmallow biscuits, e.g. Jamborees. NOT chocolate coated
- 8195 Marshmallow chocolate coated biscuits, e.g. Munchmallows
- 266 Matzo
- 9616 McVities Go Ahead caramel biscuit
- R 411 Melting moments, homemade (made with margarine (NOT polyunsaturated), sugar, flour, cornflour, glacé cherries)
- 5770 Nutri-Grain, fruit filled cereal bar, fortified with vitamins and minerals, Kellogg's. Includes Nutrigrain Twists
- R 7668 Oatcakes, homemade (made with lard)
- 267 Oatcakes, purchased. NOT homemade
- 9770 Oatmeal cookies
- 8203 Ostlers, moist biscuit, any flavour
- 3267 Rice cakes
- 2735 Rice cakes with added sugar, e.g. Snack-a-Jacks with caramel or chocolate ONLY
- 279 Ritz; Saltines; Wyna; TUC; Krackawheat

BISCUITS

- 268 Sandwich cream biscuits, e.g. custard creams, bourbons, coconut creams, digestive creams. NOT crunch creams; NOT wholemeal; NOT jam sandwich biscuits or wafer cream sandwich biscuits
- 272 Sandwich wafer biscuits, cream filled
- 270 Short, sweet biscuits, e.g. Lincoln, Shortcake, Malted milk, Nice. NOT coconut biscuits
- 269 Semi-sweet biscuits, e.g. Osborne, Rich Tea, Marie, Morning Coffee. NOT half coated with chocolate
- 8204 Semi-sweet biscuits, half coated with chocolate, e.g. Royal Tea
- R 271 Shortbread (made with flour, butter and sugar), homemade. NOT wholemeal
- 8162 Shortbread, purchased
- 4103 Shortbread, wholemeal, purchased
- 9473 Short sweet biscuits, reduced fat, e.g. Burton's Trim
- 412 Slimming biscuits, e.g. Slender bars, Bisks, Limmits
- 280 'Snowballs', coconut and chocolate coated marshmallow. NOT chocolate marshmallow biscuits
- 279 TUC; Saltines; Wyna; Ritz; Krackawheat
- 272 Wafer biscuits, filled; cream filled sandwich wafer biscuits
- 273 Wafers and cornets; ice cream cones and wafers; weight excluding ice cream
- 274 Water biscuits; Bath Olivers
- 278 Wholemeal biscuits, cream filled. NOT digestive
- 277 Wholemeal biscuits: fruit; nut; or fruit and nut; NOT digestive
- 276 Wholemeal biscuits, plain or flavoured; wholemeal digestives. NOT digestives with oats

BISCUITS

BREAD

BREAD AND ROLLS

Bread is organised into the following groups.

White Bread and Rolls

Wholemeal Bread and Rolls

Soft Grain Bread and Rolls

Other Bread and Rolls

Each group has special codes for toasted or fried bread.
These codes are listed at the end of each group.

To code, first identify which of the four types of bread above applies.

If the bread is fried or toasted, then use the codes at the end of the groups.

BREAD AND ROLLS

BREAD AND ROLLS - WHITE

- 120 White bread, sliced, wrapped, includes Kingsmill Top Grade White bread, Mothers Pride Premium, White Hovis, Danish Bread. NOT milk loaf, French stick, slimmers, Scottish batch, soda, Vienna, high fibre
white or soft grain breads, NOT fortified
- 9467 White bread, fortified with vitamins and minerals, e.g. Tesco Healthy eating white bread. NOT softgrain
- 121 White bread, crusty, uncut. NOT milk loaf, French stick, slimmers, Scottish batch, soda, Vienna high fibre white or soft grain bread
- 127 French stick; Baguette
- 128 Milk loaf
- 130 Scottish batch bread
- 129 Slimmers white bread, e.g. Nimble, Slimcea, Mothers Pride Light
- 131 Scofa bread, yeast-free
- 131 Soda bread
- 132 Vienna loaf
- 158 White, crusty Rolls
- 157 White hamburger Bun or Roll; white roll with sesame seeds
- 159 White, soft Rolls
- 160 White, starch reduced Rolls, e.g. Energen

FRIED WHITE BREAD, ANY, EXCEPT HIGH FIBRE AND SOFT GRAIN BREAD AND MILK LOAF.

- 122 Fried in blended vegetable oil. White Bread
- 124 Fried in dripping. White Bread
- 125 Fried in lard. White Bread
- 123 Fried in polyunsaturated oil. White Bread

BREAD AND ROLLS - TOASTED

- 126 Toasted White bread; any EXCEPT milk loaf
- 9929 Toasted White bread, fortified with vitamins and minerals e.g. Tesco Healthy eating white bread. NOT softgrain
- 170 Toasted White hamburger Roll or Bun; white roll with sesame seeds
- 171 Toasted White Rolls, any EXCEPT hamburger Bun or roll
- 8073 Milk loaf – Toasted

BREAD AND ROLLS - WHITE

BREAD AND ROLLS - WHOLEMEAL, WHOLEWHEAT. NOT TOASTED. NOT HI FIBRE WHITE, NOT BROWN, NOT GRANARY

- 8177 Hi Bran bread; brown bread with added bran; e.g. VitBe Hi Bran
- 7614 Slimmers wholemeal bread, e.g. Nimble
- 3603 Soda bread, wholemeal or brown; wheaten soda farls
- 133 Wholemeal bread; wholewheat bread; stoneground wholemeal bread.
NOT High Fibre white bread, NOT Vitbe Hi Bran
- 9466 Wholemeal bread, fortified with vitamins and minerals, e.g. Tesco Healthy Eating wholemeal
- 161 Wholemeal; wholewheat; stoneground wholemeal rolls. NOT brown, granary or wheatgerm rolls

FRIED WHOLEMEAL BREAD; WHOLEWHEAT BREAD; STONEGROUND WHOLEMEAL BREAD. NOT HIGH FIBRE WHITE; NOT VITBE HI BRAN

- 134 Fried in blended vegetable oil. Wholemeal Bread
- 9640 Fried in butter. Wholemeal Bread
- 136 Fried in dripping. Wholemeal Bread
- 137 Fried in lard. Wholemeal Bread
- 135 Fried in polyunsaturated oil. Wholemeal Bread

TOASTED WHOLEMEAL BREAD

- 138 Toasted Wholemeal Bread
- 172 Toasted Wholemeal; wholewheat; stoneground Wholemeal Rolls.
- 8178 Toasted Hi Bran bread; brown bread with added bran; e.g. VitBe Hi Bran
- 3431 Toasted Soda bread, wholemeal; wheaten soda farls

BREAD AND ROLLS – WHOLEMEAL

BREAD AND ROLLS, SOFTGRAIN, NOT TOASTED

FORTIFIED e.g. Asda, Champion, Co-op, M & S, Mighty White, Sainsbury's, Tesco

NOT FORTIFIED e.g. Safeway

7604 Softgrain bread. NOT fortified with folate;

8179 Softgrain bread fortified with folate,

7619 Softgrain rolls

TOASTED SOFTGRAIN BREAD

7605 Toasted. SoftGrain Bread. NOT fortified with folate.

8180 Toasted. Softgrain Bread, Fortified with folate

FRIED SOFTGRAIN BREAD

8363 Fried in blended vegetable oil. Softgrain Bread, any,

7606 Fried in dripping. Softgrain Bread, any,

7607 Fried in lard. Softgrain Bread, any.

9310 Fried in olive oil, softgrain bread, any.

7608 Fried in polyunsaturated oil. Softgrain Bread, any,

BREAD AND ROLLS – SOFTGRAIN

OTHER BREAD

- 9373 Bagels, plain only
- 9129 Brioche
- 102 Brown bread, no added bran. NOT wholemeal, wholewheat, stoneground wholemeal, granary, wheatgerm, Hovis, Hi Bran or Vitbe
- 7620 Brown; granary; wheatgerm ROLLS. Crusty. NOT wholemeal or wholewheat
- 7621 Brown; granary; wheatgerm ROLLS. Soft. NOT wholemeal or wholewheat
- 157 Brown hamburger Bun or Roll; brown roll with sesame seeds
- 144 Chapatis, white, made with butter ghee
- 145 Chapatis, white, made with vegetable ghee
- 146 Chapatis, white, made without fat
- 141 Chapatis, brown, made with butter ghee
- 142 Chapatis, brown, made with vegetable ghee
- 143 Chapatis, brown, made without fat
- 8603 Chapatis, wholemeal, made with sunflower oil
- 6976 Cheese topped rolls/baps, white ONLY
- 6977 Ciabatta, plain ONLY. NOT varieties with added olives, fruit, nuts or tomatoes
- 9372 Continental breads; Italian Breads; includes sciocco, pugliese, fougasse. NOT varieties with added olives, fruit, nuts or tomatoes. NOT ciabatta. NOT panini. NOT focaccia
- Croissant - see Cakes
- 6974 Focaccia, plain or with garlic or herbs
- 7616 French granary stick; granary Baguette
- 7615 French stick; Baguette; flavoured with garlic and or herbs. NOT low/reduced fat
- 7615 Garlic or herb bread. French stick; Baguette. NOT low/reduced fat
- 6839 Garlic bread, low/reduced fat
- 112 Granary bread, i.e. with malted wheat or added barley; mixed whole grain bread. NOT granary French stick or granary baguette
- 7609 High fibre white bread
- 110 Hovis or wheatgerm bread. NOT Hovis wholemeal or White Hovis
- 173 Muffins, English, wholemeal

OTHER BREAD

- 151 Muffins, English, NOT wholemeal
- Muffins, American: see 'Cakes'
- 7622 Naan bread, plain
- 7622 Naan bread, garlic & coriander
- 6135 Naan bread, peshwari
- 7617 Oatmeal bread, e.g. Vitbe Hi Oatbran, Hovis Golden Oatbran
- 6833 Panini white bread rolls, e.g. M&S
- 116 Pitta bread, white
- 117 Pitta bread, wholemeal
- 114 Pumpernickel; rye bread
- 114 Rye bread; Pumpernickel
- 6756 Soya & linseed bread, e.g. Burgen
- 6838 Tortillas (wheat), flour tortillas
- 118 Vitbe bread. NOT Vitbe Hi Bran
- 110 Wheatgerm bread

See earlier sections for fried or toasted white, wholemeal or wholegrain bread.

OTHER BREAD - TOASTED

- 107 Brown bread toasted, no added bran. NOT wholemeal, wholewheat
NOT stoneground, granary, wheatgerm, Hovis, Hi Bran, Vitbe
- 113 Granary bread, toasted. i.e. with malted wheat or added barley; mixed whole grain bread
- 7610 High fibre bread, toasted
- 111 Hovis or wheatgerm bread, toasted. NOT Hovis wholemeal or White Hovis
- 7618 Oatmeal bread toasted, e.g. Vitbe Hi Oatbran, Hovis Golden Oatbran
- 115 Rye bread toasted; pumpernickel
- 6745 Soya & linseed bread, toasted
- 169 Toasted Brown, granary, wheatgerm or wholegrain ROLLS.
NOT wholemeal, wholewheat or stoneground wholemeal
- 170 Toasted Brown hamburger Roll or Bun; brown roll with sesame seeds
- 119 Vitbe bread toasted. NOT Vitbe Hi Bran

OTHER BREAD

OTHER BREAD - FRIED IN BLENDED VEGETABLE OIL

- 103 Brown bread, including those with added bran, e.g. Hi Bran or Vitbe.
NOT wholemeal, wholewheat, stoneground wholemeal, granary, wheatgerm or Hovis.
Fried in blended vegetable oil
- 162 Granary bread. Fried in blended vegetable oil
- 103 Hi Bran bread. Fried in blended vegetable oil
- 8522 High fibre white bread. Fried in blended vegetable oil
- 162 Hovis bread. NOT Hovis wholemeal or White Hovis. Fried in blended vegetable oil
- 162 Rye bread. Fried in blended vegetable oil

OTHER BREAD - FRIED IN DRIPPING

- 105 Brown bread, including those with added bran, e.g. Hi Bran or Vitbe.
NOT wholemeal, wholewheat, stoneground wholemeal, granary, wheatgerm or Hovis. Fried in dripping
- 163 Granary bread. Fried in dripping
- 105 Hi Bran bread. Fried in dripping
- 7611 High fibre white bread. Fried in dripping
- 163 Hovis bread (NOT Hovis wholemeal or White Hovis). Fried in dripping
- 163 Rye bread. Fried in dripping

OTHER BREAD - FRIED IN LARD

- 106 Brown bread, including those with added bran, e.g. Hi Bran or Vitbe.
NOT wholemeal, wholewheat, stoneground wholemeal, granary,
wheatgerm, Hovis. Fried in lard
- 164 Granary bread. Fried in lard
- 106 Hi Bran bread. Fried in lard
- 7612 High fibre white bread. Fried in lard
- 164 Hovis bread. NOT Hovis wholemeal or White Hovis. Fried in lard
- 164 Rye bread. Fried in lard

OTHER BREAD - FRIED IN POLYUNSATURATED OIL

- 104 Brown bread, including those with added bran, e.g. Hi Bran or Vitbe.
NOT wholemeal, wholewheat, stoneground wholemeal, granary,
wheatgerm or Hovis. Fried in polyunsaturated oil
- 165 Granary bread. Fried in polyunsaturated oil
- 104 Hi Bran bread. Fried in polyunsaturated oil
- 7613 High fibre white bread. Fried in polyunsaturated oil

OTHER BREAD

165 Hovis bread. NOT Hovis wholemeal or White Hovis. Fried in polyunsaturated oil

165 Rye bread. Fried in polyunsaturated oil

OTHER BREAD INCLUDING SWEETENED AND FRUIT LOAVES - TOASTED

148 Crumpets, toasted; Pikelets

152 Muffins, toasted, NOT wholemeal

174 Muffins, toasted, wholemeal

148 Pikelets, toasted; crumpets

115 Pumpernickel, toasted; rye bread

Scotch pancakes: see 'Buns & Pastries'

Teacakes: see 'Buns & Pastries'

OTHER BREAD

BUTTER, MARGARINE AND SPREADS

See also: FATS FOR SPREADING CARD FC5

BUTTER

- 851 Butter, salted; slightly salted; butter flavoured e.g. garlic butter.
- 852 Butter, unsalted.
- 9407 Spreadable butter e.g. Anchor So Soft, Anchor spreadable, Marks and Spencer easier spreading butter, Safeway Spreadable, Sainsbury's spreadable butter

BLOCK MARGARINE

- 860 Hard, block margarine e.g. Dawn, Echo, Stork (block), own brand, Krona Gold (block).

SOFT MARGARINE, NOT POLYUNSATURATED

- 864 Soft margarine, NOT polyunsaturated, NOT low fat
e.g. Blue Band, Co-op Silversoft margarine, own brand soft margarine. NOT Anchor So Soft or Stork vegetable fat spread. NOT soft *spreads*.

SOFT MARGARINE, POLYUNSATURATED

- 865 Soft margarine, polyunsaturated, NOT low fat
e.g. Encore Sol margarine, own brand sunflower margarine, own brand soya margarine NOT Flora; NOT sunflower *spreads*.

REDUCED FAT SPREAD (70-80% fat), NOT POLYUNSATURATED

- 866 Reduced fat spread (70-80% fat), NOT polyunsaturated
e.g. Asda You'd Butter Believe It, Clover, I Can't Believe It's Not Butter, M & S A Touch of Butter Spreadable, M & S Spreadable Churn, Safeway Meadow, Tesco Golden Blend, Waitrose Premium Blend spread, Willow, St Ivel Golden Churn
- 9408 Reduced fat spread (70-80% fat), monounsaturated
e.g. Stork (not Stork block margarine), Not Butter But Better, Safeway's Don't Flutter with Butter, Somerfield Buttery Gold, St Ivel Utterly Buttery, Tesco Butter Me Up, Sainsbury's Butterlicious, Sainsbury's County Spread.
- 9409 Reduced fat spread (70-80% fat), NOT polyunsaturated, no hydrogenated fat
e.g. Whole Earth Super Spread ONLY.

REDUCED FAT SPREAD (70-80% fat), POLYUNSATURATED

- 8480 Reduced fat spread (70-80% fat), polyunsaturated, NOT low in trans fatty acids
e.g. Asda/ M & S/ Tesco: Sunflower spread, Sainsbury's/ Somerfield: Soya spread, Sainsbury's Sunflower spread.
- 9510 Reduced fat spread (70-80% fat), polyunsaturated, low in trans fatty acids
e.g. Co-op/ Iceland/ Morrison's/Pura/ Safeway (NOT Safeway Savers)/ Somerfield/ Waitrose/ Vitalite: Sunflower spread, Flora, Flora Low Salt and Flora Buttery, Sainsbury's Sunflower Extra Rich, Vitalite Buttery, Pure soya spread, Pure sunflower spread

BUTTER, MARGARINE AND SPREADS

REDUCED FAT SPREAD (60% fat), NOT POLYUNSATURATED

- 7775 Reduced fat spread (60% fat), NOT polyunsaturated, NOT low in trans fatty acids, NOT olive oil based
e.g. Asda Farm Stores/ Krona/ Safeway: reduced fat spread, Co-op Every Day/ Co-op Red Seal: soft spread,
Co-op You'd Never Believe it, Kraft Mello, Krona spreadable, Summer County spread, Tesco Value soft
spread
- 8230 Reduced fat spread (60% fat), made with olive oil, NOT low in trans fatty acids
e.g. Asda & Co-op Olive Gold, M & S Reduced Fat Olive Spreadable,
Safeway & Tesco Olive (NOT Somerfield Olive), Somerfield Believe It Or Not.
- 9985 Reduced fat spread (60% fat), made with olive oil, low in trans fatty acids
e.g. Co-op Reduced Fat Very Soft Spread, Olivio, Sainsbury's Olive, Somerfield Olive.

REDUCED FAT SPREAD (60% fat), POLYUNSATURATED

- 8509 Reduced fat spread (60% fat), polyunsaturated, NOT low in trans fatty acids
e.g. Safeway Organic spread, Safeway/ Sainsbury's economy-type Sunflower
spread, Tesco & Waitrose Soya spread, Tesco Value sunflower spread
- 9990 Reduced fat spread (60% fat), polyunsaturated, low in trans fatty acids eg Pure Organic
- 9987 Reduced fat spread, (60% fat), with added fish oil/ omega 3 fatty acids

LOW FAT SPREAD, NOT POLYUNSATURATED

- 859 Low fat spread (40% fat), NOT polyunsaturated, NOT low in trans fatty acids
e.g. Anchor Low Fat spread, Asda Butter Light, Asda Pure Gold, Asda You'd Butter Believe
It Light, Clover Diet, Gold and Gold unsalted (NOT Gold Lowest), Kerrygold Light, own brand Half Fat
Butter spread, own brand Golden Light spread
- 9988 Low fat spread (40% fat), NOT polyunsaturated, low in trans fatty acids
e.g. Delight Low Fat, I Can't Believe It's Not Butter Light, Anchor half fat spread
- 8511 Low fat spread (40% fat), made with olive oil, NOT low in trans fatty acids
e.g. Weight Watchers Olivite, Tesco Olive Light
- 9989 Low fat spread, (40% fat), made with olive oil, low in trans fatty acids
e.g. Asda Olive Gold Light & Sainsbury's Olive Light
- 7776 Very low fat spread (20-25% fat), NOT polyunsaturated, NOT low in trans fatty acids
e.g. Anchor Pure Gold Light, Gold Lowest
- 9986 Very low fat spread (20-25% fat), NOT polyunsaturated, low in trans fatty acids
e.g. Delight Diet, Outline
- 8487 Very, very low fat spread (5% fat), e.g. Tesco 95% Fat-Free Healthy Eating Lowest

FAT SPREADS

LOW FAT SPREAD, POLYUNSATURATED

- 2849 Flora Pro-activ spread ONLY
- 7774 Low fat spread (40% fat), polyunsaturated, NOT low in trans fatty acids
e.g. Asda/ Safeway/Tesco Healthy Eating/ Waitrose: Sunflower Light spread, Co-op Sunflower Spread Extra Light, Pura Slimmer's Gold, Waitrose 40% Sunflower spread, Sainsbury's sunflower spread light, Vitalite Light
- 9511 Low fat spread (40% fat), polyunsaturated, low in trans fatty acids
e.g. Flora Light, Sainsbury's Sunflower Extra Light
- 8510 Very low fat spread (20-25% fat), polyunsaturated, NOT low in trans fatty acids

CAKES, BUNS AND PASTRIES

BUNS AND PASTRIES

Record recipes for all homemade buns and pastries

- R 8176 Aberdeen Butteries; croissant with sweet filling
- R 301 Bakewell tart; frangipane tart; i.e. shortcrust pastry base with jam, sponge filling with ground almonds. Pastry (NOT wholemeal), made with half margarine (NOT polyunsaturated) and half lard
- R 8831 Bakewell tart; frangipane tart; i.e. shortcrust pastry base with jam, sponge filling with ground almonds. Pastry (NOT wholemeal), made with half polyunsaturated margarine and half lard
- R 303 Chelsea buns; Bath buns; NOT wholemeal
- R 407 Chelsea buns, wholemeal
- R 326 Chorley cakes; Eccles cakes
- 7676 Choux buns, filled with fresh cream. NOT iced
- 7677 Choux buns, filled with fresh cream. iced
- R 311 Coconut tart
- R 314 Cream horns; oysters; mille feuille; i.e. flaky pastry, cream filled - artificial cream
- R 313 Cream horns; oysters; mille feuille; i.e. flaky pastry, cream filled - fresh cream
- R 8176 Croissant, with sweet filling; Aberdeen Butteries
- Crumpets; English muffins; pikelets: see 'Bread and rolls'
- R 315 Currant buns, homemade. NOT wholemeal. NOT chelsea or bath buns
- 8123 Currant buns; hot cross buns, purchased. NOT wholemeal. NOT chelsea or bath buns
- R 386 Custard slice; vanilla slice; i.e. flaky pastry, icing, custard filling
- 316 Custard tart, individual, purchased
- R 317 Custard tart, large, homemade, pastry (NOT wholemeal), made with half margarine (NOT polyunsaturated) and half lard
- R 318 Danish pastry
- R 7678 Doughnuts, confectioners custard filling
- R 325 Doughnuts, fresh cream filling. NOT wholemeal
- R 324 Doughnuts, jam, artificial cream or fruit filling, homemade. NOT wholemeal
- 8139 Doughnuts, jam, artificial cream or fruit filling, purchased. NOT wholemeal
- R 323 Doughnuts, ring. NOT wholemeal, NOT iced
- R 7679 Doughnuts, ring, iced
- R 410 Doughnuts, wholemeal, ring or jam only

BUNS AND PASTRIES

- R 326 Eccles cakes; Chorley cakes
- 327 Eclairs, chocolate icing, real cream filling, fresh or frozen, purchased
- R 7680 Eclairs, chocolate icing, real fresh cream filling. Homemade
- R 328 Eclairs, chocolate icing, artificial cream filling
- Flapjacks: see "Biscuits"
- Frangipane tart: see *Bakewell tart*
- R 4556 Greek pastries, e.g. baklava, tangos, tsamilka, shredded type
- 8123 Hot cross buns, NOT wholemeal purchased
- 7674 Hot cross buns; rich currant buns. NOT wholemeal homemade
- R 7675 Hot cross buns; rich currant buns, wholemeal
- R 408 Iced buns, homemade
- 8125 Iced bun, purchased
- R 341 Jam tart; syrup tart; treacle tart; one crust, individual, homemade. Pastry (NOT wholemeal), made with half margarine (NOT polyunsaturated) and half lard
- 340 Jam tart; syrup tart; treacle tart; one crust, individual, purchased
- R 342 Jam tart; syrup tart; treacle tart; one crust, large, homemade, wholemeal pastry made with half margarine (NOT polyunsaturated) and half lard
- R 343 Jam tart; syrup tart; treacle tart; two crusts, large, homemade, pastry (NOT wholemeal), made with half margarine (NOT polyunsaturated) and half lard
- 572 Jam tart; syrup tart; treacle tart; one crust, large, purchased
- R 346 Lemon curd tart, one crust, with homemade lemon curd. Pastry (NOT wholemeal), made with half margarine (NOT polyunsaturated) and half lard
- R 347 Lemon meringue pie, homemade, pastry (NOT wholemeal), made with half margarine (NOT polyunsaturated) and half lard
- 7708 Lemon meringue pie, purchased
- R 354 Mincemeat tart, one crust, large, shortcrust pastry (NOT wholemeal), made with half margarine (NOT polyunsaturated) and half lard
- R 355 Mincemeat tart, two crusts, shortcrust pastry (NOT wholemeal), made with half margarine (NOT polyunsaturated) and half lard
- R 3308 Mince pies, sweet, individual, puff pastry
- R 353 Mince pies, sweet, individual, shortcrust pastry (NOT wholemeal), made with half margarine (NOT polyunsaturated) and half lard
- R 3203 Mince pies, sweet, individual, shortcrust pastry, (NOT wholemeal), made with all margarine (NOT polyunsaturated)

BUNS AND PASTRIES

R 7681 Mince pies, sweet, individual, shortcrust pastry, wholemeal, made with half margarine (NOT polyunsaturated) and half lard

327 Profiteroles, chocolate icing, real fresh cream filling, fresh or frozen, purchased

R 366 Sata pastries, assorted (Indian pastries)

R 367 Scones, cheese. NOT wholemeal

368 Scones, fruit. NOT wholemeal

R 369 Scones, plain, oven baked. NOT wholemeal

R 9954 Scones, plain, made with lard. NOT wholemeal

R 9586 Scones, plain, made with polyunsaturated margarine. NOT wholemeal

R 371 Scones, potato

3189 Scones, wholemeal, fruit, purchased

R 372 Scones, wholemeal, plain

373 Scotch pancakes; drop scones; plain, homemade

6975 Scotch pancakes; drop scones; plain, purchased

406 Shortcrust pastry, cooked, purchased, e.g. pastry flan case

Syrup tart - see *Jam tart*

R 384 Teacakes. NOT wholemeal; NOT chocolate marshmallow teacake

R 385 Teacakes, toasted. NOT wholemeal; NOT chocolate marshmallow teacake

R 407 Teacakes, wholemeal. NOT chocolate Marshmallow teacake

R 423 Teacakes, wholemeal, toasted. NOT chocolate Marshmallow teacake

Treacle tart: see *Jam tart*

R 386 Vanilla slice; custard slice, i.e. flaky pastry, icing, custard filling

R 389 Welsh cheesecake, i.e. shortcrust pastry base with jam, sponge filling (NOT containing ground almonds). Pastry (NOT wholemeal), made with half margarine (NOT polyunsaturated) and half lard

R 407 Wholemeal fruit buns; wholemeal Chelsea buns; wholemeal tea cakes

BUNS AND PASTRIES

CAKES

Record recipes for all homemade cakes.

R 8176 Aberdeen butteries; croissant with sweet filling

R 101 All Bran loaf (made with All Bran and dried fruit)

American Muffin: see *Fairy cakes*

R 302 Banana cake, homemade

R 304 Battenburg, i.e. sponge with marzipan coating and jam

Black Forest Gateau: see *Chocolate gateau*

6061 Cake bars, reduced fat eg Go Ahead double caramel, double chocolate

6061 Cakes, reduced fat eg Entemann's '95% fat free' range, Sainsbury's 'Be Good To Yourself' reduced fat range

R 8650 Carrot cake made with wholemeal flour, homemade, NOT iced

7685 Carrot cake made with wholemeal flour, purchased. NOT iced

3899 Carrot cake made with wholemeal flour with cream cheese icing, purchased

7686 Cherry cake, purchased

306 Chinese cakes and pastries, purchased

307 Chinese glutinous rice flour cakes, purchased

5404 Chocolate brownies, chocolate & walnut cake with chocolate icing

5603 Chocolate cake, double, Sara Lee ONLY. NOT chocolate fudge cake

5201 Chocolate cake bars, individual, coated with chocolate and filled e.g. Jaffa cake bars, Cadburys chocolate cake bars. NOT reduced fat

383 Chocolate covered swiss roll; mini roll; purchased

R 309 Chocolate cupcakes; chocolate fairy cakes; iced, homemade

7687 Chocolate cupcakes, chocolate fairy cakes; iced, purchased

3897 Chocolate fudge cake, purchased e.g. Entenmanns. Includes frozen and chilled. NOT reduced fat

R 8551 Chocolate gateau; Black Forest gateau; with cream, homemade. NOT chocolate fudge cake

7694 Chocolate gateau; Black Forest gateau; Black Forest dessert; with cream, purchased. NOT chocolate fudge cake

8555 Chocolate sponge cake; chocolate fairy cakes; chocolate American muffin; NO filling, NO icing, purchased

8562 Chocolate sponge cake; chocolate swiss roll; buttercream filling, purchased

R 8554 Chocolate sponge cake; chocolate swiss roll; made without fat, buttercream filling, homemade

R 8553 Chocolate sponge cake; chocolate swiss roll; made without fat, fresh cream filling, homemade

CAKES

- R 3082 Chocolate sponge cake, made with margarine (NOT polyunsaturated). NO filling, NO icing, homemade
- R 308 Chocolate sponge cake, made with margarine (NOT polyunsaturated), with buttercream filling, homemade
- R 9588 Chocolate sponge cake, made with polyunsaturated margarine. NO filling, No icing.
- 7688 Coconut cake, purchased
- R 409 Coconut macaroons; coconut pyramids
- Coffee cake: see *madeira cake*
- 166 Croissant, plain, not filled
- R 8366 Croissant, with savoury filling
- R 8176 Croissant, with sweet filling
- 108 Currant bread, (NOT malted)
- 109 Currant bread, (NOT malted), toasted
- 379 Dairy cream sponge with jam, frozen, purchased
- R 320 Date and walnut loaf, made with margarine (NOT polyunsaturated), dates and walnuts
- R 322 Dough cake; yeast fruit cake; doughbuns; Bara Brith
- Doughnuts: see 'Buns and Pastries'
- R 349 Fairy cakes; American Muffins; homemade. NOT chocolate. NOT iced
- 8367 Fairy cakes; American Muffins; purchased. NOT chocolate. NOT iced
- R 3082 Fairy cakes; American Muffins; chocolate, homemade. NOT iced
- 8555 Fairy cakes; American Muffins; chocolate, purchased. NOT iced
- 6597 Fairy cakes; American Muffins; triple chocolate, McVities American Dream ONLY
- R 309 Fairy cakes; chocolate; chocolate cupcakes; iced, homemade
- 329 Fairy cakes; fancy iced cakes; purchased, e.g. fondant fancies. NOT chocolate
- 7687 Fairy cakes; fancy iced cakes, chocolate; chocolate cupcakes; iced, purchased
- R 7689 Fairy cakes, iced, homemade, includes cupcakes. NOT chocolate
- Flapjacks: see 'Biscuits'
- R 334 Fruit cake, plain; light fruit cake; homemade. NOT wholemeal
- 8105 Fruit cake, plain; light fruit cake; purchased. NOT wholemeal
- R 8567 Fruit cake, plain, made with wholemeal flour, homemade
- 7690 Fruit cake, plain, made with wholemeal flour, purchased
- R 331 Fruit cake, rich, homemade, e.g. Dundee, cherry, Christmas cake mixture. NOT iced

CAKES

- 332 Fruit cake, rich, purchased, e.g. Dundee, cherry, Christmas cake mixture. NOT iced
- R 333 Fruit cake, rich, iced, with marzipan and royal icing, homemade, e.g. Christmas cake
- 8568 Fruit cake, rich, iced, with marzipan and royal icing, purchased, e.g. Christmas cake
- R 335 Fruit squares, made with margarine (NOT polyunsaturated), flour, sugar, dried fruit
- R 9306 Fruit cake with polyunsaturated margarine; homemade. NOT wholemeal
- R 9633 Fruit cake, wholemeal, made with polyunsaturated margarine
- R 336 Gateau, with cream, homemade. NOT Black Forest or chocolate gateau
- 8550 Gateau, with cream, purchased. NOT Black Forest or chocolate gateau. e.g. strawberry gateaux.
- R 337 Gingerbread; parkin
- 7691 Ginger cake, purchased
- 9020 Golden syrup sponge cake, e.g. McVities
- R 338 Gulab jamen, homemade, i.e. Indian syrup cake
- 339 Gulab jamen, purchased, i.e. Indian syrup cake
- 5201 Individual chocolate cake bars coated with chocolate and filled e.g. Jaffa cake bars, Cadburys chocolate cake bars
- R 344 Jellabi, i.e. fried Asian pastry, soaked in syrup
- R 345 Lardy cake, made with yeast base, sugar and fat
- R 409 Macaroons, coconut; coconut pyramids
- R 349 Madeira cake; luncheon cake; seed cake; fairy cakes; coffee cake, homemade. NO filling. NOT iced
- 8367 Madeira cake; luncheon cake; seed cake; fairy cakes; coffee cake; purchased. NO filling, NO icing
- 149 Malt loaf, fruit, purchased
- R 167 Malt loaf, wholemeal
- R 150 Malt loaf, toasted. (with or without currants). NOT wholemeal
- R 168 Malt loaf, toasted, wholemeal
- R 322 Muesli bread
- R 337 Parkin; gingerbread
- R 365 Raisin rhapsody, made with shortcrust pastry, margarine (NOT polyunsaturated), raisins
- R 370 Rock cakes, made with margarine (NOT polyunsaturated), flour, sugar, currants
- 5603 Sara Lee, double chocolate cake ONLY
- R 8563 Sponge cake, NOT chocolate, made without fat, homemade. NO filling
- R 376 Sponge cake, NOT chocolate, made without fat, jam filled, homemade

CAKES

- R 377 Sponge cake, NOT chocolate, made without fat, with buttercream filling, homemade
- R 8552 Sponge cake, NOT chocolate, made without fat, with fresh cream filling, homemade
- R 8507 Sponge cake, NOT chocolate, made without fat, with jam and cream filling, homemade
- 379 Sponge cake, NOT chocolate, purchased, frozen, fresh cream and jam filling
- R 2644 Sponge cake, NOT chocolate, made with margarine (NOT polyunsaturated), homemade. NO filling, NO icing
- R 374 Sponge cake, NOT chocolate, made with margarine (NOT polyunsaturated), jam filling, homemade. NO icing
- 380 Sponge cake, NOT chocolate, purchased, jam filled. NO icing. NOT fresh cream sponge
- 5448 Sponge cake, NOT chocolate, purchased, jam filled with icing. NOT fresh cream sponge
- R 413 Sponge cake, NOT chocolate, made with margarine (NOT polyunsaturated), jam filling, water icing, homemade, e.g. Victoria sandwich
- R 378 Sponge cake, NOT chocolate, made with margarine (NOT polyunsaturated), with buttercream filling or icing, homemade
- R 5179 Sponge cake, NOT chocolate, made with polyunsaturated margarine, with buttercream filling, homemade
- R 8647 Sponge cake, NOT chocolate, made with polyunsaturated margarine, jam filling, water icing, homemade
- R 9556 Sponge cake, NOT chocolate, made with polyunsaturated margarine, water icing, NO filling
- R 9587 Sponge cake, WHOLEMEAL, NOT chocolate, made with polyunsaturated margarine, buttercream filling made with polyunsaturated margarine, NO icing
- R 9659 Sponge cake, WHOLEMEAL, NOT chocolate, made with polyunsaturated margarine. NO filling; NO icing
- 8508 Sponge cake, NOT chocolate, jam and buttercream filling, purchased. NOT fresh cream sponge
- 381 Sponge cake, packet mix, as served
- 375 Sponge fingers, made without fat, purchased. NOT chocolate
- R 382 Sultana loaf, made with flour, fat, sultanas and sugar
- R 377 Swiss roll, buttercream filling, homemade. NOT chocolate swiss roll
- 8564 Swiss roll, buttercream filling, purchased. NOT chocolate swiss roll
- R 8554 Swiss roll, chocolate, buttercream filling, homemade
- 8562 Swiss roll, chocolate, buttercream filling, purchased
- R 8553 Swiss roll, chocolate, fresh cream filling, homemade
- 383 Swiss roll, chocolate covered; mini roll; purchased
- R 8552 Swiss roll, fresh cream filling, homemade. NOT chocolate swiss roll
- R 376 Swiss roll, jam filling, homemade. NOT chocolate swiss roll

CAKES

- 380 Swiss roll, jam filling, purchased. NOT chocolate swiss roll
- R 8507 Swiss roll, jam and fresh cream filling, homemade. NOT chocolate swiss roll
- 379 Swiss roll, jam and fresh cream filling, purchased. NOT chocolate swiss roll
- 9374 Tortes, not chocolate based, purchased, frozen or chilled, (i.e. biscuit base with mousse and cream topping)
e.g. Sara Lee Lemon Torte. NOT fruit flan with pastry base
- 375 Trifle sponges, made without fat, purchased. NOT chocolate
- R 413 Victoria sandwich, sponge cake made with margarine (NOT polyunsaturated), jam filling, water icing
- R 388 Walnut loaf, made with flour, margarine (NOT polyunsaturated), walnuts and sugar
- R 7692 Welsh cake, made with flour, margarine (NOT polyunsaturated), dried fruit and eggs

CAKES

FRUIT PIES

- 6967 Apple pie, double crust, chilled, frozen or ambient, purchased
- 9026 Apple turnover (flaky pastry), purchased
- R 7700 Flan, fruit (NOT strawberry), shortcrust pastry
- 9141 Fruit filled strudel, purchased
- 586 Fruit pie, any fruit, individual, purchased from McDonalds, Kentucky Fried Chicken or Wimpy
- 535 Fruit pie, blackcurrant, wholemeal pastry, one crust, made with half lard and half margarine (NOT polyunsaturated)
- 540 Fruit pie, blackcurrant, wholemeal pastry, two crusts, made with half lard and half margarine (NOT polyunsaturated)
- 531 Fruit pie, blackcurrant, NOT wholemeal pastry, one crust, made with all margarine (NOT polyunsaturated)
- 532 Fruit pie, blackcurrant, NOT wholemeal pastry, one crust, made with all lard
- 533 Fruit pie, blackcurrant, NOT wholemeal pastry, one crust, made with half lard and half margarine (NOT polyunsaturated)
- 534 Fruit pie, blackcurrant, NOT wholemeal pastry, one crust, made with half compound cooking fat and half margarine (NOT polyunsaturated)
- 536 Fruit pie, blackcurrant, NOT wholemeal pastry, two crusts, made with all margarine (NOT polyunsaturated)
- 537 Fruit pie, blackcurrant, NOT wholemeal pastry, two crusts, made with all lard
- 538 Fruit pie, blackcurrant, NOT wholemeal pastry, two crusts, made with half lard and half margarine (NOT polyunsaturated)
- 539 Fruit pie, blackcurrant, NOT wholemeal pastry, two crusts, made with half compound cooking fat and half margarine (NOT polyunsaturated)
- 520 Fruit pie, individual, purchased, two crusts, apple, blackcurrant, apricot or blackberry filling, e.g. Mr Kiplings fruit pies
- 525 Fruit pie, other fruit, wholemeal pastry, one crust, made with half lard and half margarine (NOT polyunsaturated)
- 530 Fruit pie, other fruit, wholemeal pastry, two crusts, made with half lard and half margarine (NOT polyunsaturated)
- 521 Fruit pie, other fruit, NOT wholemeal pastry, one crust, made with all margarine (NOT polyunsaturated)
- 522 Fruit pie, other fruit, NOT wholemeal pastry, one crust, made with all lard
- 523 Fruit pie, other fruit, NOT wholemeal pastry, one crust, made with half lard and half margarine (NOT polyunsaturated)
- 524 Fruit pie, other fruit, NOT wholemeal pastry, one crust, made with half compound cooking fat and half margarine (NOT polyunsaturated)

FRUIT PIES

- 526 Fruit pie, other fruit, NOT wholemeal pastry, two crusts, made with all margarine (NOT polyunsaturated). NOT purchased apple pie
- 527 Fruit pie, other fruit, NOT wholemeal pastry, two crusts, made with all lard. NOT purchased apple pie
- 528 Fruit pie, other fruit, NOT wholemeal pastry, two crusts, made with half lard and half margarine (NOT polyunsaturated). NOT purchased apple pie
- 529 Fruit pie, other fruit, NOT wholemeal pastry, two crusts, made with half compound cooking fat and half margarine (NOT polyunsaturated). NOT purchased apple pie
- 2620 Fruit pie filling, canned, blackcurrant only
- 2027 Fruit pie filling, canned e.g. blackberry and apple, gooseberry, apple, cherry. NOT blackcurrant
- 8992 Fruit pie filling, reduced sugar
- 7701 Fruit sundaes, any fruit, purchased, one crust, fruit filling with artificial cream topping e.g. Mr Kipling's
- 5907 Fruit trifle tarts, any fruit, individual, purchased e.g. Mr. Kipling's
- R 7684 Strawberry tartlets, shortcrust pastry with strawberries and glaze

FRUIT PIES

CEREALS AND CEREAL PRODUCTS (INCLUDING PASTA, RICE AND PIZZA)

BREAKFAST CEREALS

- 5508 All bran plus, Kellogg's only
- 5334 "All bran" type cereal, Nestlé Fibre 1 only
- 8481 "All bran" type cereal, Sainsbury's Hi Fibre Bran only
- 8482 "All bran" type cereal, e.g. Tesco bran breakfast cereal. NOT Kellogg's, NOT Sainsbury's, NOT Weetabix Crunchy Bran
- 8183 "All bran" type cereal, Weetabix Crunchy Bran only
- 6159 Apricot Crunchies, Tesco only
- 6851 Bananabix
- 8910 Boulders breakfast cereal, Tesco only
- 7628 Bran buds, Kellogg's only
- 6043 Bran Crisp, Jordan's only
- 203 Branflakes with sultanas, Kellogg's only. NOT wheatflakes
- 7624 Branflakes with sultanas, own brand. NOT Kellogg's, NOT wheatflakes
- 202 Branflakes without sultanas, Kellogg's only, e.g. Kellogg's Healthwise Branflakes. NOT wheatflakes
- 7623 Branflakes without sultanas, own brand, e.g. Force. NOT Kellogg's. NOT wheatflakes
- 3008 Branflakes, honey & nut, own brand, e.g. Safeway
- 6883 Cereal breakfast bar, with fruit, unfortified, e.g. Weight Watchers. NOT Kellogg's Nutri-Grain bars
- 9275 Cheerios, Honey Nut
- 7637 Cheerios, Multi
- 9823 Chex, Crunchy Nut
- 5168 Chex, Frosted
- 5208 Chocco Crunchies, Tesco
- 5357 Choco Flakes, Kellogg's only
- 5202 Chocolate Chip Crisp, Sainsbury's only
- 9032 Cinnamon Grahams, Nestlé
- 8712 Clusters, Nestlé only
- 204 Coco Pops, Kellogg's only
- 8483 Coco Pops, own brand. e.g. Cocoa Rice, Coco Snaps, Cocoa Puffs, Cocoa Crunchies, Coco Bears. NOT Kellogg's
- 8383 Coco Shreddies, Nestlé

BREAKFAST CEREALS

- 7647 Common Sense, no additions, Kellogg's
- 7648 Common Sense with raisins and apple, Kellogg's
- 4289 Cornflakes, High fibre only, e.g. Ryvita
- 205 Cornflakes, Kellogg's only
- 206 Cornflakes, own brand. NOT Kellogg's
- 9188 Corn Pops. Kellogg's ONLY.
- 212 Country Store, Kellogg's
- 213 Crunchy cluster type cereal without nuts, e.g. Sainsbury's Crunch, Quaker Tropical Fruit Harvest Crunch, M&S Cinnamon & Apple Crunch, Asda Crunchy Oat Cereal
- 5328 Crunchy/crispy muesli type cereal with nuts, e.g. Jordans Maple and Pecan Crunchy, Quaker Harvest Crunch, Tesco/Sainsbury's Pecan & Maple Crisp
- 9823 Crunchy Nut Chex - crunchy cages of toasted corn with nuts and honey
- 232 Crunchy Nut Cornflakes; Honey Nut Cornflakes; e.g. Kellogg's, own brand
- 221 Cubs; Shredded Wheat; Shredded Wheat Bitesize
- 5207 Feast of Flakes, Quaker
- 5334 Fibre 1, Nestlé
- 7623 Force
- 5168 Frosted Chex
- 7626 Frosted Cornflakes, own brand, e.g. Sainsbury's Frosted Flakes. NOT Kellogg's
- 8182 Frosted Shreddies
- 5204 Frosted Wheats, Kellogg's
- 227 Frosties, Kellogg's only
- 6132 Fruitibix
- 229 Fruit and Fibre, Kellogg's Optima ONLY
- 5327 Fruit and Fibre, own brand, NOT Kellogg's
- 8190 Fruit filled mini shredded wheat, own brand, e.g. Sainsbury's Apricot wheats, Raisin wheats, Strawberry wheats, Cherry wheats. NOT Kellogg's Raisin wheats
- 8185 Golden Grahams, corn and wheat squares with brown sugar and honey, e.g. Nestlé
- 8186 Golden Crisp, oat and rice flakes with raisins and almonds, e.g. Kellogg's
- 210 Grapenuts
- 8481 Hi Fibre Bran, Sainsbury's only
- 3008 Honey & Nut branflakes, own brand, e.g. Safeway
- 8675 Honey Bears, bear shaped toasted rice with honey and brown sugar, e.g. Co-op

BREAKFAST CEREALS

- 9275 Honey Nut Cheerios, Nestlé
- 232 Honey Nut Cornflakes; Crunchy Nut Cornflakes; e.g. Kellogg's, own brand
- 8486 Honey Loops, Kellogg's only
- 6208 Honey Nut Hoops, Sainsbury's
- 6824 Honey Nut Shredded Wheat, Nestlé
- 8189 Instant, oat cereal, containing fruit and nuts, e.g. Quaker Hot Oat Crunch
- Other instant oat cereals: see *Ready Brek*
- 6043 Jordan's Bran Crisp
- 6822 Just Right, Kellogg's
- 5140 Kellogg's Krumbly
- 8492 Lucky Charms, Nestlé
- 6302 Malty Flakes, own brand.
- 212 Muesli, with added sugar, e.g. Alpen or Kellogg's Country Store. NOT "crunchy" muesli, Jordan's Crispy Muesli
- R 214 Muesli, no added sugar, home made or shop bought, e.g. Waitrose No Added Sugar Muesli, Alpen No Added Sugar
- 6836 Muesli, no added sugar, with extra fruit and nuts, e.g. Morrison's
- 7629 Muesli, with added sugar, with extra fruit and nuts, e.g. Alpen with tropical fruit, Sainsbury's Fruit and Spice
- 228 Multi-grain Start, Kellogg's
- 5199 Nesquik Chocolate cereal
- 5334 Nestlé Fibre
- 8958 Nut Feast, Kellogg's only
- 5770 Nutri-Grain bars, Nutri-Grain Twist bars, Kellogg's
- 7647 Oat bran flakes, no additions, Kellogg's Common Sense only
- 7648 Oat bran flakes with raisins and apple, Kellogg's Common Sense only
- 9276 Oat bran flakes with raisins and apple, Co-op ONLY
- 6544 Oat bran flakes with raisins and apple, Safeway ONLY
- 9818 Oat and bran flakes with raisins and apple, Sainsbury's only
- 4084 Oat and bran flakes, no additions, own brand, e.g. Sainsbury's
- Oat cereals, instant: see *Ready Brek*
- 231 Oat Krunchies, Quaker
- 229 Optima Fruit and Fibre, Kellogg's only

BREAKFAST CEREALS

- 9796 Perfect Balance, Heinz Weight Watchers
- 8853 Pop Tarts, Kellogg's, any flavour
- 215 Porridge, (NOT instant) made with all water
- 216 Porridge, (NOT instant) made with all whole milk
- 217 Porridge, (NOT instant) made with whole milk and water
- 3797 Porridge, (NOT instant) made with all semi-skimmed milk
- 5344 Porridge, (NOT instant) made with semi-skimmed milk and water
- 3925 Porridge, (NOT instant) made with all skimmed milk
- 9549 Porridge, (NOT instant) made with skimmed milk and water
- 7644 Porridge with bran, (NOT instant) made with all whole milk
- 7645 Porridge with bran, (NOT instant) made with all semi-skimmed milk
- 7646 Porridge with bran, (NOT instant) made with all skimmed milk
- 218 Puffed Wheat
- 5207 Quaker Feast of Flakes
- 5747 Quaker Quick and Hearty Honey Bran (made up with water)
- 7051 Raisin Wheats, Kellogg's only
- 2675 Ready Brek; Warm Start; other instant oat cereals; NOT flavoured, NOT containing fruit and nuts.
DRY WEIGHT
- 9348 Ready Brek; Warm Start; other instant oat cereals; NOT flavoured, made up with water only, no milk
- 219 Ready Brek; Warm Start; other instant oat cereals; NOT flavoured, NOT containing fruit and nuts,
made with all whole milk
- 7640 Ready Brek; Warm Start; other instant oat cereals; NOT flavoured, NOT containing fruit and nuts,
made with all semi-skimmed milk
- 3421 Ready Brek; Warm Start; other instant oat cereals; NOT flavoured, NOT containing fruit and nuts,
made with all skimmed milk
- 8005 Ready Brek; Warm Start; other instant oat cereals; flavoured, NOT containing fruit or nuts, e.g. Quaker Top
That with biscuit crunch topping, caramel flavour chips, chocolate flake topping, Oatso Simple honey bran,
Toffee, golden syrup flavour. DRY WEIGHT
- 5329 Ready Brek; Instant oat cereal with fruit, e.g. Oatso Simple apple & cinnamon flavour, DRY WEIGHT
- 7641 Ready Brek; Warm Start; other instant oat cereals; flavoured, e.g. chocolate, NOT containing fruit or
nuts, made with all whole milk
- 5330 Ready Brek; Instant oat cereal with fruit and nuts, made with all whole milk
- 7642 Ready Brek; Warm Start; other instant oat cereals; flavoured, e.g. chocolate, NOT containing fruit or
nuts, made with all semi-skimmed milk
- 5331 Ready Brek; Instant oat cereal with fruit and nuts, made with all semi-skimmed milk

BREAKFAST CEREALS

- 7643 Ready Brek; Warm Start; other instant oat cereals; flavoured, e.g. chocolate, NOT containing fruit or nuts, made with all skimmed milk
- 5332 Ready Brek; Instant oat cereal with fruit and nuts, made with all skimmed milk
- 220 Rice Krispies, Kellogg's only
- 7630 Rice Krispies, own brand, e.g. Sainsbury's Rice Pops, Rice Crunchies, Crisp Rice, NOT Kellogg's
- 4331 Ricicles, Kellogg's
- 221 Shredded Wheat; Cubs; Shredded Wheat Bitesize
- 8190 Shredded Wheat Fruitful, Mini Fruit
- 6824 Shredded Wheat, Honey Nut
- 222 Shreddies, any brand. NOT frosted, NOT Coco
- 8383 Shreddies, Coco only
- 8182 Shreddies, frosted only
- 223 Special K, Kellogg's
- 2970 Special K with red berries
- 6452 Strawberry Crisp Cereal, Sainsbury's
- 6209 Strawberry Crisp Clusters, Tesco
- 5363 Strike, Kellogg's
- 224 Sugar Puffs
- 203 Sultana Bran, Kellogg's only
- 5333 Sustain, Kellogg's
- Warm Start: see *Ready Brek*
- 223 Trimflakes, Morrison's
- 6823 Weetabix Advantage
- 225 Weetabix; other whole wheat biscuits
- 6883 Weight Watcher's cereal breakfast bar, with fruit
- 6823 Wheatflakes without sultanas; wholewheat flakes, e.g. Weetabix Advantage
- 226 Wheatflakes with sultanas; wholewheat flakes with sultanas
- 7632 Weetos, chocolate covered rings
- 6 Wheatgerm, e.g. Jordan's Natural Wheatgerm

BREAKFAST CEREALS

CEREALS - BARLEY, BRAN, DUMPLINGS ETC.

- 3 Barley, pearl, white, boiled in water
- 5 Barley, whole grain, brown, boiled in water
- 6 Bemax, wheatgerm
- 8171 Bran, oat
- 7 Bran, wheat
- 7028 Bulghur wheat, cooked
- 7600 Couscous, (doughy paste made from millet) cooked
- 74 Dumplings, animal suet, unsweetened, steamed or boiled
- 8719 Dumplings, vegetable suet, unsweetened, steamed or boiled
- 6838 Flour tortilla pancakes
- 3259 Millet, boiled in water
- 6996 Nachos, cheese (corn chips with melted cheese and salsa).
- 154 Papadums; poppadoms; fried in butter ghee. NOT popadom snacks
- 155 Papadums; poppadoms; fried in vegetable ghee or unspecified; unspecified takeaway. NOT popadom snacks
- 153 Papadums; poppadoms; cooked without fat. NOT popadom snacks
- 6992 Prawn crackers, Chinese takeaway / restaurant. NOT sesame prawn toast
- 6994 Sesame prawn toasts, Chinese takeaway / restaurant (Prawns with seasonings fried with bread and dipped in sesame seeds). NOT prawn crackers
- R 817 Welsh rarebit, including white bread toasted, cheese, milk and seasoning
- R 7773 Welsh rarebit, including wholemeal bread toasted, cheese, milk, and seasoning
- 8365 Yorkshire pudding, frozen
- R 576 Yorkshire pudding; hole for Toad-in-the-hole, made with whole milk. NOT packet mix
- R 8643 Yorkshire pudding; hole for Toad-in-the-hole, made with whole milk. NO added fat. NOT packet mix
- R 7603 Yorkshire pudding; hole for Toad-in-the-hole, made with semi-skimmed milk. NOT packet mix
- R 4112 Yorkshire pudding; hole for Toad-in-the-hole, made with skimmed milk. NOT packet mix
- 8364 Yorkshire pudding, packet mix, made up with water
- 8614 Yorkshire pudding, packet mix, made up with egg and water

CEREALS - BARLEY, BRAN, DUMPLINGS ETC.

PASTA

- 34 All white pasta, boiled, including spaghetti; tagliatelle; fettucine; vermicelli; NOT macaroni or egg-based pasta. NOT egg noodles. NOT fresh pasta.
- 1324 Cannelloni, purchased, with meat filling; any type, includes fresh and frozen. NOT Vegetarian cannelloni
- Lasagne: prepared dish with meat, white sauce: see “Beef dishes”
- 7601 Lasagne, white or wholemeal sheet of pasta; cannelloni; boiled in water
- 38 Macaroni, canned in cheese sauce. NO meat additions
- R 819 Macaroni cheese. NOT canned
- 27 Macaroni, NOT wholemeal, boiled in water
- 36 Macaroni, wholemeal, boiled in water
- 32 Noodles, egg, boiled
- 5166 Noodles, instant, made up with water, e.g. Batchelor’s Supernoodles
- 2984 Noodles, fried
- 30 Noodles, plain, boiled
- 9371 Pasta, FRESH, plain, boiled, any type. NOT dried pasta; NOT stuffed pasta
- 8093 Pasta, FRESH, stuffed with cheese and vegetables, purchased e.g. ricotta and spinach tortelloni, agnolotti with mushrooms. NOT meat or fish filling.
- 8611 Pasta shapes in tomato sauce fortified with vitamins and minerals e.g. HP Postman Pat, Power Rangers, Heinz Spaghetti Hoops
- 9273 Pasta with sausages canned in tomato sauce
- 70 Pot noodles, as served. e.g. Golden Wonder
- 39 Ravioli, canned, i.e. pasta, meat filling and tomato sauce
- 8361 Ravioli, pasta with meat filling etc; fresh or frozen. NOT canned
- 9102 Ravioli, pasta with tuna in spicy tomato sauce; canned; e.g. Tesco
- 9172 Ravioli, pasta with vegetable filling in tomato sauce; canned
- 40 Spaghetti, white, canned in bolognese sauce
- 41 Spaghetti, white; pasta, white; all shapes, canned in tomato sauce or canned in tomato and cheese sauce. NOT reduced sugar; NOT ravioli; NOT macaroni; NOT fortified
- 7602 Spaghetti, white; pasta, white; all shapes, canned in tomato sauce, reduced sugar; NOT ravioli; NOT macaroni
- 3174 Spaghetti, wholemeal (brown); other wholemeal pasta; all shapes, canned in tomato sauce. NOT reduced sugar
- 36 Spaghetti, wholemeal (brown); wholemeal pasta; wholemeal macaroni, boiled in water; NOT FRESH
- 3760 Spaghetti, wholemeal (brown); other wholemeal pasta; canned in tomato sauce, reduced sugar e.g. Weight Watchers
- 8666 Tagliatelle with ham and mushrooms, ready meal, chilled or frozen

2726 Tagliatelle carbonara, reduced fat, ready meal, chilled or frozen, e.g. Asda Healthy Choice

PASTA

PIZZA

PIZZA WITH THIN AND CRISPY BASE

- R 805 Cheese and tomato pizza only
- R 8524 Cheese or cheese and tomato pizza, with vegetables and/or fruit (e.g. pineapple). NO meat, NO fish
- R 8527 Chicken pizza, with or without vegetables or fruit. NO other meat, NO fish
- R 8530 Pizza with meat topping, with or without vegetables or fruit. e.g. pepperoni; ham; beef; bacon; salami. NO chicken. NO fish
- R 8533 Pizza, with fish topping, with or without vegetables or fruit. NO meat. NO chicken
- R 8536 Pizza, with any combination of meat, chicken and fish toppings, with or without vegetables or fruit. NOT meat only, NOT chicken only, NOT fish only

PIZZA WITH FRENCH BREAD BASE

- R 8523 Cheese and tomato pizza only
- R 8526 Cheese or cheese and tomato pizza, with vegetables and/or fruit (e.g. pineapple). NO meat. NO fish
- R 8529 Chicken pizza, with or without vegetables or fruit. NO other meat. NO fish
- R 8532 Pizza, with meat topping, with or without vegetables or fruit, e.g. pepperoni; ham; beef; bacon; salami. NO chicken. NO fish
- R 8535 Pizza, with fish topping, with or without vegetables or fruit. NO meat, NO chicken
- R 8537 Pizza, with any combination of meat, chicken and fish toppings, with or without vegetables or fruit. NOT meat only, NOT chicken only, NOT fish only

PIZZA WITH ANY OTHER BASE E.G. DEEP PAN, HOMEMADE WITH SCONE OR CRUMPET BASE NOT THIN & CRISPY; NOT FRENCH BREAD

- R 806 Cheese and tomato pizza only
- R 8525 Cheese or cheese and tomato pizza, with vegetables and/or fruit (e.g. pineapple). NO meat, NO fish
- R 8528 Chicken pizza, with or without vegetables or fruit. NO other meat, NO fish
- R 8531 Pizza, with meat topping, with or without vegetables or fruit, e.g. pepperoni; ham; beef; bacon; salami. NO chicken. NO fish
- R 8534 Pizza, with fish topping, with or without vegetables or fruit. NO meat. NO chicken
- R 8538 Pizza, with any combination of meat, chicken and fish toppings; with or without vegetables or fruit. NOT meat only, NOT chicken only, NOT fish only.

PIZZA

RICE

- R 1334 Fried rice, special, with chicken, duck, prawn, vegetables, egg and rice. NOT egg fried rice. NOT Chicken fried rice (see chicken dishes)
- 70 Pot noodles; pot rice; savoury rice e.g. Batchelors'; weight as served
- 42 Rice, basmati ('Indian'), boiled
- 44 Rice, basmati ('Indian'), fried in blended vegetable oil - no vegetables
- 45 Rice, basmati ('Indian'), fried in dripping - no vegetables
- 46 Rice, basmati ('Indian'), fried in lard - no vegetables
- 47 Rice, basmati ('Indian'), fried in polyunsaturated oil - no vegetables
- 9130 Rice, basmati, fried in olive oil - no vegetables
- 49 Rice, brown; easy cook brown; boiled in water
- 50 Rice, brown; easy cook brown; fried in blended vegetable oil - no vegetables
- 51 Rice, brown; easy cook brown; fried in dripping - no vegetables
- 52 Rice, brown; easy cook brown; fried in lard - no vegetables
- 8909 Rice, brown; easy cook brown; fried in olive oil - no vegetables
- 53 Rice, brown; easy cook brown; fried in polyunsaturated oil - no vegetables
- 3267 Rice cakes
- 2735 Rice cakes with added sugar, e.g. Snack-a-Jacks with caramel or chocolate ONLY
- 76 Rice, egg fried, including takeaway
- 70 Rice, savoury, e.g. Batchelors'; pot rice; pot noodles; weight as served
- R 1334 Rice, special fried
- 55 Rice, white easy cook, boiled in water
- 58 Rice, white, long or short grain, boiled in water. NOT easy cook
- 59 Rice, white, long or short grain, or easy cook, fried in blended vegetable oil - no vegetables
- 61 Rice, white, long or short grain or easy cook, fried in dripping - no vegetables
- 62 Rice, white, long or short grain or easy cook, fried in lard - no vegetables
- 60 Rice, white, long or short grain or easy cook, fried in polyunsaturated oil - no vegetables
- Rice, with egg and milk; baked rice custard: see 'Puddings and fruit pies'
- 5178 Sainsbury's Biryani rice bites
- 70 Savoury rice, weight as served, e.g. Batchelors'

RICE

CONFECTIONERY AND SAVOURY SNACKS, INCLUDING CRISPS

CONFECTIONERY - CHOCOLATE

- 2254 Aero milk chocolate; any Aero chocolate
- 2257 After Eight mints
- 2257 All Gold chocolate assortment
- 2254 Animal bar, solid milk chocolate bar
- 7971 Applause
- 795 Balisto
- 2257 Belgian-type chocolates
- 7973 Bitz bar, milk chocolate bar with orange, cherry bits
- 7972 Bitz bar, plain and milk chocolate bar with mint bits
- 2257 Black Magic chocolate assortment
- 2252 Bliss, chocolate-covered coconut bar
- 2252 Boost bar
- 2252 Bounty bar, plain or milk chocolate
- 2255 Bournville chocolate, NO additions
- 8302 Bournville chocolate with fruit and nuts
- 7956 Brazil nut chocolates; chocolate with brazils; Guylian nut assortment
- 2254 Buttons, milk chocolate. NOT white chocolate buttons
- 2254 Cadbury's dairy milk chocolate, NO additions
- 2256 Caramel chocolate, e.g. Cadbury's caramel, Galaxy Swirls
- 2254 Caramac bar
- 2256 Caramels, chocolate covered caramels, NO additions
- 9616 Caramel Heaven
- 7037 Carob, chocolate substitute
- 2256 Chewing nuts, chocolate covered toffee centres
- 2257 Chocolate assortments; Milk Tray; Roses; Weekend Assortment; Cadbury's Wicked
- 7956 Chocolate brazils; chocolate covered nuts; peanut Treets
- 2254 Chocolate buttons, milk chocolate. NOT white chocolate buttons
- 2257 Chocolate cream; Fry's chocolate cream
- 2257 Chocolate covered ginger

CONFECTIONERY – CHOCOLATE

8372 Chocolate covered nuts and raisins e.g. fruit and nut Revels

2256 Chocolate eclairs

2257 Chocolate egg, Cadbury's velvet

2254 Chocolate, milk

2255 Chocolate, plain

9616 Chocolate, reduced fat. e.g. Halo, Lo Go, Lo Max, Flyte, Caramel Heaven, Nutsin

2254 Chocolate orange, milk chocolate, Terry's

2255 Chocolate orange, plain chocolate, Terry's

7956 Chocolate covered nuts; peanut Treets; peanut M&M's

7958 Chocolate covered raisins, e.g. Poppets

2256 Chomp, Cadbury's

2252 Coconut ice; Bounty; Bliss

7962 Creme eggs, e.g. Cadbury's

7954 Crispy caramel; Toffee crisp; Lion bar; Balisto; Picnic

7963 Crunchie bar - chocolate coated honeycomb

2256 Curly-Wurly bar

7974 Dairy Crunch milk chocolate bar. NOT white dairy crunch

7975 Dairy Crunch white chocolate. NOT milk chocolate Dairy Crunch

2254 Dairy milk chocolate bar. NO additions

9378 Diabetic chocolate, any type

2256 Dime Bars

7978 Double Decker bar

2276 Drifter bar

2254 Flake; Ripple; Spira; Twirl

9616 Flyte, reduced fat chocolate bar

7955 Fruit and nut milk chocolate bar

8302 Fruit and nut plain chocolate bar, e.g. Bournville

2257 Fry's chocolate cream, any flavour

2273 Fry's Turkish Delight

2256 Fudge, Cadburys, chocolate coated fudge finger

7954 Fuse bar

CONFECTIONERY – CHOCOLATE

2256 Galaxy caramel egg

2254 Galaxy milk chocolate bar, NO additions

2256 Galaxy Swirls

2257 Ginger, chocolate covered

2256 Golden Cup bar

7956 Guylian chocolate-nut assortment

9616 Halo, reduced calorie and fat chocolate bar

7956 Hazel whirls; hazelnuts in chocolate

2277 Kit Kat; Kit Kat Chunky

2254 Leo Milka

2254 Lila Pause corn crisp bar

7954 Lila Pause praline crisp, fruit and nut chocolate bars

7954 Lion bar

2257 Liqueur chocolates

2254 Logger milk chocolate bar

7955 Logger fruit and nut chocolate bar

9616 Lo Go, reduced fat chocolate bar

9616 Lo Max, reduced fat chocolate bar

2275 Maltesers

7961 M&M's, chocolate centre. NOT peanut M&M's

7956 M&M's peanut, Peanut Treets, other chocolate covered nuts, Nut Poppets

2258 Marble, Cadbury's

2265 Mars bar. NOT Mars Bar Ice-cream

7972 Matchmakers; chocolate mint crisp; chocolate orange crisp

7954 Maverick

7960 Mice, white chocolate

2254 Milk chocolate, NO additions

2254 Milk chocolate buttons

7956 Milk chocolate peanuts, peanut Treets

7958 Milk chocolate coated raisins

2257 Milk Tray chocolate assortment

CONFECTIONERY – CHOCOLATE

7960 Milky Bar buttons

7960 Milky Bar; white chocolate; white chocolate buttons, e.g. Milky bar buttons, including white mice

8521 Milky Bar with raisins. NOT chocolate coated raisins

7959 Milky Way

7954 Milky Way Crispy Rolls

2254 Milky Way Magic Stars

7961 Minstrels

2276 Munchies

2254 Neapolitans; Terry's "Naps"

7964 Nuts about caramel

9616 Nutsin

2254 Orange milk chocolate; Terry's milk chocolate orange

2255 Orange plain chocolate; Terry's plain chocolate orange

7956 Peanut Treets; chocolate covered peanuts

2257 Peppermint creams, chocolate covered

7954 Picnic bar

2255 Plain chocolate, NO additions. NOT milk chocolate

8302 Plain chocolate with fruit and nuts, e.g. Bournville

7958 Poppets, chocolate raisins. NOT nut poppets

2257 Pyramint, chocolate covered pyramid with mint fondant cream

2256 Quality Street chocolate assortment

9110 Reduced sugar chocolate e.g. Boots

2257 Revels. NOT fruit and nut revels

2254 Ripple; Flake; Spira; Twirl

2256 Rolos

2257 Roses, chocolate assortment

2252 Ruffle bar

2257 Rum truffle

7961 Smarties; Beanies; candy coated chocolate drops; M&M's chocolate

7964 Snickers

2254 Spira; Flake; Twirl; Ripple

CONFECTIONERY - CHOCOLATE

8308 Strollers, e.g. chocolate covered biscuit, fruit and caramel drops

2254 Taster's, Cadbury's

2256 Tazzo, Cadbury's

2254 Terry's chocolate orange, milk chocolate

2255 Terry's chocolate orange, plain chocolate

2254 Terry's Neapolitans - "Naps"

2277 Terry's Waifa bar, plain or milk chocolate; Kit Kat

2277 Time Out bar

2258 Toblerone

7954 Toffee Crisp bar

7964 Topic bar

7956 Treets chocolate covered peanuts; peanut M&M's

2254 Twirl; Flake; Ripple; Swirl

2276 Twix bar, includes orange Twix; MORO

2273 Turkish Delight, any, includes chocolate covered Turkish Delight; Fry's Turkish Delight

7961 Vice Versas

2277 Waifa bar; Terry's Waifa, plain or milk chocolate

7959 Walnut whip

2257 Weekend assortment

7960 White chocolate bar; white chocolate buttons; Milky Bar

8521 White chocolate bar with raisins. NOT chocolate coated raisins

9274 White chocolate coated raisins

7955 Wholenut chocolate bar, milk chocolate bar with nuts

2278 Wispa bar

2256 Wispa gold

2257 Wispa mint

2254 Yorkie milk chocolate bar

7955 Yorkie peanut chocolate bar; Yorkie raisin and biscuit chocolate bar

CONFECTIONERY - CHOCOLATE

CONFECTIONERY - SUGAR

- 2224 Almond paste; marzipan
- 7953 American hard gums
- 2280 Asian sweets, includes Halwa, Burfi, Rosgollas
- 8546 Banana foam shaped sweets, including chocolate coated foam bananas
- 2251 Barley sugar
- 2274 Blackjacks
- 2251 Boiled sweets, hard centre, e.g. glacier fruits, pineapple chunks. NOT mint flavoured
- 7979 Boiled sweets, soft centre, e.g. Murray fruits. NOT mint flavoured
- 6181 Boiled sweets, sugar-free, including throat lozenges
- 2280 Burfi, Asian sweets
- 2251 Butterscotch
- 2271 Candy cigarettes; dolly mixtures
- 7965 Candytots
- 2274 Chewitts; Ventura chew bars
- 2253 Chewing gum, not sugar free e.g. Wrigley's spearmint/double mint, Juicy Fruit, Hubba bubba, P.K., Hollywood spearmint
- 7970 Chewing gum, sugar free e.g. Orbit, Airwaves, Clorets, Dentyne, Stimorol, Wrigley's Ice White, Wrigley's Extra
- 2274 Chews, fruit salad; Fruitellas; Mojos
- 8303 Chewy mints, mild. NOT hard mints with soft centres, NOT Everton mints
- 8304 Clear mints; glacier mints; buttermints; mint humbugs: mild mints
- 2264 Coconut covered mushrooms, mallow sweets, e.g. toasted teacakes, flumps
- 7968 Cool "sugar free mints"; Velamints; Meltis
- 7980 Creamy fudge, NO additions. NOT Finger of Fudge
- 2279 Dextrosol (glucose) tablets
- 2271 Dolly Mixtures
- 2251 Edinburgh rock
- 8305 Everton mints; Murray Mints
- 7982 Extra Strong mints
- 8306 Fisherman's Friend Throat Lozenges
- 2270 Fizzers; Refreshers

CONFECTIONERY - SUGAR

- 2264 Flumps, mallow shapes
- 8546 Foam sweets, e.g. bananas, shrimps
- 2259 Fruit gums
- 2259 Fruit jelly/gum shapes, e.g. wormy wiggles, fizzy cola bottles, fruit gums, Starburst juice gums
- 2267 Fruit pastilles; sugar coated fruit jellies; sugar coated fruit jelly shapes; jelly tots
- 797 Fruit polos
- 2274 Fruit salad chews; Fruitellas
- 7980 Fudge, NO additions. NOT Cadburys chocolate coated fudge finger
- 8304 Glacier mints; clear mints; mint humbugs; buttermints
- 2251 Gobstoppers
- 2251 Hacks, throat lozenges. NOT Fisherman's Friends
- 2260 Halva
- 2280 Halwa, Asian sweets
- 8304 Humbugs mint; glacier mints; clear mints; buttermints
- Ice Cream see "Puddings and Ice cream"
- 2262 Ice lollies/pops, water or juice based. NOT fortified with vitamin C. NOT containing ice cream or other fillings, NOT ice lollies with chocolate or other coatings
- 7762 Ice lollies, fortified with vitamin C, NOT containing ice-cream, fruit or flavoured, purchased e.g. Walls "Sparkle", Lyons Maid "Mr Men. NOT Mr Men Dairy
- 5688 Ice lollies/pops, low sugar, low calorie, NOT blackcurrant
- 729 Ice lollies, containing ice cream e.g. Mivvi, own brand Splits, Twister, Solero, Opal Fruits ice lolly
- 7761 Ice lollies, milk e.g. Walls Mini Milk, Friff
- 8229 Ice lollies, yogurt
- 2224 Marzipan; almond paste
- 7965 Jelly babies; jelly bears
- 7965 Jelly beans, candy coated jelly centre, e.g. Skittles
- 2267 Jelly tots
- 7965 Joosters
- 2267 Juice Jellies
- 2271 Kendal mint cake
- 2263 Liquorice allsorts; liquorice comfits; pontefract cakes
- 8545 Liquorice shapes, e.g. laces, pipes, cuttings

CONFECTIONERY - SUGAR

- 2272 Liquorice toffees
- 2263 Liquorice torpedoes, candy covered with a liquorice string centre
- 2251 Locketts throat lozenges
- 2251 Lollipops, NOT ice lollies
- 8968 Lollipops, fortified with vitamin C, NOT ice lollies
- 2270 Love hearts
- 2279 Lucozade tablets
- 2262 Lollies iced, water or juice based. NOT fortified with vitamin C. NOT ice lollies with ice cream or other fillings, NOT ice lollies with chocolate or other coatings
- 2251 Mac throat lozenges
- 2264 Mallow shapes. NOT foam sweets
- 2264 Marshmallows, NOT chocolate coated
- 2224 Marzipan sweets; chocolate covered marzipan
- 2251 Mentholypus throat lozenges
- 7969 Milk gums
- 7968 Mints, sugar-free, e.g. Cool, Velamints, Meltis
- 8304 Mint humbugs; glacier mints; clear mints; butter mints
- 8307 Mint imperials; Trebor Mints; mint polos; mint tic tacs. NOT special mint imperials
- 7983 Mintoes
- 7962 Mintolas
- 7982 Extra Strong mints; Triple X mints; Special mint imperials. NOT mint imperials
- 8305 Murray mints; Everton mints
- 7979 Murray fruits, boiled sweets with soft centre
- 2267 New Berry Fruits
- 7976 Nougat
- 2266 Nut brittle
- 2266 Nutty, peanut and toffee bar
- 2267 Orange and lemon slices - jellies
- 8303 Pacers; mint chewitts; chewy mints (mild). NOT hard mints with soft centres, NOT Everton mints
- 2270 Parma violets
- 2267 Pastilles; fruit pastilles; throat pastilles; e.g. Rowntrees fruit pastilles, TCP. NOT throat lozenges

CONFECTIONERY - SUGAR

2251 Pear drops

2271 Peppermint creams, NOT chocolate covered

2251 Pineapple chunks, fruit drops, boiled sweets, hard

8307 Polo mints; mint imperials; Trebor mints; mint Tic Tacs. NOT Special Mint imperials

2263 Pontefract cakes

2269 Popcorn, sweet; sugar, honey or toffee-coated popcorn

9066 Prewitts no added sugar fruit bar; Apple and Date or Banana

2270 Refreshers, sherbet sweets; fizzers

2251 Rock; Edinburgh rock

2280 Rosgollas, Asian sweets

7980 Rum and raisin fudge

2272 Rum and raisin toffee

2272 Sherbet bonbons

2251 Sherbet pips; sherbet fruits

2270 Sherbet, powder

8546 Shrimps, foam sweets

7965 Skittles; candy tots; tooty fruities

2262 Slush Puppies

7983 Soft-centred mints, e.g. Mintoos. NOT Pacers.

2251 Spangles

2274 Starburst

2251 Strepsils throat lozenges

2266 Sugared almonds

7968 Sugar free mints, e.g. Cool, Velamints, Meltis

6181 Throat lozenges, sugar-free

8307 Tic-Tacs, mint

8309 Tic-Tacs, NOT mint

2263 Tigertots

2272 Toffees, NO additions. NOT chocolate covered

2272 Toffo's. NOT mint toffo's

CONFECTIONERY - SUGAR

- 8310 Toffo's, mint only
- 7965 Tooty Frooties; skittles
- 7967 Tracker bar, chocolate chip, blackcurrant and apple. NOT peanut
- 7966 Tracker bar, peanut
- 8307 Trebor mints; mint polos; mint imperials; mint Tic Tacs. NOT special mint imperials
- 7982 Triple X mints
- 2251 Tunes throat lozenges
- 7981 Vitasweets, fortified with vitamins
- Wagon Wheels: see "Biscuits"
- 2259 Wine gums
- 2253 Wrigley's chewing gum. NOT sugar free
- 7885 Yogurt coated nuts
- 7885 Yogurt coated peanuts, raisins or banana chips. NOT yogurt gums

CONFECTIONERY - SUGAR

CRISPS AND SAVOURY SNACKS (LISTED ALPHABETICALLY BY PRODUCT NAME)

See also: Crisps & Savoury Snacks Card FC4

- 7879 Bacon Rashers (Maize and Rice Flour Corn Snacks) - any flavour e.g. own brand
- 5124 Bacon Roll - other cereal (mainly wheat flour) and potato snacks
flavours: chilli type, prawn type, pickled onion, spring onion, tomato type (including ketchup, sauce, spicy tomato) worcester sauce ONLY e.g. Derwent Valley
- 5118 Be Good To Yourself - lower fat potato crisps
flavours: chilli, pickled onion, prawn cocktail, prawn type, tomato type (including ketchup, sauce, spicy tomato), worcester sauce ONLY e.g. Sainsbury's
- 2691 Be Good To Yourself - lower fat potato crisps
any other flavour, incl. plain/ ready salted e.g. Sainsbury's
- 7649 Breadsticks, plain, e.g. Grissini
- 2627 Cheesy Curls - corn snacks e.g. Derwent Valley
- 1905 Chinese Style Crackers e.g. Bensons
- 7875 Chiplets - chipsticks, other potato and corn sticks, any flavour e.g. Marks & Spencers
- 7875 Chipsticks - other potato and corn sticks, any flavour e.g. own brand, Walkers
- 5117 Corn Snacks -
flavours: chilli, hot n spicy, mega flamin hot, nice n spicy, pickled onion, prawn, prawn cocktail, spring onion, tomato type, worcester sauce ONLY e.g. own brand
- 2627 Corn Snacks - any other flavour, incl. plain/ ready salted e.g. own brand
- 7870 Crinkle Crisps - any flavour e.g. own brand
- 7870 Crinkles - crinkle crisps, any flavour e.g. Walkers
- 5118 Crisps, potato (Lower Fat)
flavours: chilli type, pickled onion, prawn cocktail, prawn type, tomato type, worcester sauce ONLY e.g. own brand
- 2691 Crisps, potato (Lower Fat)
any other flavour, incl. plain/ ready salted e.g. own brand
- 5119 Crisps, potato (standard)
flavours: chilli, pickled onion, prawn cocktail, prawn type, tomato type (including ketchup, spicy tomato), worcester sauce ONLY e.g. Bensons, Golden Wonder, KP, own brand, Walkers
NOT: low fat, wholewheat, crinkle, thick cut, fortified, square, or jacket potato crisps
- 1900 Crisps, potato (standard)
any other flavour, incl. plain/ ready salted e.g. Bensons, Golden Wonder, KP, own brand, Walkers
NOT: low fat, wholewheat, crinkle, thick cut, fortified, square or jacket potato crisps
- 8602 Crisps, potato, made with sunflower oil, e.g. Seabrook
- 7869 Crisps - thick crisps, any flavour e.g. Bensons (NOT crinkle crisps)
- 7875 Crunchy Fries - chipsticks, other potato and corn snacks, any flavour e.g. Golden Wonder

CRISPS AND SAVOURY SNACKS

- 7875 Crunchy Sticks - chipsticks, other potato and corn sticks, any flavour e.g. Derwent Valley
- 5120 Discos - square crisps
flavours: chilli, prawn cocktail, prawn type, tomato type (including ketchup, spicy tomato), pickled onion, worcester sauce, chilli, hot n spicy ONLY e.g. KP
- 7871 Discos - square crisps
any other flavour, incl. plain/ ready salted e.g. KP
- 7866 DJ's - jacket potato crisps, any flavour e.g. Hunts
- 7876 Doritos - corn chips. NOT including dip e.g. Phileas Fogg, Walkers
- 7869 Double Crunch - thick crisps, any flavour e.g. Walkers (NOT crinkle crisps)
- 7879 Frazzles - maize and rice flour "corn" snacks, any flavour e.g. Walkers
- 5121 French Fries -
flavours: chilli type, prawn type, pickled onion, tomato type (including ketchup, spicy tomato), worcester sauce, hot n spicy ONLY e.g. own brand, Walkers
- 8030 French Fries –
any other flavour, incl. plain/ ready salted e.g. own brand, Walkers
- 7870 Frisps - crinkle crisps, any flavour e.g. KP
- 7868 Groovers - thick crinkle crisps, any flavour e.g. Golden Wonder
- 7866 Jacket potato crisps, any flavour e.g. Natures Choice, Tuckers, own brand
- 7869 Kettle Chip Crisps - thick crisps, any flavour (NOT crinkle crisps) e.g. Kettle Chips
- 7873 Krunchi Puffs - corn snacks, with added vitamins, any flavour e.g. Red Mill
- 5118 Golden Lights - lower fat potato crisps
flavours: chilli, pickled onion, prawn cocktail, prawn type, spring onion, tomato type (including ketchup, spicy tomato), worcester sauce ONLY e.g. Golden Wonder
- 2691 Golden Lights - lower fat potato crisps
any other flavour, incl. plain/ ready salted e.g. Golden Wonder
- 5118 Lites - lower fat potato crisps
flavours: chilli, pickled onion, prawn cocktail, prawn type, spring onion, tomato type (including ketchup, spicy tomato), worcester sauce ONLY e.g. Walkers
- 2691 Lites - lower fat potato crisps
any other flavour, incl. plain/ ready salted e.g. Walkers
- 7870 Max - crinkle crisps, any flavour e.g. Walkers
- 5598 McVities Go Ahead, low fat crisps, any flavour
- 7876 Mexican Chips - corn chips. NOT including dip e.g. Phileas Fogg
- 6837 Mignons Morceaux - garlic bread-based savoury snacks
- 7875 Mini Chips - chipsticks, other potato and corn sticks, any flavour e.g. KP

CRISPS AND SAVOURY SNACKS

- 5117 Monster Munch - corn snacks
flavours: chilli, hot n spicy, mega flamin hot, nice n spicy, pickled onion, prawn, prawn cocktail, spring onion, tomato type, worcester sauce ONLY e.g. Walkers
- 2627 Monster Munch - corn snacks
any other flavour, incl. plain/ ready salted e.g. Walkers
- 7876 Nachos - corn chips. NOT including dip e.g. Phileas Fogg
- 5117 Nik Naks - corn snacks
flavours: chilli, hot n spicy, mega flamin hot, nice n spicy, pickled onion, prawn, prawn cocktail, spring onion, tomato type, worcester sauce ONLY e.g. Golden Wonder
- 2627 Nik Naks - corn snacks
any other flavour, incl. plain/ ready salted e.g. Golden Wonder
- 8296 Oasters - oat snacks, low fat e.g. Jordans
- 7873 Oinks - corn snacks, with added vitamins, any flavour e.g. Red Mill
- 7873 Onion Rings - corn snacks, with added vitamins, any flavour e.g. Red Mill
- 5125 Other Cereal (mainly Maize) and Potato Snacks -
flavours: chilli, hot n spicy, prawn type, pickled onion, spring onion, tomato type (including ketchup, spicy tomato), worcester sauce ONLY e.g. own brand
- 7883 Other Cereal (mainly Maize) and Potato Snacks -
any other flavour, incl. plain/ ready salted e.g. own brand
- 5124 Other Cereal (mainly Wheat Flour) and Potato Snacks -
flavours: chilli type, prawn type, pickled onion, spring onion, tomato type (including ketchup, spicy tomato), worcester sauce ONLY e.g. own brand
- 7874 Other Cereal (mainly Wheat Flour) and Potato Snacks -
any other flavour, incl. plain/ ready salted e.g. own brand
- 7882 Pizza bits - pizza snacks (and other potato and tapioca snacks) e.g. Marks & Spencers
- 2268 Popcorn, salted
- 2269 Popcorn, sweet; sugar, honey or toffee-coated
- 8500 Pork Scratchings
- 5122 Potato Rings –
flavours: chilli, pickled onion, prawn type, spring onion, tomato type (including ketchup, spicy tomato), worcester sauce, hot n spicy ONLY e.g. Hula Hoops, Big O's, own brand
- 7872 Potato Rings –
any other flavour, incl. plain/ ready salted e.g. Hula Hoops, Big O's, own brand
- 5801 Potato Snack with sweetener, fortified e.g. Rugrats
- 6825 Pretzels - any flavour e.g. Rumpler's, own brand
- 7870 Pringles Crisps - any flavour
- 8499 Pukka Puri - punjab puri (poppadom mini snacks; popadom spicy snacks).
e.g. Sainsbury's. NOT papadums, NOT poppadoms

CRISPS AND SAVOURY SNACKS

- 5123 Puffed Potato Products -
flavours: chilli, pickled onion, prawn type, spring onion, tomato type (including ketchup, spicy tomato),
worcester sauce, hot n spicy ONLY e.g. own brand
- 1905 Puffed Potato Products –
any other flavour, incl. plain/ ready salted
- 7873 Quarter Backs - corn snacks, with added vitamins, any flavour e.g. Red Mill
- 5123 Quavers - puffed potato products
flavours: chilli, pickled onion, prawn type, spring onion, tomato type (including ketchup, spicy tomato),
worcester sauce, hot n spicy ONLY e.g. Walkers
- 1905 Quavers - puffed potato products
any other flavour, incl. plain/ ready salted e.g. Walkers
- 7868 Real McCoys - thick crinkle crisps, any flavour e.g. KP
- 5124 Ringos - other cereal (mainly wheat flour) and potato snacks
flavours: chilli type, prawn type, pickled onion, spring onion, tomato type (including ketchup, spicy tomato),
worcester sauce ONLY e.g. Golden Wonder
- 7874 Ringos - other cereal (mainly wheat flour) and potato snacks
any other flavour, incl. plain/ ready salted e.g. Golden Wonder
- 7866 Roysters - any flavour
- 7870 Ruffles - crinkle crisps, any flavour e.g. Walkers
- 7875 Savoury Sticks - chipsticks, other potato and corn sticks, any flavour e.g. Bensons
- 5117 Skips - prawn cocktail flavour corn snacks e.g. KP
- 5123 Snaps - puffed potato products
flavours: chilli, pickled onion, prawn type, spring onion, tomato type (including ketchup, spicy tomato),
worcester sauce, hot n spicy ONLY e.g. Walkers
- 1905 Snaps - puffed potato products
any other flavour, incl. plain/ ready salted e.g. Walkers
- 5118 Solos - potato crisps, lower fat
flavours: chilli type, pickled onion, prawn cocktail, prawn type, tomato type, worcester sauce ONLY e.g. KP
- 2691 Solos - potato crisps, lower fat
any other flavour, incl. plain/ ready salted e.g. KP
- 5125 Space Raiders - other cereal (mainly maize) and potato snacks
flavours: chilli type, prawn type, pickled onion, spring onion, tomato type (including ketchup, sauce,
spicy tomato), worcester sauce ONLY e.g. KP
- 7883 Space Raiders - other cereal (mainly maize) and potato snacks
any other flavour, incl. plain/ ready salted e.g. KP
- 8499 Spicy Popadoms - punjab puri (poppadom mini snacks; poppadom spicy snacks) e.g. KP
- 5120 Square Crisps -
flavours: chilli, prawn cocktail, prawn type, tomato type (including ketchup, spicy tomato), pickled onion,
worcester sauce, chilli, hot n spicy ONLY e.g. own brand, Walkers
NOT: low fat, wholewheat, crinkle, thick cut, fortified, square, or jacket potato crisps

CRISPS AND SAVOURY SNACKS

- 7871 Square Crisps -
any other flavour, incl. plain/ ready salted e.g. own brand, Walkers
NOT: low fat, wholewheat, crinkle, thick cut, fortified, square, or jacket potato crisps
- 7873 Tangy Toms - corn snacks, with added vitamins, any flavour e.g. Red Mill
- 7868 Thick Crinkle Crisps - any flavour e.g. own brand
- 7869 Thick Crisps - any flavour e.g. Benson's, own brand
- 7873 Thinga Me Jigs - corn snacks, with added vitamins, any flavour e.g. Red Mill
- 7876 Tortilla Chips - corn chips. NOT including dip e.g. Phileas Fogg
- 275 Twiglets e.g. Jacobs, own brand
- 7867 Vita - potato crisps, with added vitamins, e.g. Tuckers
- 7882 Waffles - pizza snacks, (and other potato and tapioca snacks) e.g. Marks & Spencers
- 7883 Wallace and Gromit Moon Cheese flavour corn snacks e.g. Robt. Roberts Ltd.
- 5126 Wheat Crunchies - cylindrical wheat tubes
flavours: prawn type, tomato type (including ketchup, sauce, spicy tomato), pickled onion, spring onion, chilli
type, hot n spicy ONLY e.g. Golden Wonder, own brand
- 7878 Wheat Crunchies - cylindrical wheat tubes
any other flavour, incl. plain/ ready salted e.g. Golden Wonder, own brand
- 2616 Wholewheat Crisps - any flavour e.g. own brand
- 7882 Wickettes - pizza snacks, (and other potato and tapioca snacks) e.g. Bensons
- 7873 Wooster Saucers - corn snacks, with added vitamins, any flavour e.g. Red Mill
- 5117 Wotsits - corn snacks
flavours: chilli, hot n spicy, mega flamin hot, nice n spicy, pickled onion, prawn, prawn cocktail, spring onion,
tomato type, worcester sauce ONLY e.g. Golden Wonder
- 2627 Wotsits - corn snacks
any other flavour, incl. plain/ ready salted e.g. Golden Wonder

CRISPS AND SAVOURY SNACKS

NUTS AND SEEDS (INCLUDING FRUIT AND NUT MIXES)

- 2169 Almonds, kernel only; ground almonds
- 2170 Almonds, leftover shell not weighed
- 2171 Barcelona nuts, kernel only
- 2172 Barcelona nuts, leftover shell not weighed
- 2173 Betel nuts, kernel only
- 2605 Bombay mix; Chevda; Chevra
- 2175 Brazil nuts, kernel only
- 2176 Brazil nuts, leftover shell not weighed
- 2177 Cashew nuts, kernel only, unsalted. NOT Cashew nuts, roasted and salted
- 7884 Cashew nuts, roasted and salted
- 2179 Chestnuts, kernel only
- 2180 Chestnuts, leftover shell not weighed
- 2186 Cob nuts; hazelnuts; kernel only
- 2187 Cob nuts; hazelnuts; leftover shell not weighed
- 2181 Coconut, fresh, kernel only
- 2182 Coconut milk, drained from fresh coconut
- 2184 Coconut, desiccated, sweetened
- 2183 Coconut, desiccated, unsweetened
- 2185 Coconut cream, i.e. pureed fresh flesh, sweetened
- 2631 Hawaiian mix, made with mixed nuts and dried fruit
- 2186 Hazelnuts; cob nuts; kernel only
- 2187 Hazelnuts; cob nuts; leftover shell not weighed
- 7304 Macadamia nuts, salted
- 2188 Mixed nuts, kernels only, unroasted, unsalted
- 2189 Mixed nuts, kernels only, roasted, salted; any other salted nuts except peanuts
- 2190 Mixed nuts, leftover shell not weighed
- 2629 Mixed nuts and raisins, unsalted. NOT peanuts only and raisins
- 8297 Nut butters, any but NOT peanut butter, cashew nut butter or nut spread with chocolate
- 8540 Peanuts, dry roasted

NUTS AND SEEDS, INCLUDING FRUIT AND NUT MIXES

2191	Peanuts, fresh, kernel only
2192	Peanuts, fresh, leftover shell not weighed
2630	Peanuts and raisins
2193	Peanuts, salted
2196	Peanut butter, crunchy. NOT wholenut
2195	Peanut butter, smooth. NOT wholenut
8047	Peanut butter, wholegrain; wholenut; NO added sugar
8542	Peanut butter and chocolate spread, purchased, e.g. Sunpat
2174	Pecan nuts, kernel only
7014	Pine nuts
8548	Pistachio nuts, salted, kernels only
2197	Pistachio nuts, unsalted, kernels only
2198	Pistachio nuts, unsalted, leftover shell not weighed
2166	Pumpkin seeds
2168	Sesame seeds
2167	Sunflower seeds
2165	Tahini; sesame seed paste
2631	Trail mix; Hawaiian mix; Tropical mix; made with mixed nuts and dried fruit
2199	Walnuts, kernel only
2200	Walnuts, leftover shell not weighed

NUTS AND SEEDS, INCLUDING FRUIT AND NUT MIXES

EGGS AND EGG DISHES

EGGS

- 784 Duck egg whole, boiled, no shell, or leftover shell weighed
- 755 Egg, boiled, no shell, or leftover shell weighed
- 783 Egg, boiled, leftover shell not weighed
- 785 Egg, boiled, yolk only. NOT white
- 786 Egg, boiled, white only. NOT yolk
- 756 Egg, fried in blended vegetable oil
- 757 Egg, fried in butter
- 758 Egg, fried in dripping
- 759 Egg, fried in lard
- 760 Egg, fried in margarine (NOT polyunsaturated)
- 761 Egg, fried in polyunsaturated margarine or oil
- 8732 Egg, fried in olive oil
- 7763 Egg, fried without fat, i.e. in non stick pan
- Egg fried rice: see "Pasta, rice and cereals"
- 762 Egg, poached in water. NO added fat
- R 8598 Egg, poached in water, with added fat
- R 771 Omelette, cheese, cooked in blended vegetable oil
- R 772 Omelette, cheese, cooked in butter
- R 773 Omelette, cheese, cooked in margarine (NOT polyunsaturated)
- R 774 Omelette, cheese, cooked in polyunsaturated margarine or oil
- R 775 Omelette, ham, cooked in blended vegetable oil
- R 776 Omelette, ham, cooked in butter
- R 777 Omelette, ham, cooked in margarine (NOT polyunsaturated)
- R 778 Omelette, ham, cooked in polyunsaturated margarine or oil
- R 767 Omelette, sweet, cooked in blended vegetable oil
- R 768 Omelette, sweet, cooked in butter
- R 769 Omelette, sweet, cooked in margarine (NOT polyunsaturated)
- R 770 Omelette, sweet, cooked in polyunsaturated margarine or oil

EGGS

- R 763 Omelette, plain or other, cooked in blended vegetable oil, e.g. bacon, mushroom, Spanish.
NOT cheese, ham, or sweet
- R 764 Omelette, plain or other, cooked in butter, e.g. bacon, mushroom, Spanish. NOT cheese, ham, or
sweet
- R 765 Omelette, plain or other cooked in margarine (NOT polyunsaturated), e.g. bacon, mushroom, Spanish. NOT
cheese, ham, or sweet.
- R 766 Omelette, plain or other cooked in polyunsaturated margarine or oil, e.g. bacon, mushroom, Spanish. NOT
cheese, ham, or sweet
- R 9334 Omelette, plain or other cooked in olive oil e.g. bacon, mushroom, Spanish. NOT cheese, ham, or
sweet
- R 9355 Omelette, plain or other cooked in dripping, e.g. bacon, mushroom, Spanish. NOT cheese, ham,
or sweet
- R 9639 Omelette, plain or other cooked in lard; e.g. bacon, mushroom, Spanish. NOT cheese, ham or sweet
- R 7766 Omelette, curried, egg masala cooked in butter with onion
- 814 Scotch egg, purchased
- 7764 Scotch egg mini, bite size savoury eggs, picnic scotch egg with chopped egg centre, purchased
- 779 Scrambled egg, made with whole milk and butter
- 780 Scrambled egg, made with whole milk and margarine (NOT polyunsaturated)
- 781 Scrambled egg, made with whole milk and polyunsaturated margarine
- 782 Scrambled egg, made with whole milk, NO fat. Includes microwave cooked
- 9303 Scrambled egg with semi-skimmed milk and butter
- 8727 Scrambled egg, made with semi-skimmed milk and polyunsaturated margarine
- 8711 Scrambled egg, made with semi-skimmed milk, NO fat. Includes microwave cooked
- 8638 Scrambled egg, made with skimmed milk and polyunsaturated margarine
- 2721 Scrambled egg, made with skimmed milk, NO fat. Includes microwave cooked
- 7765 Scrambled egg, without milk, made with butter
- 755 Scrambled egg, without milk, no butter. Includes microwave cooked

EGGS

EGG DISHES

Some of these foods are also listed in other sections. e.g. Puddings.

- R 501 Apple snow, made with stewed apple, sugar and egg white
- R 801 Cheese and egg flan
- R 815 Cheese soufflé
- R 803 Curried egg and potato. NO rice
- 7769 Egggy bread; French toast; Gypsy toast; made with whole milk, fried in blended vegetable oil.
NOT wholemeal bread
- 4843 Egggy bread, wholemeal bread, made with whole milk, fried in blended vegetable oil
- R 7767 Egg fu yung, with beansprouts, mushrooms, onions, almonds, fried in blended vegetable oil
- 7768 Egg nog, drink with egg, whole milk, sugar and rum
- R 350 Meringue, no cream or filling
- R 351 Meringue, filled with artificial cream ONLY
- R 352 Meringue, filled with fresh cream ONLY
- 5581 Pavlova/meringue with fruit and cream, purchased
- 5924 Pavlova/meringue, not fruit e.g. toffee/chocolate, purchased
- R 813 Quiche Lorraine, made with shortcrust pastry, filled with bacon, cheese, egg and milk, also other quiches with cheese, egg and milk. NOT mushroom. Pastry made with half margarine (NOT polyunsaturated), and half lard. NOT wholemeal pastry.
- 8565 Quiche Lorraine, made with shortcrust pastry, filled with bacon, cheese, egg and milk, also other quiches with cheese, egg and milk, purchased. NOT wholemeal pastry
- 6631 Quiche, asparagus, reduced fat, Marks and Spencers ONLY
- 2710 Quiche, cheese and onion, purchased
- R 8566 Quiche, mushroom, made with shortcrust pastry, filled with mushrooms and cheese, homemade. Pastry made with half margarine (NOT polyunsaturated), and half lard. NOT wholemeal pastry
- 7772 Quiche, mushroom, made with shortcrust pastry, filled with mushrooms and cheese, purchased. NOT wholemeal pastry
- 7764 Savoury eggs; bite size savoury eggs; scotch eggs with chopped egg filling
- 585 Sorbet, any, homemade or purchased
- R 565 Soufflé, sweet, baked
- R 815 Soufflé, cheese
- R 816 Soufflé, plain, savoury. NOT sweet
- 814 Scotch egg, purchased
- 7764 Scotch egg mini, bite size savoury eggs, picnic scotch egg with chopped egg centre, purchased

EGG DISHES

FISH, FISH DISHES AND FISH PRODUCTS

FISH, COATED AND/OR FRIED; FISH PRODUCTS

- 1405 Cod, no coating, fried in blended vegetable oil
Coalfish, code as for *cod*
- 1406 Cod, no coating, fried in butter
- 1407 Cod, no coating, fried in dripping
- 1408 Cod, no coating, fried in lard
- 1409 Cod, no coating, fried in margarine (NOT polyunsaturated)
- 1410 Cod, no coating, fried in polyunsaturated margarine or oil
- 1411 Cod, coated in batter, fried in blended vegetable oil. NOT purchased from takeaway shop
- 1415 Cod, coated in batter, fried in blended vegetable oil, from takeaway shop
- 1412 Cod, coated in batter, fried in dripping
- 1413 Cod, coated in batter, fried in lard
- 1414 Cod, coated in batter, fried in polyunsaturated oil
- 1637 Cod, coated in batter, frozen, oven baked or grilled, no added fat
- 1416 Cod, coated in egg and breadcrumbs, fried in blended vegetable oil
- 1417 Cod, coated in egg and breadcrumbs, fried in dripping
- 1418 Cod, coated in egg and breadcrumbs, fried in lard
- 1419 Cod, coated in egg and breadcrumbs, fried in polyunsaturated oil
- 9254 Cod, coated in breadcrumbs, frozen, fried in blended vegetable oil
- 9574 Cod, coated in breadcrumbs, frozen, grilled or baked
- 8599 Cod, coated in flour, fried in blended vegetable oil
- 9540 Cod, coated in flour, fried in lard
- 9613 Cod, coated in flour, fried in olive oil
- 1539 Dogfish; rock salmon; coated in batter, fried in blended vegetable oil, no bones, or leftover bones weighed. NOT purchased from takeaway shop
- 1543 Dogfish; rock salmon; coated in batter, fried in blended vegetable oil, purchased from takeaway shop, no bones, or leftover bones weighed
- 1540 Dogfish; rock salmon; coated in batter, fried in dripping, no bones or leftover bones weighed
- 1541 Dogfish; rock salmon; coated in batter, fried in lard, no bones or leftover bones weighed
- 1542 Dogfish; rock salmon; coated in batter, fried in polyunsaturated oil, no bones, or leftover bones weighed

FISH, COATED AND/OR FRIED; FISH PRODUCTS

- 1544 Dogfish; rock salmon; coated in batter, fried in blended vegetable oil, leftover bones not weighed. NOT purchased from takeaway shop
- 1548 Dogfish; rock salmon; coated in batter, fried in blended vegetable oil, purchased from takeaway shop, leftover bones not weighed
- 1546 Dogfish; rock salmon; coated in batter, fried in dripping, leftover bones not weighed
- 1545 Dogfish; rock salmon; coated in batter, fried in lard, leftover bones not weighed
- 1547 Dogfish; rock salmon; coated in batter, fried in polyunsaturated oil, leftover bones not weighed
- Gurnet, code as for *dogfish*
- Huss, code as for *dogfish*
- 1600 Fillet-O-fish, takeaway, McDonalds only
- 1606 Fishcakes, coated in breadcrumbs, grilled
- 1607 Fishcakes, coated in breadcrumbs, fried in blended vegetable oil
- 1608 Fishcakes, coated in breadcrumbs, fried in dripping
- 1609 Fishcakes, coated in breadcrumbs, fried in lard
- 1610 Fishcakes, coated in breadcrumbs, fried in polyunsaturated oil
- 1611 Fishcakes, coated in batter, fried in blended vegetable oil. NOT purchased from a takeaway shop
- 1636 Fishcakes, coated in batter, fried in blended vegetable oil, purchased from a takeaway shop
- 1612 Fishcakes, coated in batter, fried in dripping
- 1613 Fishcakes, coated in batter, fried in lard
- 1614 Fishcakes, coated in batter, fried in polyunsaturated oil
- 1615 Fish fingers, coated in batter or breadcrumbs, grilled. NOT economy
- 1616 Fish fingers, coated in batter or breadcrumbs, fried in blended vegetable oil. NOT economy
- 1617 Fish fingers, coated in batter or breadcrumbs, fried in dripping. NOT economy
- 1618 Fish fingers, coated in batter or breadcrumbs, fried in lard. NOT economy
- 1619 Fish fingers, coated in batter or breadcrumbs, fried in polyunsaturated oil. NOT economy
- 8751 Fish fingers, coated in batter or breadcrumbs, fried in olive oil. NOT economy
- 7832 Fish fingers, economy, coated in batter or breadcrumbs, grilled
- 7833 Fish fingers, economy, coated in batter or breadcrumbs, fried in blended vegetable oil
- 7834 Fish fingers, economy, coated in batter or breadcrumbs, fried in dripping
- 7835 Fish fingers, economy, coated in batter or breadcrumbs, fried in lard
- 7836 Fish fingers, economy, coated in batter or breadcrumbs, fried in polyunsaturated oil

FISH, COATED AND/OR FRIED; FISH PRODUCTS

- 1602 Fish-in-a-bun, takeaway, NOT McDonalds
- 7801 Haddock, no coating, fried in blended vegetable oil
- 7802 Haddock, no coating, fried in butter
- 7803 Haddock, no coating, fried in dripping
- 7804 Haddock, no coating, fried in lard
- 7805 Haddock, no coating, fried in margarine (NOT polyunsaturated)
- 9895 Haddock, no coating, fried in olive oil
- 7806 Haddock, no coating, fried in polyunsaturated margarine or oil
- 9563 Haddock, coated in batter, FROZEN, baked or grilled
- 7807 Haddock, coated in batter, fried in blended vegetable oil. NOT purchased from takeaway shop
- 7808 Haddock, coated in batter, fried in blended vegetable oil, from takeaway shop
- 7809 Haddock, coated in batter, fried in dripping
- 7810 Haddock, coated in batter, fried in lard
- 7811 Haddock, coated in batter, fried in polyunsaturated oil
- 7812 Haddock, coated in egg & breadcrumbs, fried in blended vegetable oil
- 9877 Haddock, coated in egg and breadcrumbs, fried in butter
- 7813 Haddock, coated in egg and breadcrumbs, fried in dripping
- 7814 Haddock, coated in egg and breadcrumbs, fried in lard
- 7815 Haddock, coated in egg and breadcrumbs, fried in polyunsaturated oil
- 7816 Haddock, coated in flour, fried in blended vegetable oil
- 8978 Haddock, coated in flour, fried in polyunsaturated oil
- 9257 Haddock, coated in flour, fried in dripping
- 9524 Haddock, coated in breadcrumbs, frozen, oven baked or grilled
- 9258 Haddock, coated in breadcrumbs, frozen, fried in blended vegetable oil
- 1453 Lemon sole, coated in flour, fried in blended vegetable oil
- 1454 Lemon sole, coated in flour, fried in butter
- 1455 Lemon sole, coated in flour, fried in margarine (NOT polyunsaturated)
- 1456 Lemon sole, coated in flour, fried in polyunsaturated margarine or oil
- 1457 Lemon sole, coated in egg and breadcrumbs, fried in blended vegetable oil
- 1458 Lemon sole, coated in egg and breadcrumbs, fried in butter

FISH, COATED AND/OR FRIED; FISH PRODUCTS

- 1459 Lemon sole, coated in egg and breadcrumbs, fried in margarine (NOT polyunsaturated)
- 1460 Lemon sole, coated in egg and breadcrumbs, fried in polyunsaturated margarine or oil
- 1464 Plaice; whiting; coated in batter, fried in blended vegetable oil. NOT purchased from takeaway shop
- 1468 Plaice; whiting; coated in batter, fried in blended vegetable oil, purchased from takeaway shop
- 1465 Plaice; whiting; coated in batter, fried in dripping
- 1466 Plaice; whiting; coated in batter, fried in lard
- 1467 Plaice; whiting; coated in batter, fried in polyunsaturated oil
- 1469 Plaice; coated in egg and breadcrumbs, fried in blended vegetable oil
- 1470 Plaice; coated in egg and breadcrumbs, fried in dripping
- 1471 Plaice; coated in egg and breadcrumbs, fried in lard
- 1472 Plaice; coated in egg and breadcrumbs, fried in polyunsaturated oil
- 9362 Plaice; coated in egg and breadcrumbs, fried in butter
- 9571 Plaice; coated in egg and breadcrumbs, fried in olive oil
- 9353 Plaice, coated in breadcrumbs, frozen, baked or grilled without fat
- 9260 Plaice, coated in breadcrumbs, frozen, fried in blended vegetable oil
- 1475 Plaice; whiting; coated in flour, fried in blended vegetable oil, no bones, or leftover bones weighed
- 1476 Plaice; whiting; coated in flour, fried in dripping, no bones, or leftover bones weighed
- 1477 Plaice; whiting; coated in flour, fried in lard, no bones, or leftover bones weighed
- 1478 Plaice; whiting; coated in flour, fried in polyunsaturated oil, no bones, or leftover bones weighed
- 1479 Plaice; whiting; coated in flour, fried in blended vegetable oil, leftover bones not weighed
- 1480 Plaice; whiting; coated in flour, fried in dripping, leftover bones not weighed
- 1481 Plaice; whiting; coated in flour, fried in lard, leftover bones not weighed
- 1482 Plaice; whiting; coated in flour, fried in polyunsaturated oil, leftover bones not weighed
- R 1581 Prawn balls; sweet and sour prawn balls, weight of prawn balls only, NO sauce
- 7837 Red snapper, fried in blended vegetable oil, No bones or skin, or left over bones weighed
- Rock salmon, code as for *dogfish*
- 1623 Roe, cod, hard, coated in batter, fried in blended vegetable oil, NOT purchased from a takeaway shop
- 1640 Roe, cod, hard, coated in batter, fried in blended vegetable oil, purchased from a takeaway shop
- 1624 Roe, cod, hard, coated in batter, fried in dripping
- 1625 Roe, cod, hard, coated in batter, fried in lard
- 1626 Roe, cod, hard, coated in batter, fried in polyunsaturated oil

FISH, COATED AND/OR FRIED; FISH PRODUCTS

- R 1581 Scampi, coated, fried in blended vegetable oil. Includes prawn balls from sweet and sour prawns
- 1582 Scampi, coated, fried in dripping
- 1583 Scampi, coated, fried in lard
- R 1584 Scampi, coated, fried in polyunsaturated oil
- 9693 Scampi, coated, frozen, grilled or oven baked
- 1549 Skate, fried in butter, leftover bones and skin weighed
- 1550 Skate, fried in butter, leftover bones and skin not weighed
- 9530 Skate, fried in polyunsaturated oil; no bones or skin or leftover bones and skin weighed
- 1556 Skate, coated in batter, fried in blended vegetable oil, leftover bones weighed.
NOT purchased from takeaway shop
- 1560 Skate, coated in batter, fried in blended vegetable oil, purchased from takeaway shop, leftover bones weighed
- 1558 Skate, coated in batter, fried in dripping, leftover bones weighed
- 1557 Skate, coated in batter, fried in lard, leftover bones weighed
- 1559 Skate, coated in batter, fried in polyunsaturated oil, leftover bones weighed
- 1551 Skate, coated in batter, fried in blended vegetable oil, leftover bones not weighed. NOT purchased from takeaway shop
- 1555 Skate, coated in batter, fried in blended vegetable oil, purchased from takeaway shop, leftover bones not weighed
- 1553 Skate, coated in batter, fried in dripping, leftover bones not weighed
- 1552 Skate, coated in batter, fried in lard, leftover bones not weighed
- 1554 Skate, coated in batter, fried in polyunsaturated oil, leftover bones not weighed
- 9916 Skate, coated in flour, fried in olive oil, no bones or skin, or leftover skin and bones weighed
- 9261 Whiting, coated in egg and breadcrumbs, fried in blended vegetable oil, no bones, or leftover bones weighed
- 9262 Whiting, coated in egg and breadcrumbs, fried in dripping, no bones, or leftover bones weighed
- 926 Whiting, coated in egg and breadcrumbs, fried in polyunsaturated oil, no bones, or leftover bones weighed
- Whiting, coated in flour, fried: see *plaice*

FISH, COATED AND/OR FRIED; FISH PRODUCTS

FISH - OILY (INCLUDING CANNED)

- 1593 Anchovies, canned, drained weight
- 1500 Bloater; smoked herring; grilled, no bones, or leftover bones weighed
- 1501 Bloater; smoked herring; grilled, leftover bones not weighed

Brisling: see sardines

R 1598 Curried oily fish with vegetables; NO rice

- 1485 Eel, jellied, flesh and jelly
- 1484 Eel, stewed, flesh only
- 1603 Fish paste, NOT paté
- 1498 Herring, canned in oil, fish only
- 1497 Herring, canned in tomato sauce, fish and sauce
- 1487 Herring, coated in oatmeal or flour, fried in blended vegetable oil, no bones, or leftover bones weighed
- 1488 Herring, coated in oatmeal or flour, fried in dripping, no bones or leftover bones weighed
- 1489 Herring, coated in oatmeal or flour, fried in lard, no bones or leftover bones weighed
- 1490 Herring, coated in oatmeal or flour, fried in polyunsaturated oil, no bones, or leftover bones weighed
- 1491 Herring, coated in oatmeal or flour, fried in blended vegetable oil, leftover bones not weighed
- 1492 Herring, coated in oatmeal or flour, fried in dripping, leftover bones not weighed
- 1493 Herring, coated in oatmeal or flour, fried in lard, leftover bones not weighed
- 1494 Herring, coated in oatmeal or flour, fried in polyunsaturated oil, leftover bones not weighed
- 1495 Herring, grilled, no bones, or leftover bones weighed
- 1496 Herring, grilled, leftover bones not weighed
- 1499 Herring, pickled; soured; roll mop
- 1502 Kipper, baked, NO butter, no bones, or leftover bones weighed
- 1503 Kipper, baked, NO butter, leftover bones not weighed
- 1504 Kipper, baked, with butter, no bones, or leftover bones weighed
- 1505 Kipper, baked, with butter, leftover bones not weighed
- 7825 Kipper, boil in the bag, boiled
- 1498 Kippers, canned in oil, fish only
- 1644 Mackerel, unsmoked, baked or grilled, NO butter, no bones or leftover bones weighed
- 1645 Mackerel, unsmoked, baked or grilled, NO butter, leftover bones not weighed
- 1515 Mackerel, unsmoked, canned, in oil, fish only

FISH, OILY, INCLUDING CANNED

1516	Mackerel, unsmoked, canned, in oil, fish and oil	
1647	Mackerel, smoked, NOT canned	
8270	Mackerel, smoked, canned in oil, fish only	
8745	Mackerel, smoked, canned in brine, fish only	
1518	Mackerel, canned in tomato sauce, fish and sauce	
1507	Mackerel, with coating, fried in blended vegetable oil, no bones or leftover bones weighed	
1508	Mackerel, with coating, fried in dripping, no bones, or leftover bones weighed	
1509	Mackerel, with coating, fried in lard, no bones, or leftover bones weighed	
1510	Mackerel, with coating, fried in polyunsaturated oil, no bones or leftover bones weighed	
1511	Mackerel, with coating, fried in blended vegetable oil, leftover bones not weighed	
1512	Mackerel, with coating, fried in dripping, leftover bones not weighed	
1513	Mackerel, with coating, fried in lard, leftover bones not weighed	
1514	Mackerel, with coating, fried in polyunsaturated oil, leftover bones not weighed	
9271	Paté, tuna; salmon; smoked salmon; crab, purchased. NOT smoked mackerel or smoked trout pate.	
1639	Paté, smoked mackerel; smoked trout.	
7828	Pilchards, canned in brine, fish only	
9264	Pilchards in tomato sauce, canned, fish and sauce	
1628	Roe, herring, soft, fried in blended vegetable oil	
1629	Roe, herring, soft, fried in butter	
1630	Roe, herring, soft, fried in dripping	
1631	Roe, herring, soft, fried in lard	
1632	Roe, herring, soft, fried in margarine (NOT polyunsaturated)	
1633	Roe, herring, soft, fried in polyunsaturated margarine or oil	
9905	Roe, herring, soft, grilled	
9720	Salmon crumble, frozen or chilled, ready meal e.g. Iceland	
9541	Salmon, grilled; no bones or skin or leftover bones and skin weighed	
2831	Salmon ocean pie, e.g. Young's	
9271	Salmon pate; smoked salmon pate, purchased	
7826	Salmon, pink, canned in brine, fish only	
7827	Salmon, pink, canned in brine, fish and backbone eaten	
9265	Salmon, red, canned in brine, fish only	
9266	Salmon, red canned in brine, fish and bones	FISH, OILY, INCLUDING CANNED

- 1522 Salmon, smoked, NOT canned
- 8271 Salmon, smoked, canned, fish only
- 1520 Salmon, steamed, no bones and skin, or leftover bones and skin weighed
- 1521 Salmon, steamed, leftover bones and skin not weighed
- 9267 Salmon, unspecified canned in brine, fish only
- 9268 Salmon, unspecified, canned in brine, fish and bones
- 3169 Sardines, brisling, sild, canned in brine, fish only
- 1523 Sardines; brisling; sild; canned in oil, fish only
- 1524 Sardines; brisling; sild; canned in oil, fish and oil
- 1525 Sardines; brisling; sild; canned in tomato sauce
- Sild: see *sardines*
- Smoked herring: code as *bloater*
- 1639 Smoked mackerel paté; smoked trout paté
- 1526 Sprats, coated, fried in blended vegetable oil, no heads or leftover heads weighed
- 1527 Sprats, coated, fried in dripping, no heads, or leftover heads weighed
- 1528 Sprats, coated, fried in lard, no heads, or leftover heads weighed
- 1529 Sprats, coated, fried in polyunsaturated oil, no heads, or leftover heads weighed
- 2729 Swordfish, grilled
- 1634 Taramasalata
- 1530 Trout, brown or rainbow, unsmoked, baked, grilled, poached or steamed, no bones, or leftover bones weighed
- 1531 Trout, brown or rainbow, unsmoked, baked, grilled, poached or steamed, leftover bones not weighed
- 8272 Trout, brown or rainbow, smoked, baked, grilled, poached or steamed, no bones, or leftover bones weighed
- 8273 Trout, brown or rainbow, smoked, baked, grilled, poached or steamed, leftover bones not weighed
- 1534 Tuna, canned, in brine, fish only
- 1533 Tuna, canned, in oil, fish only
- 1532 Tuna, canned, in oil, fish and oil
- 9271 Tuna paté; crab paté; smoked salmon paté; salmon paté, purchased. NOT smoked mackerel paté
- 2732 Tuna Light Lunch, all varieties, e.g. John West
- 1535 Whitebait, coated in flour, fried in blended vegetable oil
- 1536 Whitebait, coated in flour, fried in dripping
- 1537 Whitebait, coated in flour, fried in lard
- 1538 Whitebait, coated in flour, fried in polyunsaturated oil

FISH, OILY, INCLUDING CANNED

OTHER WHITE FISH; FISH DISHES

- 1594 Caviar, canned
- 1595 Chinese fish balls, purchased. Steamed. NOT Prawn balls
- 1403 Cod, baked or grilled, with butter. No bones
- 1404 Cod, baked or grilled, with butter. Weighed with bones
- 7798 Cod, baked or grilled, NO butter. No bones
- 1420 Cod, unsmoked, poached in water, steamed
- 1422 Cod, unsmoked, poached in milk and butter.
- 8983 Cod, unsmoked, poached in milk, NO added fat
- 1424 Cod, smoked, poached in water, steamed, baked or grilled. NO butter
- 1445 Cod, smoked, poached in milk and butter
- 1446 Cod, dried, salt, boiled
- 9253 Cod in parsley sauce boil in bag
- 9292 Cods roe, fresh, grilled
- 9542 Coley, grilled
- 9324 Coley, steamed; poached in water
- 7831 Crabsticks
- R 1597 Curried white fish with tomatoes; NO rice
- 8277 Fish feasts i.e. white fish filled with cheese sauce coated in breadcrumbs grilled or baked
- 8278 Fish pancake, e.g. Findus, fried in blended vegetable oil
- 8279 Fish pearls or fish Kievs, i.e. breaded fish with garlic filling, baked or grilled
- 5338 Fish shapes - white fish in breadcrumbs, grilled or oven baked e.g. Golden Fishies, Willy Whales
- R 1604 Fish pie, i.e. white fish with potato in white sauce
- R 1605 Fish pie, one pastry crust; shortcrust pastry made with half lard, half margarine (NOT polyunsaturated)
- R 1638 Fish, white, in butter, mushroom, parsley, prawn or shrimp sauce,
- R 1601 Fish, white, in cheese sauce
- 9270 Fisherman's pie, retail
- 1603 Fish paste, NOT paté
- 7799 Haddock, unsmoked, baked or grilled. NO butter
- 7800 Haddock, unsmoked, baked or grilled, with butter

OTHER WHITE FISH; FISH DISHES

- 9327 Haddock bake with cheese sauce, potatoes & topping, frozen ready meal, e.g. Young's
- 7817 Haddock, unsmoked, poached in water
- 7818 Haddock, unsmoked, poached in milk and butter
- 9552 Haddock, unsmoked, poached in whole milk. NO butter
- 7819 Haddock, smoked, poached in water, steamed, baked or grilled. NO butter
- 7820 Haddock, smoked, poached in milk and butter
- 9255 Haddock, smoked, baked or grilled. NO butter
- 9256 Haddock smoked baked or grilled, with butter

Hake, code as for *cod*

- 9804 Halibut, grilled with butter; no bones or skin or leftover bones and weighed
- 1448 Halibut, steamed or poached in water, no bones or skin, or leftover bones and skin weighed
- 1449 Halibut, steamed or poached in water, leftover bones and skin not weighed

Hoki, code as for *cod*

- 1620 Kedgeree, i.e. white rice, smoked fish, hard boiled egg and parsley
- 1451 Lemon sole, steamed or poached in water, no bones or skin, or leftover bone and skin weighed
- 1452 Lemon sole, steamed or poached in water, leftover bones and skin not weighed
- 9259 Lemon sole, grilled, NO added fat
- 7821 Plaice, baked or grilled, NO butter, NO bones or skin, or leftover bones and skins weighed
- 7822 Plaice, baked or grilled with butter, NO bones or skin, or leftover bones and skins weighed
- 1462 Plaice, steamed or poached in water, no bones or skin, or leftover bones and skin weighed
- 1463 Plaice, steamed or poached in water, leftover bones and skin not weighed

Pollock, code as for *cod*

- 9269 Skate grilled NO added fat; no skin and bones or leftover skin and bones weighed
- 9539 Skate, poached in milk and butter; no skin or bones or leftover skin and bones weighed
- 2820 Sushi, not vegetarian, e.g. M&S
- 9316 White fish in cheese sauce in a pastry case, frozen ready meal, e.g. Birds Eye Cheese Normandy en Croute.
- 9291 White fish with vegetables and cheese sauce, frozen ready meal, e.g. Birds Eye Tuscany Bake
- 7823 Whiting, baked or grilled, NO butter, No bones or skin, or leftover bones and skins weighed
- 7824 Whiting, baked or grilled with butter, NO bones or skin, or leftover bones and skins weighed
- 1473 Whiting, steamed or poached in water, no bones, or leftover bones weighed
- 1474 Whiting, steamed or poached in water, leftover bones not weighed

OTHER WHITE FISH; FISH DISHES

SHELLFISH

- 1592 Abalone, canned, drained weight
- 1596 Clams, canned, drained weight
- 1564 Cockles, fresh, boiled, no shells, or leftover shells weighed. NOT canned or bottled
- 7829 Cockles, canned, bottled, no shells
- 1561 Crab, boiled, flesh only
- 1562 Crab, boiled, leftover shell not weighed
- 1563 Crab, canned, drained weight
- 1565 Lobster, boiled, flesh only
- 1566 Lobster, boiled, leftover shell not weighed
- 1568 Mussels, fresh, boiled, no shells, or leftover shells weighed. NOT canned or bottled
- 1569 Mussels, boiled, leftover shells not weighed
- 8274 Mussels, bottled, no shells, drained weight. NOT canned
- 7830 Mussels, canned, no shells, drained weight. NOT smoked
- 8275 Mussels, smoked, canned, no shells, drained weight
- 1571 Oysters, uncooked, flesh only
- 1572 Oysters, uncooked, leftover shells not weighed
- 8276 Oysters, smoked, canned, drained weight
- 1573 Prawns, boiled; King prawns; fresh or frozen; boiled, flesh only
- 1574 Prawns, boiled; King prawns; fresh or frozen; boiled, leftover shells not weighed
- 1575 Prawns, canned, drained weight
- R 1641 Prawn biryani; prawn pilau; includes rice
- R 1621 Prawn chop suey
- R 1642 Prawn chow mein
- 9328 Prawn curry with rice, frozen or chilled ready meal e.g. Iceland. NOT takeaway
- R 1643 Prawn curry; king prawn curry; NO rice. Includes takeaway prawn curry e.g. prawn madras. NOT Prawn curry with cream or coconut sauce. NOT prawn bhuna
- R 1646 Prawn curry; king prawn curry; with cream or coconut sauce; NO rice
- 1576 Scallops, steamed, no shells, or leftover shells weighed

Scampi - see "coated fish"

SHELLFISH

- 1578 Shrimps, boiled, flesh only
- 1579 Shrimps, boiled, leftover shells not weighed
- 1580 Shrimps, canned in brine, drained weight
- 1577 Shrimps, potted in butter
- 1588 Whelks, boiled, no shells, or leftover shells weighed
- 1589 Whelks, boiled, leftover shells not weighed
- 1590 Winkles, boiled, no shells, or leftover shells weighed
- 1591 Winkles, boiled, leftover shells not weighed

SHELLFISH

FRUIT

FRUIT - CANNED IN JUICE

- 1974 Apricots, canned in fruit juice, fruit and juice
- 1975 Apricots, canned in fruit juice, fruit only
- 1984 Bilberries, canned, fruit only, NO juice
- 8496 Blackberries, canned in juice, fruit and juice
- 1984 Blackberries, canned in juice, fruit only
- 8498 Cherries, canned in fruit juice, fruit and juice
- 2628 Cherries, canned in fruit juice, fruit only, with or without stones
- Cherries, glace, maraschino, cocktail: see "Preserves"
- 2030 Fruit salad; fruit cocktail; canned in fruit juice, fruit and juice
- 2031 Fruit salad; fruit cocktail; canned in fruit juice, fruit only
- 2049 Grapefruit, canned in fruit juice, fruit and juice
- 2050 Grapefruit, canned in fruit juice, fruit only
- 2076 Mandarin oranges, canned in fruit juice, fruit and juice
- 2077 Mandarin oranges, canned in fruit juice, fruit only
- 2108 Peaches, canned in fruit juice, fruit and juice
- 2109 Peaches, canned in fruit juice, fruit only
- 2161 Pears, canned in fruit juice, fruit and juice
- 2162 Pears, canned in fruit juice, fruit only
- 2121 Pineapple, canned in fruit juice, fruit and juice
- 2122 Pineapple, canned in fruit juice, fruit only
- 2140 Prunes, canned in natural juice, fruit and juice
- 8803 Raspberries, canned in juice, fruit and juice
- 9535 Strawberries, canned in juice, fruit and juice

FRUIT - CANNED IN JUICE

FRUIT - CANNED IN SYRUP

- 1972 Apricots, canned in syrup, fruit and syrup
- 1973 Apricots, canned in syrup, fruit only
- 1988 Blackberries, canned in syrup, fruit and syrup
- 8495 Blackberries, canned in syrup, fruit only
- 1990 Breadfruit, canned, fruit only
- 1999 Cherries, canned in syrup, fruit and syrup, with or without stones
- 8497 Cherries, canned in syrup, fruit only
- 2004 Currants, black, canned, fruit and syrup
- 2018 Damsons, canned in syrup, fruit and syrup
- 2028 Fruit salad; fruit cocktail; canned in syrup, fruit and syrup
- 2029 Fruit salad; fruit cocktail; canned in syrup, fruit only
- 6133 Fruitini, mixed fruit pieces in tropical fruit sauce, Del Monte ONLY
- 2602 Gooseberries, canned, drained weight
- 8501 Gooseberries, canned in syrup, fruit and syrup
- 2621 Grapes, any, canned in syrup, fruit only
- 2047 Grapefruit, canned in syrup, fruit and syrup
- 2048 Grapefruit, canned in syrup, fruit only
- 2131 Greengages, canned, in syrup, fruit and syrup
- 2058 Guava, canned in syrup, fruit and syrup
- 2059 Guava, canned in syrup, fruit only
- 2060 Jackfruit, canned in syrup, fruit and syrup
- 2062 Kumquats, canned in syrup, fruit and syrup
- 2069 Loganberries, canned in syrup, fruit and syrup
- 2070 Longan, canned in syrup, fruit and syrup
- 2071 Loquats, canned in syrup, fruit and syrup
- 2073 Lychees, canned in syrup, fruit and syrup
- 2074 Mandarin oranges, canned in syrup, fruit and syrup
- 2075 Mandarin oranges, canned in syrup, fruit only
- 2079 Mangoes, canned in syrup, fruit and syrup

FRUIT - CANNED IN SYRUP

- 2100 Paw paw, canned in syrup, fruit and syrup
- 2106 Peaches, canned in syrup, fruit and syrup
- 2107 Peaches, canned in syrup, fruit only
- 2115 Pears, canned in syrup, fruit and syrup
- 2116 Pears, canned in syrup, fruit only
- 2119 Pineapple, canned in syrup, fruit and syrup
- 2120 Pineapple, canned in syrup, fruit only
- 2131 Plums, canned in syrup, fruit and syrup
- 2139 Prunes, canned in syrup, fruit and syrup
- 2146 Raspberries, canned in syrup, fruit and syrup
- 2151 Rhubarb, canned in syrup, fruit and syrup
- 2154 Strawberries, canned in syrup, fruit and syrup

FRUIT - CANNED IN SYRUP

FRUIT - NOT CANNED

NB: Fruit cooked etc. with an artificial sweetener should be coded as cooked without sugar.
The artificial sweetener should be recorded and coded (food & brand) separately.

- 1952 Apples, eating, raw, flesh and skin only, no core or leftover core weighed
- 2601 Apples, eating, raw, flesh and skin only, leftover core not weighed
- 1952 Apples, eating, raw, flesh, skin and core eaten
- 1951 Apples, eating, raw, flesh only, no core or skin or leftover core and skin weighed
- 1955 Apples, cooking, baked without sugar, no core or skin or leftover core and skin weighed
- 1954 Apples, cooking, baked without sugar, flesh and skin, no core or leftover core weighed
- 1957 Apples, cooking, baked with sugar, no core or skin or leftover core and skin weighed
- 1956 Apples, cooking, baked with sugar, flesh and skin, no core or leftover core weighed
- 1958 Apples, cooking, stewed without sugar, flesh and juice
- 1959 Apples, cooking, stewed with sugar, flesh and juice
- 1960 Apples, dried, uncooked, DRY WEIGHT
- 1962 Apples, dried, stewed without sugar, flesh and juice
- 1961 Apples, dried, stewed with sugar, flesh and juice
- R 2159 Apple sauce, NOT canned
- 2160 Apple sauce, canned
- 1963 Apricots, fresh, uncooked, no stones, or leftover stones weighed
- 1964 Apricots, fresh, uncooked, leftover stones not weighed
- 1965 Apricots, fresh, stewed without sugar, fruit and juice, no stones or leftover stones weighed
- 1966 Apricots, fresh, stewed without sugar, fruit and juice, leftover stones not weighed
- 1967 Apricots, fresh, stewed with sugar, fruit and juice, no stones or leftover stones weighed
- 1968 Apricots, fresh, stewed with sugar, fruit and juice, leftover stones not weighed
- 1969 Apricots, dried, uncooked, DRY WEIGHT. NOT ready to eat, semi-dried, "no need to soak" apricots
- 1971 Apricots, dried, stewed without sugar, fruit and juice
- 1970 Apricots, dried, stewed with sugar, fruit and juice
- 8547 Apricots, ready to eat, "no need to soak", semi dried. NOT dried apricots or fresh apricots
- 5235 Asian Pears (nashi)
- 1976 Avocado pears, flesh only, leftover skin weighed
- 1979 Banana chips, dried weight

FRUIT - NOT CANNED

1977 Bananas, raw, flesh only, no skin or leftover skin weighed

1978 Bananas, raw, leftover skin not weighed

4369 Banana, baked

1980 Bilberries, raw

1986 Bilberries, stewed without sugar, fruit and juice

1987 Bilberries, stewed with sugar, fruit and juice

1985 Blackberries, raw

1986 Blackberries, stewed without sugar, fruit and juice

1987 Blackberries, stewed with sugar, fruit and juice

4005 Breadfruit, baked

1991 Cherries, eating, raw, no stones, or leftover stones weighed

1992 Cherries, eating, raw, leftover stones not weighed

1995 Cherries, cooking, stewed without sugar, fruit and juice, no stones or leftover stones weighed

1996 Cherries, cooking, stewed without sugar, fruit and juice, leftover stones not weighed

1997 Cherries, cooking, stewed with sugar, fruit and juice, no stones or leftover stones weighed

1998 Cherries, cooking, stewed with sugar, fruit and juice, leftover stones not weighed

Clementines - see *tangerines*

2152 Chicko; chico, Indian fruit, raw

2011 Currants, dried weight

2002 Currants, black, stewed without sugar, fruit and juice

2003 Currants, black, stewed with sugar, fruit and juice

2006 Currants, red, stewed without sugar, fruit and juice

2007 Currants, red, stewed with sugar, fruit and juice

2009 Currants, white, stewed without sugar, fruit and juice

2010 Currants, white, stewed with sugar, fruit and juice

2012 Custard apples, raw

2015 Damsons, stewed without sugar, fruit and juice, no stones or leftover stones weighed

2016 Damsons, stewed without sugar, fruit and juice, leftover stones not weighed

2017 Damsons, stewed with sugar, fruit and juice, no stones, or leftover stones weighed

2019 Damsons, stewed with sugar, fruit and juice, leftover stones not weighed

FRUIT - NOT CANNED

- 2021 Dates, dried no stones, or leftover stones weighed
- 2022 Dates, dried, leftover stones not weighed
- 2020 Dates, fresh, raw, no stones, or leftover stones weighed
- 8502 Dates, fresh, raw, leftover stones not weighed
- 2665 Dried mixed fruit
- 2023 Figs, green, fresh, raw, whole fruit
- 2024 Figs, dried, raw, DRY WEIGHT
- 2025 Figs, dried, stewed without sugar, fruit and juice
- 2026 Figs, dried, stewed with sugar, fruit and juice
- Fruit juices: see "Soft drinks, fruit and vegetable juices"
- Fruit pies: see "Cakes, buns and pastries"
- 2034 Fruit salad, dried fruits, stewed without sugar, fruit and juice
- 2033 Fruit salad, dried fruits, stewed with sugar, fruit and juice
- 2036 Fruit salad, fresh, without sugar or syrup, fruit and juice
- 2035 Fruit salad, fresh, with sugar or syrup, fruit and juice
- 2037 Gooseberries, ripe/dessert, raw
- 2039 Gooseberries, stewed without sugar, fruit and juice
- 2040 Gooseberries, stewed with sugar, fruit and juice
- 2041 Grapes, black, raw, flesh and skin only, no pips, or leftover pips weighed
- 2042 Grapes, black, raw, flesh and skin, leftover pips not weighed
- 2043 Grapes, white, raw, flesh and skin, no pips, or leftover pips weighed
- 2044 Grapes, white, raw, whole grapes i.e. flesh, skin and/or pips
- 2045 Grapefruit, raw, flesh only, no peel or pips, or leftover peel and pips weighed
- 2046 Grapefruit, whole fruit; leftover peel and pips not weighed
- 2051 Greengages, raw, no stones, or leftover stones weighed
- 2052 Greengages, raw, leftover stones not weighed
- 2053 Greengages, stewed without sugar, fruit and juice, no stones or leftover stones weighed
- 2054 Greengages, stewed without sugar, fruit and juice, leftover stones not weighed
- 2055 Greengages, stewed with sugar, fruit and juice, no stones or leftover stones weighed
- 2056 Greengages, stewed with sugar, fruit and juice, leftover stones not weighed

FRUIT - NOT CANNED

- 2057 Guava, fresh, raw
- 2061 Kiwi fruit, fresh, no skin or leftover skin weighed
- 2063 Lemons, raw, weight includes juice, flesh and peel, leftover peel not weighed
- 2065 Lime, fresh, juice only, no peel or flesh or leftover peel and flesh weighed
- 2066 Loganberries, raw
- 2067 Loganberries, stewed without sugar, fruit and juice
- 2068 Loganberries, stewed with sugar, fruit and juice
- 2072 Lychees, raw, flesh only, no skin or stones, or leftover skin and stones weighed
- Mandarins - see *tangerines*
- 2078 Mangoes, fresh, flesh only, no stone or skin or leftover stone and skin weighed
- 2080 Medlars, raw, flesh only
- 2081 Melons, Cantaloupe, Charantais (orange flesh), flesh only, no skin or seeds, or leftover skin and seeds weighed
- 2082 Melons, Cantaloupe, Charantais (orange flesh), leftover skin not weighed
- 2083 Melons, honeydew, Galia, Ogen (yellow or green flesh), flesh only, no skin or seeds, or leftover skin and seeds weighed
- 2084 Melons, honeydew, Galia, Ogen (yellow or green flesh), leftover skin not weighed
- 2085 Watermelon, flesh only, no skin or seeds, or leftover skin and seeds weighed
- 2086 Watermelon, leftover skin not weighed
- 2087 Mulberries, raw
- 2088 Nectarines, raw, flesh and skin only, no stones, or leftover stones weighed
- 2089 Nectarines, raw, flesh and skin only, leftover stones not weighed
- 2090 Olives, in brine, flesh and skin only, no stones, or leftover stones weighed; stuffed olives
- 2091 Olives, in brine, leftover stones not weighed
- 2092 Oranges, raw, flesh only, no peel or pips, or leftover peel and pips weighed
- 2093 Oranges, raw, leftover peel and pips not weighed
- 2095 Ortaniques, fresh, flesh only, no peel or pips, or leftover peel and pips weighed
- 2096 Passion fruit, raw, juice
- 2097 Passion fruit, raw, flesh and seeds only, no skin or leftover skin weighed
- 2098 Passion fruit, raw, leftover skin and pips not weighed
- 2099 Paw paw; papaya; fresh, flesh only

FRUIT - NOT CANNED

- 2101 Peaches, fresh, flesh and skin only, no stones, or leftover stones weighed
- 2102 Peaches, fresh, leftover stones not weighed
- 2104 Peaches, dried, stewed without sugar, fruit and juice
- 2105 Peaches, dried, stewed with sugar, fruit and juice
- 2110 Pears, eating, raw, flesh only, no skin or core or leftover skin and core weighed
- 2111 Pears, eating, raw, flesh only. leftover skin and core not weighed
- 2240 Pears, eating, raw, flesh and skin, no core or leftover core weighed
- 2241 Pears, eating, raw, flesh and skin, leftover core not weighed
- 2240 Pears, eating, raw, flesh, skin and core eaten
- 2113 Pears, cooking, stewed without sugar, fruit and juice
- 2114 Pears, cooking, stewed with sugar, fruit and juice
- 2711 Physalis (cape gooseberry)
- 2117 Pineapple, fresh, flesh only, no skin or leftover skin weighed
- 2118 Pineapple, fresh, leftover skin not weighed
- 7093 Pineapple, dried
- 2123 Plums, dessert, e.g. Victoria, raw, flesh and skin only, no stones or leftover stones weighed
- 2124 Plums, dessert, e.g. Victoria, raw, leftover stones not weighed
- 2127 Plums, cooking, stewed without sugar, fruit and juice, no stones or leftover stones weighed
- 2128 Plums, cooking, stewed without sugar, fruit and juice, leftover stones NOT weighed
- 2129 Plums, cooking, stewed with sugar, fruit and juice, no stones or leftover stones weighed
- 2130 Plums, cooking, stewed with sugar, fruit and juice, leftover stones not weighed
- 2132 Pomegranate, raw, juice only, no skin or seeds, or leftover skin and seeds weighed
- 9564 Pomegranate, flesh and seeds; leftover skin not weighed
- 2133 Prunes, dried, uncooked, no stones, or leftover stones weighed. NOT semi-dried, ready to eat prunes
- 2134 Prunes, dried, uncooked, leftover stones not weighed
- 2135 Prunes, dried, stewed without sugar, fruit and juice, no stones or leftover stones weighed
- 2136 Prunes, dried, stewed without sugar, fruit and juice, leftover stones not weighed
- 2137 Prunes, dried, stewed with sugar, fruit and juice, no stones or leftover stones weighed
- 2138 Prunes, dried, stewed with sugar, fruit and juice, leftover stones not weighed
- 8558 Prunes, ready to eat, semi-dried, "no need to soak". NOT dried prunes
- 2142 Raisins, dried weight

FRUIT - NOT CANNED

- 2143 Raspberries, raw
- 2144 Raspberries, stewed without sugar, fruit and juice
- 2145 Raspberries, stewed with sugar, fruit and juice
- 2147 Raspberries, frozen, as served, NO sugar
- Redcurrants: see *currants*
- 2149 Rhubarb, stewed without sugar, fruit and juice
- 2150 Rhubarb, stewed with sugar, fruit and juice
- 2152 Sapota; noiseberry fruits; raw
- Satsumas: see *tangerines*
- 2153 Strawberries, raw, NO sugar
- 2155 Strawberries, frozen, as served, NO sugar
- 2156 Sultanas, dried weight
- 6889 Tamarinds, raw
- 2157 Tangerines; mandarins; clementines; satsumas; Temples; Wilkins; raw, flesh and juice only, no peel or pips, or leftover peel and pips weighed
- 2158 Tangerines; mandarins; clementines; satsumas; Temples; Wilkins; raw, leftover peel and pips not weighed

FRUIT - NOT CANNED

MEAT, MEAT DISHES, MEAT PRODUCTS AND OFFAL

BACON

N.B. DRY FRIED = FRIED WITH NO ADDED FAT

- 5407 Bacon, lean, grilled or dry fried, cut unspecified, smoked or unsmoked
- 8232 Collar joint, smoked, boiled, lean and fat
- 901 Collar joint, NOT smoked, boiled, lean and fat
- 8233 Gammon joint; gammon steaks; smoked, boiled, lean and fat
- 903 Gammon joint, gammon steaks; NOT smoked, boiled, lean and fat
- 8234 Gammon joint, gammon steaks; smoked, boiled, lean only
- 904 Gammon joint, gammon steaks; NOT smoked, boiled, lean only
- 8237 Rashers, back, smoked, fried, lean and fat
- 910 Rashers, back, NOT smoked, fried, lean and fat
- 8238 Rashers, back, smoked, grilled or dry fried, lean and fat
- 914 Rashers, back, NOT smoked, grilled or dry fried, lean and fat
- 9410 Rashers, back, smoked, grilled or dry fried, extra trimmed
- 9464 Rashers, back, NOT smoked, grilled or dry fried, extra trimmed
- 9411 Rashers, back, reduced fat and reduced salt, smoked, grilled or dry fried, e.g. Sainsbury's extra trimmed low salt
- 9412 Rashers, back, reduced fat and reduced salt, NOT smoked, grilled or dry fried, e.g. Danepak, lean and low
- Rashers, belly; see "Pork" and "Pork dishes"
- 8239 Rashers, gammon, smoked, grilled or dry fried, lean and fat
- 906 Rashers, gammon, NOT smoked, grilled or dry fried, lean and fat
- 8240 Rashers, gammon, smoked, grilled or dry fried, lean only
- 907 Rashers, gammon, NOT smoked, grilled or dry fried, lean only
- 8241 Rashers, middle; side; smoked, fried, lean and fat
- 911 Rashers, middle; side; NOT smoked, fried, lean and fat
- 8242 Rashers, middle; side; smoked, grilled or dry fried, lean and fat
- 915 Rashers, middle; side; NOT smoked, grilled or dry fried, lean and fat
- 8243 Rashers, streaky, smoked, fried, lean and fat
- 912 Rashers, streaky, NOT smoked, fried, lean and fat

BACON

- 8244 Rashers, streaky, smoked, grilled or dry fried, lean and fat
- 916 Rashers, streaky, NOT smoked, grilled or dry fried, lean and fat
- 8245 Rashers, any other cut, NOT gammon, back, middle, streaky, smoked, grilled or dry fried, lean and fat
- 913 Rashers, any other cut, NOT gammon, back, middle, streaky, NOT smoked, grilled or dry fried, lean and fat
- 909 Rashers, cut unspecified, NOT smoked, fried, lean and fat
- 8246 Rashers, cut unspecified, smoked, fried, lean and fat
- 8247 Rashers, cut unspecified, smoked, grilled or dry fried, lean and fat
- 908 Rashers, cut unspecified, NOT smoked, grilled or dry fried, lean and fat
- 9414 Bacon Steaks; chops; loin, smoked, grilled, e.g. Somerfield cured pork loin steaks, Asda bacon chops
- 9413 Bacon Steaks; chops; loin, NOT smoked, grilled, e.g. Tesco bacon chops, Danepak boneless chops

BACON

BEEF

9416	Braising steak; chuck steak; braised, lean and fat
9417	Braising steak; chuck steak; braised, lean only
935	Brisket, boiled, lean and fat
9415	Brisket, boiled, lean only
936	Brisket, pot-roasted or braised, lean and fat
9418	Fillet steak, fried, lean only
9419	Fillet steak, grilled, lean only
9420	Flank; top rump, pot-roast or braised, lean and fat
9421	Flank; top rump, pot-roast or braised, lean only
938	Fore-rib; rib-roast, roast, lean and fat
939	Fore-rib; rib-roast, roast, lean only
941	Minced beef, stewed, fat not skimmed, NOT extra lean mince. NOT canned
942	Minced beef, stewed, fat skimmed, includes extra lean mince. NOT canned
5309	Roast beef; cooked beef slices, prepacked or from delicatessen
950	Rump steak, fried, lean and fat
951	Rump steak, fried, lean only
952	Rump steak, grilled, lean and fat
953	Rump steak, grilled, lean only
9422	Silverside, not salted, pot-roasted or braised, lean and fat
9423	Silverside, not salted, pot-roasted or braised, lean only
954	Silverside, salted, boiled, lean and fat
955	Silverside, salted, boiled, lean only
957	Sirloin joint, roast, lean and fat
958	Sirloin joint, roast, lean only
9424	Sirloin steak, fried, lean and fat
9425	Sirloin steak, fried, lean only
9426	Sirloin steak, grilled, lean and fat
9427	Sirloin steak, grilled, lean only
960	Stewing steak, stewed, lean and fat, no gravy. NOT canned

BEEF

- 971 Stewing steak, stewed, lean only, no gravy. NOT canned
- 969 Topside, roast, lean and fat
- 970 Topside, roast, lean only

BEEF DISHES

- R 1319 Beef and vegetable curry; NO rice
- R 1329 Beef biryani or pilau; includes rice
- R 5310 Beef casserole, made with cook in sauce
- 5311 Beef casserole, frozen or chilled. Ready meal; beef in tomato gravy and vegetables. No potato, e.g. Marks & Spencers braised steak, beef bourguignon, beef goulash. No rice
- R 1317 Beef chow mein.
- 9318 Beef curry with rice frozen or chilled ready meal, e.g. Birds Eye Menu Master
- 5312 Beef curry, frozen or chilled. Ready meal. No rice
- R 1328 Beef curry with cream or coconut sauce; NO rice
- 1318 Beef curry, Vesta only, as served; NO rice
- 2719 Beef in black bean sauce, takeaway
- 5313 Beef hot pot with potato. Ready meal, e.g. Birds Eye
- 1231 Beef, minced, in gravy canned
- 1232 Beef, minced, pie filling canned
- 1233 Beef, minced, pie filling, with onion, reformed meat canned
- 1234 Beef, pie filling, reformed meat; canned
- 1320 Beef, roast dinner; roast beef platter frozen, purchased, ready meal with Yorkshire pudding, potatoes, and vegetables.
- 1321 Beef, roast, in gravy, frozen, or chilled purchased, ready meal. e.g. Birds Eye, No vegetables.
- 9465 Beef stew and dumplings, frozen or chilled ready meal, e.g. Birds Eye
- R 9810 Beef stew and dumplings, homemade
- R 961 Beef stew, stewed, fat NOT skimmed, in thickened gravy, with carrots but NOT potatoes. NOT canned
- R 962 Beef stew, stewed, fat skimmed, in thickened gravy, with carrots but NOT potatoes. NOT canned
- R 963 Beef stew, stewed, fat NOT skimmed, in thickened gravy with carrots and potatoes. NOT canned
- R 964 Beef stew, stewed, fat skimmed, in thickened gravy, with carrots and potatoes. NOT canned
- R 1323 Bolognese sauce; made with minced beef, onion, tomatoes, carrots, homemade
- R 5314 Bolognese sauce made with bottled pasta sauce

BEEF AND BEEF DISHES

- 7780 Bolognese sauce, canned
- 1324 Cannelloni, purchased; with meat filling. NOT Vegetarian cannelloni
- R 1325 Chilli con carne; homemade; made with minced beef, red kidney beans, onion, tomatoes, green pepper.
Not canned; not ready meal. NO rice.
- 7779 Chilli con carne, canned. NO rice
- 9244 Chilli con carne with rice, ready meal, frozen or chilled, purchased
- 5315 Chilli con carne. NO rice. Ready meal, frozen or chilled
- R 1332 Chop suey, with beef
- R 1317 Chow mein, with beef
- R 1357 Cottage pie; homemade with minced beef; mashed potato with NO added butter or margarine
- R 1365 Cottage pie; homemade with minced beef; mashed potato with added butter or margarine
- 1356 Cottage pie with minced beef; purchased, frozen or chilled ready meal
- R 9347 Cottage pie; homemade with extra lean minced beef, mashed potato with no added fat

Cottage Pie, made with lamb - see *Shepherds Pie*
- 9155 Extra lean stewing steak in gravy canned
- R 1348 Lasagne, homemade, with beef. NOT vegetarian lasagne
- 1347 Lasagne, purchased, frozen or chilled ready meal, with meat sauce. NOT vegetarian or chicken lasagne
- 9359 Meatballs in gravy. Ready meal with mashed potato, e.g. Birds Eye
- 7782 Meatballs and pasta/baked beans, canned e.g. Campbell's
- 1244 Meatballs in gravy, canned
- 3011 Mexican chilli with deep fried potato wedges, ready meal, e.g. Weight Watchers
- 943 Minced beef, stewed, fat NOT skimmed with onions in thickened gravy. NO other vegetables. NOT canned
- 944 Minced beef, stewed, fat skimmed with onions in thickened gravy. NO other vegetables, NOT canned.
Includes extra lean mince
- R 945 Minced beef, stewed, fat NOT skimmed with onions and carrots in thickened gravy, with vegetables
but NOT potatoes, NOT canned
- R 946 Minced beef, stewed, fat skimmed with onions and carrots in thickened gravy, with vegetables but NOT
potatoes, NOT canned. Includes extra lean mince.
- R 947 Minced beef, stewed, fat NOT skimmed, in thickened gravy, with onions, carrots and potatoes. NOT canned
- R 948 Minced beef, stewed, fat skimmed, in thickened gravy, with onions, carrots and potatoes. NOT canned.
Includes extra lean mince.
- R 1350 Moussaka, made with minced beef, potatoes, and cheese sauce
- R 1364 Moussaka, made with minced beef, aubergines, and cheese sauce. No potato

BEEF DISHES

- 3756 Pancakes savoury, minced beef filling, crispy coated, fried in blended vegetable oil, purchased, e.g. Findus
- 8644 Pancakes savoury, minced beef filling, crispy coated, grilled, purchased, e.g. Findus
- Shepherds pie, made with beef - see *cottage pie*
- 9245 Spaghetti Bolognese, beef, frozen or chilled, ready meal. Purchased.
- 9700 Steak in red wine with potatoes and vegetables. Ready meal, e.g. Birds Eye
- 966 Stewing steak and kidney, stewed, fat NOT skimmed, in thickened gravy. NOT canned
- 967 Stewing steak and kidney, stewed, fat skimmed, in thickened gravy. NOT canned
- 9155 Stewing steak in gravy - extra lean, canned
- 1243 Stewed steak, in gravy, pie filling, canned
- 1244 Stewed steak, in gravy, canned; meat balls in gravy

BEEF DISHES

BURGERS, GRILL STEAKS AND KEBABS

Burgers

- 1268 Beefburgers and onion; hamburgers and onion; fried. NOT 100 % meat. NOT canned, NOT low fat beefburgers, NOT burger in a bun
- 8265 Beefburgers and onion; hamburgers and onion; grilled. NOT 100 % meat. NOT canned, NOT low fat beefburgers, NOT burger in a bun
- 1270 Beefburger; hamburger; economy or other, fried, with or without onion. NOT canned, NOT low fat beefburgers.
- 8266 Beefburger; hamburger; economy or other, grilled, with or without onion. NOT canned, NOT low fat beefburgers
- 1266 Beefburgers; hamburgers; purchased, 100 % meat only, fried. NOT canned, NOT low fat beefburgers, NOT burger in a bun
- 8264 Beefburgers; hamburgers; purchased, 100 % meat only, grilled. NOT canned, NOT low fat beefburgers, NOT burger in a bun
- 1316 Beefburgers, in batter, deep fried, purchased, takeaway
- 1264 Beefburgers, in gravy, canned
- 8263 Beefburgers, low fat, fried
- 1382 Beefburgers, low fat, grilled

Chicken burgers etc: see “coated chicken”

- 1289 Lamb burgers; grill steaks; fried or grilled, e.g. Dale

Burgers in a bun

- 1340 Big Mac ONLY
- 5306 Burger King Double Whopper ONLY
- 5307 Burger King Double Whopper with cheese ONLY
- 5304 Burger King Whopper ONLY
- 5305 Burger King Whopper with cheese ONLY
- 1333 Cheeseburger; beefburger with cheese in a bun; takeaway. NOT quarter pounder
- 1339 Cheeseburger; beefburger with cheese in a bun; takeaway, quarter pounder
- 1330 Hamburger in a bun; beefburger in a bun; takeaway. NOT quarter pounder
- 1336 Hamburger in a bun; beefburger in a bun; takeaway, quarter pounder

BURGERS

Grill steaks

- 1289 Grill steaks, beef, fried or grilled
- 7794 Grill steaks, beef only, low fat, grilled
- 7795 Grill steaks, beef only, low fat, fried
- 1289 Lamb burgers; grill steaks; fried or grilled, e.g. Dale

Kebabs

- 1342 Kebab, doner; sliced lamb and salad in pitta; takeaway
- 8146 Kebab, doner; sliced lamb in pitta, NO salad; takeaway
- 1343 Kebab, kofte; spiced sausage and salad in pitta; takeaway
- 1344 Kebab, shish; skewered lamb and salad in pitta; takeaway

GRILL STEAKS AND KEBABS

CHICKEN

This section is divided into subsections as follows:-

- A. COATED CHICKEN
- B. FRIED CHICKEN, NOT BREADED
- C. BARBECUED STYLE CHICKEN
- D. GRILLED CHICKEN
- E. ROAST CHICKEN
- F. CASSEROLED AND STEWED CHICKEN
- G. CHICKEN PRODUCTS AND DISHES

A. COATED CHICKEN

Chicken, Coated in Egg and Breadcrumbs

- 9287 Chicken breast, without skin, coated in egg and breadcrumbs, fresh, frozen or chilled, grilled or baked. No added fat. No bones or leftover bones weighed
- 8250 Chicken breast without skin, coated in egg and breadcrumbs, fresh, chilled or frozen, fried in blended vegetable oil. No bones or leftover bones weighed
- 8253 Chicken breast, without skin, coated in egg and breadcrumbs, fresh, chilled or frozen, fried in polyunsaturated oil. No bones or leftover bones weighed
- 8252 Chicken breast, without skin, coated in egg and breadcrumbs, fresh, chilled or frozen, fried in lard. No bones or leftover bones weighed
- 1078 Chicken, NOT breast, without skin, coated in egg and breadcrumbs, fried in blended vegetable oil. No bones or leftover bones weighed
- 1079 Chicken, NOT breast, without skin, coated in egg and breadcrumbs, fried in blended vegetable oil. Leftover bones not weighed
- 1082 Chicken, NOT breast, without skin, coated in egg and breadcrumbs, fried in lard. No bones or leftover bones weighed
- 1083 Chicken, NOT breast, without skin, coated in egg and breadcrumbs, fried in lard. Leftover bones not weighed
- 1084 Chicken, NOT breast, without skin, coated in egg and breadcrumbs, fried in polyunsaturated oil. No bones or leftover bones weighed
- 1085 Chicken, NOT breast, without skin, coated in egg and breadcrumbs, fried in polyunsaturated oil. Leftover bones not weighed
- 5346 Chicken, NOT breast, without skin, coated in egg and breadcrumbs, fresh, chilled or frozen, grilled or baked. NO added fat. Leftover bones not weighed

CHICKEN

Chicken burgers

- 2672 Chicken burgers, coated in crumbs or batter, frozen or chilled, e.g. Bird's Eye, grilled or baked. NO added fat. NOT burger in a bun
- 1109 Chicken burgers, coated in crumbs or batter, frozen or chilled, e.g. Bird's Eye, fried in blended vegetable oil. NOT burger in a bun
- 1111 Chicken burgers, coated in crumbs or batter, frozen or chilled, e.g. Bird's Eye, fried in lard. NOT burger in a bun
- 1112 Chicken burgers, coated in crumbs or batter, frozen or chilled, e.g. Bird's Eye, fried in polyunsaturated oil. NOT burger in a bun
- 5262 Chicken burger in a bun, takeaway, includes chicken burger, bun, lettuce and mayonnaise, e.g. McDonald's, KFC and Wimpy. NOT KFC Zinger Tower burger
- 2955 Zinger Tower burger, including cheese & hash brown, KFC ONLY

Chicken Fingers; Pieces; Goujons

- 8258 Chicken fingers; pieces, coated in crumbs or batter, grilled or baked. No added fat, e.g. Bird's Eye Chicksticks
- 8254 Chicken fingers; pieces, coated in crumbs or batter, fried in blended vegetable oil, e.g. Bird's Eye Chicksticks
- 8256 Chicken fingers; pieces, coated in crumbs or batter, fried in lard, e.g. Bird's Eye Chicksticks
- 8257 Chicken fingers; pieces, coated in crumbs or batter, fried in polyunsaturated oil, e.g. Bird's Eye Chicksticks
- 5263 Chicken goujons; chicken pieces in breadcrumbs, fresh or chilled, grilled or oven baked
- 1115 Chicken nuggets, from takeaway, e.g. McDonald's, Kentucky Dippers, Burger King Pick Em Ups. Includes chicken balls, Chinese (sweet and sour)

Coated chicken with filling

- 3680 Chicken Kiev, NOT Mini Chicken Kiev, breaded chicken with garlic butter centre, oven baked, purchased, e.g. Bernard Matthews Kiev Supreme
- 8259 Chicken Kiev Mini, small pieces of breaded chicken with garlic butter centre, oven baked or grilled, purchased, e.g. Bernard Matthews Mini Kievs
- 5264 Chicken, breaded, with cheese and vegetable filling, chilled or frozen, oven baked, e.g. Tesco chicken with creamy cheese and broccoli in breadcrumbs, Sainsbury's boneless chicken with broccoli and cheese, Sun Valley chicken kiev with cheese and mushroom

Takeaway coated chicken

- 1086 Takeaway chicken portions, coated in batter and deep fried, e.g. Kentucky Fried Chicken, Favorite Fried Chicken, Perfect Fried Chicken. No bones or leftover bone weighed
- 1087 Takeaway chicken portions, coated in batter and deep fried, e.g. Kentucky Fried Chicken, Favorite Fried Chicken, Perfect Fried Chicken. Leftover bones not weighed

CHICKEN

- 5262 Chicken burger, takeaway, includes chicken burger, bun, lettuce and mayonnaise, e.g. McDonald's, KFC and Wimpy. NOT KFC Zinger Tower burger
- 1115 Chicken nuggetts, from takeaway, e.g. McDonald's, Kentucky Dippers, Burger King Pick Em Ups. Includes chicken balls from sweet and sour chicken
- 2955 Zinger Tower burger, including cheese & hash brown, KFC ONLY

B. FRIED CHICKEN, NOT BREADED

- 5265 Chicken breast strips, stir fried in polyunsaturated oil
- 9094 Chicken breast strips, stir fried in olive oil
- 1070 Chicken breast, no skin, uncoated or coated in flour only, fried in blended vegetable oil. No bones or leftover bones weighed
- 1071 Chicken breast, no skin, uncoated or coated in flour only, fried in blended vegetable oil, leftover bones not weighed
- 1074 Chicken breast, no skin, uncoated or coated in flour only, fried in lard, no bones or leftover bones weighed
- 1075 Chicken breast, no skin, uncoated or coated in flour only, fried in lard. Leftover bones not weighed
- 1076 Chicken breast, no skin, uncoated or coated in flour only, fried in polyunsaturated oil. No bones or leftover bones weighed
- 1077 Chicken breast, no skin, uncoated or coated in flour only, fried in polyunsaturated oil. Leftover bones not weighed
- 5171 Chicken breast, no skin, uncoated or coated in flour only, fried in olive oil. No bones or leftover bones weighed
- 5266 Chicken portion, with skin, uncoated or coated in flour only, deep fried in blended vegetable oil. No bones or leftover bones weighed. Includes from chip shop or takeaway
- 5267 Chicken portion, with skin, uncoated or coated in flour, deep fried in blended vegetable oil. Leftover bones not weighed. Includes from chip shop or takeaway

C. BARBECUED STYLE CHICKEN

- 5268 Chicken wings, marinated, barbecued or grilled, e.g. Tesco's Hot & Spicy, Asda, Safeway Chinese style
- 2705 Chicken leg, marinated, barbecued or grilled, meat only
- 5269 Chicken breast, marinated in garlic and herbs, chilled or frozen, oven baked

D. GRILLED CHICKEN

- 5127 Chicken breast, meat only, no skin, grilled, no added fat
- 5128 Chicken breast, meat and skin, grilled, no added fat

E. ROAST CHICKEN

- 1088 Chicken, roast, light and dark meat only, no skin, no bones or leftover bones weighed
- 1089 Chicken, roast, light and dark meat and skin, no bones or leftover bones weighed

- 1092 Chicken, roast, light and dark meat and skin, leftover bone not weighed
- 1090 Chicken, roast, light meat only, no skin, no bones or leftover bones weighed
- 1372 Chicken, roast, light meat and skin, no bones or leftover bones weighed
- 1091 Chicken, roast, dark meat only, no skin, no bones or leftover bones weighed
- 1374 Chicken, roast, dark meat and skin, no bones or leftover bones weighed
- 1093 Chicken, roast, dark meat and skin, leftover bones not weighed
- 1372 Chicken, wing quarter, roast, meat and skin, no bones or leftover bones weighed
- 1092 Chicken, wing quarter, roast, meat and skin, leftover bones not weighed
- 1374 Chicken, leg quarter, thigh, roast, meat and skin, no bones or leftover bones weighed
- 1093 Chicken, leg quarter, thigh, roast, meat and skin, leftover bones not weighed
- 5270 Chicken drumsticks, roast, meat only, no bone or leftover bone weighed
- 5271 Chicken drumsticks, roast, meat and skin, no bone or leftover bone weighed
- 5272 Chicken drumsticks, roast, meat and skin, leftover bone not weighed

F. CASSEROLED AND STEWED CHICKEN

- 1068 Chicken breast, casserole, meat only, no skin, no bones or leftover bones weighed
- 5273 Chicken breast, casserole, with skin, no bones or leftover bone weighed
- 5274 Chicken breast, casserole, with skin, leftover bones not weighed
- 1069 Chicken thighs, casserole, meat only, no skin, no bones or leftover bones weighed
- 5275 Chicken thighs, casserole, with skin, no bones or leftover bones weighed
- 5276 Chicken thighs, casserole, with skin, leftover bones not weighed
- 5277 Chicken leg quarter, casserole, meat only, no skin, no bones or leftover bones weighed
- 1375 Chicken leg quarter, casserole, with skin, no bones or leftover bones weighed
- 1095 Chicken leg quarter, casserole, with skin, leftover bones not weighed
- 5278 Chicken wing quarter, casserole, meat only, no bones or leftover bone weighed
- 1373 Chicken wing quarter, casserole, with skin, no bones or leftover bones weighed
- 1094 Chicken wing quarter, casserole, with skin, leftover bone not weighed
- 1067 Chicken, casserole, cut unspecified, light and dark meat, no skin, no bones or leftover bones weighed
- R 1096 Chicken, giblets, NOT just livers, cooked

CHICKEN

G. CHICKEN DISHES, INCLUDING CANNED CHICKEN

- R 1098 Chicken biryani, no rice. NOT takeaway
- 6991 Chicken biryani, with rice, takeaway
- 5279 Chicken casserole, ready meal (chicken in tomato/gravy sauce with vegetables), no rice, e.g. Marks & Spencers chicken and mushroom casserole, sweet 'n' sour chicken, chicken jalfrezi, chicken creole
- R 1099 Chicken casserole, meat only, no skin, in thickened gravy, with vegetables, no bones or leftover bones weighed
- R 1100 Chicken casserole, meat only, no skin, in thickened gravy, with vegetables, leftover bones not weighed
- 1101 Chicken casserole, canned, e.g. Tyne
- R 5280 Chicken Chasseur, no bones or leftover bones weighed
- 7777 Chicken, sweet and sour, no bones or leftover bones weighed. Includes takeaway sweet and sour chicken
- 2734 Chicken, sweet and sour, low fat, e.g. Asda Healthy Choice
- 1366 Chicken chop suey, takeaway
- 1102 Chicken chow mein, Vesta only, ready meal, weight as served, complete meal
- 1367 Chicken chow mein, takeaway. Not Vesta
- 1106 Chicken curry, Vesta only, weight as served. NO rice
- 1103 Chicken curry, canned. NO rice, e.g. Uncle Ben's Chicken Korma or Tikka Masala, Tyne Chicken Curry
- 9386 Chicken curry; Masala; tikka masala, ready meal, frozen or chilled, with rice. NOT takeaway
- 9387 Chicken curry; Masala, tikka masala, ready meal, frozen or chilled, no rice. NOT takeaway
- R 5281 Chicken curry, made with canned/bottled curry sauce, no rice. NOT takeaway
- R 1104 Chicken curry with vegetables, no skin, no bones or leftover bones weighed, no rice. NOT takeaway
- R 1105 Chicken curry with vegetables, with skin, leftover bones not weighed, no rice. NOT takeaway
- R 1363 Chicken curry, Korma style with cream or coconut sauce, no bones or leftover bones weighed, no rice. NOT takeaway
- R 1362 Chicken curry, Korma style with cream or coconut sauce, leftover bones not weighed, no rice. NOT takeaway
- 6988 Chicken curry, Korma style with cream or coconut sauce, no rice, takeaway
- 5290 Chicken curry, takeaway e.g. chicken vindaloo, chicken dupiaza. NOT chicken korma, tandoori, tikka or tikka masala, chicken biryani, dhansak or jalfrezi
- R 5282 Chicken fricassee, made with cream, no bones or leftover bones weighed, no rice
- 6993 Chicken fried rice, Chinese takeaway
- 2724 Chicken Jalfrezi curry, no rice, takeaway
- R 7778 Chicken lasagne
- 8260 Chicken pancake, frozen, fried in blended vegetable oil, e.g. Findus

- R 5283 Chicken risotto, made with butter
- 1116 Chicken roast dinner; roast chicken platter, frozen ready meal with potatoes, vegetables and stuffing, e.g. Birds Eye
- 1117 Chicken, roast in gravy, frozen, purchased, no vegetables or potatoes, e.g. Bird's Eye
- 1126 Chicken roll, with or without stuffing, canned
- 1127 Chicken roll, with or without stuffing, NOT canned
- 5494 Chicken satay, takeaway (Thai dish of marinated chicken with peanut satay sauce)
- 5284 Chicken slices, prepacked or delicatessen, includes wafer thin sliced chicken. NOT smoked
- 5285 Chicken slices, smoked, prepacked or delicatessen, includes wafer thin sliced smoked chicken
- 1125 Chicken spread; chicken paste; NOT canned, e.g. Shiphams
- 2661 Chicken stir fry, with rice, ready meal, frozen, e.g. Ross Oriental Express Indian/ Chinese chicken, Iceland Chinese chicken
- R 5286 Chicken breast strips, stir fried, with peppers, onions and mushrooms in polyunsaturated oil
- R 5287 Chicken breast strips, stir fried, with peppers, onions and mushrooms in olive oil
- R 5288 Chicken breast strips, stir fried, with mushrooms and cashew nuts in polyunsaturated oil
- R 5289 Chicken breast strips, stir fried, with peppers in black bean sauce in polyunsaturated oil
- 1108 Chicken, in white sauce, canned
- 9565 Chicken in white sauce with vegetables/ham with rice, ready meal
- R 1107 Chicken supreme; creamed chicken; chicken in white wine sauce; no bones or leftover bones weighed. NOT canned. NOT chicken fricassee
- R 1123 Chicken tandoori, no bones or leftover bones weighed
- R 1124 Chicken tandoori, leftover bones not weighed
- 1122 Chicken tikka, i.e. Indian spiced chicken , grilled, no bones or leftover bones weighed, includes takeaway chicken tikka. NOT chicken tikka masala
- 6989 Chicken tikka masala, takeaway
- 5290 Chicken Vindaloo, takeaway, no rice

HAM

- 1236 Ham, canned in juice, canned in jelly
- 9508 Ham, prepacked or from delicatessen or butcher, any cut, includes premium or superior ham, dry cure, Wiltshire type cure, honey roast/honey glazed, wafer thin ham. NOT smoked, NOT canned.
- 9509 Ham, prepacked or from delicatessen or butcher, any cut, includes premium or superior ham, dry cure, Wiltshire type cure, honey roast/honey glazed, wafer thin ham, smoked. NOT canned.
- 9385 Pork shoulder; shoulder ham, prepacked or from delicatessen or butcher, NOT smoked, NOT ham

HAM

LAMB

- 1055 Breast of lamb, roast, lean and fat, no bone, or leftover bone weighed
- 1019 Breast of lamb, roast, lean and fat, leftover bone not weighed
- 977 Breast of lamb, roast, lean only, no bone, or leftover bone weighed
- 1018 Breast of lamb, roast, lean only, leftover bone not weighed
- 978 Breast of lamb, roast, stuffed
- 984 Chump chops; steaks, grilled or fried, lean and fat, no bone, or leftover bone weighed
- 985 Chump chops; steaks, grilled or fried, lean and fat, leftover bone not weighed
- 986 Chump chops; steaks, grilled or fried, lean only, no bone, or leftover bone weighed
- 987 Chump chops; steaks, grilled or fried, lean only, leftover bone not weighed
- 994 Cutlets; best end of neck; noisettes, grilled or fried, lean and fat, no bone, or leftover bone weighed
- 995 Cutlets; best end of neck, grilled or fried, lean and fat, leftover bone not weighed
- 996 Cutlets; best end of neck; noisettes, grilled or fried, lean only, no bone, or leftover bone weighed
- 997 Cutlets; best end of neck, grilled or fried, lean only, leftover bone not weighed
- 999 Leg of lamb, whole, roast, lean and fat
- 1000 Leg of lamb; whole, roast, lean only
- 9429 Half leg of lamb, knuckle or shank end, roast, lean and fat
- 1000 Half leg of lamb, knuckle or shank end, roast, lean only
- 9430 Half leg of lamb, fillet end, roasted, lean and fat
- 1000 Half leg of lamb, fillet end, roasted, lean only
- 9431 Leg chops; steaks, grilled or fried, lean and fat
- 9432 Leg chops; steaks, grilled or fried, lean only
- 9433 Loin joint, roast, lean and fat
- 9434 Loin joint, roast, lean only
- 980 Loin chops, grilled or fried, lean only, no bone, or leftover bone weighed
- 981 Loin chops, grilled or fried, lean only, leftover bone not weighed
- 982 Loin chops, grilled or fried, lean and fat, no bone, or leftover bone weighed
- 983 Loin chops, grilled or fried, lean and fat, leftover bone not weighed
- 9435 Neck fillet, grilled, lean and fat
- 9436 Neck fillet, grilled, lean only
- 9437 Rack of lamb; best end of neck; crown roast, roast, lean and fat

LAMB

- 9438 Rack of lamb; best end of neck; crown roast, roast, lean only
- 1008 Shoulder of lamb, whole, roast, lean and fat
- 1009 Shoulder of lamb, roast, lean only
- 9439 Half shoulder of lamb, knuckle end, roasted, lean and fat
- 1009 Half shoulder of lamb, knuckle end, roasted, lean only
- 9440 Half shoulder of lamb, bladeside, roasted, lean and fat
- 1009 Half shoulder of lamb, bladeside, roasted, lean only
- 1002 Stewing lamb; scrag and neck end; stewed, lean and fat, no bones, or leftover bones weighed
- 1003 Stewing lamb; scrag and neck end; stewed, lean only, no bones, or leftover bones weighed
- 1004 Stewing lamb; scrag and neck end; stewed, lean only, leftover bones not weighed
- 9441 Lamb, minced, stewed, lean and fat

LAMB DISHES

- R 9475 Chow mein, made with lamb
- R 1332 Chop suey, made with lamb
 - 1238 Irish stew, canned
- R 9478 Lamb biryani or pilau; includes rice
 - 978 Lamb, breast of, roast, stuffed
- R 9477 Lamb curry with cream or coconut sauce, e.g. lamb korma. NO rice
- R 5316 Lamb curry, made with canned curry sauce. NOT takeaway
 - 6990 Lamb curry, takeaway, NO rice, e.g. lamb rogan josh. NOT lamb balti. NOT lamb korma/lamb curry with cream or coconut sauce
 - 5319 Lamb hot pot with potato, ready meal e.g. Lancashire hot pot
- R 5318 Lamb, minced, stewed with onions and gravy
- R 5317 Lancashire hot pot, homemade
- R 979 Lamb or mutton and vegetable curry; NO rice
 - 8248 Lamb, roast roll, purchased, e.g. Bernard Matthew's lamb roast, cooked
- R 1005 Lamb, scrag and neck end, stewed, lean and fat, with potatoes, carrots, onions and gravy, i.e. Irish Stew. Leftover bones weighed, NOT canned
- R 1016 Lamb, scrag and neck end, stewed, lean and fat, with potatoes, carrots, onions and gravy, i.e. Irish Stew. Leftover bones not weighed. NOT canned
- R 1006 Lamb, scrag and neck end, stewed, lean only, with potatoes and vegetables, e.g. carrots or tomatoes. Leftover bones weighed. NOT canned

LAMB AND LAMB DISHES

R 1017 Lamb, scrag and neck end, stewed, lean only, with potatoes and vegetables, e.g. carrots or tomatoes.
Leftover bones not weighed. NOT canned

5320 Moussaka ready meal

R 1350 Moussaka made with minced lamb, potato, cheese sauce

R 1364 Moussaka made with minced lamb, aubergines, cheese sauce. No potato

5321 Shepherds pie, made with lamb, frozen or chilled. Ready meal

R 5322 Shepherds pie, homemade with minced lamb

Shepherds pie made with beef, code as *cottage pie*

LAMB DISHES

LIVER AND LIVER DISHES, LIVER PATÉ AND LIVER SAUSAGE

- 1259 Extrawurst, NOT canned
- 1179 Liver, calves, fried or grilled, NO coating
- 1181 Liver, calves, coated, fried in blended vegetable oil
- 1182 Liver, calves, coated, fried in butter
- 1183 Liver, calves, coated, fried in dripping
- 1184 Liver, calves, coated, fried in lard
- 1185 Liver, calves, coated, fried in margarine (NOT polyunsaturated)
- 1186 Liver, calves, coated, fried in polyunsaturated margarine or oil
- 1187 Liver, calves, stewed or braised, in thickened gravy
- 1189 Liver, chicken, fried or grilled, NO coating
- 1190 Liver, chicken, stewed in thickened gravy
- 1191 Liver, lambs, fried or grilled, NO coating
- 1192 Liver, lambs, coated, fried in blended vegetable oil
- 1193 Liver, lambs, coated, fried in dripping
- 1194 Liver, lambs, coated, fried in lard
- 1195 Liver, lambs, coated, fried in polyunsaturated margarine or oil
- 1196 Liver, lambs, stewed in thickened gravy
- 1227 Liver and onion with gravy, ready meal, purchased, e.g. Birds Eye
- 1198 Liver, ox, stewed in thickened gravy
- 4001 Liver, ox, coated, fried in blended vegetable oil
- 1256 Liver paté, canned
- 1258 Liver paté, plastic packed. NOT low fat
- 1257 Liver paté , from delicatessen. NOT canned, NOT pre-packed
- 3334 Liver paté, low fat
- 1199 Liver, pigs, fried or grilled, NO coating
- 1200 Liver, pigs, coated, fried in blended vegetable oil
- 1201 Liver, pigs, coated, fried in dripping
- 1202 Liver, pigs, coated, fried in lard
- 1203 Liver, pigs, coated, fried in polyunsaturated margarine or oil

LIVER AND LIVER DISHES, LIVER PATÉ AND LIVER SAUSAGE

- 3322 Liver, pigs, coated, fried in butter
- R 1204 Liver, pigs, stewed in thickened gravy
- 1259 Liver sausage

LIVER AND LIVER DISHES, LIVER PATÉ AND LIVER SAUSAGE

MEAT - OTHER; MEAT PRODUCTS

- 1315 Bacon and egg in a bun, purchased, takeaway, e.g. Bacon and Egg McMuffin
- Beanburger: see "Vegetables"
- R 1326 Chinese meat buns
- R 1332 Chop suey, with beef, lamb or pork
- R 1327 Corned beef hash; corned beef and mashed potato
- 1235 Corned beef, canned
- 1341 Corned beef, NOT canned
- 1237 Ham and pork, chopped, canned
- 1337 Ham and pork, chopped. NOT canned
- 4771 Ham paté low fat, purchased. NOT canned
- 1255 Haslet
- 3334 Low fat meat paté
- 1239 Luncheon meat, canned
- 1338 Luncheon meat, NOT canned
- 8267 Pepperami or snack salami
- 923 Pork crackling; "pork scratchings"
- Ravioli, canned: see "Pasta, rice and grains"
- 1274 Salami. NOT pepperami or snack salami
- 1239 Spam, canned
- 1338 Spam, NOT canned
- 4857 Steak and kidney pie filling, canned
- 1245 Tongue, ox or lamb, canned. Not lunch tongue or pork tongue
- 1215 Tongue, ox or lamb, NOT canned. Not lunch tongue or pork tongue
- 9590 Tongue , pork; tongue, lunch; canned
- 1335 Luncheon meat, Chinese, steamed, purchased
- R 1332 Meat chop suey, beef, lamb or pork
- R 1349 Meat loaf, homemade
- 1260 Meat loaf, purchased

MEAT - OTHER; MEAT PRODUCTS

MEAT PIES AND PASTRIES (INCLUDING CHICKEN PIES)

- 1296 Bacon and egg pie, two crusts; shortcrust pastry made with half lard, half margarine (NOT polyunsaturated)
- 1293 Beef and potato pie, one crust; shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- 1294 Beef and potato pie, two crusts; shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- 1291 Bridies; scotch pies; mutton pies
- R 1118 Chicken pie; turkey pie; one crust, shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- R 1119 Chicken pie; turkey pie; two crusts, shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- 1120 Chicken pie, frozen or chilled, purchased, individual size, two crusts. Includes chicken and ham; chicken and vegetable
- R 1121 Chicken vol-au-vent, i.e. chicken in white sauce in vol-au-vent case
- R 9321 Corned beef pastie, homemade
- 8846 Corned beef pastie, purchased
- R 9326 Corned beef and potato pie homemade with shortcrust pastry
- R 1295 Cornish pastie, homemade; shortcrust pastry, beef, potatoes and onions; pastry made with half lard and half margarine (NOT polyunsaturated)
- 1299 Cornish pastie; meat and vegetable pastie; purchased
- R 1297 Kidney and mushroom pie, one crust; shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- R 1298 Kidney and mushroom pie, two crusts; shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- R 1302 Minced beef pie, homemade, one crust, shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- R 1301 Minced beef pie, homemade, two crusts, shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- 1292 Minced beef pie, purchased, two crusts, frozen or chilled
- 1299 Pastie, Cornish; meat and vegetable pastie, purchased
- 7796 Pork pie, buffet, mini (diameter 1.5 inches)
- 1304 Pork pie, individual
- 1305 Pork pie, sliced, NO egg
- 1303 Pork and egg pie; veal and egg pie; ham and egg pie; Grosvenor pie

MEAT PIES AND PASTRIES (INCLUDING CHICKEN PIES)

- R 1158 Rabbit pie, one crust, shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- 1354 Samosa, meat
- 1306 Sausage roll, flaky pastry, homemade
- 8071 Sausage roll, puffed pastry or flaky pastry, purchased
- 1307 Sausage roll, shortcrust pastry, homemade; pastry made with half lard and half margarine (NOT polyunsaturated)
- 1308 Sausage roll, shortcrust pastry, purchased
- 1351 Spring roll (i.e. fried pancake roll with meat filling)
- R 1309 Steak pie, one crust, shortcrust pastry made with half lard and half margarine (NOT polyunsaturated). NOT canned
- R 1310 Steak pie, two crusts or individual, shortcrust pastry made with half lard, and half margarine (NOT polyunsaturated). NOT canned
- R 8731 Steak pie, lean meat, two crusts or individual, shortcrust pastry made with polyunsaturated margarine. NOT canned
- 1378 Steak pie, individual, flaky pastry, purchased
- 1241 Steak and kidney pie, canned
- 1242 Steak and kidney pudding, canned
- R 1322 Steak, pudding, suet pastry, NO kidney. NOT canned
- R 1381 Steak and kidney pudding, suet pastry, NOT canned
- R 1312 Steak and kidney pie, one crust, shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- R 1313 Steak and kidney pie, two crusts, individual; shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- R 1314 Steak and kidney pie, two crusts, shortcrust pastry, made with half lard and half margarine (NOT polyunsaturated). NOT individual; NOT canned.
- 1379 Steak and kidney pie, two crusts, individual, flaky pastry, purchased
- 1377 Steak and kidney pie, two crusts, shortcrust pastry, purchased
- 5626 Toaster pockets, flaky pastry toaster sandwiches, e.g. Pillsbury toaster pockets, cheese and bacon
- R 1118 Turkey pie, one crust, shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)
- R 1119 Turkey pie, two crusts, shortcrust pastry made with half lard and half margarine (NOT polyunsaturated)

MEAT PIES AND PASTRIES (INCLUDING CHICKEN PIES)

OFFAL AND OFFAL PRODUCTS

SEE SEPARATE SECTION FOR LIVER

- 1171 Brain, calves, boiled
- 1172 Brain, lambs, boiled
- 1173 Heart, sheep's, roast or braised, meat only, NO fat
- R 1175 Heart, ox, stewed or casserole
- 1176 Kidney, lambs, fried or grilled
- R 1177 Kidney, any kind, stewed in thickened gravy
- 1178 Kidney, pigs, fried or grilled
- 1206 Oxtail, stewed, lean meat only, NO fat, leftover bones weighed
- 1207 Oxtail, stewed, lean meat only, NO fat, leftover bones and fat not weighed
- 1208 Sweetbreads, lambs, NO coating, fried in butter
- 1209 Sweetbreads, lambs, coated in egg and breadcrumbs, fried in blended vegetable oil
- 1210 Sweetbreads, lambs, coated in egg and breadcrumbs, fried in dripping
- 1211 Sweetbreads, lambs, coated in egg and breadcrumbs, fried in lard
- 1212 Sweetbreads, lambs, coated in egg and breadcrumbs, fried in polyunsaturated margarine or oil
- R 1213 Sweetbreads, lambs, stewed in white sauce
- 1215 Tongue, ox or lambs, cold, sliced, NOT canned. Not pork or lunch tongue
- 1245 Tongue, ox or lambs, canned. Not pork or lunch tongue
- 1216 Tongue, ox, stewed, meat only, NO fat or skin, or leftover fat and skin weighed
- 1214 Tongue, sheep's, stewed, meat only, NO fat or skin, or leftover fat and skin weighed
- 1218 Tripe, stewed in milk
- R 1219 Tripe, stewed in thickened sauce
- 1220 Trotters and tails, salted, boiled, meat only, NO fat, skin or bones, or leftover fat, skin and bones weighed

OFFAL PRODUCTS

- 1248 Black pudding, dry fried or grilled
- 1247 Black pudding, boiled
- 1249 Brawn
- 1250 Faggots; in gravy ready meal, e.g. Mr Brains Faggots in a rich country sauce

OFFAL AND OFFAL PRODUCTS

- 1251 Haggis, boiled
- 1252 Haggis, in batter, deep fried in blended vegetable oil, purchased from takeaway shop
- 1253 Haggis, in batter, deep fried in dripping, purchased from takeaway shop
- 1254 Haggis, in batter, deep fried in lard, purchased from takeaway shop
- 1255 Haslet
- 1261 Meat paste, canned. NOT chicken paste
- 1262 Meat paste, NOT canned. NOT chicken paste
- 1263 White pudding

OFFAL PRODUCTS

PORK

- 1020 Belly rashers; slices; joint, roasted or grilled, lean and fat, no bone, or leftover bone weighed
- 1043 Belly rashers; slices; joint, roasted or grilled, lean and fat, leftover bone not weighed
- 1022 Belly rashers; slices; joint, stewed or boiled, lean and fat, no bone, or leftover bone weighed
- 1057 Belly rashers; slices; joint, stewed or boiled, lean and fat, leftover bone not weighed
- Belly rashers, stewed or boiled with vegetables; see 'Pork dishes'
- 1024 Chops, unspecified, fried or grilled, lean only, no bone, or leftover bone weighed
- 1025 Chops, unspecified, fried or grilled, lean only, leftover bone not weighed
- 1026 Chops, unspecified, fried or grilled, lean and fat, no bone, or leftover bone weighed
- 1027 Chops, unspecified, fried or grilled, lean and fat, leftover bone not weighed
- 9452 Chump chops; steaks, fried or grilled, lean and fat, no bone, or leftover bone weighed
- 9453 Chump chops; steaks, fried or grilled, lean and fat, leftover bone not weighed
- 9454 Chump chops; steaks, fried or grilled, lean only, no bone, or leftover bone weighed
- 9455 Chump chops; steaks, fried or grilled, lean only, leftover bone not weighed
- 3808 Diced pork, stewed, lean and fat
- 9460 Diced pork, stewed, lean only
- 9462 Fillet (tenderloin), grilled, lean
- 9448 Hand or spring (shoulder) joint, roasted, lean and fat
- 9449 Hand or spring (shoulder) joint, roasted, lean only
- 9457 Leg chops, grilled or fried, lean and fat, leftover bone not weighed
- 9459 Leg chops, grilled or fried, lean only, leftover bone not weighed
- 1032 Leg joint, knuckle or fillet, roasted, lean and fat
- 1033 Leg joint, knuckle or fillet, roasted, lean only
- 9456 Leg steaks; chops, grilled or fried, lean and fat, no bone, or leftover bone weighed
- 9458 Leg steaks; chops, grilled or fried, lean only, no bone, or leftover bone weighed
- 1024 Loin chops (no kidney); steaks, fried or grilled, lean only, no bone, or leftover bone weighed
- 1025 Loin chops (no kidney); steaks, fried or grilled, lean only, leftover bone not weighed
- 1026 Loin chops (no kidney); steaks, fried or grilled, lean and fat, no bone, or leftover bone weighed
- 1027 Loin chops (no kidney); steaks, fried or grilled, lean and fat, leftover bone not weighed
- 1028 Loin chops (with kidney), fried or grilled, lean only, no bone, or leftover bone weighed

PORK

- 1029 Loin chops (with kidney), fried or grilled, lean only, leftover bone not weighed
- 1030 Loin chops (with kidney), fried or grilled, lean and fat, no bone, or leftover bone weighed
- 1031 Loin chops (with kidney), fried or grilled, lean and fat, leftover bone not weighed
- 9450 Loin joint, roasted, lean and fat
- 9451 Loin joint, roasted, lean only
- 9461 Minced pork, stewed, lean and fat
- 9463 Spare ribs, American style (belly), grilled, lean and fat
- 9442 Spare rib (shoulder) joint, pot-roasted or braised, lean and fat
- 9443 Spare rib (shoulder) joint, pot-roasted or braised, lean only
- 9444 Spare rib (shoulder) chops, braised, lean and fat, no bone, or leftover bone weighed
- 9445 Spare rib (shoulder) chops, braised, lean and fat, leftover bone not weighed
- 9446 Spare rib (shoulder) chops, braised, lean only, no bone, or leftover bone not weighed
- 9447 Spare rib (shoulder) chops, braised, lean only, leftover bone not weighed

Spare ribs in barbecue sauce; see 'Pork dishes'

PORK DISHES

- R 1332 Chop suey, made with pork
- R 9476 Chow mein, made with pork
- 1358 Pork balls, battered, deep fried; sweet and sour pork with or without sauce
- R 1023 Pork, belly rashers, stewed or boiled, lean and fat, in thickened gravy with vegetables but NOT potatoes.
No bone or leftover bone weighed
- R 1056 Pork, belly rashers, stewed or boiled, lean and fat, in thickened gravy with vegetables but NOT potatoes.
Leftover bone not weighed
- R 1041 Pork, diced, lean and fat; pork steak, lean and fat; stewed or boiled in thickened gravy with vegetables
but NOT potatoes
- R 1042 Pork, diced, lean only; pork steak, lean only; pork fillet; stewed or boiled in thickened gravy with
vegetables but NOT potatoes
- 5323 Pork roast, cooked pork slices, prepacked or delicatessen
- 8249 Pork roast roll, purchased, e.g. Bernard Matthew's pork roast, cooked
- 1352 Pork roast dinner, frozen, ready meal with potatoes and vegetables
- 1353 Pork roast, in gravy, frozen, ready meal, no potatoes or vegetables

PORK AND PORK DISHES

- R 5324 Pork casserole with cook in sauce
- R 5325 Sausage casserole, made with pork, pork sausage, bacon and baked beans
- 1331 Spare ribs, marinated, barbecue style, purchased, chilled, frozen, or takeaway, leftover bones weighed
- 1355 Spare ribs, marinated, barbecue style, purchased, chilled, frozen, or takeaway, leftover bones not weighed
- 1358 Sweet and sour pork battered, Chinese style
- 9726 Sweet and sour pork with rice. Ready meal. NOT battered sweet and sour pork
- 9763 Sweet and sour pork, ready meal. NO rice. NOT battered sweet and sour pork
- R 5326 Toad-in-the-hole, made with pork sausages and semi-skimmed milk

PORK DISHES

POULTRY (NOT CHICKEN/TURKEY) AND GAME

- 9405 Duck, braised, meat only, no fat or skin, no bones, or leftover bones weighed
- 5421 Duck, crispy Chinese, with pancakes, plum sauce, spring onions and cucumber
- 1129 Duck, roast, meat only, NO skin, no bones, or leftover bones weighed
- 1130 Duck, roast, meat only, No skin, leftover bones not weighed
- 1131 Duck, roast, meat, fat and skin, no bones, or leftover bones weighed
- 1132 Duck, roast, meat, fat and skin, leftover bones not weighed
- 1133 Goose, roast, meat only, NO skin, No fat, no bones, or leftover bones weighed
- 1134 Goose, roast, meat only, NO skin, NO fat, leftover bones not weighed
- 1135 Grouse, roast, meat only, NO skin, NO fat, no bones, or leftover bones weighed
- 1136 Grouse, roast, meat only, NO skin, NO fat, leftover bones not weighed
- 1159 Hare, roast, meat only, no bones, or leftover bones weighed
- 1160 Hare, stewed, meat only, no bones, or leftover bones weighed
- 1161 Hare, stewed, meat only, leftover bones not weighed
- 1137 Partridge, roast, meat only, NO skin, NO fat, no bones, or leftover bones weighed
- 1138 Partridge, roast, meat only, NO skin, NO fat, leftover bones not weighed
- 1139 Pheasant, roast, meat only, NO skin, NO fat, no bones, or leftover bones weighed
- 1140 Pheasant, roast, meat only, NO skin, NO fat, leftover bones not weighed
- 9406 Pheasant, stewed, meat only, no bones, or leftover bones weighed
- 1141 Pigeon, roast, meat only, NO skin, NO fat, no bones, or leftover bones weighed
- 1142 Pigeon, roast, meat only, NO skin, NO fat, leftover bones not weighed
- 1162 Rabbit, roast, meat only, no bones, or leftover bones weighed
- 1163 Rabbit, stewed, meat only, no bones, or leftover bones weighed
- 1164 Rabbit, stewed, meat only, leftover bones not weighed
- 1167 Venison, roast, meat only, no bones, or leftover bones weighed
- 9403 Venison stewed, meat only, no bones, or leftover bones weighed

POULTRY (NOT CHICKEN/TURKEY) AND GAME

SAUSAGES

- 1337 Bierwurst, NOT canned
- 1272 Frankfurter, canned
- 1271 Frankfurter, NOT canned
- 5308 Frankfurter in a bun with ketchup, onions and mustard
- 1337 Garlic sausage, NOT canned
- 1273 Polony

Quorn: see "vegetable dishes"

- 1276 Sausages, beef, fried. NOT low fat
- 1277 Sausages, beef, grilled, NOT low fat
- 7790 Sausages, beef, skinless, fried
- 7791 Sausages, beef, skinless, grilled
- 7792 Sausages, Cumberland, fried
- 7793 Sausages, Cumberland, grilled
- 7784 Sausages, pork, economy, fried
- 7785 Sausages, pork, economy, grilled
- 1279 Sausages, pork, fried. NOT smoked, NOT low fat
- 1280 Sausages, pork, grilled. NOT smoked, NOT low fat
- 7786 Sausages, pork, skinless, fried
- 7787 Sausages, pork, skinless, grilled
- 8268 Sausages, pork, smoked, fried. NOT low fat
- 8269 Sausages, pork, smoked, grilled. NOT low fat
- 1282 Sausages, pork and beef mixed, fried or grilled. NOT low fat
- 7788 Sausages, pork and beef mixed, skinless, fried
- 7789 Sausages, pork and beef mixed, skinless, grilled
- 1283 Sausages, pork, beef, or pork and beef, low fat, grilled
- 7792 Sausages, premium pork, premium pork and herbs, Cumberland sausage; fried
- 7793 Sausages, premium pork, premium pork and herbs, Cumberland sausage; grilled
- 1284 Sausages, in batter, fried in blended vegetable oil, NOT purchased from takeaway shop
- 1288 Sausages, in batter, fried in blended vegetable oil, purchased from a takeaway shop

SAUSAGES

- 1285 Sausages, in batter, fried in dripping
- 1286 Sausages, in batter, fried in lard
- 1287 Sausages, in batter, fried in polyunsaturated oil
- 6243 Sausages in batter, grilled or oven-baked, Walls 'Wall Bangers' ONLY
- 7783 Sausages specially for microwave ovens, microwaved, NOT fried, e.g. Walls Microwave sausages
- 1290 Saveloy, unbattered, takeaway
- Scotch Eggs: see "Eggs and egg dishes"
- 1157 Turkey sausages, fried or grilled

SAUSAGES

TURKEY

This section is divided into subsections as follows:-

- A. COATED TURKEY
- B. STIR FRIED TURKEY
- C. GRILLED TURKEY
- D. ROAST TURKEY
- E. CASSEROLED AND STEWED TURKEY
- F. TURKEY DISHES

A. COATED TURKEY

Turkey burgers/steaks/grills

- 1380 Turkey burger/steaks/grills, coated in crumbs or batter, frozen or chilled, grilled or baked, no added fat, e.g. Bernard Matthews Southern Fried grill, Crispy Crumb Turkey steaks, Golden Drummers
- 1153 Turkey burger/steaks/grills, coated in crumbs or batter, frozen or chilled, fried in blended vegetable oil
- 1155 Turkey burger/steaks/grills, coated in crumb or batter, frozen or chilled, fried in lard
- 1156 Turkey burger/steaks/grills, coated in crumb or batter, frozen or chilled, fried in polyunsaturated oil

Turkey fingers/pieces

- 5291 Turkey fingers/pieces, coated in crumbs or batter, frozen or chilled, grilled or baked, no added fat, e.g. Bernard Matthews Turkistix, Turkey Jetters and Turkey Dinosaurs

B. STIR FRIED TURKEY

- 5292 Turkey, breast strips, stir fried in polyunsaturated oil
- 9126 Turkey breast strips, stir fried in olive oil
- R 5293 Turkey, breast strips, stir fried with mushrooms, onions and peppers in polyunsaturated oil
- R 5294 Turkey, breast strips, stir fried with mushrooms, onions and peppers in olive oil
- R 5295 Turkey, breast strips, stir fried with vegetables in sauce

C. GRILLED TURKEY

- 5296 Turkey, breast, meat only (no skin), grilled, no added fat

D. ROAST TURKEY

- 5297 Turkey, roast, light and dark meat and skin, no bones or leftover bones weighed
- 1146 Turkey, roast, light and dark meat, without skin, no bones or leftover bones weighed

TURKEY

- 1147 Turkey, roast, light and dark meat, without skin, leftover bones not weighed
- 1148 Turkey, roast, light meat, no skin, no bones or leftover bones weighed
- 1149 Turkey, roast, dark meat, no skin, no bones or leftover bones weighed
- 1150 Turkey, roast, dark meat, no skin, leftover bones not weighed
- 1149 Turkey drumsticks, roast, meat only, no skin, no bones or leftover bones weighed
- 5298 Turkey drumsticks, roast, meat and skin, no bones or leftover bones weighed
- 5299 Turkey drumsticks, roast, meat and skin, leftover bones not weighed

E. CASSEROLED AND STEWED TURKEY

- 5300 Turkey mince, stewed
- 5301 Turkey leg; thigh, meat only, no skin, casseroled
- R 1152 Turkey, giblets and neck meat, cooked

F. TURKEY PRODUCTS AND DISHES

- 9598 Turkey melts, turkey breast with cheese and tomato topping, e.g. Sun Valley
- R 5302 Turkey and pasta bake
- 9358 Roast turkey platter; roast turkey dinner, frozen or chilled ready meal, with potatoes, vegetables and stuffing, e.g. Bird's Eye
- 8261 Turkey, roast roll, purchased, e.g. Bernard Matthews Turkey Roast, cooked
- 1126 Turkey roll, with or without stuffing, canned
- 5382 Turkey roll, with or without stuffing. NOT canned
- 8262 Turkey slices, smoked, prepacked or delicatessen, includes wafer thin smoked turkey
- 5303 Turkey slices, unsmoked, prepacked or delicatessen, includes wafer thin unsmoked turkey, Bernard Matthews wafer thin turkey ham

TURKEY AND TURKEY DISHES

VEAL AND VEAL DISHES

VEAL

- 9428 Veal mince, stewed, fat not skimmed
- 1051 Veal, fillet; escalope, schnitzel, fried, lean only

VEAL DISHES

- 1045 Veal, cutlet or escalope, coated in egg and breadcrumbs, fried in blended vegetable oil, e.g. Wiener Schnitzel
- 1046 Veal, cutlet or escalope, coated in egg and breadcrumbs, fried in butter, e.g. Wiener Schnitzel
- 1048 Veal, cutlet or escalope, coated in egg and breadcrumbs, fried in dripping, e.g. Wiener Schnitzel
- 1047 Veal, cutlet or escalope, coated in egg and breadcrumbs, fried in lard, e.g. Wiener Schnitzel
- 1050 Veal, cutlet or escalope, coated in egg and breadcrumbs, fried in margarine (NOT polyunsaturated), e.g. Wiener Schnitzel
- 1049 Veal, cutlet or escalope, coated in egg and breadcrumbs, fried in polyunsaturated oil or margarine, e.g. Wiener Schnitzel
- R 1053 Veal, stewed in thickened gravy. NOT canned
- R 1054 Veal, in white sauce; veal fricassee; blanquette de veau; NO vegetables, NOT canned
- 1246 Veal, jellied

VEAL AND VEAL DISHES

MILK

MILK BASED DRINKS

- 8217 Cadbury's Chocolate Milk Drink, low fat, made with skimmed milk, real chocolate drink, carton
- 7891 Coffee, iced, low fat, carton, ready to drink, e.g. Nescafé "Frappé"
- 2640 Drinking chocolate, from vending machine, as served
- For other drinking chocolate: see "Beverages"
- R 7768 Egg nog, drink with egg, whole milk , sugar and rum
- 7714 Mars chocolate milk drink
- 612 Milk, mixed skimmed and whole milk drink, pasteurised or sterilised, e.g. Crazy Milk, Breaktime, Stripes. NOT chocolate flavoured milk; NOT milk shake; NOT Nescafé Frappé
- 8212 Milk, mixed skimmed and whole milk drink, pasteurised or sterilised, chocolate flavoured, e.g. Crazy Milk, Breaktime, Stripes, Yazoo. NOT milk shake; NOT Cadburys Chocolate milk drink; NOT Mars chocolate milk drink; NOT Nescafé Frappe
- 8215 Milk shake; flavoured milk drink, fresh not UHT/longlife, made with semi-skimmed milk e.g. Frijj fresh classics shakes, Tesco fresh strawberry milk drink, Mr S Kool Shake
- R 627 Milk shake, home made, NO ice cream
- R 628 Milk shake, home made, thick, with ice cream
- 629 Milk shake, takeaway, thick, with ice cream, e.g. MacDonalds, Wimpy
- 8214 Milk shake, UHT, purchased, carton, made with whole milk, e.g. Ed the Duck Milkshake
- 8216 Milk (semi-skimmed) and fruit juice mixed, purchased, e.g. Frulait
- 8621 Nourishment, fortified milk drink
- 9072 Thick milk shakes, fresh, purchased e.g. Sainsbury's, Tesco extra thick American style
- 6829 Yakult

MILK BASED DRINKS

MILK - INCLUDES BOTTLES AND CARTONS

MILK - WHOLE

- 602 Milk, whole, pasteurised, Summer (May-October), silver top. Includes homogenised
- 603 Milk, whole pasteurised, Winter (November-April), silver top. Includes homogenised
- 604 Milk, whole, sterilised
- 605 Milk, whole, UHT or longlife
- 606 Milk, whole, Channel Island or Jersey, pasteurised; Breakfast Milk; Summer (May-October) gold top
- 607 Milk, whole, Channel Island or Jersey, pasteurised; Breakfast Milk; Winter (November-April) gold top
- 3145 Milk, unpasteurised, whole, e.g. Farm fresh untreated milk

MILK - SEMI-SKIMMED

- 608 Milk, semi-skimmed, pasteurised, summer (May-October), red and silver striped top
- 8543 Milk, semi-skimmed, pasteurised, winter (November-April), red and silver striped top
- 609 Milk, semi-skimmed, pasteurised, with added vitamins and milk solids, e.g. low fat Vitapint, Sainsbury's vitamin enriched half fat milk, Shape, Waitrose semi-skimmed milk with vitamins A and D.
- 610 Milk, semi-skimmed, UHT or longlife
- 611 Milk, semi-skimmed, UHT or longlife, Channel Island, e.g. 'Light Gold'
- 694 Milk, semi-skimmed, UHT or longlife, CANNED
- 694 Canned milk, semi-skimmed, UHT or longlife
- 9132 Semi-skimmed milk, sterilised

MILK - SKIMMED

- 613 Milk, skimmed, pasteurised, summer (May-October), blue and silver checked top
- 8544 Milk, skimmed, pasteurised, winter (November-April), blue and silver checked top
- 614 Milk, skimmed, pasteurised, with added vitamins and milk solids, e.g. Boots Shapers. NOT Vital or Calcia
- 615 Milk, skimmed, sterilised
- 616 Milk, skimmed, UHT or longlife
- 617 Milk, skimmed, UHT or longlife with added vitamins

MILK - INCLUDES BOTTLES AND CARTONS

OTHER MILK

- 601 Buttermilk
- 7716 Coffee Compliment, DRY WEIGHT
- 6983 Coffee creamer, LIQUID (glucose syrup and vegetable fat) eg liquid coffee compliment, Café Maid luxury coffee creamer. NOT coffee whitener
- 7717 Coffee whitener, DRY WEIGHT, e.g. Coffee Mate, own brand. NOT Coffee Compliment or Coffee Mate Lite
- 8213 Coffee whitener powder, low fat, DRY WEIGHT e.g. Coffee Mate Lite, Sainsbury's Coffee Plus low fat, Tesco Healthy Eating Light
- 6982 Coffee whitener, LIQUID (skimmed milk and non-milk fat) eg Millac Maid coffee whitener, Country Dale skimmed milk with non-milk fat. NOT coffee creamer
- 618 Condensed milk, skimmed, sweetened, undiluted
- 619 Condensed milk, whole, sweetened, undiluted
- 5105 Water used to make up dried milk
- 620 Dried milk, skimmed, with added vitamins, DRY WEIGHT, e.g. Marvel
- 695 Dried milk, skimmed, with added vitamins, made up, e.g. Marvel made up
- 621 Dried milk, skimmed, with added non-milk fat, DRY WEIGHT, e.g. Five Pints, Pint Size
- 696 Dried milk, skimmed, with added non-milk fat, made up, e.g. Five Pints, Pint Size
- 622 Evaporated milk, whole, unsweetened, undiluted
- 4713 Evaporated milk, light/low fat, canned e.g. Carnation Lite, own brand light
- 623 Goats milk, Summer (May-October)
- 624 Goats milk, Winter (November-April)
- 625 Sheep's milk, Summer (May-October)
- 626 Sheep's milk, Winter (November-April)
- 650 Soya alternative to milk. NOT sweetened; NOT flavoured
- 8512 Soya alternative to milk, sweetened, NOT flavoured
- 7715 Soya alternative to milk, flavoured, e.g. Granose, Provamel, Holland and Barratt, Whitewave
- 8726 Soya alternative to milk, sweetened, enriched with calcium, e.g. Tesco, Plamil

Vitapints: see previous milk sections

OTHER MILK

MILK PRODUCTS

CHEESE

COTTAGE CHEESE

- 686 Cottage cheese, flavoured with additions, e.g. pineapple, onion. NOT very low fat versions
- 687 Cottage cheese, plain. NOT very low fat versions
- 7725 Cottage cheese, very low fat, diet, low calorie, half fat, e.g. St Ivel Shape, own brand. NO additions
- 7726 Cottage cheese, with additions (e.g. pineapple, chives), very low fat; diet; low calorie; half fat; e.g. St Ivel Shape, own brand
- 7730 Cottage cheese snack pots, with vegetable additions including coleslaw, e.g. Eden Vale, own brand

OTHER CHEESE

- 693 Blue cheese, low fat only
- 668 Bonbel
- 691 Brie, any; Melbury
- 651 Caerphilly
- 681 Cambozola
- 652 Camembert
- 7731 Cheddar/Cheshire type low fat hard cheese, e.g. Delight, Tendale, Shape, own brand. NOT Edam reduced fat (15% fat), NOT low fat blue cheese, NOT Flora or sunflower oil type cheddar
- 8219 Cheddar type, made with sunflower oil: e.g. Flora
- 8218 Cheddar type smoked hard cheese, e.g. Applewood smoked cheddar
- 653 Cheddar, Australian
- 654 Cheddar, English
- 657 Cheddar, Irish
- 658 Cheddar, New Zealand
- 660 Cheddar, vegetarian
- 661 Cheddar, any other or non-specified country of origin. NOT smoked
- 684 Cheese spreads and triangles, flavoured, e.g. Primula. NOT Flora cheese spread
- 685 Cheese spreads and triangles, plain, e.g. Dairylea, Primula, Mr Men, Laughing Cow. NOT low fat, NOT Flora
- 4414 Cheese spreads and triangles, low fat, half fat, e.g. Delight, Kerrygold Light, Kraft Dairylea Light, Laughing Cow Light, Primula light low fat dairy spreads. NOT hard
- 7733 Cheese spread with sunflower oil e.g. Flora
- 662 Cheshire; blue Cheshire

CHEESE

688	Cream cheese, (full fat) with or without additions (NOT walnuts). NOT full fat soft cheese; NOT medium fat soft cheese
692	Cream cheese (full fat) with walnuts
2742	Cream cheese spread, Benecol ONLY
664	Danish Blue
665	Derby
666	Sage Derby
681	Dolcelatte
667	Double Gloucester
668	Edam. NOT reduced fat
7727	Edam type, reduced fat (11%), e.g. Sainsbury's, Safeway, Trimrite Dutch cheese
671	Emmental; Gruyere
669	Feta
7057	Goats cheese, full fat
681	Gorgonzola
670	Gouda
671	Gruyere; Emmental
6981	Halloumi
689	Lactic cheese spread
673	Lancashire
672	Leicestershire, e.g. red leicester
6978	Mascarpone
691	Melbury
675	Mozzarella
6980	Paneer
676	Parmesan
6958	Port Salut
677	Processed cheese slices or blocks, e.g. Kraft Singles. NOT reduced fat; NOT smoked cheese or cheese spread; NOT Dairy Lea
7732	Processed cheese spread type slices, e.g. Dairy Lea, Cheesestings. NOT reduced fat; NOT Kraft singles
7729	Processed cheese slices, low fat e.g. Kraft Light Singles, Delight Cheese slices, Tesco Healthy Eating processed cheese slices
7734	Quark, very low fat soft cheese

CHEESE

678	Red Windsor
7728	Ricotta
681	Roquefort; Gorgonzola; Dolcelatte
666	Sage Derby
682	Smoked processed cheese, with or without additions, e.g. ham, mushrooms, shrimp. NOT smoked hard cheddar type
7724	Snack hard cheese, any flavour, e.g. Mr Cheese Cheds
2703	Soft cheese (full fat), with or without additions (NOT walnuts), e.g. Philadelphia, Boursin, Roule. NOT cream cheese
7112	Soft cheese (medium fat) with or without additions (NOT walnuts), e.g. Philadelphia Light, Safeway medium fat light soft cheese
6979	Soft cheese (low fat) with or without additions (NOT walnuts) e.g. St Ivel shape low fat soft cheese, Sainsbury's creamery extra light
4082	Soya cheese, e.g. Marigold, Plamil Veeze spread
6958	St Paulin
679	Stilton, blue
680	Stilton, white
8219	Sunflower oil cheddar type "cheese", alternative to cheddar cheese, e.g. Flora
683	Wensleydale

CHEESE

CHEESE DISHES

R 801 Cheese and egg flan

6996 Cheese nachos (corn chips with melted cheese and salsa)

R 818 Welsh rarebit, i.e. cheese, milk, seasoning. NO toast

R 817 Welsh rarebit, including white bread toasted, cheese, milk and seasoning

R 7773 Welsh rarebit, including wholemeal bread toasted, cheese, milk, and seasoning

Quiche, Soufflé & Omelette: see “Eggs/Egg Dishes”

Cauliflower cheese, cheese and onion pastie, other cheese dishes: see “Vegetable Dishes”

CHEESE DISHES

CREAM (INCLUDING IMITATION CREAM)

- 643 Aerosol spray cream, dairy, e.g. Anchor premium dairy, Anchor real dairy cream swirls, NOT reduced fat
- 6968 Aerosol spray cream, non-dairy, e.g. Anchor Big Top, Anchor Delissimo, Roselle Supreme, Elmlea
- 6986 Aerosol spray cream, dairy, half fat, e.g. Anchor Light Swirls
- 630 Artificial cream; Dream Topping; made up with whole milk, weight as served
- 7720 Artificial cream; Dream Topping; made with semi-skimmed milk, as served
- 4209 Artificial cream; Dream Topping; made with skimmed milk, as served
- 9112 Birds Eye Superwhip, low fat "cream"
- 632 Clotted cream
- 3014 Crème fraiche. NOT reduced or low fat. NOT crème fraiche dessert
- 6985 Crème fraiche. Reduced or low fat. NOT crème fraiche dessert
- 633 Cultured sour cream
- 5335 Delight double imitation cream
- 5336 Delight single imitation cream
- 5337 Delight whipping imitation cream
- 634 Double dairy cream, fresh or frozen, includes extra thick double cream
- 635 Double dairy cream, UHT or longlife
- Dream Topping: see *artificial cream*
- 2681 Elmlea, imitation cream, double cream only
- 4328 Elmlea, imitation cream, single cream only
- 7718 Elmlea, imitation cream, whipping cream only
- 6828 Elmlea Light, imitation single cream, UHT
- 6984 Extra thick dairy cream, fresh, 24% fat
- 636 Half dairy cream, fresh. NOT Shape
- 637 Half dairy cream, UHT or longlife. NOT Shape
- 6987 Simply double dessert topping, Nestle. NOT Tip-Top dessert toppings
- 638 Single dairy cream, fresh, includes extra thick single cream
- 639 Single dairy cream, frozen
- 640 Single dairy cream, UHT or longlife
- 7719 Smatana
- 633 Sour cream, cultured

CREAM (INCLUDING IMITATION CREAM)

- 641 Sterilised cream, double, canned
- 642 Sterilised half cream
- 697 Tip-Top dessert topping. NOT Tip Top pours and whips. NOT Nestle simply double dessert topping
- 8368 Tip Top Pours And Whips. NOT Tip Top. NOT Nestle simply double dessert topping
- 643 Whipping dairy cream, canned aerosol spray cream. NOT reduced/low fat
- 6986 Whipping dairy cream, half fat, canned aerosol spray cream
- 644 Whipping dairy cream, fresh, includes extra thick whipping cream
- 645 Whipping dairy cream, frozen
- 646 Whipping dairy cream, UHT or longlife

CREAM (INCLUDING IMITATION CREAM)

FROMAGE FRAIS

- 8221 Fromage frais, chocolate; nut; toffee; butterscotch, e.g. Sainsbury's chocolate petit fromage frais. NOT fruit flavoured. NOT very low fat or diet
- 7736 Fromage frais, creamy; full fat, fruit or fruit flavour, e.g. Muller, own brand creamy, own brand petit fromage frais. NOT low fat, virtually fat free or diet, NOT children's fromage frais, NOT fortified fromage frais
- 5255 Fromage frais, fruit or fruit flavour, fortified with vitamins A, C and D and calcium ONLY. NOT virtually fat free or diet fromage frais
- 7737 Fromage frais, fruit or fruit flavour, fortified with added vitamins and calcium e.g. Tesco's fromage frais with added vitamins. NOT virtually fat free or diet fromage frais
- 5254 Fromage frais, low fat or unspecified, fruit or fruit flavour, e.g. Sainsbury's low fat fromage frais, Ski Fruitful. Includes children's fromage frais. NOT virtually fat free or diet fromage frais. NOT fortified.
- 7735 Fromage frais, natural, unflavoured, unsweetened, e.g. own brand. NOT containing fruit, NOT reduced fat
- 7985 Fromage frais, very low fat, virtually fat free, diet, fruit or fruit flavour, with artificial sweetener, e.g. St Ivel Shape, Weight Watchers fruit on the bottom. NOT fortified
- 7738 Fromage frais, very low fat, virtually fat free, diet, natural unflavoured, unsweetened, e.g. own brand, Tesco healthy eating virtually fat free natural fromage frais, Sainsbury's diet/virtually fat free natural fromage frais
- 7739 Fromage frais, very low fat, virtually fat free, fruit or fruit flavour. NOT containing artificial sweetener e.g. Sainsbury's diet fromage frais, Onken very low fat fromage frais. NOT fortified
- 7740 Fromage frais mousse
- 7734 Quark, very low fat soft cheese

FROMAGE FRAIS

OTHER DAIRY DESSERTS

- 8205 Buttermilk desserts, fruit flavoured
- 8661 Chocolate dairy desserts, chilled, e.g. Nestlé Rolo, Cadburys Caramel, Nestlé Milky Bar, Cadburys Dairy Milk, Chambourcy Hippo Milky dessert, Cadburys Chocolate mint dessert, Cadburys Flake dessert, Nestlé Creament. NOT low fat / Light. NOT topped with cream. NOT twinpot desserts
- 7709 Chocolate mousse, rich e.g. Cadburys Dairy Milk mousse, Chambourcy Real Chocolate Mousse, Nestlé Aero Mousse, Nestlé Duo de Mousse, Hippo Potta Milk Chocolate Mousse, purchased. NOT topped with cream
- 7710 Chocolate mousse, other. NOT rich; NOT light or low fat, e.g. Munch Bunch Chocolate Pots, Hippo Pota MUD chocolate mousse, own brand chocolate mousse. NOT mousse topped with cream
- 9791 Chocolate mousse, low fat; low calorie; light, e.g. Cadburys Light, own brand low fat chocolate mousse, St. Michael Lite milk chocolate mousse
- R 582 Chocolate mousse, homemade, made with double cream
- 5257 Chocolate sundae, e.g. St Michael Triple Chocolate sundae, own brand. NOT low fat / light
- 5133 Chocolate twinpot desserts - chocolate dessert with separate nuts/dried fruit/cereal/caramel, e.g. Cadburys Picnic twin dessert, Cadburys Fruit and Nut twin, Nestlé Munchies, Nestlé Toffee Crisp.
- 2709 Crème Brulee, homemade
- R 517 Creme caramel; cream caramel; homemade, with whole milk
- R 9627 Creme caramel; cream caramel, homemade, with semi-skimmed milk
- 7695 Creme Caramel; cream caramel; purchased. Includes Yoplait L'île au caramel. NOT topped with cream, NOT creme brulee
- 7696 Cream desserts topped with cream, chocolate, caramel, or fruit flavoured, but NOT containing fruit, e.g. Co-op supreme chocolate dessert, Iceland chocolate dessert with cream, Sainsbury's chocolate/caramel surprise. NOT creme brulee.
- 7697 Cream desserts, creamy desserts with fruit, e.g. Edenvale Strawberry Supreme, own brand
- R 9819 Egg custard, baked or as sauce, made with semi-skimmed milk. NOT custard tart
- R 545 Egg custard, baked or as sauce; made with whole milk. NOT custard tart
- R 544 Fruit fool, any fruit, e.g. gooseberry, rhubarb. Homemade only.
- 8556 Fruit fool, any fruit, e.g. gooseberry, rhubarb. Purchased, e.g. own brand. NOT low fat
- 5258 Fruit fool, low fat, e.g. St Michael Lite fruit fool, own brand low fat fruit fool
- Instant dessert; Instant whip; packet mix, as served: see *Angel Delight* in "Milk Puddings"
- R 554 Jelly, NOT low sugar, made with whole milk
- R 7702 Jelly, NOT low sugar, made up with semi-skimmed milk
- R 7703 Jelly, NOT low sugar, made up with skimmed milk
- R 7705 Jelly, low sugar, made up with whole milk
- R 7706 Jelly low sugar, made up with semi-skimmed milk

OTHER DAIRY DESSERTS

- R 7707 Jelly, low sugar, made up with skimmed milk
- 8557 Jelly, milk, purchased, e.g. Chambourcy
- R 555 Junket, made with whole milk
- 8557 Milk jelly, purchased, e.g. Chambourcy
- 7711 Mousse, fruit flavour, e.g. Strawberry or Banana Hippo Potta Mousse, own brand. NOT chocolate mousse. NOT topped with cream
- 7712 Mousse, frozen, purchased, any flavour, not low fat or low calorie
- 7709 Mousse, chocolate, rich e.g. Cadburys Dairy Milk mousse, Chambourcy Real Chocolate Mousse, Nestlé Aero Mousse, Nestlé Duo de Mousse, Hippo Potta Milk Chocolate Mousse, purchased. NOT mousse topped with cream
- 7710 Mousse, chocolate, other. NOT rich; NOT Light or low fat, e.g. Munch Bunch Chocolate Pots, Hippo Potta MUD chocolate mousse, own brand chocolate mousse. NOT mousse topped with cream
- 9791 Mousse, chocolate, low fat, low calorie, light, e.g. Cadburys Light, own brand low fat chocolate mousse, St. Michael Lite milk chocolate mousse
- R 582 Mousse, homemade, made with double cream
- 7711 Mousse, fruit flavoured, e.g. St Ivel Real orange and lemon, strawberry or banana Hippo Potta Mousse, own brand. NOT fruit yogurt mousse

OTHER DAIRY DESSERTS

YOGURT

THIS SECTION CONTAINS THE FOLLOWING SUBSECTIONS:

A. CREAMY YOGURT, INCLUDING GREEK YOGURT

B. LOW FAT YOGURT

C. VERY LOW FAT YOGURT

D. OTHER YOGURT - NOT MADE FROM COWS MILK

E. YOGURT PRODUCTS

A. CREAMY YOGURT, INCLUDING GREEK YOGURT

- 5259 Thick and creamy twinpot fruit yogurts, full fat yogurt with separate fruit portion, e.g. Muller fruit corner, Sainsbury's Duet, Tesco Fruit Plus, Safeway Double Treat, Co-op Duo, Munch Bunch Split Pots, Ski Bio Split. NOT Muller kids corner
- 9881 Thick and creamy twinpot yogurt with separate cereal/ crumble portion, NO fruit e.g. Muller crunch corner, Muller crumble corner, Chambourcy whole milk yogurt with Nesquik cereal, own brand crunch / crumble twinpots
- 5408 Thick and creamy twinpot yogurt with separate cereal/ crumble portion, with fruit
- 701 Thick and Creamy; whole milk yogurt; fruit or any other flavour, includes whole milk bio and organic yogurt e.g. Onken biopot wholegrain peach flavour wholemilk yogurt, Sainsbury's wholemilk fruit yogurt. NOT pasteurised, longlife or UHT
- 5361 Thick and creamy; whole milk yogurt, with added sugar, no fruit, e.g. Muller plain classic
- 5260 Thick and creamy; whole milk yogurt, fortified with vitamins A, C and D, e.g. Ribena
- 5261 Thick and creamy; whole milk yogurt, fortified with vitamin C, e.g. Mr Men
- 5529 Thick and creamy; whole milk yogurt; fortified with vitamin E and B vitamins, e.g. Müller Kids Corner
- 8613 Thick and Creamy; whole milk yogurt, longlife or pasteurised or UHT (not refrigerated), fruit or any other flavour, e.g. Delice thick and creamy pasteurised yogurt, Iceland thick and creamy pasteurised yogurt
- 702 Thick and Creamy; whole milk yogurt; natural, unsweetened, e.g. Sainsbury's whole milk natural yogurt. Includes natural bio and organic yogurt. NOT Greek style yogurt
- 9142 Greek or Greek style cows milk yogurt, with fruit, made with whole milk e.g. Sainsbury's apricot Greek style yogurt, Tesco Greek style thick and creamy blackcurrant yogurt
- 6997 Greek or Greek style cows milk yogurt, with honey e.g. Tesco Greek style thick and creamy yogurt with honey
- 7741 Greek or Greek style cows milk yogurt, natural, unflavoured, e.g. Total, Asda natural Greek style, Safeway natural strained Greek yogurt. NOT Total Light
- 7742 Greek sheeps milk yogurt, natural, unflavoured and unsweetened e.g. Total original sheeps yogurt

YOGURT

B. LOW FAT YOGURT

- 703 Low fat yogurt, any flavour but not containing fruit or nuts, e.g. toffee/vanilla flavour. NOT longlife, UHT or pasteurised. NOT low fat natural yogurt. NOT French set yogurt
- 704 Low fat yogurt, containing fruit only, includes low fat bio or organic yogurt and low fat twin pot yogurt, e.g. Ski Fruit, Ski Extra Fruit, Ski Bio Split, Ski Fruit Spoon Pot, Tesco garden fruits mild and creamy bio low fat strawberry yogurt. NOT low fat French set fruit yogurt. NOT longlife, UHT or pasteurised. NOT Benecol
- 2730 Low fat yogurt, containing fruit, Benecol ONLY
- 2702 Low fat yogurt, French set fruit yogurt ONLY. NOT pasteurised, longlife or UHT
- 706 Low fat yogurt, containing muesli or nuts only e.g. Sainsbury's low fat hazelnut yogurt. NOT longlife, UHT or pasteurised.
- 712 Low fat yogurt, natural, slightly sweetened. NOT longlife, UHT or pasteurised.
- 705 Low fat yogurt, natural, unsweetened. NOT longlife, UHT or pasteurised.
- 708 Low fat yogurt, longlife, UHT or pasteurised (not refrigerated), any fruit or flavour, e.g. Fruit basket low fat yogurt, Dennis the Menace.
- 7749 Low fat fruit yogurt, fortified with vitamins A and C, e.g. St Ivel Fiendish Faces
- 7748 Low fat fruit yogurt, fortified with vitamins A, C and D

C. VERY LOW FAT; VIRTUALLY FAT FREE YOGURT

- 8376 Very low fat; virtually fat free yogurt, twin pot fruit yogurts with separate fruit portion, with artificial sweetener, e.g. St Ivel Shape Twinpot, Sainsbury's Duet diet. NOT longlife or UHT or pasteurised
- 2701 Very low fat; virtually fat free fruit yogurt, with artificial sweetener, e.g. Tesco healthy eating strawberry flavour virtually fat free bio yogurt, Muller light. NOT virtually fat free twinpot fruit yogurts
- 8990 Very low fat; virtually fat free yogurt, containing fruit, with added sugar. NO artificial sweetener, e.g. Loseley very low fat yogurt. NOT longlife or UHT or pasteurised
- 9272 Very low fat; virtually fat free yogurt, any flavour but not containing fruit or nuts, with artificial sweetener, e.g. St Ivel Shape French style set, not long life, UHT or pasteurised. NOT natural virtually fat free yogurt
- 2700 Very low fat; virtually fat free yogurt, natural, unsweetened, includes bio varieties. NOT longlife, UHT or pasteurised
- 8488 Very Low Fat Yogurt, any flavour, with Simplese, Tesco Healthy Eating Bio only
- 8223 Very low fat yogurt, longlife or UHT or pasteurised (not refrigerated), any fruit or flavour, e.g. St Ivel Prize longlife, Fruttis, Delice very low fat

D. OTHER YOGURT - NOT MADE FROM COWS MILK

- 7742 Greek yogurt, sheep, e.g. Total. NOT containing fruit or honey.
- 7743 Soya alternative to yogurt, full fat, sweetened
- 9115 Soya alternative to yogurt, low fat, with added sugar and fruit, e.g. Soja Sun
- 710 Goats or sheeps yogurt, any flavour. NOT artificially sweetened. NOT Greek yogurt

YOGURT; LOW FAT, VERY LOW FAT, OTHER

E. YOGURT PRODUCTS

- 6829 Actimel yogurt drink
- 8513 Yogurt choc ice
- 8220 Custard style fruit yogurt, e.g. Sainsbury's fruit on the bottom custard style. NOT custard fruit dessert
- 8229 Frozen yogurt, ice lollies
- 8227 Frozen yogurt in a cone,
- 8228 Frozen yogurt, NOT in a cone, e.g. Orchard Maid, own brand; includes Munch Bunch frozen yogurt lolly. NOT "Mr Whippy" type
- 7757 Frozen yogurt, NOT in a cone, e.g. Mr Whippy type only
- 6829 Yakult
- 9390 Yogurt dressings, purchased
- 711 Yogurt drink, UHT (not refrigerated)
- 7756 Yogurt drink, light, with artificial sweetener, e.g. Ski Cool Lite, Yop Light, own brand light
- 7755 Yogurt drink, NOT containing artificial sweetener, e.g. Yop, Ski Cool, own brand. NOT light yogurt drinks
- 5213 Yogurt drink, fortified with vitamins, e.g. Ribena
- 7753 Yogurt fruit mousse, NOT fortified, e.g. Boots, own brand
- 8224 Yogurt mousse with cream,
- 7754 Yogurt and jelly dessert, e.g. Munch Bunch Wobblers, Muller Jelly Invaders

YOGURT PRODUCTS

PUDDINGS, INCLUDING ICE CREAM

ICE CREAM

Code wafers and cornets separately (code 273) in “Biscuits”

Ice cream topping sauce (code 2227) and Ice Magic (code 2652) in “Sweet spreads, fillings and icings”

Ice lollies, not containing ice cream in “sugar confectionery”

- 570 Arctic Roll - sponge roll with ice cream filling
- 8225 Choc ices, luxury, made with real dairy ice cream e.g. Magnum, Bounty, Galaxy, Aero, Sainsbury's Indulgence on a stick, own brand. NOT choc ices with caramel, nuts or biscuits
- 730 Choc ices, made with non dairy ice cream or unspecified, e.g. Walls Chunky, Blue Ribbon choc ices, own brand. NOT choc ices with caramel, nuts or biscuits. NOT reduced fat
- 8226 Choc ice, containing caramel, biscuits or nuts, e.g. Mars, Snickers, Magnum Almond, Cadbury's Caramel, Cadbury's Crunchy, Nestlé Lion, Haagen Dazs Choc Nut, Fudge Bar, Penguin ice cream bar, Feast Bar, Feastwich, Own brand, Kit Kat,
- 2852 Choc ices, reduced fat, e.g. Flyte ice-cream bar
- 732 Feast; Big Feast, Toffee Feast
- R 9814 Homemade ice cream
- 9927 Ice cream alternative, Virtually Fat Free e.g. Walls Too Good To Be True
- 722 Ice cream, non-dairy, hard, block, vanilla
- 6969 Ice cream, non dairy, hard, block, chocolate ONLY
- 726 Ice cream, non-dairy, hard, block, any other flavour, includes flavoured ice cream on a stick, e.g. Kick Off. NOT chocolate
- 723 Ice cream, non-dairy, soft scoop, vanilla, e.g. Walls Blue Ribbon
- 6970 Ice cream, non-dairy, soft scoop, chocolate ONLY, e.g. Walls Blue Ribbon
- 8009 Ice cream, non-dairy, soft scoop, containing nuts, toffee, caramel or biscuit pieces, e.g. Gino Ginelli toffee fudge
- 727 Ice cream, non-dairy, soft scoop, any other flavours, e.g. strawberry, coffee, neapolitan
- 720 Ice cream, dairy, hard, block, vanilla
- 6971 Ice cream, dairy, hard, block, chocolate ONLY
- 724 Ice cream, dairy, hard, block, flavoured. NOT chocolate
- 721 Ice cream, dairy, soft scoop, vanilla, e.g. Walls Cream of Cornish. NOT luxury or premium ice cream
- 6972 Ice cream, dairy, soft scoop, chocolate, e.g. Walls Carte D'or dairy chocolate ice cream, own brand dairy chocolate ice cream
- 8663 Ice cream, dairy, soft scoop with nuts, caramel, toffee or biscuit pieces. NOT luxury or premium ice cream
- 725 Ice cream, dairy, soft scoop, any other flavours, e.g. strawberry, coffee, neapolitan. NOT luxury or premium ice cream
- 5251 Ice cream, luxury or premium, dairy, vanilla only, e.g. Mackies, Loseley, Haagen Dazs, own brands

ICE CREAM

- 5155 Ice cream, luxury or premium, dairy, containing chocolate, caramel, toffee, nuts and/or biscuit pieces, e.g. Haagen Dazs, Sainsbury's Indulgence, Ben and Jerrys, Mackies, Ranieri, Asda Gold Medal, Tesco Luxury
- 5252 Ice cream, luxury or premium, dairy, any other flavours, e.g. strawberry, coffee, neapolitan, e.g. Haagen Dazs, Sainsbury's Indulgence, Ben and Jerry's, Mackies, Ranieri, Asda Gold Medal, Tesco Luxury
- 7758 Ice cream, reduced or low calorie, e.g. Weight Watchers, Walls Blue Ribbon Vanilla Light, Walls Strawberry Light, Dolcella. NOT Walls Too Good To Be True
- 728 Ice cream, "Mr Whippy" type
- 731 Ice cream cornet, purchased, e.g. King Cone, Cornetto, own brand. Chocolate/chocolate mint and nut ONLY
- 6973 Ice cream cornet, purchased, e.g. King cone, Cornetto, own brand. Strawberry or any other flavour. NOT chocolate/chocolate mint and nut
- 7759 Ice cream desserts, e.g. Walls Viennetta, Sonata, Romantica, own brands, Nestle After Eight ice cream dessert
- 729 Ice lollies, containing ice cream, e.g. Mivvi, Own brand Splits, Twister, Solero, Opal Fruits ice lolly
- 7750 Kulfi, Indian ice cream, homemade or purchased
- 7761 Milk ice lollies, e.g. Walls Mini Milk, Friff
- R 585 Sorbet, any, homemade or purchased
- 9053 Soya ice cream, e.g. Vive Frozen Vanilla dessert, Tofutti, Winner Swedish Glace

ICE CREAM

MILK PUDDINGS - CEREAL BASED

- 551 Angel Delight; Instant Whip; instant dessert; NOT sugar free, made up with whole milk. Includes potted Angel Delight and Instant Whip ready to eat.
- 3179 Angel Delight; Instant Whip; instant dessert; NOT sugar free, made up with semi-skimmed milk
- 4319 Angel Delight; Instant Whip; instant dessert; NOT sugar free, made up with skimmed milk
- 587 Angel Delight; Instant Whip; instant dessert; sugar free, made up with whole milk
- 7693 Angel Delight; Instant Whip; instant dessert; sugar free, made up with semi-skimmed milk
- 5035 Angel Delight; Instant Whip; instant dessert; sugar free, made up with skimmed milk
- R 506 Blancmange, made with whole milk
- R 9636 Blancmange, made with semi-skimmed milk
- 546 Custard, canned, e.g. own brand ready to serve canned custard
- 547 Custard, as served, made with powder, whole milk and sugar
- 548 Custard, as served, made with powder, semi-skimmed milk and sugar
- 549 Custard, as served, made with powder, skimmed milk and sugar
- 9349 Custard as served made with powder and skimmed milk. No sugar
- 8152 Custard, carton, NOT low fat, e.g. Ambrosia, Sainsbury's UHT ready to serve custard. NOT fresh chilled custard
- 6960 Custard, fresh, chilled. NOT low fat, e.g. St Michael fresh custard sauce, own brand fresh chilled custard
- 7699 Custard, confectioners only
- 8145 Custard, instant, as served, made with powder and water, e.g. Birds whisk and serve custard
- 8857 Custard, instant, sugar free, as served, made with powder and water e.g. Sainsbury's sugar free instant custard
- 8100 Custard low fat, ready to serve, e.g. Birds. NOT canned
- 8206 Custard low fat, ready to serve, canned, e.g. Ambrosia low fat ready to serve canned custard
- 8207 Custard fruit dessert, e.g. Dairy Crest Custard Crazy, own brand. NOT custard style yogurt
- 8207 Fruit custard dessert, e.g. Dairy Crest Custard Crazy, own brand. NOT custard style yogurt
- 559 Milk pudding, rice; sago; semolina or tapioca, canned. NOT light or low calorie, NOT fruit or flavoured, NOT artificially sweetened. e.g. Ambrosia creamed rice pudding.
- 8172 Milk pudding, rice; sago; semolina or tapioca, canned, chocolate or any flavour but NOT containing fruit, NOT low calorie
- 556 Milk pudding, sago; semolina or tapioca, made with whole milk. Homemade. NOT rice pudding
- 557 Milk pudding, sago; semolina or tapioca, made with semi-skimmed milk. Homemade. NOT rice pudding
- 558 Milk pudding, sago; semolina or tapioca, made with skimmed milk. Homemade. NOT rice pudding

MILK PUDDINGS - CEREAL BASED

- 3068 Rice pudding, low calorie, low fat, with artificial sweetener, canned, e.g. Weight Watchers, Ambrosia low fat rice pudding. NOT fruit or flavoured
- 559 Rice pudding; sago; semolina; tapioca; canned. NOT light or low calorie, NOT fruit or flavoured, NOT artificially sweetened
- 8172 Rice pudding; sago; semolina; tapioca; chocolate or any flavour but NOT containing fruit, canned. NOT low calorie
- 8696 Rice pudding; sago; semolina; tapioca; chocolate or any flavour but NOT containing fruit, e.g. Ambrosia. NOT canned, NOT low calorie, NOT homemade
- 8173 Rice pudding; sago; semolina; tapioca; with fruit but NOT flavoured, canned. NOT low calorie
- 8174 Rice pudding; sago; semolina; tapioca; with fruit but NOT flavoured, e.g. Muller Fruit Rice Dessert. NOT canned, NOT low calorie, NOT homemade
- 63 Rice, short grain - 'pudding rice', boiled or baked in whole milk, no sugar
- 64 Rice, short grain - 'pudding rice', boiled or baked in whole milk, with sugar
- 65 Rice, short grain - 'pudding rice', boiled or baked in semi-skimmed milk, no sugar
- 66 Rice, short grain - 'pudding rice', boiled or baked in semi-skimmed milk, with sugar
- 67 Rice, short grain - 'pudding rice', boiled or baked in skimmed milk, no sugar
- 9559 Rice, short grain - 'pudding rice', boiled or baked in semi-skimmed milk and water, no sugar
- 68 Rice, short grain - 'pudding rice', boiled or baked in skimmed milk, with sugar
- 75 Rice, short grain - 'pudding rice', boiled or baked in whole milk, with sugar and butter or margarine
- R 560 Rice with egg and whole milk; baked rice custard
- R 7683 Sevyiaan (sweet Indian snack)
- R 2452 White sauce, made with whole milk, sweet

Yorkshire pudding: see "Pasta, rice and cereals"

MILK PUDDINGS - CEREAL BASED

SPONGE PUDDINGS

Sponge cake, chocolate: see *chocolate sponge cake*

- R 542 Eve's pudding
- R 583 Flan, fruit; sponge base with fruit
- 3834 Jam roly poly, purchased
- 566 Sponge pudding, canned, any
- R 567 Sponge pudding, steamed, microwaved or baked, plain or ginger
- R 568 Sponge pudding, steamed, microwaved or baked, with dried fruit (currants, raisins etc.)
- R 542 Sponge pudding, steamed, microwaved or baked, with fruit (NOT dried fruit), e.g. Eve's pudding, upside down pudding
- R 569 Sponge pudding, steamed, microwaved or baked, with jam, syrup or treacle
- 7713 Spotted Dick, purchased
- R 571 Suet pudding, made with animal suet, steamed or baked, plain, sweetened. NOT spotted Dick
- R 542 Upside down pudding; sponge pudding, steamed or baked with fruit, e.g. apple, pineapple

SPONGE PUDDINGS

OTHER PUDDINGS

R 502 Apple crumble. NOT wholemeal crumble

Apple pie: see *fruit pies*

9025 Angel delight; Instant Whip; instant dessert; NOT sugar free, made up with water

Angel Delight made up with milk - see "Milk Puddings"

R 501 Apple snow, made with stewed apple, sugar and egg white

6965 Banoffee pie, purchased

R 504 Batter pudding, sweet, made with flour, egg, milk, and syrup

R 505 Bread pudding, made with bread, butter, dried fruit, sugar and spice

R 507 Bread and butter pudding, made with bread, butter, sugar, milk, egg and currants

R 508 Charlotte pudding, made with bread, butter, sugar, fruit

R 509 Cheesecake, baked, homemade

510 Cheesecake, with fruit topping, purchased, frozen or chilled. NOT individual cheesecakes. NOT low fat

6962 Cheesecake, with fruit topping, purchased, frozen or chilled, individual. NOT low fat

8626 Cheesecake, chocolate/toffee/caramel, purchased, frozen or chilled NO fruit

5474 Cheesecake, low fat, with fruit topping, purchased, frozen or chilled, includes individual low fat cheesecakes, e.g. McVities Go Ahead cheesecake, Heinz weight watchers strawberry cheesecake individual

588 Cheesecake, packet mix, as served, includes fruit topping

R 8787 Cheesecake, packet mix, as served, NO fruit topping

R 511 Christmas pudding, homemade

512 Christmas pudding, purchased

6832 Compote, summerfruits, e.g. M&S

5160 Crepes with fruit filling, purchased e.g. Findus dessert crepes

R 502 Crumble, apple only. NOT wholemeal topping. NOT purchased

R 9950 Crumble, apple only, made with polyunsaturated margarine. NOT wholemeal topping. NOT purchased

R 9934 Crumble, blackcurrant only, made with margarine (NOT polyunsaturated) . NOT wholemeal topping. NOT purchased

R 503 Crumble, fruit NOT apple; NOT blackcurrant . NOT wholemeal topping. NOT purchased

6966 Crumble, fruit, purchased

R 3176 Crumble, wholemeal, apple, topping made with margarine (NOT polyunsaturated), wholemeal flour, sugar. NOT purchased

R 7698 Crumble, wholemeal, any fruit except apple, topping made with margarine (NOT polyunsaturated), wholemeal flour, sugar. NOT purchased

OTHER PUDDINGS

- 5959 Danish bar, vanilla, Sara Lee ONLY
- R 7768 Egg nog, drink with egg, whole milk , sugar and rum
- 8208 Fruit cup, jelly with fruit, purchased, e.g. Chivers Pure fruit cup
- 577 Fruit fritters, any fruit, fried in blended vegetable oil. NOT purchased from a takeaway shop
- 580 Fruit fritters, any fruit, fried in blended vegetable oil, purchased from a takeaway shop
- 578 Fruit fritters, any fruit, fried in lard
- 579 Fruit fritters, any fruit, fried in polyunsaturated oil
- 5907 Fruit trifle tarts, any fruit, individual, purchased e.g. Mr. Kipling's
- 6133 Fruitini, mixed fruit pieces in tropical fruit sauce, Del Monte ONLY
- R 553 Jelly, NOT low in sugar, made with water, includes ready to eat pot
- R 7704 Jelly, low sugar, made up with water
- 8208 Jelly, with fruit, purchased, e.g. Chivers Pure fruit cup
- 4743 Mousse, instant, packet, made up with water, e.g. Birds Mousse
- R 350 Meringue, no cream or filling
- R 351 Meringue, filled with artificial cream ONLY
- R 352 Meringue, filled with fresh cream ONLY
- 6965 Mississippi mud pie, purchased
- R 8627 Pancakes made with semi-skimmed milk NO sugar
- R 563 Pancakes made with whole milk; no sugar
- Pavlova – see Egg dishes
- R 7682 Pinni, dabra (Asian sweetmeat)
- R 564 Queen of puddings, made with breadcrumbs, whole milk, jam and egg white
- R 584 Rum baba; savarin
- 3561 Scotch pancakes; drop scones with fruit, purchased
- Scones: see "Buns and Pastries"
- R 584 Savarin; Rum baba
- 585 Sorbet, any, homemade or purchased
- R 565 Soufflé, sweet, baked
- 9533 Tiramisu, purchased
- 9374 Tortes, not chocolate based, purchased, frozen or chilled, (i.e. biscuit base with mousse and cream topping)
e.g. Sara Lee Lemon Torte. NOT fruit flan with pastry base

OTHER PUDDINGS

- R 573 Trifle, homemade, with cake, fruit, custard and fresh cream
- 6964 Trifle, chocolate, purchased. NOT chocolate mousse
- 574 Trifle, fruit, purchased, with fresh cream
- 575 Trifle, purchased, frozen, with dairy cream. NOT artificial cream
- R 581 Trifle, with artificial cream, e.g. Bird's trifle
- 3204 Waffles, sweet, grilled, purchased

OTHER PUDDINGS

SAUCES, SOUPS, PICKLES, GRAVIES AND CONDIMENTS

SAUCES, PICKLES, GRAVIES AND CONDIMENTS

- R 2409 Barbecue sauce, any
- 9400 Black bean sauce
- R 2501 Blue cheese dressing
- 2410 Bovril, any, not made up
- 6891 Brandy sauce
- R 2411 Bread sauce
- 2412 Brown sauce, bottled, e.g. OK, HP, Daddies
- 9389 Capers
- R 2413 Cheese sauce made with whole milk
- R 8629 Cheese sauce made with semi skimmed milk
- R 8664 Cheese sauce made with skimmed milk
- 9479 Cheese sauce, made up from packet mix, with whole milk
- 9480 Cheese sauce, made up from packet mix, with semi-skimmed milk
- 9481 Cheese sauce, made up from packet mix, with skimmed milk
- 2414 Chilli pickle, oily
- 2415 Chilli pickle, sour
- 2416 Chilli pickle, sweet
- 9397 Chilli sauce
- 2417 Chutney, any, homemade, e.g. apple, tomato. NOT purchased
- 2418 Chutney, purchased, e.g. tomato, tomato relish, sweetcorn relish, any other chutney or relish.
NOT mango chutney
- 2419 Chutney, mango
- 2457 Cook-in-sauces, canned, any
- 2458 Cook-in-sauces, packet, any, as served
- 8648 Cook-in-sauces, any flavour, carton, bottled. NOT canned; NOT packet; NOT tomato-based pasta
sauces (8358). Includes sizzle and stir sauces.
- R 2501 Coleslaw dressing, Kraft only
- 2436 Cranberry sauce
- 9375 Curry paste, any strength, e.g. Pataks, Sharwoods, Subahdar
- 2420 Curry sauce, purchased

SAUCES, PICKLES, GRAVIES AND CONDIMENTS

8358	Dolmio pasta sauce
R 2421	Egg sauce; white savoury sauce with egg
R 2422	French dressing: oil and vinegar dressing, homemade NOT oil free
3456	French dressing oil free; oil free vinaigrette. NOT reduced fat
9391	French dressing, purchased. e.g. Kraft, Heidelberg own brand. NOT reduced fat or oil free
2704	French dressing, low fat, purchased, e.g. Marks and Spencers
9395	Garlic puree
2424	Gravy, thickened, with fat (unskimmed), includes Bisto gravy with added fat, Bisto and Oxo gravy with added fat, gravy granules with added fat
2425	Gravy thickened, without fat (skimmed), includes Bisto gravy with NO added fat, Bisto and Oxo gravy with NO added fat, gravy granules with NO added fat
2426	Gravy, unthickened, with fat (unskimmed), includes Oxo gravy with added fat but NO added thickening
2427	Gravy, unthickened, without fat (skimmed), includes Oxo gravy with NO added thickening and NO added fat
2428	Horseradish sauce
9398	Hot pepper sauce
2429	Lime pickle, oily
2430	Mango pickle, oily
2431	Marmite, other yeast extracts. NOT Vecon
2432	Mayonnaise, NOT low calorie, purchased
R 8382	Mayonnaise, NOT low calorie, homemade
2433	Mayonnaise, low calorie
6846	Mayonnaise-based dips, purchased
2434	Mild mustard sauce, e.g. McDonalds
2435	Mint sauce, i.e. mint, vinegar, sugar. NOT mint jelly
2436	Mint jelly; cranberry sauce
2454	Mustard, ready made, any sort
2090	Olives, in brine, flesh and skin only, no stones, or leftover stones weighed; stuffed olives
2091	Olives, in brine, leftover stones not weighed
2423	Onion, pickled
R 2437	Onion sauce
2515	Oxo cubes, or other stock/bouillon cubes, DRY WEIGHT

SAUCES, PICKLES, GRAVIES AND CONDIMENTS

2438	Oyster sauce
8358	Pasta sauce, tomato based, purchased, e.g. Dolmio, own brand
6036	Pesto sauce
2439	Piccalilli; mustard pickle
2440	Pickle, sweet, e.g. Panyan, Branston, Ploughman's. NOT mango or tomato, not chilli pickle
9388	Pickled gherkins
R 2441	Prawn cocktail sauce
9396	Redcurrant jelly, purchased
9399	Salad dressing, fat free, purchased e.g. Kraft free choice
R 2441	Salad cream, NOT low calorie
2442	Salad cream, low calorie, e.g. Weight Watchers, Waistline reduced calorie dressing
2418	Salsa dips
2443	Sandwich spread
9366	Sour cream based dips, e.g. St Ivel, own brand
2444	Soy sauce, dark
2445	Soy sauce, light
R 2459	Stuffing, parsley and thyme; sage and onion; packet mix, made-up weight. NOT (sausage) meat stuffing, rice stuffing, chestnut stuffing
2446	Sweet curry sauce, McDonalds only
R 2447	Sweet and sour sauce, NOT canned
9393	Sweet and sour sauce, canned
2418	Sweetcorn relish
9392	Tartare sauce, purchased
6678	Thai red curry sauce, Uncle Ben's ONLY
R 2501	Thousand island dressing. NOT low calorie
7921	Thousand island dressing, low calorie
820	Toast toppers, canned, any
2448	Tomato ketchup, bottled
9101	Tomato ketchup, bottled, reduced sugar and salt, e.g. Crosse & Blackwell Healthy Balance
2449	Tomato puree, NOT canned
2460	Tomato puree, canned

SAUCES, GRAVIES, PICKLES AND CONDIMENTS

- R 2450 Tomato sauce, home made. NOT ketchup
- 7065 Vecon
- 7318 Vegetable spread, e.g. Granose
- 9394 Vegetable puree
- 2525 Vinegar, any
- R 2451 White sauce, savoury, made with whole milk, e.g. parsley, caper, anchovy, mustard
- R 3026 White sauce, savoury, made with semi-skimmed milk
- R 7922 White sauce, savoury, made with skimmed milk
- R 2452 White sauce, sweet, made with whole milk
- 2453 Worcester sauce, Lea and Perrins
- 9390 Yogurt dressings, purchased

SAUCES, PICKLES, GRAVIES AND CONDIMENTS

SOUPS

This section is divided into the following sub-sections:

A. LOW CALORIE SOUP

B. CONDENSED SOUP MADE UP

C. CANNED SOUP

D. CARTON SOUP

E. PACKET SOUP MADE UP

F. HOMEMADE SOUP

A. LOW CALORIE SOUP

2491 Low calorie soup, any, canned

2492 Low calorie soup, any, packet, as served

B. CONDENSED SOUP

2465 Chicken soup, cream of, made up with water only, as served

2480 Tomato soup, made up with water only, as served

2488 Soup, other, made up with water only, as served. NOT tomato. NOT cream of chicken

2487 Soup, any, made up with milk only, as served

2486 Soup, any, made up with milk and water, as served

C. SOUP, CANNED. NOT CONDENSED

2463 Chicken soup, cream of, ready to serve

4338 Cock-a-leekie soup, as served

2462 Consommé; other clear soups: Bouillon cubes, as served

3772 Lentil soup, as served

2491 Low calorie soup, any, canned

2472 Mushroom soup, cream of, ready to serve

2473 Oxtail soup, ready to serve

2494 Scotch broth, ready to serve

5384 Soups with pasta e.g. Heinz Chicken Pastini, Minestrone Italiano

2478 Tomato soup, cream of, ready to serve

2483 Vegetable soup, ready to serve

SOUPS

- 2493 Vending machine soup, any
- 2485 Soup, other, not specified elsewhere, ready to serve

D. SOUP IN A CARTON

- 7925 Chicken soup, cream of, ready to serve
- 7926 Mushroom soup, cream of, ready to serve
- 6795 Thai spinach soup e.g New Covent Garden soup
- 7927 Tomato soup, cream of, ready to serve
- 7928 Vegetable soup, ready to serve
- 2493 Vending machine soup, any
- 7929 Soup, other, not specified elsewhere, ready to serve

E. DEHYDRATED (PACKET) SOUP

- 2467 Chicken noodle soup, as served. NOT instant soup powder. NOT Quick soup. NOT Cup-A-Soup
- 2462 Consommé; other clear soups: Bouillon cubes, as served
- 2468 Instant soup, includes Cup-A-Soup, any variety, as served. NOT low calorie, NOT vending machine
- 2492 Low calorie soup, any, as served
- 2471 Minestrone soup, as served. NOT instant soup powder. NOT Quick soup. NOT Cup-A-Soup
- 7923 Mushroom soup, cream of, as served. NOT instant soup powder. NOT Quick soup. NOT Cup-A-Soup
- 2475 Oxtail soup, as served. NOT instant soup powder. NOT Quick soup. NOT Cup-A-Soup
- 7924 Tomato soup, cream of, as served. NOT instant soup powder. NOT Quick soup. NOT Cup-A-Soup
- 2482 Tomato soup, as served. NOT instant soup powder. NOT Quick soup. NOT Cup-A-Soup. NOT cream of tomato soup
- 8575 Vegetable soup, as served. NOT instant soup powder. NOT Quick soup. NOT Cup-A-Soup

F. HOMEMADE SOUP

- R 2461 Broth, bone and vegetable
- R 2469 Lentil soup
- R 2476 Pea soup
- R 2477 Scotch broth, i.e. mutton, carrot, other vegetables, must include meat, thickened
- R 2489 Sweetcorn soup; sweetcorn chowder
- R 2484 Vegetable soup. NO pulses - lentils, beans, barley etc.
- R 2490 Vegetable soup, with lentils, peas, pearl barley; soup mix, as served

SOUPS

PRESERVES, SUGARS AND SWEET SAUCES

PRESERVES

- 9325 Diabetic jam, e.g. Boots
- 7886 Fruit spreads; pure fruit spreads, fruit with edible seeds, e.g. blackberry, blackcurrant, gooseberry, raspberry, strawberry
- 7887 Fruit spreads; pure fruit spreads, stone fruit, e.g. plum, apricot, damson, greengage, mixed fruit
- 2213 Honey comb
- 2214 Honey, in jars, any
- 9325 Jam, diabetic. e.g. Boots
- 2215 Jam, including "Extra" jam, fruit with edible seeds, purchased, e.g. blackberry, blackcurrant, gooseberry, raspberry, strawberry. NOT homemade
- 8300 Jam, including "Extra" jam, fruit with edible seeds, homemade, e.g. blackberry, blackcurrant, gooseberry, raspberry, strawberry. NOT purchased
- 2217 Jam, including "Extra" jam, stone fruit, purchased, e.g. plum, apricot, damson, greengage, mixed fruit. NOT homemade
- 8301 Jam, including "Extra" jam, stone fruit, home made, e.g. plum, apricot, damson, greengage, mixed fruit. NOT purchased
- 2216 Jam, with reduced sugar content, fruit with edible seeds, e.g. blackberry, blackcurrant, gooseberry, raspberry, strawberry
- 2218 Jam, with reduced sugar content, stone fruit, e.g. plum, apricot, damson, greengage, mixed fruit
- 2219 Lemon curd, lime or orange curd, starch based, purchased
- 2220 Lemon, lime or orange curd; lemon cheese; homemade
- 2221 Marmalade, any, with peel, homemade. NOT Mamade
- 8559 Marmalade, any, with peel, purchased
- 2222 Marmalade, any, without peel, homemade. NOT Mamade
- 8560 Marmalade, any, without peel, purchased
- 2223 Marmalade, any, with reduced sugar content; pure fruit spread; with and without peel
- 5170 Sweet spreads without fruit, with added vitamin C, e.g. Chivers Bread Busters

PRESERVES

SUGAR

- 9474 Fruit sugar; fructose, e.g. Fruisana
- 2201 Glucose powder with added vitamin C, e.g. Glucodin
- 2202 Glucose liquid BP
- 2312 Milk shake syrup
- Milk shakes, as served, home made or purchased: see "Milk based drinks"
- 2207 Molasses
- 9379 Soft brown sugar, light or dark
- 2203 Sugar, demerara, golden granulated
- 2204 Sugar, jaggery, muscovado; molasses crystals
- 2205 Sugar, white; granulated, caster, icing, cubes, crystals, preserving sugar, raw cane sugar
- 2206 Syrup, golden
- 2662 Syrup only from fruit canned in syrup
- 2207 Treacle, black; molasses

ARTIFICIAL SWEETENERS

- B 2208 Granulated table top sweeteners, e.g. Sweet'n'slim, Sweet'n'low, Shapers Sugar Lite, Sweetex with Nutriblend, Sucron, Canderel Spoonful, Trimspoon
- B 8299 Liquid table top sweeteners, e.g. Original Hermesetas Liquid, Sweetex Liquid Sweetener
- Minicube sweeteners: code as *tablet sweeteners* (below)
- B 2209 Table top sweeteners in tablets or mini cubes, e.g. Original Hermesetas, New Taste Hermesetas Gold, Sweetex, Saxin, Natrena, Natriblend, Canderel tablets, Boots Shapers, Flix

SUGAR AND ARTIFICIAL SWEETENERS

SWEET SPREADS, FILLINGS AND ICING

- 6891 Brandy sauce
- 9216 Butter cream icing made with margarine, not polyunsaturated
- 8714 Butter cream icing made with polyunsaturated margarine
- 2210 Cherries, glace maraschino; cocktail cherries
- R 2645 Chocolate sauce, homemade. NOT ice cream topping sauce, NOT Ice Magic
- 2211 Chocolate spread
- 2212 Chocolate and nut spread. NOT peanut butter and chocolate spread
- 2227 Ice cream topping sauces, any flavour. NOT Ice Magic
- 2652 Ice Magic
- 8007 Icing, made with sugar and water or sugar and egg white
- 2225 Mincemeat, sweet
- 2226 Mixed peel; angelica
- 2212 Nut spread, with chocolate

Peanut butter: see "Nuts"

SWEET SPREADS, FILLINGS AND ICING

VEGETABLES

FRIED OR ROAST POTATOES AND POTATO PRODUCTS

6386 Hash browns, fried in rapeseed oil, McDonald's ONLY

All other hash browns: see *potato waffles*

7864 Ketchips, mashed potato with a tomato ketchup centre, purchased, baked

8766 Mushroom feasts, potato with creamy mushroom filling, oven baked or grilled, purchased, e.g. Birds Eye

2654 Potato croquettes; potato cakes; coated in breadcrumbs, grilled or baked. NO fat

1901 Potato croquettes; potato cakes; coated in breadcrumbs, fried in blended vegetable oil

1902 Potato croquettes; potato cakes; coated in breadcrumbs, fried in dripping

1903 Potato croquettes; potato cakes; coated in breadcrumbs, fried in lard

1904 Potato croquettes; potato cakes; coated in breadcrumbs, fried in polyunsaturated oil or margarine

8295 Potato Crunchies, e.g. Ross, own brand, grilled or baked

Potato Fritters: see *potato waffles*

7864 Potato Ketchips; mashed potato with tomato ketchup centre, purchased, baked

1884 Potato slices, in batter, fried in blended vegetable oil

1885 Potato slices, in batter, fried in dripping

1886 Potato slices, in batter, fried in lard

1887 Potato slices, in batter, fried in polyunsaturated oil or margarine

1888 Potato slices, old, sautéed in blended vegetable oil

1892 Potato slices, new, sautéed in blended vegetable oil

1889 Potato slices, old, sautéed, in dripping

1893 Potato slices, new, sautéed in dripping

1890 Potato slices, old, sautéed, in lard

1894 Potato slices, new, sautéed in lard

1891 Potato slices, old, sautéed in polyunsaturated oil or margarine

1895 Potato slices, new, sautéed in polyunsaturated oil or margarine

9351 Potato slices, old, sautéed in olive oil

1879 Potato waffles; Fritters; Hash browns; Alphabites; fried in blended vegetable oil

1880 Potato waffles; Fritters; Hash browns; Alphabites; fried in dripping

1881 Potato waffles; Fritters; Hash browns; Alphabites; fried in lard

FRIED OR ROAST POTATOES AND POTATO PRODUCTS

- 1882 Potato waffles; Fritters; Hash browns; Alphabites; fried in polyunsaturated oil or margarine
- 3307 Potato waffles; Fritters; Hash browns; Alphabites, fried in butter
- 9345 Potato waffles; Fritters; Hash browns; Alphabites, fried in olive oil
- 1883 Potato waffles; Fritters; Hash browns; Alphabites; grilled or baked, NO fat
- 1841 Roast old potatoes, in blended vegetable oil
- 1845 Roast new potatoes, in blended vegetable oil
- 9789 Roast old potatoes, in butter
- 1842 Roast old potatoes, in dripping
- 1846 Roast new potatoes, in dripping
- 1843 Roast old potatoes, in lard
- 1847 Roast new potatoes, in lard
- 1844 Roast old potatoes, in polyunsaturated oil or margarine
- 1848 Roast new potatoes, in polyunsaturated oil or margarine
- 8785 Roast new potatoes, in butter
- 8827 Roast old potatoes, in olive oil
- 8683 Roast new potatoes, in olive oil
- 8371 Roast potatoes, old, frozen, baked

FRIED OR ROAST POTATOES AND POTATO PRODUCTS

POTATO CHIPS

This section is divided into the following subsections:

- A. JACKET POTATO SLICES
- B. CHIPS MADE FROM FRESH OLD POTATOES
- C. CHIPS MADE FROM FRESH NEW POTATOES
- D. FROZEN CHIPS
- E. CHIPS PURCHASED FROM A TAKEAWAY OR FAST FOOD OUTLET
- F. OVEN CHIPS AND MICROWAVE CHIPS

A. JACKET POTATO SLICES

1878 Jacket potato slices, frozen, grilled or oven cooked, no added fat

B. CHIPS MADE FROM FRESH OLD POTATOES, NOT PURCHASED FROM A TAKEAWAY

- 1849 Chips, old potatoes, fresh, fried in blended vegetable oil. NOT purchased from a takeaway shop
- 1850 Chips, old potatoes, fresh, fried in dripping
- 1851 Chips, old potatoes, fresh, fried in lard
- 1852 Chips, old potatoes, fresh, fried in polyunsaturated oil or margarine
- 8750 Chips, old potatoes, fresh, fried in olive oil

C. CHIPS MADE FROM FRESH NEW POTATOES, NOT PURCHASED FROM A TAKEAWAY

- 1854 Chips, new potatoes, fresh, fried in blended vegetable oil. NOT purchased from a takeaway shop
- 1855 Chips, new potatoes, fresh, fried in dripping
- 1856 Chips, new potatoes, fresh, fried in lard
- 1857 Chips, new potatoes, fresh, fried in polyunsaturated oil or margarine

D. FROZEN CHIPS, NOT PURCHASED FROM A TAKEAWAY

- 1859 Crinkle cut frozen chips, fried in blended vegetable oil. NOT purchased from a takeaway shop
- 1860 Crinkle cut frozen chips, fried in dripping
- 1861 Crinkle cut frozen chips, fried in lard
- 1862 Crinkle cut frozen chips, fried in polyunsaturated oil or margarine
- 9346 Crinkle cut frozen chips, fried in olive oil

POTATO CHIPS

- 1864 Fine cut frozen chips, fried in blended vegetable oil. NOT purchased from a takeaway shop
- 1865 Fine cut frozen chips, fried in dripping
- 1866 Fine cut frozen chips, fried in lard
- 1867 Fine cut frozen chips, fried in polyunsaturated oil or margarine
- 8921 Fine cut frozen chips, fried in olive oil
- 1868 Steak cut/Thick cut frozen chips, fried in blended vegetable oil. NOT purchased from a takeaway shop
- 1869 Steak cut/Thick cut frozen chips, fried in dripping
- 1870 Steak cut/Thick cut frozen chips, fried in lard
- 1871 Steak cut/Thick cut frozen chips, fried in polyunsaturated oil or margarine
- 1872 Straight cut frozen chips, fried in blended vegetable oil. NOT purchased from a takeaway shop
- 1873 Straight cut frozen chips, fried in dripping
- 1874 Straight cut frozen chips, fried in lard
- 1875 Straight cut frozen chips, fried in polyunsaturated oil or margarine

E. CHIPS PURCHASED FROM A TAKEAWAY OR FAST FOOD OUTLET

- 1853 Chips, old potatoes, fresh, fried in blended vegetable oil, purchased from a takeaway shop
- 1850 Chips, old potatoes, fresh, fried in dripping
- 1851 Chips, old potatoes, fresh, fried in lard
- 1852 Chips, old potatoes, fresh, fried in polyunsaturated oil or margarine
- 1858 Chips, new potatoes, fresh, fried in blended vegetable oil, purchased from a takeaway shop
- 1855 Chips, new potatoes, fresh, fried in dripping
- 1856 Chips, new potatoes, fresh, fried in lard
- 1857 Chips, new potatoes, fresh, fried in polyunsaturated oil or margarine
- 1863 Crinkle cut frozen chips, fried in blended vegetable oil, purchased from a takeaway shop
- 1860 Crinkle cut frozen chips, fried in dripping
- 1861 Crinkle cut frozen chips, fried in lard
- 1862 Crinkle cut frozen chips, fried in polyunsaturated oil or margarine
- 1949 Fine cut frozen chips, fried in blended vegetable oil purchased from fast food outlet. NOT McDonalds
- 5580 Fine cut frozen chips, purchased from McDonalds only
- 1865 Fine cut frozen chips, fried in dripping

POTATO CHIPS

- 1866 Fine cut frozen chips, fried in lard
- 1867 Fine cut frozen chips, fried in polyunsaturated oil or margarine
- 8549 Steak cut/Thick cut frozen chips, fried in blended vegetable oil, purchased from a takeaway shop
- 1869 Steak cut/Thick cut frozen chips, fried in dripping
- 1870 Steak cut/Thick cut frozen chips, fried in lard
- 1871 Steak cut/Thick cut frozen chips, fried in polyunsaturated oil or margarine
- 1876 Straight cut frozen chips, fried in blended vegetable oil, purchased from a takeaway shop
- 1873 Straight cut frozen chips, fried in dripping
- 1874 Straight cut frozen chips, fried in lard
- 1875 Straight cut frozen chips, fried in polyunsaturated oil or margarine

F. OVEN CHIPS AND MICROWAVE CHIPS

- 1877 Steak cut/Beefeater chips, frozen, oven ready, cooked without fat
- 1878 Oven ready chips, other, cooked without fat. NOT Microchips; NOT Steak cut/Beefeater chips
- 7863 Chips, designed for use in microwave only, any cut e.g. McCains Microchips

POTATO CHIPS

POTATOES - OTHER (E.G. BOILED, BAKED), POTATO SALADS AND DISHES

BAKED OR MICROWAVED POTATO

- 1834 Baked or microwaved potatoes in skins, old, skin eaten
- 1837 Baked or microwaved potatoes in skins, new, skin eaten
- 1835 Baked or microwaved potatoes in skins, old, skin NOT eaten, leftover skin weighed
- 1836 Baked or microwaved potatoes in skins, old, skin NOT eaten, leftover skin NOT weighed
- 1838 Baked or microwaved potatoes in skins, new, skin NOT eaten, leftover skin weighed
- 1839 Baked or microwaved potatoes in skins, new, skin NOT eaten, leftover skin NOT weighed

BOILED OR MASHED POTATO

- 1829 Boiled or mashed potatoes, old, NO added butter or margarine
- 1830 Boiled or mashed potatoes, new, NO added butter or margarine, skins eaten
- 8294 Boiled or mashed potatoes, new, NO added butter or margarine, skins not eaten, leftover skin weighed
- 1831 Boiled or mashed potatoes, old, with butter
- 1833 Boiled or mashed potatoes, old, with polyunsaturated margarine
- 1832 Boiled or mashed potatoes, old, with margarine (NOT polyunsaturated)
- 9249 Boiled or mashed potatoes, old, with low or reduced fat spread
- 1896 Potatoes, canned

INSTANT POTATO

- 1897 Instant potato powder or granules, made up with water only
- 1898 Instant potato powder or granules, made up with milk and water
- 1899 Instant potato powder or granules, made up with whole milk only
- 8493 Instant potato powder or granules, made up with semi-skimmed milk
- 8494 Instant potato powder or granules, made up with skimmed milk

POTATO DISHES

- R 802 Cheese and potato pie, i.e. potato, fat, cheese and milk
- R 1840 Curried potatoes; no rice
- 1906 Potato salad, in salad cream, or mayonnaise, canned
- 1907 Potato salad, in salad cream or mayonnaise, NOT canned
- 7862 Potato salad, in salad cream or mayonnaise, low calorie

POTATOES - OTHER (E.G. BOILED, BAKED), POTATO SALADS AND DISHES

VEGETABLES (NOT POTATOES)

- 1651 Ackee, canned, drained weight
- 1652 Artichoke, globe, boiled, base of leaves and soft inside parts
- 1653 Artichoke, globe, boiled, weight as served
- 1654 Artichoke, Jerusalem, boiled
- 1655 Asparagus, boiled, soft tips only
- 1656 Asparagus, boiled, weight as served
- 1657 Asparagus, canned, drained weight
- 1659 Aubergines, brinjal, eggplant, fried in blended vegetable oil
- 1660 Aubergines, brinjal, eggplant, fried in polyunsaturated oil or polyunsaturated margarine
- 1976 Avocado pears, flesh only, leftover skin weighed

See next section for BAKED BEANS

- 1661 Bamboo shoots, canned, drained weight
- 9223 Basil fresh
- 8826 Beans, aduki, dried, boiled
- 1664 Beans, balor; valor; canned, drained weight
- 8280 Beans, blackeye, canned, boiled, drained weight
- 8281 Beans, blackeye; dried, boiled
- 1667 Beans, broad, canned, drained weight
- 1666 Beans, broad, fresh, boiled
- 1668 Beans, broad, frozen, boiled
- 1669 Beans, butter, canned, drained weight
- 1670 Beans, butter, dried, boiled
- 1671 Beans, green, French, boiled, pods and beans
- 2679 Beans, green, French, canned, drained weight
- 1681 Beans, green, runner, fresh or accelerated freeze dried, boiled, e.g. Surprise
- 1682 Beans, green, runner, canned, drained weight
- 1683 Beans, green, runner, frozen, boiled
- 1674 Beans, haricot, canned, boiled, drained weight
- 1673 Beans, haricot, dried, boiled

VEGETABLES (NOT POTATOES)

- 1676 Beans, kidney, red, canned, drained weight
- 1677 Beans, kidney, red, dried, boiled. NOT canned
- 8809 Beans, mung, boiled
- 1679 Beans, papri, canned, drained weight
- 1680 Beans, papri, boiled. NOT canned
- 1685 Beans, soya, boiled
- 1689 Beansprouts, canned, drained weight
- 4731 Beansprouts, fresh, boiled
- 4520 Beansprouts, fresh, fried in blended vegetable oil
- 4558 Beansprouts, fresh, fried in polyunsaturated oil
- 1688 Beansprouts, fresh, uncooked
- 1691 Beetroot, boiled
- 2456 Beetroot, pickled; red cabbage, pickled
- 1690 Beetroot, uncooked
- 7842 Broccoli, sprouting, uncooked. NOT calabrese
- 1693 Broccoli, spears; calabrese; fresh, boiled
- 1694 Broccoli, spears; calabrese; frozen, boiled
- 7843 Broccoli, sprouting, boiled. NOT calabrese
- 1696 Brussels sprouts, fresh, boiled
- 1697 Brussels sprouts, canned, drained weight
- 1698 Brussels sprouts, frozen, boiled
- Brussels tops: see *cabbage, winter*
- 1669 Butter beans, canned, drained weight
- 7845 Cabbage, January King, fresh, boiled
- 1704 Cabbage, savoy, fresh, boiled
- 1705 Cabbage, spring; spring greens; fresh, boiled
- 7847 Cabbage, Summer, fresh, boiled
- 2617 Cabbage, white, fresh, boiled
- 1708 Cabbage, winter; kale; fresh, boiled
- 1709 Cabbage, any type, frozen, boiled

VEGETABLES (NOT POTATOES)

- 7844 Cabbage, January King, uncooked
- 1700 Cabbage, red, fresh, uncooked
- 1703 Cabbage, savoy, fresh, uncooked
- 7846 Cabbage, Summer, uncooked
- 1706 Cabbage, white, fresh, uncooked
- 1707 Cabbage, winter; kale; uncooked
- 1701 Cabbage, red, fresh, boiled
- 2456 Cabbage, red, pickled
- 1693 Calabrese, fresh, boiled
- 1694 Calabrese, frozen, boiled
- 1710 Carrots, old, fresh, uncooked; (October-July), unless otherwise stated
- 1712 Carrots, young, new, fresh, uncooked; (August-September, unless otherwise stated)
- 1711 Carrots, old, fresh, boiled; (October-July), unless otherwise stated
- 1713 Carrots, young; new, fresh, boiled; (August-September, unless otherwise stated)
- 1714 Carrots, old or new, frozen, boiled
- 1715 Carrots, canned, drained weight
- Carrot juice: see "Soft drinks, fruit and vegetable juices"
- 1718 Cauliflower, fresh, uncooked
- 1719 Cauliflower, fresh, boiled
- 1720 Cauliflower, frozen, boiled
- 1724 Celeriac, fresh, boiled
- 1725 Celery, fresh, uncooked
- 1726 Celery, fresh, boiled or braised
- 1727 Celery, canned, drained weight
- 2647 Chestnuts, water, canned, drained weight
- 1815 Chick Peas, boiled
- 1816 Chick Peas, canned, drained weight
- 7848 Chicory, fresh, boiled
- 1728 Chicory, fresh, uncooked. NOT Radiccio
- 1729 Chinese leaves, fresh, uncooked

VEGETABLES (NOT POTATOES)

- 9227 Chives fresh
- R 1731 Coleslaw, homemade. NOT low calorie
- 8079 Coleslaw, purchased. NOT low calorie
- R 1732 Coleslaw, low calorie, homemade
- 8282 Coleslaw, low calorie, purchased
- Corn on the cob: see *sweetcorn*
- 9154 Coriander fresh
- 1733 Courgette, fresh, uncooked
- 1734 Courgettes, fresh or frozen, boiled
- 1738 Courgettes, fried or sautéed in blended vegetable oil
- 1735 Courgettes, fried or sautéed in butter
- 1736 Courgettes, fried or sautéed in margarine (NOT polyunsaturated)
- 1737 Courgettes, fried or sautéed in polyunsaturated oil or polyunsaturated margarine
- 9569 Courgettes, fried or sautéed in olive oil
- 1740 Cucumber, uncooked
- 1707 Curly Kale, fresh, uncooked
- 1708 Curly kale, fresh, boiled
- 1742 Endive, curly endive, frisee; fresh, uncooked
- 8477 Fennel, fresh, uncooked
- 8478 Fennel, fresh, boiled or braised
- 1671 French Beans , boiled, pods and beans
- 1743 Garlic, uncooked
- 9388 Gherkin, pickled; pickled cucumber
- 1748 Green banana, boiled
- 1749 Green banana; fried in blended vegetable oil
- 1750 Green banana; fried in polyunsaturated oil
- 1751 Green banana; fried in red palm oil
- 1671 Green Beans, French, boiled, pods and beans
- 2679 Green Beans, French, canned, drained weight
- 1681 Green Beans, runner, fresh or accelerated freeze dried, boiled, e.g. Surprise

VEGETABLES (NOT POTATOES)

1682 Green Beans, runner, canned, drained weight

1683 Green Beans, runner, frozen, boiled

1753 Kohlrabi, uncooked

7852 Kohlrabi, boiled

1756 Leeks, fresh, boiled

9311 Leeks fried in olive oil

6058 Lentils, brown, boiled

1758 Lentils, split, boiled

7853 Lettuce, Butterhead, raw

7854 Lettuce, Cos, raw

7855 Lettuce, Iceberg

7856 Lettuce, Webbs

1762 Lettuce, unspecified/unknown/other

1763 Lettuce, in oil and vinegar dressing

2650 Mange-tout peas; sugar peas; fresh or frozen, boiled

1765 Marrow, boiled

1767 Marrow, parwal; small Asian marrow, boiled

1768 Marrow, parwal; small Asian marrow, canned, drained weight

1770 Mixed vegetables; carrots, peas, turnip, swede, etc., canned, drained weight. NOT mixed beans

1771 Mixed vegetables, frozen, boiled

9232 Mint fresh

1772 Mushrooms, uncooked

6847 Mushrooms, coated in breadcrumbs or batter, fried in vegetable oil

2731 Mushrooms, garlic, not breaded

1775 Mushrooms, fried in blended vegetable oil

1773 Mushrooms, fried in butter

1777 Mushrooms, fried in dripping

1778 Mushrooms, fried in lard

1774 Mushrooms, fried in margarine (NOT polyunsaturated)

1776 Mushrooms, fried in polyunsaturated oil or margarine

9309 Mushrooms fried in olive oil

VEGETABLES (NOT POTATOES)

1779 Mushrooms, stewed or grilled

1781 Mushrooms, canned, with or without white sauce

1782 Mustard and cress, uncooked

1784 Okra; ladies fingers; bindi; canned, drained contents

2624 Okra; ladies fingers; bindi; fried in blended vegetable oil

1785 Onions, uncooked

1798 Onions, spring, white bulb only, uncooked

7722 Onions, spring bulb and top, uncooked

9293 Onion baked or roast

1786 Onions, boiled

1789 Onions, fried in blended vegetable oil

1787 Onions, fried in butter

1790 Onions, fried in dripping

1791 Onions, fried in lard

1788 Onions, fried in margarine (NOT polyunsaturated)

1792 Onions, fried in polyunsaturated oil or margarine

9570 Onions fried in olive oil

1793 Onion rings, in batter, frozen, fried in blended vegetable oil

1794 Onion rings, in batter, frozen, fried in dripping

1795 Onion rings, in batter, frozen, fried in lard

1796 Onion rings, in batter, frozen, fried in polyunsaturated oil or margarine

8026 Onion rings, in batter, frozen, grilled

2423 Onion, pickled

1799 Parsley, fresh

1801 Parsnips, boiled

1804 Parsnips, roast, in blended vegetable oil

9792 Parsnips, roast, in butter

1802 Parsnips, roast, in dripping

1803 Parsnips, roast, in lard

1805 Parsnips, roast, in polyunsaturated oil or margarine

1806 Peas, fresh, uncooked

VEGETABLES (NOT POTATOES)

1818 Peas, freeze dried, boiled, e.g. Surprise

1807 Peas, fresh, boiled

1808 Peas, frozen, boiled. NOT petit pois

8284 Petit pois peas, frozen, boiled

1809 Peas, canned, garden, boiled

1810 Peas, canned, marrowfat, boiled

1811 Peas, "mushy", canned, boiled

2618 Peas, "mushy", boiled from dried. NOT canned

1812 Peas, processed, canned, boiled

2650 Peas, mange-tout; sugar peas; fresh or frozen, boiled

1813 Peas, split, dried, boiled

1819 Pease pudding, canned, boiled

1823 Peppers, green, fresh, uncooked

1824 Peppers, green, fresh, boiled

7857 Peppers, red, fresh, uncooked

7988 Peppers, red, fresh, boiled

7987 Peppers, yellow, black or white, fresh, uncooked

7989 Peppers, yellow, black or white, fresh, boiled

1826 Peppers, green, red, yellow, black or white, frozen, boiled

8479 Plantain, boiled

9468 Plantain fried in blended vegetable oil

9469 Plantain fried in polyunsaturated oil

9470 Plantain fried in red palm oil

9471 Plantain raw

1908 Pumpkin, boiled

8285 Quorn, stir fried in blended vegetable oil

1909 Radish, red, uncooked

1910 Radish, white; mooli

8283 Raddiccio, uncooked

1701 Red cabbage, fresh, boiled

2456 Red cabbage, pickled

VEGETABLES (NOT POTATOES)

9231	Sage fresh
1911	Salsify, boiled
1912	Sauerkraut, bottled, drained weight
1913	Seakale, boiled. NOT kale
1685	Soya beans, boiled
1686	Soya bean curd; Tofu. NOT smoked
8369	Soya bean curd; Tofu; smoked
1370	Soya mince, canned
1376	Soya mince, made up from dried
1914	Spinach, fresh, uncooked
1915	Spinach, fresh, boiled
1916	Spinach, frozen, boiled
1918	Spinach, canned, drained weight
8377	Stir fried vegetables, purchased frozen, boiled
8390	Stir fried vegetables, purchased, frozen, fried in blended vegetable oil
8391	Stir fried vegetables, purchased, frozen, fried in polyunsaturated margarine or oil
9365	Sun-dried tomatoes in olive oil and / or sunflower oil, e.g. Sacla, Florentino, own brand
1921	Swede, boiled
8370	Sweetcorn baby, frozen, boiled
1922	Sweetcorn; corn on the cob; fresh or frozen, boiled, leftover cob not weighed
1923	Sweetcorn; corn on the cob; fresh or frozen, boiled, kernels only, or leftover cob weighed
1924	Sweetcorn; corn on the cob; canned, kernels only, drained weight
1925	Sweetcorn, immature cobs, canned, drained weight
1930	Sweet potatoes, boiled
1686	Tofu, soya bean curd, NOT smoked
8369	Tofu, soya bean curd, smoked
1931	Tomatoes, fresh, uncooked
1932	Tomatoes, fresh, fried in blended vegetable oil
1933	Tomatoes, fresh, fried in butter
1934	Tomatoes, fresh, fried in dripping

VEGETABLES (NOT POTATOES)

- 1938 Tomatoes, fresh, fried in lard
- 1936 Tomatoes, fresh, fried in margarine (NOT polyunsaturated)
- 9352 Tomatoes, fresh, fried in olive oil
- 1937 Tomatoes, fresh, fried in polyunsaturated oil or margarine
- 1935 Tomatoes, fresh, grilled or baked, NO fat
- Tomato juice: see "Fruit and vegetable juices"
- 1939 Tomatoes, canned
- 9365 Tomatoes, sun dried, in olive oil and / or sunflower oil, e.g. Sacla, Florentino, own brand
- 1941 Turnips, boiled
- 1942 Turnips, tops, boiled
- 1947 Watercress, uncooked
- 2647 Water chestnuts, canned, drained weight
- 1948 Yam, boiled

VEGETABLES (NOT POTATOES)

VEGETABLE DISHES (INCLUDING BAKED BEANS)

- 2828 Bacon flavoured TVP strips
- 1662 Baked Beans in tomato sauce, canned, includes curried baked beans. NOT baked beans with additions; NOT low sugar baked beans
- 2646 Baked beans in tomato sauce, canned, reduced sugar; low sugar; no sugar added or sugar free, with or without reduced/low salt
- 7840 Baked beans in tomato sauce with pasta, canned, e.g. Crosse and Blackwell Fred Bear Beans and Pasta shapes
- 7781 Baked beans with burgers, chicken bits or bacon. NOT baked beans with sausages
- 1240 Baked beans in tomato sauce, with sausages (NOT low fat), canned
- 7839 Baked beans in tomato sauce with low fat sausages, canned
- 9284 Bean salad, purchased
- 2655 Beanburger, in a bun with cheese e.g. Burger King spicy beanburger, Wimpy spicy beanburger with cheese
- 9282 Red kidney beanburger e.g. Wimpy, no bun
- 3083 Beanfeast, various flavours, made up with water, cooked
- R 1699 Bubble and squeak, cooked potato and cabbage, fried in blended vegetable oil
- R 1702 Cabbage, red, recipe dish with apple, onion, sugar and butter
- R 1721 Cauliflower, boiled, with white sauce
- R 1722 Cauliflower cheese i.e. in cheese sauce, made with whole milk
- R 5241 Cauliflower cheese i.e. in cheese sauce, made with semi-skimmed milk
- R 5345 Cauliflower cheese i.e. in cheese sauce, made with skimmed milk
- R 1723 Cauliflower bhaji i.e. fried Asian vegetable dish
- R 1741 Cucumber and gram flour raita; i.e. Asian vegetable side dish with yogurt
- R 2660 Cucumber and yogurt, Greek style; Tzatziki
- 1817 Hummus; chick pea paste with sesame seeds. NOT canned. NOT reduced fat
- 1717 Hummus; chick pea paste with sesame seeds; canned. NOT reduced fat
- 2978 Hummus, low/reduced fat
- Kale: see *cabbage, winter*
- Kidney beans: see *beans, kidney, red*
- 1760 Lentils, canned, in tomato sauce
- R 1759 Lentils, masur dahl; cooked dish with onion and butter
- R 1761 Lentils, red; toor dahl; cooked dish
- R 1769 Marrow, boiled in white sauce

VEGETABLE DISHES, INCLUDING BAKED BEANS

- 1797 Onion bhaji; pakora i.e. Asian dish, fried battered onion ball, purchased
- 3205 Pancakes, savoury cheese, purchased, grilled or fried in blended vegetable oil. e.g. Findus
- 821 Pastie, cheese and onion, purchased
- 1817 Peas, chick, paste, with sesame seeds; hummus. NOT canned. Not reduced fat
- 1717 Peas, chick, paste, with sesame seeds; hummus; canned. NOT reduced fat
- 2978 Peas, chick, paste; hummus, low/reduced fat
- R 1821 Pea curry, no rice
- R 1822 Pea and potato curry, made with canned peas. NO rice
- 5439 Pinto beans; refried beans eg Old El Paso, own brand
- 5447 Quorn quarter pounder, grilled, no bun
- 5677 Quorn burger, fried in sunflower oil
- 7103 Quorn, savoury pies with puff pastry, purchased
- R 2625 Ratatouille, made with tomatoes, aubergines, courgettes, onions and green pepper, NOT canned
- 2626 Ratatouille, made with tomatoes, aubergines, courgettes, onions and green pepper, canned
- 9280 Ratatouille, frozen, purchased
- Red kidney beans: see *beans, kidney, red*
- 1240 Sausages (NOT low fat) and baked beans, canned
- 7839 Sausages (low fat) with baked beans, canned
- R 1917 Spinach curry; "sag"; i.e. with onion, garlic, tomatoes and blended vegetable oil
- Split peas see *peas, split*
- R 1919 Spring roll, i.e. fried pancake roll with beansprouts filling, NO meat
- Sprouts: see *brussels sprouts*
- 8631 Stir fried vegetables, Chinese style, takeaway ONLY
- 1927 Sweetcorn, fritters, fried in blended vegetable oil
- 1929 Sweetcorn, fritters, fried in lard
- 1928 Sweetcorn, fritters, fried in dripping
- 1926 Sweetcorn, fritters, fried in polyunsaturated oil or margarine
- Sweetcorn pickle: see "Sauces and pickles"
- 2967 Thai vegetable curry, purchased
- 2828 TVP strips, bacon flavoured
- R 2660 Tzatziki, Greek style cucumber and yogurt
- 9281 Vegetable balti, takeaway. NO rice

VEGETABLE DISHES, INCLUDING BAKED BEANS

- 2622 Vegetable biryani or pilau, includes rice. Includes takeaway
- R 1943 Vegetable curry, i.e. curried mixed vegetables. NO rice. NOT takeaway
- 8286 Vegetable curry with rice, ready meal. NOT takeaway
- 9281 Vegetable curry takeaway no rice. NOT vegetable biryani or pilau. NOT vegetable korma
- 8287 Vegetable chilli, ready meal. NO rice
- 6995 Vegetable enchiladas (corn tortillas with bean and tomato filling)
- 8289 Vegetable fingers, coated in breadcrumbs, fried in blended vegetable oil
- 8384 Vegetable fingers, coated in breadcrumbs, fried in butter
- 8385 Vegetable fingers, coated in breadcrumbs, fried in margarine (NOT polyunsaturated)
- 8386 Vegetable fingers, coated in breadcrumbs, fried in polyunsaturated margarine or oil
- 8288 Vegetable fingers, coated in breadcrumbs, grilled
- 7137 Vegetable grills, burgers, crispbakes, in breadcrumbs, grilled or oven baked e.g. Linda McCartney's southern grills, Dalepak vegetable tikka grills, Tesco vegetable tikka crispbakes, Birds Eye cauliflower cheese quarter pounders, any
- Vegetable juice: see "Fruit and vegetable juices"
- 3143 Vegetable lasagne ready meal, purchased, cooked
- 8290 Vegetable moussaka, ready meal, purchased
- 1919 Vegetable pancake roll (spring roll), purchased
- 7859 Vegetable pastie, purchased
- R 1950 Vegetable pie, mixed vegetables in white sauce with one pastry crust, made from half lard and half margarine (NOT polyunsaturated)
- 1945 Vegetable salad, in salad cream or mayonnaise, canned
- 2623 Vegetable samosa, purchased
- 7858 Vegetable "sausage roll", purchased
- 8631 Vegetables, stir fried, takeaway ONLY
- 8291 Vegetarian paté, purchased
- 8292 Vegiebanger or vegieburger mix, made up, fried in blended vegetable oil
- 8293 Vegiebanger or vegieburger mix, made up, grilled. NOT vegetable grill
- 8387 Vegiebanger or vegieburger mix, made up, fried in butter
- 8388 Vegiebanger or vegieburger mix, made up, fried in margarine (NOT polyunsaturated)
- 8389 Vegiebanger or vegieburger mix, made up, fried in polyunsaturated margarine or oil
- 4203 Vegieburger, vegetable burger grills; not in breadcrumbs or oven baked, purchased, grilled e.g. Dalepak vegetable grills, Birds Eye vegetable burgers

VEGETABLE DISHES, INCLUDING BAKED BEANS

- 4785 Vegieburger, purchased, fried in lard
- 9279 Vegieburger purchased fried in blended vegetable oil
- 5174 Vegetable hot pot, frozen or chilled, ready meal
- 9523 Vegetable Kievs, oven baked or grilled e.g. Linda McCartney, Birds Eye
- 9538 Vegetable shepherds pie, ready meal
- 9594 Vegetarian pie, soya based, purchased e.g. Linda McCartney vegetarian country pie
- 5153 Vegetarian sausages, boiled e.g. Tivalli, Tesco
- 5339 Vegetarian sausages, fried
- 9572 Vegetarian sausages, oven baked or grilled e.g. Linda McCartney

VEGETABLE DISHES, INCLUDING BAKED BEANS

VITAMIN AND MINERAL SUPPLEMENTS AND MEDICINE

ONLY USE CODE IF THE PRODUCT NAME OF THE SUPPLEMENT CORRESPONDS EXACTLY WITH THE DESCRIPTION GIVEN BELOW:-

MEDICINE

- 5106 Water used to make up powdered medicines or dietary supplements
- 9308 Cold relief powders with added vitamin C. Dry Weight. e.g. Lemsip
- 9343 Fybogel, ispaghula based laxative, dry weight
- 5163 Liquid medicine, NOT LABELLED AS SUGAR FREE
- 5342 Liquid medicine, LABELLED AS SUGAR FREE
- 2527 Medicine; tablets, capsules or powders, any. NOT liquid medicine, NOT vitamin or mineral supplements
- 9869 Tonic wine e.g. Sanatogen

VITAMIN AND MINERAL SUPPLEMENTS

SYRUP/OIL FORM

- 8392 Abidec multivitamin drops
- 8397 Boots multivitamin syrup
- 8996 Dalivit multivitamin drops
- 8402 Haliborange multivitamin liquid
- 8505 Minadex multivitamin syrup
- 8437 Minadex tonic

VITAMIN AND MINERAL SUPPLEMENTS – MEDICINE; OIL/SYRUP FORM

ONLY USE CODE IF THE PRODUCT NAME OF THE SUPPLEMENT CORRESPONDS EXACTLY WITH THE DESCRIPTION GIVEN BELOW:-

TABLET OR CAPSULE FORM

- 5000 Water drunk as 'water'. NOT used as a diluent. Includes water drunk to swallow tablets.
- 6845 Aloe Vera tablet/capsule, any
- 8925 Amway multivitamin and iron tablets
- 2850 Asda cod liver oil liquid, 525mg
- 2848 Asda multivitamins and minerals tablet
- 2824 Asda multivitamins and iron tablets
- 5347 Boots chewable multivitamins with iron and calcium
- 9956 Boots cod liver oil capsules 300mg
- 5350 Boots cod liver oil and multivitamins
- 2837 Boots multivitamins and minerals with Ginseng
- 5719 Boots vegetarian daily supplement system
- 9601 Boots vitamin B complex tablets
- 8398 Boots vitamins A, C, D tablets
- 9544 Boots vitamin D and calcium capsules
- 9743 Boots zinc and vitamin C
- 9854 Brewers yeast (Superdrug)
- 9652 Brewers yeast tablets e.g. Philips & Boots
- 9603 Calcia calcium, iron and vitamin tablets
- 8400 Cantassium junamac naturtabs
- 8401 Cantassium junior ideal quota chewable tablets
- 6453 Centrum multivitamin and mineral tablets/capsules
- 6835 Cod liver oil capsules 410mg e.g. Holland & Barrett
- 2982 Cod liver oil with calcium capsule
- 2965 Co-op multivitamins and minerals tablet
- 2954 Cranberry tablet, 5000mg, e.g. Nature's Aid
- 2715 Echinacea tablets, any dose
- 2708 Evening primrose oil capsules 40mg
- 2960 Evening primrose oil capsule 250mg

VITAMIN AND MINERAL SUPPLEMENTS - TABLET OR CAPSULE FORM

9299 Evening primrose oil capsules 500mg

9522 Evening primrose oil capsules 1000mg

8561 Fluoride tablets

6848 Folic acid tablet/capsule 400µg

9340 Garlic capsules, any e.g. Hofels Lloyds Healthichoice

6842 Ginseng tablets/capsules 600mg e.g. Nature's Best Korean

8406 Haliborange crunchy fish oil plus vitamins A, C, D, E

8404 Haliborange multivitamins plus calcium & iron

8405 Haliborange vitamin A, C, D tablets orange/blackcurrant

9956 Health Essentials cod liver oil capsules 300mg

6453 Health Essentials multivitamin and mineral tablets/capsules

9946 Healthilife cod liver oil capsules 400mg

3010 Healthspan multivitamins and minerals tablet/capsule

3009 Healthspan selenium with vitamins A, C, E

2718 Holland & Barrett calcium (600mg) and vitamin D (3ug) tablet

8796 Holland & Barrett evening primrose oil capsules

9617 Holland & Barratt high potency vitamin B complex tablets

5875 Holland & Barrett iron and vitamin C tablets

2822 Holland & Barrett Radiance multivitamin and iron capsule

6928 Holland & Barrett vitamin E oil

5605 Jelly Babies soft and chewy vitamins A, C, D and E pastilles

2713 Kelp tablets, e.g. Holland and Barratt (150ug iodine)

9661 Kordels nutritime multivitamin tablets

9961 Lanes calcium with vitamins A, C, D

9947 Lloyds multivitamin and mineral tablets

9606 Lloyds vitamin A and D capsules

9800 Maxepa capsules

9671 Morrisons multivitamin tablets

9872 Morrisons multivitamins with iron tablets

2988 Multivitamins, soft and chewy, with fibre, e.g. Bassett's

8415 Natural Flow animal fun vegetarian vitamins & minerals

VITAMIN AND MINERAL SUPPLEMENTS - TABLET OR CAPSULE FORM

9315 Numark multivitamins tablets one a day

2994 Nutri Vite multivitamins and multiminerals tablet

2995 Omega Vite fish oil capsules, 500mg

6850 Pro-plus; pro-poopulis tablets/capsules

5562 Redoxin vitamin C tablet/capsule 250mg

6884 Roche Redoxin vitamin C (500mg) and zinc (5mg) tablets

9241 Sainsbury's multivitamin and iron tablets

5544 Sanatogen 1-a-day vitamins A, C, D tablets

6527 Sanatogen chewable vitamins extra A, C, D

6453 Sanatogen Gold A-Z 1-a-day multivitamin and mineral tablets

9185 Sanatogen multivitamin tablets/capsules

5152 Sanatogen vegetarian multivitamin tablets/capsules

9689 Selenium ACE tablets

5440 Seven Seas calcium and vitamin D capsule

9304 Seven Seas cod liver oil and evening primrose oil with vitamins

5608 Seven Seas cod liver oil plus multivitamins

9963 Seven Seas multivitamins without iron

3007 Solgar zinc capsule, 22mg

6890 St. John's Wort tablets/capsules

2964 Superdrug A-Z multivitamin tablet

9295 Superdrug cod liver oil (550mg) with vitamins A, D and E

2992 Superdrug vitamin B complex tablet

5960 Superdrug vitamin B₆ tablet/capsule

9945 Unichem cod liver oil capsules 550mg

6844 Vitabiotics Cardioace vitamin and mineral supplement

2961 Vitafit MultiVita2000 tablet

2830 Vitamin A tablet/capsule, 2400ug

5960 Vitamin B₆ tablet/capsule 25mg

5691 Vitamin B₆ tablet/capsule 40mg

2712 Vitamin B₆ tablet/capsule 82mg, e.g. Holland and Barratt

6426 Vitamin C tablet/capsule 30mg

VITAMIN AND MINERAL SUPPLEMENTS - TABLET OR CAPSULE FORM

8424	Vitamin C tablet/capsule 45mg
6436	Vitamin C tablet/capsule 60mg
9322	Vitamin C tablet/capsule 75 mg
9149	Vitamin C tablet/capsule 90mg
9638	Vitamin C tablet/capsule 100mg
9301	Vitamin C tablet/capsule 200mg
5430	Vitamin C tablet/capsule 250mg
9605	Vitamin C tablet/capsule 300mg
9298	Vitamin C tablet/capsule 500mg
9342	Vitamin C tablet/capsule 1000mg
9790	Vitamin E tablet/capsule 10mg
9600	Vitamin E tablet/capsule 100mg
2956	Vitamin E tablet/capsule 167mg
5431	Vitamin E tablet/capsule 300mg
2832	Vitamin E tablet/capsule 335mg
2959	Vitamin E tablet/capsule 670mg
6843	Vitamin E tablet/capsule 804mg
9650	Yeastamin brewers yeast tablets enriched B vitamin
9532	Yeastvite tablet
6841	Zinc supplement 15mg

VITAMIN AND MINERAL SUPPLEMENTS - TABLET OR CAPSULE FORM



Serial number label

NDNS: Adults Aged 19 to 64 Years

D7

COUNTING YOUR TEETH AND AMALGAM-FILLED TEETH

We know that the sorts of foods people eat can be affected by any problems they have chewing. So, we need to know how many natural teeth you have and how many of your teeth have dental amalgam (mercury) fillings. This information will help us understand the dietary information that we get from other parts of the survey.

Before reading the rest of the instructions please answer this question:

Do you wear a complete denture at all? By complete denture we mean one which replaces all of your teeth in your upper or lower jaw. *Circle the one that applies to you*

No, I do not wear a complete denture in either my upper or lower jaw.....1

Yes, I wear a complete denture in my upper jaw2

Yes, I wear a complete denture in my lower jaw3

Yes, I wear a complete denture in my upper and lower jaw.....4

If you circled number 4 you do not need to complete anything further on this form! Please just hand this form back to the interviewer.

If you circled numbers 1,2 or 3, please read the rest of these instructions, complete the form and hand it back to the interviewer when he or she next calls.

Before you start...

We would like you to count your teeth and amalgam-filled teeth using the instructions given on this form and record the information in the boxes shown. To help you count your teeth and amalgam-filled teeth, the interviewer has given you a disposable mouth mirror. This is easier to use if you dip it into warm water first, so it doesn't fog up. Please use only lukewarm water or the surface of the mirror will melt!

If you have difficulty in seeing or counting your teeth or fillings you could ask a member of your family or a friend to help you.

Stand in front of a mirror so that when you open your mouth you can see into it. Good lighting in front of you helps – a bathroom mirror with a light above it is a good place. Take out any partial dentures you wear before starting to count.

COUNTING YOUR TEETH

Start with your lower jaw

If you have a complete denture with no natural teeth in your LOWER jaw, go to the next section to count the teeth in your UPPER jaw.

If you have some natural teeth, please follow these instructions:

- Standing in front of the mirror, look at the teeth in your lower jaw.
- Using an index finger, right or left whichever is easiest, touch the outside of the very last back tooth on one side of your bottom teeth. By the outside of the tooth we mean the side that is closest to your cheek. This is shown in Diagram 1.
- Keeping your finger on the outside of the teeth move it slowly towards the middle of your mouth, counting each tooth as your finger moves over it, and carry on round until you reach the very back tooth on the other side of your bottom jaw. This is shown in Diagram 2.

Diagram 1



Diagram 2

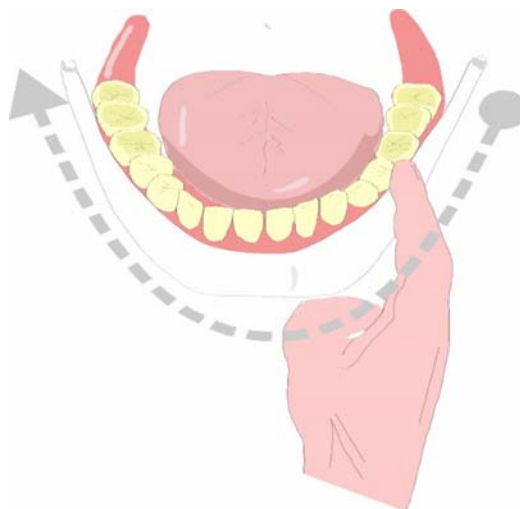
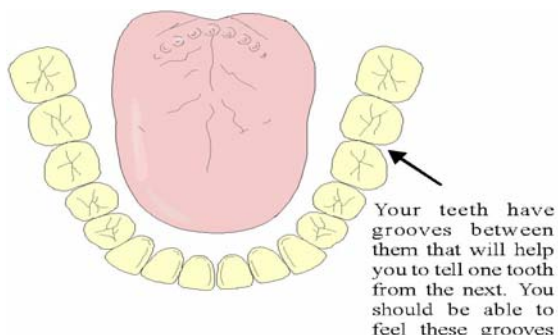


Diagram 3



- As you move your finger over the outside of your teeth, you will feel the grooves between each tooth. These grooves will help you find the end of one tooth and the beginning of the next as you are counting. This is shown in Diagram 3.
- Practise feeling your teeth and grooves and counting them a few times until you are happy with the way you are counting your teeth.

When you are ready, please tell us how many teeth are in your LOWER jaw here →

Next, count the teeth in your upper jaw

If you have a complete denture with no natural teeth in your UPPER jaw, go to the next section to count the number of teeth with amalgam fillings in your LOWER jaw.

If you have some natural teeth:

- Standing in front of the mirror, tilt your head back so that you can look at the teeth in your upper jaw. You might find it easier if you use the mouth mirror to help you count your upper teeth.
- Using an index finger, right or left whichever is easiest, touch the outside of the very last back tooth on one side of your top teeth. By the outside of the tooth we mean the side that is closest to your cheek. This is shown in Diagram 1.
- Keeping your finger on the outside of the teeth move it slowly towards the middle of your mouth, counting each tooth as your finger moves over it, and carry on round until you reach the very back tooth on the other side of your upper jaw (Diagram 2).
- The grooves you feel between your teeth will help you to tell where one tooth ends and the next one begins. Practise feeling your teeth and grooves and counting them a few times until you are happy with the way you are counting your teeth. If you have difficulty then try to get a member of your family, or a friend to help you.

When you are ready, please tell us how many teeth are in your UPPER jaw here →

COUNTING YOUR TEETH FILLED WITH AMALGAM

We would also like you to count the number of teeth that have dental amalgam fillings. Amalgam fillings look **grey** or **black** on the surface, so please do NOT count any teeth with shiny gold or very shiny silver fillings. Your interviewer has given you leaflet D8, *Counting your own teeth and amalgam-filled teeth: Examples*. This has pictures of amalgam fillings, which will help you recognise them when you come to count your own.

We need to know how many teeth you have with amalgam fillings in, not how many individual fillings you have. A filling can be on the top or sides of a tooth and you can have more than one filling in the same tooth (Diagram 4). Please only count the filled tooth once, even if it has more than one filling.

Take out any partial dentures you wear before starting to count.

Diagram 4



This mouth would count
as having 4 filled teeth

Start with your lower jaw

If you have a complete denture with no natural teeth in your LOWER jaw, go to the next section to count the filled teeth in your UPPER jaw.

If you have some natural teeth:

- Using a well-lit mirror, look at the teeth in your lower jaw.
- Start with the very back tooth on one side and work round to the very back tooth on the other side of your lower jaw, counting the teeth which have grey or black-looking fillings.
- Practise counting the number of teeth with grey or black-looking fillings in your lower jaw a few times, until you are happy with the way you are counting.

When you are ready, please tell us how many teeth have grey or black fillings in your LOWER jaw here →

If you do not have any teeth with grey or black fillings, write '0' in the box

Now count the number of amalgam-filled teeth in your upper jaw

If you have a complete denture with no natural teeth in your UPPER jaw, then you have finished this part of the survey. Please keep this form safe for the interviewer for when he/she next calls.

If you have some natural teeth in your UPPER jaw:

- Standing in front of a well-lit mirror, tilt your head backwards so that you can see the teeth in your upper jaw.
- Count the number of filled teeth you have in your upper jaw using the mouth mirror to help you look at the different surfaces of each tooth. Remember only to count teeth that have grey or black-looking fillings. You may need to bend the mirror slightly to make this easier – there are instructions on the mirror packet on how to do this.
- Practise counting the number of teeth with grey or black-looking fillings in your upper jaw a few times, until you are happy with the way you are counting. If you have difficulty then try to get a member of your family, or a friend to help you.

When you are ready, please tell us how many teeth have grey or black fillings in your UPPER jaw here →

If you do not have any teeth with grey or black fillings, write '0' in the box

**THANK YOU VERY MUCH FOR HELPING US WITH THIS PART OF THE SURVEY.
PLEASE KEEP THIS FORM SAFE TO GIVE TO THE INTERVIEWER WHEN HE/SHE NEXT CALLS.**

D8 COUNTING TEETH LEAFLET



COUNTING YOUR TEETH AND AMALGAM-FILLED TEETH

This leaflet is to help you to count your own teeth and amalgam-filled teeth. It contains some pictures that show you what amalgam fillings look like and some explanation of what you should and should not include when you count your teeth and amalgam-filled teeth.

The interviewer will be very happy to help you if there is anything that you are not sure about.



- A single amalgam filling; this counts as one filled tooth.



- Upper jaw containing 8 teeth
- 6 teeth have amalgam fillings



- Upper jaw containing 8 teeth
- 6 teeth have amalgam fillings



- 14 teeth
- 6 teeth filled with amalgam
- Tooth 36 should not be counted, because it is a tooth-coloured filling that does not contain amalgam
- Tooth 46 has 2 amalgam fillings, but should only be counted as 1 amalgam-filled tooth



- 4 teeth
- 3 teeth filled with amalgam
- Tooth 16 has a cast gold crown; this is a different colour and should not be counted

Contact

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Serial number label

NDNS: Adults Aged 19 to 64 Years

RECORD OF BOWEL MOVEMENTS

B1

We would like to have a record of the number of bowel movements that you have on each day that the food/drink diary is kept, starting on the first full day of keeping the diary - day 1 - and finishing on day 7.

Please use this to record the number of bowel movements you have each day.

At the end of each day please write the total number of bowel movements for that day, *number at home plus number away from home*, in the right-hand column of this chart.

Day of the week <i>write in - Tues, Wed, Thurs, etc.</i>	Total number of bowel movements - ring next number after each movement	Enter total number of bowel movements today
1st day is: day	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	Total today: -----
2nd day is: day	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	Total today: -----
3rd day is: day	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	Total today: -----

Continues on the other side →

→ Continued from the other side:

Day of the week <i>write in -Tues, Wed, Thurs, etc.</i>	Total number of bowel movements - ring next number after each movement	Enter total number of bowel movements today
4th day is: day	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	Total today: -----
5th day is: day	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	Total today: -----
6th day is: day	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	Total today: -----
7th, and last day is: day	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14	Total today: -----

If you have any questions, or are not sure how to complete the form, ask the interviewer who will be pleased to help you.

Please hand this chart back to the interviewer
at the end of the 7 days.

Thank you

To the interviewer: enter total in Blaise, and return this chart tagged to the front of the measurement schedule (M1).

BP1

NATIONAL DIET AND NUTRITION SURVEY OF ADULTS AGED 19 TO 64 YEARS

THESE INSTRUCTIONS ARE TO BE KEPT IN THE CASE WITH THE DINAMAP AT ALL TIMES

Informing people of their blood pressure measurements

If the respondent has said that they would like to know what their blood pressure measurements are you should write down the three readings for the systolic and diastolic pressures for them on the card provided (M2).

You will probably then be expected to explain or comment on the readings. It is very important that you avoid giving any interpretation or advice on the measurements. You do not have any medical training or qualifications and are not acting in a medical advisory capacity. You therefore must NOT offer advice. You should explain this to the respondent and suggest that their GP is the best person to help them.

Reporting blood pressure results

The measurements should be copied onto:

- the paper Measurement Schedule (M1) - and subsequently entered in the Blaise progress block
- the Blood Pressure Consent Form (Z3) - copy immediately sent to HNR
- the person's record of their measurements (M2)

There may be situations where you need to take action because the respondent's blood pressure is sufficiently raised that their GP needs to be informed as soon as possible. These situations are rare, but you must know how to deal with them.

Action on your part is required as follows:

If all three **systolic** readings are - **equal to or above 160mm**

and/or

If all three **diastolic** readings are - **equal to or above 95mm**

These ranges are the same for all ages (19 – 64 years).

For instruction on reporting raised blood pressures see over page →

Reporting raised blood pressures

In these circumstances you should:

1. Contact the respondent's GP surgery or health centre
2. Contact Dr Maureen Birch (the survey doctor) on xxxxx xxxxxx.

Contacting the GP surgery or health centre:

You should do this either by phone, or in person, as soon as possible. You have a record of the GP's name and address and telephone number on the GP participation consent form. If the respondent did not know their GP's telephone number then you will have to get it from a local phone book or Directory Enquiries.

NOTE: if the surgery is closed, wait until the next day - it is not necessary to leave a message on an answerphone or with a deputising service.

You have been given a form (BP2) with a standard wording that you can use when you phone the surgery, or you can complete the form, put it in an envelope addressed to the GP, and drop it into the surgery. You should report all three systolic and diastolic readings (MAP - mean arterial pressure and pulse readings should not be reported).

NOTE: you do not have to insist on speaking to or seeing the GP - it is acceptable to leave the information with the receptionist.

If the surgery has any questions then they should be referred to Dr Birch - your responsibility is fully discharged once you have taken the readings and passed on the information.

NOTE: If you are having problems following the protocol detailed above or are in any doubt at all as to how to handle a particular situation contact the Field officer or member of Research immediately.

Contacting Dr Birch

Ring Dr Birch's mobile number – xxxxx xxxxxx; you may be asked to leave a voicemail message. Please give your name, interviewer number and telephone number and she will call you back as soon as possible.

When you speak to Dr Birch she will ask you for the following information:

- details of the respondent - full name, serial number, date of birth and sex
- their BP readings
- their height and weight
- GP's name, address and telephone number.

If there were any unusual circumstances relating to the blood pressure measurement - for example, you could not get the cuff to wrap around the arm properly, the respondent's arm was too large for the cuff, but the next size cuff was too deep, then you should also report this to Dr Birch.

Please make a note in your notebook of the time you phone or call at the surgery and the time you call Dr Birch.

NATIONAL DIET AND NUTRITION SURVEY OF ADULTS AGED 19 TO 64 YEARS

IN CONFIDENCE

As you will be aware, your patient is taking part in the National Diet and Nutrition Survey of adults aged 19 to 64 years. As part of the survey consent was given to measure his/her blood pressure and to inform you, as their GP, of the result.

When measured the blood pressure readings were higher than 160/95, and were recorded as given below.

Should you have any queries or wish to discuss this information further, please contact the Survey Doctor, Dr Maureen Birch xxxxx xxxxx.

BP reading

First reading

--	--	--

Systolic (mmHg)

--	--	--

Diastolic (mmHg)

Second reading

--	--	--

Systolic (mmHg)

--	--	--

Diastolic (mmHg)

Third reading

--	--	--

Systolic (mmHg)

--	--	--

Diastolic (mmHg)

BP2



M1

MEASUREMENTS SCHEDULE

Serial number label

This Schedule contains

(Please tick)

A - D: BLOOD PRESSURE AND ANTHROPOMETRIC
MEASUREMENTS,
including clothing record

pages 2 -13
pages 5 - 6

All measurements should be recorded on this document at the time they
are taken.

E: BLOOD SAMPLE RECORD

pages 14 - 17

F: TAP WATER SAMPLE

page 18

G: 24 HOUR URINE COLLECTION RECORD

pages 19 - 22

H: PRESCRIBED MEDICINES INFORMATION

pages 23 - 24

METRIC to IMPERIAL WEIGHT CONVERSION CHART

pages 25 - 26

Measurement

Entered
into
Blaise

The information in this schedule should be subsequently entered in the Blaise questionnaire progress block.

**When complete, this schedule should be returned to ONS, Titchfield Rm 5002
with all other documents for this serial number.**

BLOOD PRESSURE AND ANTHROPOMETRIC MEASUREMENTS

This page to be completed before returning this schedule.

I:

Measurement	Measurement made?		Tick when entered in Blaise
	No	Yes	
Weight	2	1→	
Height	2	1→	
Waist circumference	2	1→	
Hip circumference	2	1→	
Blood pressure	2	1→	

II: If blood pressure measurement taken:

readings copied onto HNR blood pressure consent form?

Yes.....

1

blood pressure consent form with readings
sent to HNR?

Yes.....

2

A: WEIGHT - if measurement not made go to **A7**

A1 Date of measurement:

Day		Month		Year			

A2 **Weight:**

1st measurement (kilograms) →

--	--	--

 •

--

2nd measurement (kilograms) →

--	--	--

 •

--

A3 **Clothing record**

Ask respondent to complete the clothing record (pages 5/6) and hand back to you.
If refused, interviewer to complete.

At home enter information in Blaise document.

Clothing record completed by respondent.....	1
Clothing record refused - interviewer completed	2
No clothing record.....	3

A4 Ring code if scales placed on: (**code all that apply**)

Uneven floor.....	1
Carpet.....	2
Neither.....	3

A5 Any unusual circumstances?

Yes.....	1	(a)
No.....	2	A6

(a) Code unusual circumstances: (**code all that apply**)

Wearing heavy clothes/shoes.....	1	A6
Other person did weighing.....	2	
Other (specify).....	3	
.....		

A6 Do you consider this weight measurement to be reliable?

Yes.....

No.....

1 - **Go to B**

2 - **(a)**

a) Explain why weight measurement is not reliable

- **Go to B**

A7 If measurement **not made** please give reason: (code all that apply)

Attempted, unsuccessful.....

Not attempted, refused.....

Not attempted, chairfast/bedfast.....

Equipment failure/unavailable.....

1

2

3

4

- **Go to B**



CLOTHING RECORD FOR MALES

What people are wearing obviously makes a difference to their weight at the time. To help us allow for this please put a tick by any item of clothing being worn while being weighed. If something is being worn which is not on the list, please tell the interviewer what it is.

Shoes, trainers and jackets are generally the heaviest pieces of clothing, so these items should not be worn while being weighed.

It would also help if any heavy jewellery was taken off for the short time it takes to be weighed, and any keys or money in pockets removed.

Put a tick besides each item being worn eg

Shirt	✓
Trousers	✓

Items being worn while being weighed	TICK	If more than one is being worn, please write in how many
Vest		
Pair of socks		
Pants/briefs		
T-shirt		
Shirt		
Tie		
Trousers/Jeans		
Shorts		
Belt		
Jumper/Sweatshirt		
Something else not on the list - <i>please tell the interviewer</i>		

CLOTHING RECORD FOR FEMALES

What people are wearing obviously makes a difference to their weight at the time. To help us allow for this please put a tick by any item of clothing being worn while being weighed. If something is being worn which is not on the list, please tell the interviewer what it is.

Shoes, trainers and jackets are generally the heaviest pieces of clothing, so these items should not be worn while being weighed.

It would also help if any heavy jewellery was taken off for the short time it takes to be weighed, and any keys or money in pockets removed.

Put a tick besides each item being worn eg

Blouse	√
Skirt	√

Items being worn while being weighed	TICK	If more than one is being worn, please write in how many
Vest		
Pair of socks		
Stockings/tights		
Pants/knickers/briefs		
Bra		
Suspender belt		
Petticoat/slip		
Blouse		
T-shirt		
Skirt		
Trousers/Jean		
Leggings		
Shorts		
Belt		
Dress		
Jumper		
Cardigan		
Something else not on the list - <i>please tell the interviewer</i>		

B: HEIGHT - if measurement not made go to **B5**

B1 Date of measurement:

Day		Month		Year			

B2 Height:

1st measurement (cms) →

--	--	--

 .

--

2nd measurement (cms) →

--	--	--

--

 . .

B3 Any unusual circumstances?

Yes.....

No.....

1

(a)

2

B4

(a) Code unusual circumstances: (**code all that apply**)

Affected by hairstyle.....

1

Wearing turban.....

2

Posture; back not straight.....

3

Posture; legs not straight.....

4

B4

Unable to stand still/unco-operative.....

5

Other person made measurement.....

6

Other (specify).....

7

.....

B4 Do you consider this height measurement to be reliable?

Yes.....

No.....

1

Go to C

2

(a)

(a) Explain why height measurement is not reliable

- Go to C

B5 If measurement **not made** please give reason:(code all that apply)

Attempted, but unsuccessful.....

Not attempted, refused.....

Not attempted, chairfast/bedfast.....

Equipment failure/unavailable.....

1

2

3

4

Go to C

C: WAIST AND HIP CIRCUMFERENCES

C1 Date of measurement: - if measurement not made go to C6

Day		Month		Year			

C2 Circumferences:

1st Measurement

Waist •

cms

Hip •

cms

2nd Measurement

Waist •

cms

Hip •

cms

C3 Any unusual circumstances?

Yes.....

No.....

1	(a)
2	C4

(a) Code unusual circumstances: (code all that apply)

Clothing thickness different at waist and hips.....

Posture difficulty.....

Unco-operative/would not keep still.....

Other person made measurement.....

Other (specify).....

.....

1	C4
2	
3	
4	
5	

C4 Do you consider this waist measurement to be reliable?

Yes.....

No.....

1	-C5
2	-(a)

(a) Explain why waist measurement is not reliable

- C5

C5 Do you consider this hip measurement to be reliable?

Yes.....

No.....

1	-Go to D
2	-(a)

(a) Explain why hip measurement is not reliable

- Go to D

C6 If measurement **not made** please give reason:(code all that apply)

Attempted, unsuccessful.....

Not attempted, refused.....

Not attempted, chairfast/bedfast.....

1	-Go to D
2	
3	

D BLOOD PRESSURE

D1 Blood pressure can only be measured if the following = Yes

<i>Ring code</i>	Yes	No
Consent to take blood pressure given (Z3)	1	2

If Code 2 do not take blood pressure

- Go to E

Introduce

D2 Can I just check, have (you) eaten or drunk anything or had a cigarette in the last 30 minutes?

CODE ALL THAT APPLIES

Yes, eaten.....

Yes, drunk something....

Yes, had a cigarette.....

No, none of the above.....

1

2

3

4

Take three measurements from right arm - if no measurements taken go to **D11**.

D3 Date of measurement:

Day		Month		Year			

D4 Time measured - first reading (24 hrs):

Hours		Minutes	

D5 BP reading:

First reading:

MAP (mmHg)

--	--	--

PULSE (bpm)

--	--	--

SYSTOLIC (mmHg)

--	--	--

DIASTOLIC (mmHg)

--	--	--

Second reading:

MAP (mmHg)

--	--	--

PULSE (bpm)

--	--	--

SYSTOLIC (mmHg)

--	--	--

DIASTOLIC (mmHg)

--	--	--

Third reading:

MAP (mmHg)

--	--	--

PULSE (bpm)

--	--	--

SYSTOLIC (mmHg)

--	--	--

DIASTOLIC (mmHg)

--	--	--

D6 Check: Interviewer code (a) and (b)

- (a) Are **all three systolic** readings equal to or above 160mmHg?

Yes.....

1

-Report results to GP and Dr Birch (b)

No.....

2

-(b)

- (b) Are **all three diastolic** readings equal to or above 95mmHg?

Yes.....

1

-Report results to GP and Dr Birch (D7)

No.....

2

-D7

D7 Cuff size used:

Large adult size.....

1

Adult size.....

2

Small adult size.....

3

D8 Any difficulties in fitting or wrapping cuff?

Yes.....

1

-(a)

No.....

2

-D9

(a) Code difficulties (code all that apply)

Conical shaped arm.....

1

Obese arm; correct circumference cuff too deep.

2

-D9

Other difficulties with the cuff (specify).....

3

D9 Any unusual circumstances?

Yes.....

No.....

1

-(a)

2

-D10

(a) Code unusual circumstances: (code all that apply)

Person was upset/anxious/nervous.....

Error 844 -excessive movement.....

Right arm unavailable, taken from left arm.....

Other (specify).....

1

2

3

4

-D10

D10 Do you consider this blood pressure measurement to be reliable?

Yes.....

No.....

1

-Go to E

2

-(a)

(a) Explain why blood pressure measurement is not reliable

- Go to E

D11 If measurement **not made** please give reason: (code all that apply)

Attempted, unsuccessful.....

Not attempted, consent withdrawn.....

Equipment failure/unavailable.....

1

2

3

-Go to E

E: BLOOD SAMPLE RECORD

E1 Blood sample can only be taken if the following = Yes

<i>Ring code</i>	Yes	No
Consent given to take blood (Z4)	1	2

If Code 2 **Do NOT take blood sample**

E2 Interviewer to code:

Consented to sample being attempted.....

Refused consent to attempt blood sample.....

1
2

E3

(a)

(a) Specify reasons for refusal to **consent to** blood sample

Blood can only be taken if the consent form has been signed.

The phlebotomist must be given a copy of the signed consent form (Z4) before attempting to take blood.

E3 Date sample attempted

Day		Month		Year			

E4 Time at start of 'blood visit'

Hours		Minutes	

E5 Has respondent ever been told he/she has a clotting or bleeding disorder:

Yes.....

1

-blood must NOT be taken; END

No.....

2

-E6

E6 Is the respondent taking anticoagulant drugs?

Yes.....

1

-blood must NOT be taken; END

No.....

2

-E7

E7 Was there a problem with taking the blood sample?

Yes.....

1

-(a)

No.....

2

-E8

(a) Specify problem:

Outcome:

E8 Number of attempts made (max 2)

Ring number

None..... 0 **(a)**

One..... 1 **-E9**

Two..... 2

(a) Reason not attempted

No suitable vein..... 1

Respondent refused..... 2 **E11**

Respondent too upset/nervous..... 3

Other (specify)..... 4

E9 Sample obtained?

Yes..... 1 **E10**

No..... 2 **(a)**

(a) Reason attempted, but unsuccessful

Respondent's discomfort/distress..... 1

Vein collapsed..... 2 **E11**

Other (specify)..... 3

.....

E10 Volume of sample obtained (mls)

--	--

(max 30ml)

E11 Any other problems reported by the phlebotomist?

Yes..... 1 **(a)**

No..... 2 **E12**

(a) Specify problems:

E12 Any problems or unusual circumstances you
(the interviewer) wish to note?

Yes.....

No.....

1

(a)

2

E13

(a) Specify problems:

E13 Time at end of blood visit: (24hr clock)

--	--	--	--

Hours

Minutes

E14 Phlebotomist's name:

F: TAP WATER SAMPLE

F1 Interviewer to code:

Tap water sample taken	1	-(a)
No tap water sample taken	2	

a) Reasons for NOT taking tap water sample.

- Go to G

F2 Were there any problems taking the tap water sample?

Yes.....	1	-(a)
No.....	2	

a) Specify problems:

F3 Were there any problems in posting/packing the sample?

Yes.....	1	-(a)
No.....	2	-Go to G

a) Specify problems:

- Go to G

G: 24-HOUR URINE COLLECTION RECORD

G1 Interviewer to code:

Agreed to make a 24-hour urine collection and full
collection made.....

Agreed to make a 24-hour urine collection but full
collection **not** made.....

Refused to make a 24-hour urine collection.....

1 -G2

2 -(a)

3 -(b)

(a) Reason full collection not made

(b) Reason collection refused

- Go to H

G2 Date 24-urine collection started (by respondent)

Day		Month		Year			

G3 Time of first urine collection (24hr clock)

Hours		Minutes	

G4 Time of last urine collection (24hr clock)

Hours		Minutes	

G5 Date 24-urine collection ended

Day		Month		Year			

G6 Weight of 24-hour urine collection (Kilograms)

		•		
--	--	---	--	--

		•		
--	--	---	--	--

G7 Was the 24-hour urine collection made during the 7-day diary Keeping period or after diary keeping completed?

During.....

1

After.....

2

No diary.....

3

G8 Were there any problems in making the collection?

Yes.....

1

-(a)

No.....

2

-G9

(a) Specify problems:

- G9

G9 Were there any problems in weighing the collection?

Yes.....

No.....

1
2

-(a)

-G10

(a) Specify problems:

- G10

G10 Who took the sub-samples from the urine collection?

Respondent (supervised).....

Respondent (not supervised).....

Interviewer.....

1
2
3

- G11

G11 Were there any problems in taking the sample from the collection?

Yes.....

No.....

1
2

-(a)

-G12

a) Specify problems:

- G12

G12 Were there any problems in packing/posting the samples?

Yes.....

No.....

1

-(a)

2

rine

Record

a) Specify problems:

- End Urine
Record

H: PRESCRIBED MEDICINES - this information is to be collected at the pick-up call at the end of the dietary recording period.

H1 Has the (*respondent*) taken any prescribed medicines since the start of the record-keeping period?

If dietary record refused ask:

Is (*respondent*) currently taking any prescribed medicines?

Yes.....

1

-H2

No.....

2

-End of prescribed medicines section

H2 Interviewer to record details of all prescribed medicines taken during record-keeping period/currently.

Include all prescribed medicines - not just those taken orally; include injections, inhalers, skin preparations etc. Include the oral contraceptive, if taken. Ask to see the medicine container/packet and copy full product name, including brand, and strength if given.

NB Please write in pen (not pencil) and in BLOCK CAPITALS. This information will not be entered by you in Blaise.

Medicine 1:	
Name (incl brand)	
Strength (if given)	
Medicine 2:	
Name (incl brand)	
Strength (if given)	
Medicine 3:	
Name (incl brand)	
Strength (if given)	
Medicine 4:	
Name (incl brand)	

Strength (if given)
Medicine 5: Name (incl brand)
Strength (if given)
Medicine 6: Name (incl brand)
Strength (if given)
Medicine 7: Name (incl brand)
Strength (if given)
Medicine 8: Name (incl brand)
Strength (if given)
Medicine 9: Name (incl brand)
Strength (if given)
Medicine 10: Name (incl brand)
Strength (if given)



NDNS: ADULTS AGED 19 TO 64 YEARS

Metric to imperial weight conversion chart

One pound = 0.454 kilos
One kilo = 2.204 pounds

Kilos	Stones	Pounds	Kilos	Stones	Pounds	Kilos	Stones	Pounds
45	7	1	69	10	12	93	14	9
46	7	4	70	11	0	94	14	11
47	7	6	71	11	3	95	14	13
48	7	8	72	11	5	96	15	2
49	7	10	73	11	7	97	15	4
50	7	12	74	11	9	98	15	6
51	8	0	75	11	11	99	15	8
52	8	3	76	12	0	100	15	10
53	8	5	77	12	2	101	15	13
54	8	7	78	12	4	102	16	1
55	8	9	79	12	6	103	16	3
56	8	11	80	12	8	104	16	5
57	8	13	81	12	11	105	16	7
58	9	2	82	12	13	106	16	10
59	9	4	83	13	1	107	16	12
60	9	6	84	13	3	108	17	0
61	9	8	85	13	5	109	17	2
62	9	11	86	13	8	110	17	5
63	9	13	87	13	10	111	17	7
64	10	1	88	13	12	112	17	9
65	10	3	89	14	0	113	17	11
66	10	3	90	14	2	114	17	13
67	10	7	91	14	5	115	18	2
68	10	10	92	14	7	116	18	4

Kilos	Stones	Pounds	Kilos	Stones	Pounds	Kilos	Stones	Pounds
117	18	6	125	19	10	133	20	13
118	18	8	126	19	12	134	21	1
119	18	10	127	20	0	135	21	4
120	18	13	128	20	2	136	21	6
121	19	1	129	20	4	137	21	8
122	19	3	130	20	7	138	21	10
123	19	5	131	20	9	139	21	12
124	19	7	132	20	11	140	22	1

Interviewer: after entering the information in this schedule into the Blaise, return the schedule to ONS, Titchfield, with all other documents for this serial number.

We would like to thank for your time and effort with this survey.



Measurement Record Card

This information was collected for the National Diet and Nutrition Survey of Adults aged 19 to 64 years. The survey was carried out by the Social Survey Division of the Office for National Statistics, and is for the Departments of Health and the Food Standards Agency.

The information from the survey will help in better understanding the relationship between what people eat and their health, and will help to improve the health of all people in the future.



For further information about the survey please contact:

Lynne Henderson
Social Survey Division
Office for National Statistics
1 Drummond Gate
London SW1V 2QQ
020 7533 5385

NAME:.....

DATE:.....

PA322

M2

These are your measurements:

BLOOD PRESSURE

First reading

Systolic (mmHg)

--	--	--

Diastolic (mmHg)

--	--	--

Second reading

Systolic (mmHg)

--	--	--

Diastolic (mmHg)

--	--	--

Third reading

Systolic (mmHg)

--	--	--

Diastolic (mmHg)

--	--	--

PULSE - beats per minute

First reading

--	--	--

Second reading

--	--	--

Third reading

--	--	--

*Interviewer's
initials.....*

HEIGHT.....cm

WEIGHT.....kg

**WAIST
CIRCUMFERENCE**.....cm

**HIP
CIRCUMFERENCE**.....cm

*The leaflet the interviewer gave you tells you more about all
these measurements.*

Appendix B Example letter as sent to:

Directors of Social Services

Chief Constables of Police

Directors of Public Health

Chief Executives of Health Authorities



Social Survey Division

The Director of Social Services

Date as postmark

Dear

National Diet and Nutrition Survey: Adults aged 19 to 64 years

The Social Survey Division of the Office for National Statistics, which is the government's survey organisation, has been commissioned by the Food Standards Agency and the Departments of Health (in England, Wales and Scotland) to carry out a survey to determine the diet and nutritional status of adults aged 19 to 64 years living in private households in Great Britain. This is part of a programme of surveys which has already covered pre-school children, young people and elderly persons.

Because of the nature of the study I am writing to all the Directors of Social Services in the areas where the survey is being carried out. The ... wave of fieldwork for the survey is taking place in 38 areas across the country. In each area 40 addresses have been sampled and will be contacted by our interviewer. Fieldwork will start at the beginning of and will continue for 4 months.

Within the area for which you have responsibility, our interviewers will be working as follows:

Overall this study aims to obtain information for about 2,000 people, about 13 in each area. The sample of addresses for the survey was selected from the Post Office's Postcode Address File and each sampled address will be sent a letter in advance, explaining about the survey. The addresses will then be visited by an interviewer who will select one adult and invite their voluntary co-operation. They will be given my name and telephone number as well as the name and telephone number of my Survey Manager to contact for further information.

If co-operation is obtained, the survey starts with an interview to collect information about the person and their household and about their general eating habits, physical activities and health. They are then asked to keep a detailed diary for seven days weighing and describing every item of food and drink that they consume over the period. A voucher for £10 is given as a token of our appreciation. The interviewer will then seek the person's co-operation in measuring their height, weight, waist and hips. With written consent the interviewer will also measure blood pressure and ask respondents to make a urine collection. If written consent is obtained, the interviewer will return to the address with a person qualified to take a blood sample for analysis.

All the interviewers working on the study are employed by Social Survey Division; all have been trained and are experienced in carrying out surveys on a wide range of topics covering different groups in the population. In addition, they will all receive five days of special training for this survey prior to the start of fieldwork. All our interviewers carry identification issued by this Office, and before starting work they will call at the main Police Station(s) covering the sample area to make themselves known to the local police. The usual procedure is for their name to be entered in the station 'Day Book'. As the names and addresses of people who take part in any of our surveys are confidential to Social Survey Division, we are unable to divulge these to the local police or other authorities.

The blood samples are being taken by persons qualified in taking blood. These personnel have been specially recruited for the study by the Medical Research Council's Human Nutrition Research Unit, in Cambridge, which has been contracted to carry out all of the procedures associated with the blood sampling aspects of the survey. These personnel will also receive specialised briefing before the start of fieldwork.

The survey protocols, and in particular the procedures associated with taking the blood sample and blood pressure, have been approved by your Local Research Ethics Committee.

I should stress that, as with all surveys undertaken by this Division, co-operation is voluntary, although we rely on people's willingness to take part in order to achieve results which will be representative of the whole population being studied. It will be made clear to those taking part that they are free to withdraw at any stage.

All the equipment and instruments being used are of the highest standard to meet the rigorous requirements for quality data demanded by the Food Standards Agency and the Departments of Health.

If you would like any further information about the survey, please write to me at;

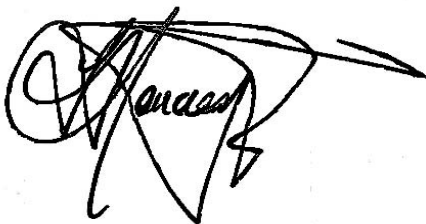
Social Survey Division
Office for National Statistics
1 Drummond Gate
London SW1V 2QQ

or phone me on 020 7533 5385.

Alternatively you can contact the survey manager, Michaela Pink on 020 7533 5465.

I am also writing to Chief Constables, Chief Executives of Health Authorities and to the Director of Public Health in the areas to inform them of the survey.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Lynne Henderson', with a large, stylized flourish extending from the end of the signature.

Lynne Henderson
Project Manager

Appendix C

Feasibility study report

The National Diet and Nutrition Survey: adults aged 19 to 64 years

Social Survey Division, Office for National Statistics; and
C.J. Bates, R. Quigley, M. Birch, W.A. Coward and A. Prentice
MRC Human Nutrition Research, Cambridge.

1 Introduction

The National Diet and Nutrition Survey (NDNS) of adults aged 19 to 64 years was commissioned by the Food Standards Agency¹ and the Department of Health (DH). It is part of an on-going programme of surveys designed to provide a comprehensive picture of the dietary habits and nutritional status of the population. The programme is conducted in separate cross-sectional surveys, carried out at approximately three-yearly intervals, with each survey covering a separate age group: children aged 1½ to 4½ years (pre-school children)², young people aged 4 to 18 years (young people)³, people aged 65 years and over (older adults)⁴ and adults aged 19 to 64 (adults). The NDNS programme was set up following the successful completion and evaluation of the benefits of a survey of adults in 1986/87⁵, the first survey of this type.

The feasibility study for the proposed survey of adults aged 19 to 64 years was carried out by the Social Survey Division (SSD) of the Office for National Statistics (ONS) (London) and Medical Research Council Human Nutrition Research (HNR) (Cambridge), with the University of Newcastle Dental School. HNR was responsible for obtaining ethics approval, recruiting and training phlebotomists, processing the blood and urine samples and the doubly labelled water samples, and reporting clinically significant results to respondents and their GPs (if appropriate). The University of Newcastle Dental School was responsible for advising on the oral health component.

This report describes the design, implementation and results of the feasibility study. Many of the components of the proposed survey of adults had been tested and included in other surveys in the programme, and, therefore, the feasibility study differed substantially from those carried out for previous studies in the NDNS series. This feasibility study was not primarily designed to test procedures or equipment for the first time, although there were some new components which needed developing and testing, for example, a self tooth count and an eating restraint questionnaire.

The first part of this report describes the overall aims and objectives of the feasibility study and describes the survey content, methodology and protocols employed in the various components of the study, including those that were the responsibility of HNR. The second part considers the results of the study, together with recommendations for adaptations to the methodology for the mainstage survey. The oral health component of the feasibility study and the assessment of the feasibility of respondents counting the number of their own teeth and teeth filled with amalgam are reported on separately⁶.

2 Design of the NDNS

The NDNS programme has over its lifetime developed well-established methodologies to meet its aims of measuring the dietary habits and nutritional status of the population⁷. To meet these

overall aims, the survey design needs to include means of collecting data on dietary intake as well as measures of physical activity, anthropometric, physiological and biochemical measurements. As in previous NDNS surveys the proposed design for the adults' survey included several different components administered by an interviewer and with an additional component requiring the use of trained phlebotomists. For the survey of adults it was proposed to adhere to the existing methodology as closely as possible identifying areas where improvements could be made and were warranted. As in previous NDNS surveys the different components of the study would be scheduled over several visits to the respondent's home.

The fieldwork for the feasibility study took place between September and December 1999. This was later than originally scheduled due to delays incurred during the process of obtaining ethics approval for the survey (see Section 8).

3 The aims of the feasibility study

The key aim of the study was to test the feasibility of the proposed design and methods for use in a household based national survey assessing the diets and nutritional status of adults in Britain.

More specifically, the objectives of the feasibility study, were:

- to test the acceptability of the survey to respondents;
- to test the procedure for the collection of a seven-day weighed intake record of all food and drink consumed by respondents;
- to test the procedure for the assessment of level of physical activity;
- to compare food energy intake estimates from the seven-day dietary record with an independent measure of energy expenditure, using the doubly labelled water procedure;
- to test the procedure for making a 24-hour urine collection and subsampling, posting and storing samples from the collection, using para-amino benzoic acid (PABA) as a marker for completeness;
- to test the procedure for collecting and processing a blood sample for analysis for a wide variety of nutritional status indicators;
- to test the procedure for respondent self-assessment of number of teeth and number of teeth with dental amalgam fillings.

4 Design of the feasibility survey

Two samples were selected for the survey (see Section 5), Sample A and Sample B. Those in Sample A were invited to co-operate in a dietary validation which required them to take a measured dose of doubly labelled water and collect 11 spot urine samples for analysis. Cost restraints precluded all survey participants taking part in the doubly labelled water dietary validation and it was decided that to maximise co-operation with this part of the feasibility study respondents in Sample A would be asked to co-operate with only some of the other aspects of the survey. Respondents in Sample B, who were not taking the doubly labelled water, were asked to co-operate with all aspects of the survey.

Respondents in both Sample A and Sample B were asked to take part in the following components of the survey:

- A questionnaire administered face-to-face collecting details about the household, the habitual eating habits of the respondent and their physical activity.
- A seven-day weighed intake record of all food and drink consumed both in and out of the home.
- A seven-day physical activity record.
- A seven-day bowel movement record.
- A short psychometric eating restraint questionnaire.
- A tooth count and oral health interview.

Respondents in Sample A additionally were weighed (so that the appropriate dose of doubly labelled water could be prepared) took the doubly labelled water, and provided 11 spot urine samples.

Respondents in Sample B were asked to co-operate with the following:

- Anthropometric measurements - height, weight; waist and hip circumference.
- Blood pressure measurements.
- Providing a blood sample.
- 24-hour urine collection, validated by PABA.

In one area respondents were also asked, having completed the self tooth count, to agree to a dentist counting their teeth.

5 The role of MRC Human Nutrition Research

HNR had specific responsibility, in the feasibility study, for the following:

- preparation of an agreed survey protocol
- obtaining ethics approval from the Multi-centre Research Ethics Committee (MREC) and each of the regional Local Research Ethics Committees responsible for the chosen postcode sectors
- ensuring that appropriate written consents were obtained and collating the consent information
- urine sample analysis and assistance with the collection protocol
- blood sample collection and analysis
- reporting to the respondents and, with their permission, their General Practitioners (GP's) the results of all clinically significant blood tests and blood pressure measurements.

6 Review of HNR's laboratory analysis methodologies

A review of HNR's laboratory procedures was conducted by Professor Elaine Gunter (Centers for Disease Control and Prevention, Atlanta) in November 1999⁸.

7 The sample design

The feasibility study was based on a sample of 200 people aged 19 to 64 years living in private households in Britain (about 10% of the sample to be achieved in the mainstage survey). The aim of the sample design was not to be representative of the population as a whole but to achieve a balance in the sample across key characteristics so that the sample included equal numbers of men and women in four age bands: 19 to 24 years; 25 to 34 years; 35 to 49 years and 50 to 64 years. The feasibility study was conducted in ten areas purposefully chosen to represent different social and economic profiles.

The sample was divided into two parts, Sample A consisting of 80 interviews and Sample B, 120 interviews (see Section 4 for a description of the different components Sample A and Sample B were asked to participate in). In each selected postcode sector, 50 addresses were randomly selected from the Postcode Address File (PAF), the standard sampling frame for large-scale household surveys, and issued to the interviewer. Each interviewer was asked to achieve 12 fully co-operating interviews. They were asked to report the characteristics of the selected respondents to central field office to try and ensure a cross-section of adults, with equal numbers of men and women in the four age bands.

7.1 Eligibility for the survey

As the initial sample was a household address, interviewers did not have any information as to whether the address contained eligible adults. Only those aged 19 to 64 years were eligible to take part and women who were known to be pregnant or breastfeeding were excluded from the study. The interviewer first screened the address to determine the number of eligible adults. If the household contained more than one eligible adult, the interviewer selected one person to take part at random, using prescribed techniques.

8 Ethics approval, the opt-out card and consent

Obtaining ethics approval was the responsibility of HNR, and Dr Lisa Jackson, the survey doctor, applied for ethics approval for the feasibility survey. Because the fieldwork was to take place within the geographical boundaries of more than five Local Research Ethics Committees (LRECs), ethics approval was initially sought from a Multi-centre Research Ethics Committee (MREC). There are MREC's in each region and it is normal practice to apply to the MREC for the area in which the principal researcher is based, hence the Anglia and Oxford MREC was selected.

The process of gaining ethics approval for the survey was particularly lengthy. A standard application form and copies of the survey protocol, based on the standard NDNS protocols and adhering to best survey practice, were submitted in December 1998. In January 1999 Anglia and Oxford MREC approved the feasibility survey, in principle, subject to six amendments. Four of these amendments (involving changes to the documentation for respondents or requests to see additional documents) were complied with, but two of the amendments requested (concerning the recruitment and consent procedures) proved particularly problematic.

Recruitment: The MREC requested that 'an approach must be adopted which allows potential respondents to decline to take part rather than the interviewer will contact you'. In response it was felt that the approach stated in the protocol ensured that participation was truly voluntary and a case was made for retaining this, particularly as it had been used successfully in previous surveys.

Consent procedures: The MREC also requested 'to see the consent procedure simplified'. In response a case was made for retaining the staged procedures for obtaining fully informed voluntary consent which had also been used successfully in previous surveys.

In February 1999 Anglia and Oxford MREC failed to approve these amendments and were not satisfied with the responses regarding recruitment and consent. They required 'a fresh approach which allows subjects to opt-in and an approach to consent which does not involve a staged process which we regard as coercive'. In addition they requested an additional four amendments

to the documentation which had not been mentioned previously. They were prepared to consider the application on one further occasion subject to a satisfactory arrangement for recruitment. After much discussion it was concluded that a mutually acceptable arrangement was unlikely to be reached and a decision was made on the advice of Professor Stacey to use the 'referral' system. This allowed Dr Jackson to apply to a second MREC for a final decision to be made on ethics approval.

In May 1999 an application was made to South Thames MREC (which covers the area in which the survey sponsors are based). Anglia and Oxford MREC were informed and copies of their response to the original application were included. South Thames MREC approved the survey subject to changes being made to the advance letter to respondents and inclusion of an opt-out card to be sent with the advance letter. The 'opt-out' card was a reply paid card that could be returned by the household/address if they did not wish to take part in the survey. The MREC was concerned that respondents should not feel pressurised to participate in the survey and should have plenty of time to consider whether they wish to be interviewed. Including opt-out cards with advance letters is not standard procedure on household surveys in this country or indeed elsewhere so far as we were able to determine. The requested changes were made to the advance letter, and an 'opt-out' card included, and full MREC approval was given in August 1999.

Having achieved MREC approval, applications were then made to the ten Local Research Ethics Committees that covered the geographical areas selected for the fieldwork. All LRECs approved the survey, although some required written clarification of details or amendments to the documentation. Particular concerns included: (a) indemnity cover; (b) that local ethics committee contact details be provided on forms; and (c) that information on the local researcher be provided. It proved necessary to modify some of the documentation for certain areas.

Full ethics approval from the MREC and all LRECs was achieved before fieldwork started.

Directors of Public Health and Social Services, Chief Constables and Health Authorities were notified that fieldwork was taking place in their areas during the feasibility study (as they were to be in the mainstage survey). Interviewers were also asked to register at the local police stations before starting work in an area.

8.1 Contacting the respondents

The procedure used on the feasibility survey for contacting sampled households was the same as that used in other surveys. An advance letter was sent to all sampled addresses explaining the purpose of the survey, that participation was voluntary, asking for their co-operation and saying that an interviewer would call to explain in more detail. As the NDNS is a survey of individuals rather than households and of certain age groups only, it was not known at the advance letter stage whether anyone at the address was eligible for the survey nor which of the eligible residents at the address was the sampled individual. It was deemed important therefore that the interviewer had the opportunity to contact the residents at the sampled address to be able to determine eligibility and to complete the final stage of sampling, either selecting a household, where there was more than one at the address, or selecting an individual.

The inclusion of an opt-out card at the advance letter stage meant that where these were used the interviewer was not allowed to visit the address to undertake these important tasks. It was also not possible to get any information on who returned the opt-out card, whether there was more than one household at the address or on the number of eligible respondents. It is quite likely therefore that the opt-out card was being returned by someone other than the would-be respondent. While the advance letter contained information on all the key components of the survey, it was of necessity fairly short and did not afford a real opportunity to explain to the respondent the purpose behind all the components of the survey.

8.2 Consent

Co-operation with the survey was completely voluntary and respondents could and did refuse to complete some components of the survey if they so wished. As in most surveys consent to the survey was obtained in stages as it was felt that the respondent might not be able to absorb all the implications of the survey if consent to all stages was sought at once. Information leaflets (developed by HNR if about urine or blood) were given to the respondent outlining the purpose and the procedures involved. Respondents were given adequate time at each stage to consider and discuss any implications with the interviewers or others (including HNR staff), and were free to opt out at any stage, without giving a reason. Staging the consent procedures allowed the respondent to focus on whether they wished to participate or agree with any particular component or procedure such as blood sampling, reporting of results to their GP or being weighed and measured. The respondent had several opportunities at the initial contact stage to decline to participate. Once all the sampling had been completed and a particular individual was selected they were asked to participate in the first stages of the survey. The normal procedure was for the interviewer to make an appointment to come back and start the survey. This effectively allowed at least two 'cooling off' periods at the initial stages of the survey for the respondent to change their mind about participation. Only in very rare circumstances, and

usually at the insistence of the respondent, was the first interview conducted on the same day as the final stage of sampling was completed.

Once contact was made with an eligible respondent, signed consent for participation in each of the components of the survey, given below, was sought by the interviewer. The consent information, when complete was returned to HNR immediately for database entry.

Components of the study for which signed consent was sought included:

- to allow the survey doctor to notify the respondent's GP that they were participating in the survey
- to have their blood pressure measured
- taking a blood sample for analyses (at HNR and elsewhere) which are related to nutrition
- flagging the respondent's name on the NHS Central Register for future research⁹
- to taking PABA tablets to verify the completeness of a 24-hour urine collection
- to having energy expenditure measured using doubly labelled water
- to report back results from the blood pressure and blood sample analysis to the respondent's GP
- to allow residual blood to be stored, at HNR, for possible future analyses related to nutrition
- to allow a dentist to examine the respondent's teeth.
- to HNR informing the respondent's GP of any findings from the oral health examination that might affect general health.

Consent could be withdrawn to any of the components at any time. It was required that consent to providing a blood sample was witnessed by someone other than a member of the survey team. Summaries of participation and consent are provided in Section XX.

At the first visit, the respondent was asked to consent to providing the name and address of their GP. If given, each respondent's GP was informed of his/her participation in the survey by a letter and information sheet from the survey doctor. This was sent to the GP surgery by the interviewer immediately after the respondent has agreed to participate in the survey. This procedure of informing GP's of their patients' participation in the survey worked well. If unwilling or unable to provide this information the respondent was not included in the doubly labelled water survey, PABA verification of the 24-hour urine collection or the dental examination. A period of about two days was allowed between the first visit and those components requiring consent, to enable discussion between the respondent and their GP if they wished and for the

GP to notify the survey doctor if they felt the respondent was unsuitable for any aspect of the survey.

9 Training the interviewers

All of the fourteen interviewers working on the feasibility study had been fully trained by SSD in general interviewing techniques as part of their initial training and were experienced on other surveys. A number had worked on either the NDNS of children aged 1½ to 4½ years or the NDNS of young people aged 4 to 18 years, both of which used similar methodology for most components of the survey. Most of the interviewers had also worked on other diary-keeping surveys such as the Family Expenditure Survey (FES).

For the feasibility study, interviewers attended a five-day residential briefing covering all the components of the survey. This was conducted by research and other professional staff from SSD, the two client departments and staff from HNR. Before attending the briefing, interviewers completed a three-day weighed-intake record of their own, and individual feedback on the recording and coding of these diaries was given by the ONS survey nutritionists at the briefing. The main components covered by the training were:

- background and purpose of the study;
- sampling and achieving the required respondent profile;
- ethical and medical aspects of the survey;
- the procedure for obtaining consents and despatching the consent forms;
- completing the interview;
- the procedure for completing the physical activity diaries;
- the procedure for completing the weighed intake dietary record;
- techniques for checking and detailed probing of the dietary record;
- training in how to assign food and brand codes to the entries in the dietary record;
- training in how to take anthropometric measurements and blood pressure;
- an explanation of the doubly labelled water method and training in how to administer it and collect the spot urine samples;
- the procedure for making the 24-hour urine collections;
- the procedure for the blood-taking visit;
- the oral health component.

Throughout the briefing emphasis was placed on the need for accuracy in all measurements, recording and coding. Detailed written instructions were provided for each interviewer.

10 Recruitment and training of phlebotomists

Recruitment of the phlebotomists within a particular fieldwork area and their training was the responsibility of HNR. The phlebotomists were required to have had recent blood taking experience. Suitable phlebotomists were identified by either:

- recommendations by consultant haematologists in hospitals in the fieldwork localities; or by
- phlebotomists who had worked for the NDNS previously during the survey of children aged 1½ to 4½ years, or the survey of young people aged 4 to 18 years.

The phlebotomists were approached by telephone. They were given a complete explanation of the survey and its requirements and were invited to help. They were asked to provide a CV and the name of a referee from whom a reference was obtained to ensure that they had recent experience of phlebotomy. If successful, the phlebotomist became an employee of MRC for the period of the feasibility survey and indemnity was provided as for all MRC members of staff.

The phlebotomists who agreed to participate in the feasibility study were sent full written instructions about the survey methodology and procedures and were invited to attend a briefing session, arranged to coincide with the briefing of the interviewers. Four of the ten phlebotomists recruited were able to attend the briefing session. This briefing provided an opportunity to meet the ONS interviewers they would work with as well as other members of the survey team. Phlebotomists were also trained in the survey background and protocols, and were provided with refresher training on the venepuncture technique. Those phlebotomists who were unable to attend the briefing session were given instruction by telephone. Since all ten phlebotomists had worked on previous NDNS surveys, attendance at the briefing was not considered critical.

11 Feedback from interviewers

Interviewers who worked on the feasibility study were asked to attend a one-day debriefing session to discuss feedback on various aspects of the survey and to identify areas that could be improved for the main stage. The debriefing meeting was attended by interviewers, research and field management staff from SSD, staff from HNR and client representatives. Prior to the debriefing session interviewers were required to complete detailed reports and these were used to identify those areas that were of particular concern. In addition to the outcome of the debriefing sessions these written reports were used to identify recommended actions for the mainstage survey.

12 Scheduling of survey components

The different components of the survey were administered over several visits to the respondent's home. Once the respondent had been selected from those eligible in the household an appointment was made to explain more about what the survey entailed and to start the survey. This first part of the survey is the 'dietary interview' which was conducted face-to-face using computer assisted interview (CAI) methods. At the end of the dietary interview the interviewer explained in detail the next stage of the survey and 'placed' the dietary record if the respondent agreed to continue. The respondent was then briefed on how to complete the diary. The scheduling of the other components of the survey and the visit at which they could be completed are shown in the table below. This represents the maximum number of visits and some are discretionary depending on how the respondent was getting on, particularly with completing the diary.

Visit	Purpose	Content
1	Dietary interview	Interview on eating patterns and placing the diary
2	24hr check	Check on diary progress; start anthropometric measurements. Introduce urine and blood sample. Leave instructions and equipment for urine sample
3	Mid-week check	Check on diary progress; anthropometric measurements
4	Additional diary check	As visit 2, if required
5	Post-dietary recording period interview and diary check	Collect diary and carry out the post-dietary recording interview introduce oral health component. Complete anthropometric measurements
6	24 hr urine call	Pick up urine sample
7	Phlebotomist visit	Take blood sample

13 The questionnaires

The survey used Computer Assisted Interviewing (CAI) methods for the face-to-face components of the survey using Blaise interviewing software. Some questions or topics in the survey were of a sensitive nature such as those on oral contraception, the menopause and hormone replacement therapy and were asked using computer assisted self-completion methods (where the respondent answered the questions directly onto the laptop). Other self-completion modules such as the psychometric eating restraint questionnaire were offered as both CAI versions and paper. Responses completed on the paper and pencil questionnaire were subsequently entered into the Blaise computer program by the interviewer. Recording documents for the self-tooth count and the catering questionnaire, which was used by

interviewers to collect information from workplace or college catering establishments if used by the respondent, were also provided as paper documents.

Face-to-face interviews were carried out at the dietary interview and the post-dietary recording interview. The topics covered in each of these interviews are listed in the following sections.

13.1 Dietary interview

The dietary interview included the following topics:

- use of milk, tea (including herbal tea), coffee, artificial sweeteners and salt
- respondent assessment of appetite
- food frequency questions
- special diets, allergies, whether vegetarian or vegan
- whether eats organic food or home grown food
- food storage
- use of dietary supplements
- physical activity
- health problems and long-standing illness
- use of prescribed medicines
- whether has any of own natural teeth
- smoking behaviour
- drinking behaviour
- use of oral contraceptives and hormone-replacement therapy, and the menopause
- classificatory questions such as education, ethnic origin, tenure, income, employment questions, occupation and industry coding, household durables.

13.2 Post-dietary recording interview

The interview conducted at the visit to pick up the completed diary covered:

- assessment of the quality of the diary information
- illness during record keeping week
- oral health questions

At this visit the interviewer also collected:

- the completed dietary record
- psychometric eating restraint questionnaire
- tooth count.

At this visit the interviewer also:

- completed any outstanding anthropometric measurements
- arranged appointments for blood and urine samples if not already done.

The results of the anthropometric and blood pressure measurements, number of teeth and amalgam fillings, information in the physical activity diary and the record of bowel movements were entered into the appropriate sections of the dietary interview questionnaire as and when completed.

13.3 Psychometric restraint questionnaire

The Dutch Eating Behaviour Questionnaire¹⁰ (DEBQ) has been developed as a possible means of identifying mis-reporters, that is, individuals who under- or over report their consumption, or otherwise mis-report their eating behaviour. The questionnaire is one of a few of its kind that has been validated. It was included in the feasibility study as a self-completion questionnaire as part of the post-dietary recording questionnaire.

14 Diaries

In order to meet the aims of the survey the NDNS seeks to collect detailed information on nutritional intake over a seven-day period. Food intake is only one part of the picture and so the other components of the survey provide context for understanding and interpreting the dietary diary. In addition to knowing what the subject consumed over the diary period it is useful to have complementary information on their activity levels and bowel movements over the same period. In the feasibility survey four different diaries were kept over the same seven-day period:

- weighed intake diary
- eating out diary
- bowel movement diary
- physical activity diary.

14.1 The weighed intake diary

Detailed dietary information was needed to derive nutrient intakes. Several methodologies exist for obtaining estimates of nutrient intake such as 24-hour recall, food frequency questionnaires or duplicate portions¹¹. The NDNS programme has always used weighed intake diaries and this is the model that was again adopted for the adults' feasibility study. While weighed intake diaries have a heavy respondent burden they are considered far superior to other methods as they provide detailed information on the distribution of nutrient intakes. An important part of the feasibility study was to test the suitability of continuing to use a weighed record of all food and drink, consumed both in and outside the home, for seven consecutive days, in relation to response and data quality.

The weighed intake diary used was an A3 sized 'Home' diary for recording food and drink consumed at home. For each food item the respondent was asked to complete:

- description of the food including any brand names
- the time consumed
- the weight of the plate
- the weight of the plate plus the food
- to indicate if there were any leftovers
- weight of plate and leftovers
- for fruit and vegetables, whether the food was home grown or not
- who weighed the food item.

At the end of the seven days interviewers coded the food information into the diary using a detailed food-coding frame, which included brand codes for a limited number of food types.

The diaries contained pages to cover an eight-day period, with the first day as a practice, before the seven-day recording period.

14.2 Eating out diary

An A4 sized 'Eating Out' diary was provided for recording food and drink consumed outside of the home. Respondents were encouraged to take the diary with them whenever they went out. Items which were consumed out of the home and which had not been prepared at home were generally not weighed. The information recorded in the 'Eating Out' diary was much less detailed than for the home diary but included:

- time food or drink consumed
- brand name, if not fresh food
- full description of the food or drink

- amount, size or quantity
- amount, size or quantity of leftovers
- where the food was consumed e.g. work, café, restaurant, friend's house
- where the item was obtained e.g. name of shop, pub, or if brought from home
- cost of the item

The diary also contained a note page for the respondent to give additional descriptions of the food consumed. This also had a ruler to help with the estimation of the size of the food items.

14.3 Checks on the weighed intake diary

Having placed the diary the interviewer made a number of visits to the respondent during the record-keeping period. At each visit the interviewer checked the completeness of the diary and prompted the respondent for further information to clarify the description of the food consumed and allow accurate coding of the food item. A checking visit was made 24 hours after placing the diary when the interviewer reviewed the practice day, gave additional guidance and instructions and encouraged the respondent to continue with the record keeping. A further checking visit was done during the middle of the recording period when the interviewer again reviewed the completeness of the diary and prompted for further or more detailed information if necessary. If needed, the interviewer also made a further visit if the respondent was finding it difficult to complete the diary or if the quality of the diary keeping was poor. At all check visits the interviewer encouraged the respondent to continue with the diary and answered any questions the respondent had. A final diary check was done when the diary was picked up at the end of the recording period. In order to assist with the coding of the diaries respondents were encouraged to keep the packaging from any foods they consumed during the period.

14.4 Validation of the dietary record

The doubly labelled water procedure (DLW) was the technique used to validate the dietary records kept by respondents in Sample A. The method involved the respondent drinking a dose of water labelled with two non-radioactive isotopes, hence 'doubly labelled' water. Urine samples were then collected from the respondent: a pre-dose sample and ten post-dose samples for ten days on a daily basis. From the analysis of these samples, the rates of excretion of the isotopes could be measured and energy expenditure calculated. By comparing energy intake from the food diary over the same period with the DLW calculated energy expenditure a measure of the extent of misreporting, particularly of underreporting of food intake could be obtained. This method was successfully used in the feasibility studies for the NDNS of children aged 1½ to 4½ years¹² and young persons aged 4 to 18 years¹³.

Staff at HNR were responsible for the fieldwork and the sample analysis of the DLW¹⁴. The analysis showed that energy intake was significantly lower than total energy expenditure as measured using the DLW, but unlike in the NDNS of young persons aged 4 to 18 years, there was no evidence that individual groups, by age or sex, behaved differently. Overall, the agreement between the estimates for energy expenditure derived from the doubly labelled water analysis and energy intake derived from the dietary record indicated a degree of under-reporting typical of the intake methodology but acceptable in the mainstage survey.

14.5 Bowel movement diary

Respondents were asked to complete a record of the number of bowel movements on each day of the recording period.

14.6 Physical activity diary

There is little information on the physical activity levels of a nationally representative sample of British adults, particularly in relation to diet. Lack of activity is a known risk factor in cardiovascular disease. The NDNS of young people included a physical activity diary. For the adults' survey it was proposed to use something similar to measure the activity levels of adults as an estimate of energy expenditure. One of the objectives of the feasibility study was to develop and trial a method of assessing habitual physical activity. This included asking some lifestyle activity questions as part of the dietary interview and asking respondents to do 'same-day recall of physical activity' in a diary for each day of the seven-day dietary diary period. The physical activity diary was adapted from that used in the NDNS survey of young people who are generally more active than most adults.

The physical activity diary asked the respondent to record how long they spent doing various activities on that day to the nearest 10 minutes. For some activities that could be carried out at varying levels of intensity, such as walking, they were also asked to tick whether the activity had made them out of breath or sweaty. Feedback from initial trials of the diary with interviewers suggested that some respondents who were not very active found it embarrassing or judgmental in some way that they were not able to enter how they did spend their time. Therefore, the diary also included questions for each diary day on aspects such as what time they went to bed the night before, what time they got up that morning, whether they were working/at college that day, how long they spent at work or college, how long they spent watching TV, using a computer, reading, or similar that day, and the duration of any other periods of sleep during the day.

15 Methodology for physical measurements

Anthropometric measurements are intrinsic to any nutrition study and one of the aims of the feasibility study was to test the procedures for determining the anthropometric status of adults and the robustness and suitability of the equipment. Protocols and methods for taking physical measures of adults are well developed and have been included on a number of nutrition and health surveys in the past. Interviewers measured respondents at home during the diary week or questionnaire interviews. The measurements included in the NDNS feasibility were:

Height and weight: Measurements were made of the respondent's height and weight to provide a measure of body size. The Body Mass Index (BMI) is calculated by dividing weight in kilos by height in metres squared and is a standard measure used in many surveys. Height was measured using the Leicester Height Measure and a Frankfort Plane card, and weight using digital personal weighing scales calibrated in 100 gram units.

Waist and hip: Measurements were made of the respondent's waist and hip circumferences to provide a measure of body fat distribution. The waist to hip ratio (WHR) is a well-established indicator and is calculated by dividing the measurement of the waist circumference by the measurement of the hip circumference. The WHR measures abdominal fat stores and several studies in adults have shown that the location of body fat has been associated with health risks, in particular, cardiovascular disease¹⁵. The interviewers used insertion tapes to measure waist and hip circumference following the established procedures and protocols used in previous NDNS studies.

Blood pressure: This was measured only with the respondent's signed consent. Three blood pressure readings were made by interviewers using the Dinamap 8100. The interviewer sent the recorded blood pressure readings to the survey doctor at HNR by post, and copied the readings onto the consent form, which was left with the respondent. All blood pressure readings were scrutinised by the survey doctor, and if consent had been obtained sent, with an indication of the normal range, to the respondent's GP. If the respondent had refused consent for the readings to be passed to their GP, or if they were not registered with a GP, the letter from the survey doctor was sent to the respondent, with advice, if the blood pressure was raised. If the respondent's blood pressure readings were at the level where it was felt necessary to report the readings to their GP as soon as possible, rather than wait for the official report from the survey doctor, the interviewer was instructed to contact the survey doctor at HNR and complete and deliver a report form to the respondent's GP¹⁶. See Section 16.3.1 for further details on the reporting procedure.

16 Biological specimens

The survey included the collection of two biological samples from the respondent, a 24-hour urine sample and a blood sample. All equipment for the collection of physiological specimens was provided by HNR, who also did all analyses of the specimens.

16.1 24-hour urine collection

The urine sample was collected principally to provide an indirect measure of salt (sodium) intake. Previous surveys in the programme have collected a spot urine sample, as co-operation with making a 24-hour collection had not been sufficiently high. It was decided to try, at the feasibility stage, obtaining 24-hour collections from adults. A sample of urine from a 24-hour urine collection is preferable to a spot urine sample as the latter is not sufficiently representative to estimate reliably intakes of sodium, potassium, fluoride and ochratoxin A (a biomarker for exposure to fungal toxins in food), as well as to measure urea (necessary to monitor nitrogen turnover).

Respondents in Sample B, who were not taking part in the doubly labelled water dietary validation, were asked to make a 24-hour urine collection and provide a sample from this, as would be administered in the mainstage.

HNR was responsible for organising the procedure that would be used by the interviewer to advise the respondents about making the 24-hour urine collection. HNR provided training and written instructions to the interviewers on the appropriate way for respondents to make the urine collection, and provided the required equipment.

During the 24-hour urine collection each respondent was asked to take three 80mg oral doses of the marker substance para-aminobenzoic acid (PABA), with meals, to verify the completeness of the 24-hour collection, by its recovery in the urine. PABA is part of the B vitamin folic acid but cannot be utilised by humans and therefore is completely excreted in urine. Signed consent was required for taking PABA, and, before PABA could be given, a detailed drug and allergy history was collected from the respondent. This was used by the survey doctor to exclude individuals with contraindications (e.g. sulphonamide sensitivity) from taking PABA. No significant side effects were noted from PABA administration. One respondent reported abdominal discomfort during the 24-hour urine collection having taken PABA. The survey doctor followed this up, by telephone, and no lasting effects were reported.

Respondents were provided with two containers for the 24-hour urine collection, a 5 litre plastic screw-capped container, with 4 grams boric acid preservative added prior to dispatch, for home use, and a smaller container for use away from home. They were also provided with a safety pin

for attachment to their undergarments to remind them to collect their urine. The respondent was instructed to choose a suitable day for the collection and to start the collection after taking the first PABA tablet. From the moment of taking the PABA tablet the respondent was asked to collect all of their urine for the next 24 hours. A one litre plastic jug was provided for respondents to use to collect urine, the urine was then transferred immediately into the five litre plastic bottle containing boric acid preservative. A two litre bottle was provided for 'away from home' collections. Respondents were instructed to add 'away from home' collections to the five litre bottle when they returned home. Missed collections were recorded on a urine record collection sheet.

On completion of the 24-hour collection, the interviewer arranged a time to weigh the complete urine sample and take four sub-samples of the urine. The complete 24-hour collection was weighed by the interviewer using an electronic hanging balance to estimate the volume. The contents of the container were mixed well before samples were taken. The subsamples were transferred by the interviewer into four Sarstedt Urine Monovette containers (10ml); the remainder was discarded by the respondent. The interviewers posted the urine samples by first class business-reply post in an approved outer container and pre-labelled envelope to HNR. The samples were then stored frozen at -80°C until analysed for sodium, potassium, urea, creatinine, PABA and fluoride content.

The interviewers were unhappy about handling respondents' urine samples and several complaints were made about the protocol. This led to changes being made for the mainstage protocol.

16.2 Blood samples

16.2.1 Collection of the blood samples

Non-fasting blood samples were obtained in the respondent's own home, with their signed consent, by trained phlebotomists employed by HNR and accompanied by the interviewer. The phlebotomists were contacted by the interviewer who made the appointment for each phlebotomy visit with the respondent. Phlebotomists were always accompanied by the interviewer when visiting the respondent. When notified of a visit, the phlebotomists contacted the field laboratories to where blood would be taken. Laboratory processing constraints on weekends at Great Ormond Street (GOS) and Southampton required that samples were collected on weekdays, Monday to Thursdays inclusive, before 3.00pm.

Respondents with clotting or bleeding disorders were excluded from this part of the survey. A maximum of 30ml of blood was taken and no more than 2 attempts from the brachial vein were

allowed. The blood samples were collected by the phlebotomists using the Sarstedt Monovette blood collection system using a multify 21G or fixed needle according to their preference. The Monovette system of blood collection is an enclosed system, which allows the safe, spill-free collection of blood in the home environment. It has an appropriate range of tube volumes and types, including trace element contamination control. It is manufactured from plastic which allows safe transport inside an approved rigid outer container in the postal system. It was successfully used in the mainstage surveys of the NDNS of people aged 65 years and over, and of young people aged 4 to 18 years.

No significant problems were encountered with the phlebotomy visit. One respondent reported bruising after the procedure. This was followed up, by telephone, by the survey doctor, and no lasting effects were reported.

The phlebotomist packaged and dispatched the samples to the laboratories. All sample tubes were labelled with the respondent's serial number which had been printed with waterproof ink onto labels specially designed to withstand very low temperatures. The portions of blood collected followed one of three routes to sample processing and analysis:

- Direct first class business-reply post to GOS (packaging provided, haematological determinations) (1 x 2.7ml EDTA anticoagulated for plasma, 1 x 1.2ml clotted for serum)
- Direct first class business-reply post to Southampton (packaging provided, for trace element determinations) (1 x 2.7ml EDTA anticoagulated for plasma)
- Transfer to local field laboratory for immediate processing and storage (2 x 7.5ml lithium heparin anticoagulated for plasma). The samples taken to the field laboratory were frozen immediately after processing and were returned to HNR, still frozen, as a batch at the end of the fieldwork period. Annex Four gives the list of analytes undertaken on these samples.

The phlebotomists were responsible for posting the samples on the same day to GOS and Southampton, and for taking the two portions of blood in a cool box to the local field laboratory within one hour of collection.

There were no significant delays of samples sent by post to Southampton and HNR during the feasibility study. Nearly all the urine samples were received at HNR, and the blood samples sent to Southampton within 48 hours of collection. However, unexpectedly, only 25 percent of GOS samples arrived at GOS within 48 hours of being sent by the phlebotomist. The postal service was contacted about this unacceptable delay and they began an investigation. The Christmas rush-period was a possible reason for the postal delay and the postal service believed the

problem would be corrected quickly. Postal delays of samples had never been a problem in previous surveys. Any late arrival of GOS samples is being monitored closely in mainstage to determine if this remains an ongoing problem and to modify postal procedures if necessary.

The survey doctor reported results from blood analytes with recognised clinical significance to respondents, and with their consent, their GPs. Results included a full blood count plus measures of iron status, vitamin D, vitamin B₁₂, cholesterol and folic acid status. A guide to normal ranges was also provided for GPs along with the results.

16.2.2 Analysis of the blood samples

HNR contracted the Department of Haematology, Great Ormond Street Hospital, London (GOS) to undertake a range of haematological and other investigations on 2.7ml of EDTA anti-coagulated blood and from a serum sample containing a minimum of 1.2ml of clotted blood. These analytes require determination in fresh blood; samples of blood for these analyses were posted by first class business-reply post in approved outer containers and pre-labelled envelopes to GOS directly from the field. GOS routinely provide haematological analyses as a hospital service for prompt reporting.

HNR also worked in conjunction with the Department of Clinical Biochemistry at Southampton University who undertook certain trace element determinations (whole blood mercury and plasma/whole blood selenium) on a 2.7ml portion of EDTA anticoagulated blood. The determination of these analytes requires a contamination-controlled sample preparation procedure and a sample of blood for these analyses was posted (first class) to Southampton directly from the field.

Two 7.5ml lithium-heparinised blood samples were also collected for subsequent separation and sub-division at a nearby field laboratory. The phlebotomist transported the two samples to the field laboratory within one hour of collection. After processing the samples, the field laboratory froze the subsamples for collection by HNR at the end of the feasibility survey. These samples were analysed at HNR for a number of nutrition-related biochemical analyses.

16.2.3 Field Laboratories

A local field hospital laboratory was identified for each postcode sector involved in the survey. The labs were chosen by HNR according to certain criteria:

- being reasonably accessible from the sampling point
- having appropriate facilities for sample processing (i.e. a refrigerated centrifuge and frozen blood storage facilities at -30°C or below).

HNR were prepared to modify the selection criteria if a laboratory did not have the sample processing or storage facilities required, providing alternative arrangements could be made. The laboratories identified were usually at the same hospital where the phlebotomist(s) for that area was based. Initial approaches to consultant haematologists were made by telephone followed by a letter giving more detail about the background to the survey and the procedures involved. The laboratories also received portions of a stabilising solution, 6 percent metaphosphoric acid (for plasma for vitamin C determination). The solution was batch prepared at HNR and transported frozen, on dry ice, by courier. The solution was stored frozen by the laboratory at -30 °C or below until the day of arrival of the blood sample when the solution was thawed, immediately prior to addition of plasma. All tubes were labelled with the specially prepared labels provided by the phlebotomist. Record forms were completed for every blood sample processed and returned to HNR with the samples.

The laboratories stored all the blood samples frozen until the end of fieldwork when the samples were collected and brought to HNR by a courier, in a dry ice-filled polystyrene container that was collected from HNR on the previous day. This process was successful and all samples arrived at HNR in good condition and with all documentation.

The samples returned to HNR were stored at -80°C in a position-allocated freezer file to allow easy location and access. The plasma sample was thawed, subdivided into working volume portions, labelled, refrozen and filed. The location of each sample aliquot in the freezer file was logged in a hard-copy book and on a computer spreadsheet. This initial portioning of the plasma sample facilitated the subsequent determination of many analytes without the risk of sample deterioration due to frequent freeze-thawing cycles.

16.3 Reporting procedures

This section provides details of the reporting procedures established for informing the respondent, and their GP if appropriate, of their blood pressure measurement and the results of the blood analyses.

16.3.1 Reporting Blood Pressure Measurements

As detailed in Section 15, blood pressure was measured using the Dinamap 8100 in those respondents who consented to the procedure. Three systolic and three diastolic blood pressure measurements were taken and recorded, and a copy of the readings was given to the respondent if requested.

Interviewers were instructed to inform the survey doctor if any blood pressure readings of over 160/95 mmHg were recorded. Readings over 160/95mmHg were immediately reported to the respondent's GP by the interviewer, who delivered a notification of raised blood pressure slip to the surgery. This procedure worked well for the two respondents whose blood pressure measurements fell into this category.

The interviewer sent the blood pressure results to HNR by 1st Class post. The results, as a duplicate of the original paper form, were entered onto a computer spreadsheet by a double-data entry verification procedure by staff at HNR. An individual results sheet for each respondent was produced and these were sent out within 3 to 6 weeks of taking the measurements (along with haematology blood test results if a blood sample had also been taken). These were sent with an accompanying letter from the survey doctor, to the respondent and their GP (if consent was given to notify the GP of the results). The GPs, and respondents with no GP or who did not consent for their GP to be informed, were also sent the normal ranges.

For all respondents, regardless of age, the British Hypertension Society definition of high blood pressure was used, this being a level greater than or equal to 140/90mmHg. Those blood pressure readings that were above the normal range were 'asterisked' to bring attention to the results. Appropriate advice was given to those respondents with high readings in the accompanying letter.

The data below summarises the blood pressure results as received at HNR. Blood pressure was measured in 110 respondents.

Number of respondents with systolic readings ≥ 160	3 (3 percent)
Number of respondents with diastolic readings ≥ 95	0
Number of respondents with systolic readings ≥ 140	10 (9 percent)
Number of respondents with diastolic readings ≥ 90	3 (3 percent)

16.3.2 Reporting of GOS analyses

The results of the analyses carried out at GOS were returned to HNR within 2 to 3 weeks of sample collection. The results, on paper copy, were entered onto a computer spreadsheet by a double-data entry verification procedure at HNR. Individual reports were created for each respondent and were sent, with an accompanying letter from the survey doctor, to the respondent and if consent had been obtained, to their GP (with an indication of the normal reference range for that age/sex) within 3 to 6 weeks of blood sample collection. Respondents without a GP or who had not consented to their GP being notified of the results were also given

the normal ranges. Out of range results were asterisked and appropriate advice given in the accompanying letter. The reportable results from the 89 blood samples are summarised in the table below.

The normal ranges used were those provided by the laboratories carrying out the analyses and are shown in Table C1.

For mainstage, criteria were developed to exclude any invalid results due to postal delay. These were based on discussions with GOS haematologists and other experts. Factors taken into account were the limits of the normal range, the clinical relevance of the result and the effects of sample age. The number of invalid results due to postal delay is reported in Table C1.

Table C1 Haematological and other determinations at GOS

Index	Age and sex range	Normal range	Number of samples	Number outside normal range	Number invalid due to postal delay
Haemoglobin	Men Women	13.5-16.5 g/dL 12-16 g/dL	43 46	3 5	0 0
Mean cell Hb	Men/Women	26-34 pg	89	3	0
Red cell count	Men Women	$4.5-5.9 \times 10^{12}/L$ $4.0-5.2 \times 10^{12}/L$	89	9	0
Packed cell volume	Men Women	0.41-0.51 L/L 0.36-0.46 L/L	43 46	0 0	8 18
Mean cell volume	Men/Women	80-100 fL	89	1	28
Platelet count	Men/Women	$150-450 \times 10^9/L$	89	9	1
White cell count	Men/Women	$4-11 \times 10^9/L$	86	2	0
Serum ferritin	Men 19-50 Women 19-50 Men/Women > 50 years	20-200 µg/L 10-150 µg/L 20-200 µg/L	23 40 21	2 2 3	0 2 1
Serum folate	Men/Women	3.0-20 µg/L	85	0	0
Red cell folate	Men/Women	150-650 µg/L	85	4	2
Serum B ₁₂	Men/Women	150-900 pmol/L	82	3	0

16.3.3 Reporting of other blood analyses

The frozen heparinised blood fractions were returned to HNR by each of the field laboratories in a single batch at the end of the fieldwork period. These samples were analysed at HNR, with each analyte being completed in a single batch. All samples were analysed for those analytes regarded as having clinical significance, for those analytes which were new methods for HNR and for those analytes required by ONS for the purpose of data management testing. As requested by ONS, HNR sent a full data set of all feasibility analyte results to ONS, including

those not specified in the Service Level Agreement, for the purpose of data management testing at ONS.

Five months after the end of the feasibility study fieldwork the clinically relevant results were sent as individual reports with an accompanying letter from the survey doctor to the respondent and GP (if appropriate), with an indication of the normal reference range for that age/sex. These included the cholesterol level, cholesterol/HDL ratio, % iron saturation, 25-hydroxy vitamin D and whole blood mercury. Homocysteine results were only reported if abnormally high as they are not commonly measured in clinical practice.

17 The oral health component

Previous surveys in the NDNS series had oral health components that involved an examination by a dentist. In order to reduce both respondent burden and survey costs the feasibility study investigated other possible methods of getting some information on the oral health of respondents to the survey. The key information identified as necessary was the number of teeth the respondent had and the number of teeth with amalgam fillings. In discussion with experts from the Department of Health and the University of Newcastle Dental School protocols and instructions were developed for testing on the feasibility study. Respondents were provided with disposable dental mirrors and detailed illustrated instructions. They were asked to count how many of their own natural teeth they had, and how many of these teeth were filled with dental amalgam; they were also asked some general questions about their oral health in the post-dietary recording interview.

As a means of assessing the reliability of this method, in one of the NDNS fieldwork areas a dentist visited the respondent to validate the procedure for counting teeth and fillings. Consent had to be sought from the respondent for this additional component of the feasibility study and written consent had to be provided for any serious oral pathology identified to be reported to the survey doctor. The survey doctor, after consulting with an oral health expert, if necessary reported back to the respondent's GP.

A second validation exercise was conducted whereby respondents who had participated in the Survey of Adult Dental Health¹⁷ which took place some 12 months prior to the NDNS were revisited and asked to conduct the same exercise. The results from both these validation exercises are reported in a separate document⁶.

18 Outcome of the feasibility study

This section of the report focuses on the new measures and changes introduced to the survey since the Dietary and Nutritional Survey of British Adults in 1986/87⁵. These include:

- response to the survey and effect of the opt-out card
- physical activity diary
- 24-hour urine collection
- Dutch Eating Behaviour Questionnaire

In addition some feedback on the diaries and measurement protocols is discussed.

18.1 Overall outcome

The procedures and protocols for the survey, including the components undertaken by HNR, worked satisfactorily overall with only minor clarifications and amendments required for the mainstage. The main difficulty experienced was in gaining respondent co-operation, which is dealt with in the next section. Once respondents agreed to participate in the survey then they agreed to most of the subsequent parts. It was felt that for the mainstage the interviewer training needed to devote more time to ways of increasing initial response to the survey. The quality of the completed diaries indicated a good understanding of what was required by both interviewers and respondents. Procedures for gaining consent to the various components of the survey and the communication of those permissions to the necessary authority all worked well.

18.2 Response and the effect of the opt-out card

Given that the sample was partially determined using quota methods, based on a randomly selected list of addresses, response rates do not necessarily reflect what would be achieved if a random probability sampling method had used. However they do give an indication of the general receptivity of the population to the request for participation. As described above in the section on sampling, interviewers were issued with two sets of addresses and did not necessarily have to contact all addresses on the list if they had reached their target. In addition, the requirement of the ethics approval to send opt-out cards with the advance letters meant that the individuals at the addresses interviewers were able to approach were already positively disposed to taking part in the survey since they did not return the opt-out card. This suggests the sample may have been biased towards compliant respondents.

Based on the addresses contacted, response to the survey was only 28% of the eligible sample for both Sample A (DLW) and Sample B (procedural test). This was particularly disappointing and the opt-out card certainly made a significant contribution to the high number of initial refusals that were made before the interviewer called at the address. The opt-out card was used by 74%

of households approached with the advance letter, increasing the level of refusal before the interviewer visited the address to 32% compared with about 2 to 3% on most other surveys. Some of these households may not have been eligible to take part.

Feedback from interviewers confirmed that the presentation of the survey was affected by both the use of the opt-out card and the requirement to explain all aspects of the survey to the respondent at the first visit. Interviewers felt that the opt-out card created an expectation of non-response among respondents by almost encouraging them not to take part from the first communication.

Table C2 Response to the survey

	Sample A (DLW)			Sample B		
	N	%	%	N	%	%
Total households	445	100		643	100	
Total ineligible	170	38		213	33	
Total eligible	275	62	100	367	67	100
Fully co-operating cases	76		28	102		28
Partially co-operating	5		2	13		4
Refusal to HQ	88		32	116		32
Refusal to interviewer	83		30	115		31
Non-contact	23		8	21		6

A more detailed breakdown of the response figures to individual components of the survey is reported in Table C3. Despite the overall poor level of co-operation those respondents that did agree to take part participated in most of the components of the survey. Almost all agreed to have their GP notified of participation and to their names being flagged on the National Health Service Central Register (NHSCR) for future notification of death and cancer registration. Among the physical measurements high levels of co-operation were achieved for height and weight, blood pressure and waist and hip measurements. Again most respondents agreed to the self-count of natural teeth and amalgam filled teeth, the physical activity diaries and to a lesser extent the bowel movement diaries.

Biological samples were more likely to be refused by respondents, and response to the request for a blood sample and a urine sample was lower than for the physical measures, although this was in line with response to these measures on other surveys. As is shown in Table C3, 95 respondents (83%) provided a 24-hour urine sample that was returned to HNR and of these, 75 were shown to have taken PABA, although only 46 were within the “acceptable range” of 204-

300 mg PABA recovery. Consent was obtained from 92 adults to have a blood sample taken. Blood was collected from 89 of these respondents.

Table C3 Response to the different survey components

	Sample A (DLW)		Sample B	
	No	%	No	%
Dietary interview	81	100	115	100
Diaries				
Weighed intake diary				
– full 7 day diary completed	76	94	102	89
– less than 7 days completed	1	1	4	3
Physical activity				
– full 7 day diary completed	72	89	100	87
– less than 7 days completed	3	4	1	1
Bowel movement diary	72	89	99	86
Self tooth count	n/a	n/a	98	85
Height	n/a	n/a	99	86
Weight	80*	99	103	90
Waist and hip	n/a	n/a	100	87
Consent to blood pressure	n/a	n/a	111	96
Blood pressure taken	n/a	n/a	110	96
Consent for blood sample	n/a	n/a	92	80
Blood sample obtained	n/a	n/a	89	97*
Consent to blood storage	n/a	n/a	88	96*
Consent to 24-hour urine collection	n/a	n/a	99	86
24-hour urine collection made	n/a	n/a	95	96*
Consent to PABA	n/a	n/a	88	89*
Approved to take PABA	n/a	n/a	76	86*
Completed 3 doses PABA	n/a	n/a	75	99**
Adequate laboratory recovery of PABA	n/a	n/a	46	61**
Doubly labelled water	72	89	n/a	n/a
Consent given to contact GP	81	100	113	98
NHSCR consent	n/a	n/a	102	89
Base	81		115	

* percentage of those who consented to that procedure.

** percentage of those approved to take PABA.

The main issue regarding response in the feasibility study was the use of the opt-out card. This had been introduced to satisfy the ethics committee that respondents were not pressurised to take part. Following the very poor response to the feasibility study, the mainstage application, submitted to the South Thames MREC, described the response problems experienced using the 'head-office opt-out' card along with the implications of continuing with the use of this card in mainstage. The survey doctor gave detailed information on the use of results and the positive benefits to the community and to society, argued that truly informed consent could only be

obtained by a trained interviewer fully describing the survey and its purpose and requested that the 'head-office opt-out' card is removed from the sampling protocol. The application made the case for reverting to normal survey procedures for contacting households at sampled addresses on the grounds that the procedures used in the feasibility survey invalidated the principles of inference on which surveys depend for estimating in relation to the whole population. The use of the opt-out card procedure in the feasibility study meant that some of the objectives of the feasibility study could not be met. For example, it was not possible to get an accurate gauge of the acceptability of the survey to respondents nor therefore to estimate response rates for the mainstage of the survey nor to get a true reflection of diary quality that might be achieved in the mainstage with a more representative sample. Even without the opt-out card response to a survey such as the NDNS is likely to be lower than for other types of surveys, including diary surveys, given the commitment it requires from respondents.

18.3 Characteristics of respondents

Although the sample was not intended to be strictly representative it is still useful to consider the composition of the sample in terms of respondent characteristics to identify any particular groups. Comparison with data from the General Household Survey¹⁸ showed that the women, those in higher social groups and those with higher levels of educational attainment were over-represented in the achieved sample. From the poor response to the survey and the demographic profile of the respondents it is likely that the sample contained mainly survey-friendly respondents who were attracted by the survey topic. It was therefore difficult to estimate from the feasibility sample the diary quality likely in the mainstage survey but it was almost certain to be lower than that achieved from the feasibility sample.

Table C4 Characteristics of respondents

	Sample A (DLW)		Sample B	
	N	%	N	%
Men	29	36	42	37
Women	52	64	73	63
Age-group				
19-24	4	5	18	16
25-34	19	23	23	20
35-49	37	46	44	38
50-64	21	26	30	26
Social class				
I and II	31	38	49	43
III non-manual	23	28	31	27
III manual	9	11	8	7
IV and V	15	19	21	18
Never worked/ inadequate information	3	4	6	5
Highest level of education				
Above GCE 'A level'	31	38	48	42
GCE 'A' level and equivalent	7	9	11	10
GCE 'O' level and equivalent	27	33	29	25
CSE and equivalent	7	9	12	11
None	9	11	13	11
<i>Base</i>	<i>81</i>		<i>115</i>	

18.4 Seven-day physical activity diary

The physical activity diary was completed by most of the respondents and interviewers did not report any problems of acceptability of the activities. Feedback from interviewers suggested that the inclusion of the non-physical activities did have the desired comfort effect on those respondents with low levels of physical activity. The data from the physical activity diary in the feasibility study was used to develop and test the calculation of Metabolic Equivalent Value (MET) scores which were summarised into an overall summary measure of activity level and which were reported in the DLW study¹⁹. Preliminary analysis of the physical activity data from the feasibility study did however suggest a tendency to overestimate activity levels and this was addressed in the design of the mainstage diary by listing more, lower intensity activities.

18.5 24-hour urine collection

The intended methodology for mainstage was that used in Sample B, sub-samples from a 24-hour urine collection. Feedback from interviewers suggested two problems with the procedure as

carried out in the feasibility study. Firstly, in order to facilitate respondent availability for collecting and sub-alliquoting the 24-hour collection, the sub-sampling was not always being carried out under ideal conditions. In some cases the respondent was not at home when the interviewer called and had simply left the sample outside for collection. This meant that in these cases the sub-sampling of the urine into the Sarstedt Monovette containers and the disposal of the residual urine were not done in the respondents' home. Secondly, and related to the first, some interviewers did not feel happy about doing the urine sampling. It was therefore recommended that for the mainstage the sub-sampling of 24-hour urine collections and the disposal of the residual urine should be done by respondents themselves under the supervision of the interviewer, rather than by the interviewers.

18.6 Oral health component

The oral health component was one of the new components of the feasibility study and is reported on in a separate report⁶. Based on the validation exercise described earlier the feasibility of asking respondents to count their own teeth and amalgam filled teeth was established. In consultation with experts from the Department of Health and the University of Newcastle Dental School the following recommendations were made for the mainstage.

- interviewers to emphasise the importance of good lighting, and encourage respondents to practise counting their own teeth and filled teeth (using the disposable dental mirrors) – older people in particular;
- consider either telling respondents the normal maximum number of teeth, particularly those who count more than 32 teeth, probably after they have conducted their initial count, or recoding counts of more than 32 teeth to the 32 teeth category;
- emphasise at interviewer training, and in the protocol for respondents, the 'count of amalgam filled teeth' is a count of the number of teeth containing amalgam-fillings, not the number of separate amalgam fillings they have. This should help decrease instances of over-counting;
- respondent instructions be simplified, both in terms of the language used, and the amount of text provided;
- respondent instructions to exclude very 'shiny' silver fillings should be changed to 'glossy', 'mirror-like' or even 'like a piece of jewellery';
- respondents to be supplied with coloured pictures, either in a brochure or on a card, of amalgam and other types of filling to help them identify amalgam fillings and thus reduce under-counting of amalgam-filled teeth; the document should also include pictures of multiple restorations to help prevent over-counting;

- a tap water sample to be included at mainstage for fluoride analysis (samples to be collected by interviewers and stored at HNR).

18.7 Other modifications

Additional procedural modifications are listed below, and relate mainly to aspects for which HNR had responsibility.

- The late arrival of GOS blood samples will be monitored closely in mainstage. The Post Office has been contacted about this delay and is investigating. If this late arrival continues, alternative procedures for delivery of the samples to Great Ormond Street Laboratories will be instigated, such as the use of ordinary postage stamps instead of preprinted reply labels.
- A tap water collection will be included in mainstage for fluoride analysis. Samples will be stored at HNR.
- The same results' sheets with an indication of the normal range will be sent to both GPs and respondents in line with current clinical practice.

The feasibility study also provided the opportunity to test data recording, transmission and management systems at HNR and at ONS. Data were used to assess the speed of processing, the accuracy of the CAI questionnaires, and the calculations of derived variables. In addition, amendments were made to the systems used to monitor progress by interviewers in the field. The database management system used at HNR during the Feasibility Survey was Filemaker Pro. This system was successful in its handling of the data and reporting results to respondents. However, it was believed that efficiencies in data handling could be achieved by developing an Oracle Database to handle the larger quantities of data expected in mainstage. Development of an Oracle Database system was undertaken during the feasibility study. The enhanced graphics capabilities of Oracle provide higher quality respondent and GP letters due to the better layout of results and text. The Oracle database will be used to generate more personalised letters to GP's and participants with variant paragraphs included, depending on the normality or otherwise of the results attached. Integrated files ensure that data management is seamless across the many different data files required for the NDNS mainstage.

References and endnotes

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- ¹⁷ Kelly M, Steele JG, Nuttal N, et al. *Adult Dental Health Survey, Oral Health in the United Kingdom 1998.* TSO (London, 2000).

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Appendix D

Sample design, response and weighting the survey data

1 Sample design requirements

The sampling method for the NDNS of adults was designed to give a representative sample of adults aged 19 to 64 living in private households in Great Britain.

In determining the overall sample size, the critical requirement was to achieve at least 2,000 seven-day weighed intake dietary diaries in total, 500 in each of the four waves of the survey. Account was taken of the resources required for the survey, particularly the high unit cost of using a weighed intake dietary methodology. In deciding the number of people who would be invited to take part in the survey, consideration was also given to the costs associated with using phlebotomists, processing blood samples, obtaining equipment for making measurements of blood pressure and body size, training interviewers and other fieldworkers, and the relatively large number of interviewer calls at each address. The sample size was chosen to be sufficiently large to indicate important differences between selected subgroups of the population and to enable comparisons with data from The Dietary and Nutritional Survey of British Adults 1986/87 (1986/87 Adults Survey)¹. In the 1986/87 Adults Survey, 2,197 adults completed the seven-day dietary diary.

Given the comparatively wide age range for the survey it was likely that in many households there would be more than one adult eligible to take part. The pattern of dietary behaviour within the same household is likely to be more similar than that between different households. Therefore for the same sample size information on a much greater variety of diets could be collected by selecting only one eligible adult per household. It was also recognised that the survey was particularly burdensome for adults, involving their commitment over a considerable period of time. Selecting only one eligible adult from a household would reduce the burden on the household, which might have affected co-operation and the quality of the data being collected.

The requirements of the sample were therefore that only one adult aged 19 to 64 from each selected household should be interviewed. It was also necessary for addresses to be clustered to give areas of a realistic size for interviewers to cover.

2 The sampling frame and sample size

The most suitable frame for the sample was the Small Users' File of the Postcode Address File (PAF). Social Survey Division (SSD) draw almost all of their household-based samples from an in-house copy of the PAF. The PAF is the Royal Mail's list of every mail delivery point in the country. This provides better coverage of the population than the Electoral Register which suffers from low levels of voter registration in some areas. A check against an independent sample from the Census Validation Survey showed that the PAF (used with SSD's address sampling procedures) covered 97% of private households. SSD update the PAF twice a year to ensure that new addresses are included, demolished addresses removed and postcode revisions incorporated.

Consideration was given to the size of sample that would need to be issued to interviewers in order to achieve approximately 2,000 dietary records. The following issues were taken into account:

- the proportion of households in Great Britain containing an adult in the eligible age range; this was estimated to be 78% from the General Household Survey²
- the proportion of addresses on the PAF which would be ineligible because they are not private households, have not yet been built or have been demolished - about 12%
- response at the interview stage (outright refusals and refusals to keep the dietary record) 65%
- the need to produce interviewer work quotas of a manageable size, a maximum of 30 addresses³.

On this basis it was estimated that a set sample of 4,560 addresses would be required to achieve 2,000 dietary records. During fieldwork it became apparent that response to the dietary diary was lower than anticipated. In order to increase the number of diaries being completed the number of addresses per interviewer quota were increased from 30 to 40. This was put in place from Wave 2. The overall set sample over the four waves was, therefore, 5,700.

3 Selecting the addresses

At the first stage of sampling a stratified random sample of 152 postcode sectors (or groups of small sectors) with probability proportional to size was drawn. From each sampled sector 40 addresses (30 in Wave 1) were drawn.

All postal sectors in England, Wales and mainland Scotland were stratified by the following:

- government office region;
- population density;
- the proportion of heads of household in socio-economic groups 1 to 5 and 13;
- the proportion of households with no car⁴.

These census-derived variables have been found to be the best all-round stratifiers for surveys on health-related topics⁵.

A total of 152 postal sectors was systematically selected, the chances of selection being proportional to the size of the sector - the number of postal delivery points.

As in previous surveys in the NDNS series, it was required that fieldwork take place over a 12-month period, to cover any seasonality in eating behaviour. For organisational reasons the 12-month fieldwork period was divided into four fieldwork waves each of three months duration. The 152 selected postal sectors were therefore each systematically allocated to one of the four fieldwork waves, ensuring as far as possible a similar regional distribution in each wave. In each wave fieldwork took place in 38 postal sectors.

In each of the 38 postal sectors in each wave, 30 (for Wave 1; 40 thereafter) addresses were systematically selected with a random start from the Small Users' File of the PAF.

3.1 Ineligible addresses

The survey was restricted to adults aged 19 to 64 living in private households. Anyone living in a residential institution, such as a hospital or care unit was ineligible to take part. The Small User's File of the PAF excludes delivery points receiving more than 25 items of post daily and therefore excludes most large institutions and non-residential addresses, such as businesses. Any other institutions or non-residential addresses in the sample were identified by the interviewer and excluded as ineligible.

3.2 Multi-household addresses

It is not possible from the PAF for England and Wales to identify multi-household addresses; for Scotland the PAF contains a multi-household indicator which is used in the selection of addresses.

Interviewers were issued with specific instructions on how to deal with concealed multi-households. If an issued address contained more than one household the interviewer listed all the households at the address and selected one at random, using a random number selection sheet. Interviewers had four different multi-household random number selection sheets. These were used consecutively to vary the chance of selection of the household relative to the number of households it contained. In this way each household had an equal chance of selection at a multi-household address, with the probability of selecting one household proportional to the number of households at the address. Where there was only one household at an address, the majority of the sample, this household was automatically selected.

Having selected a single household at concealed multi-household addresses, interviewers then selected an eligible adult at that address as with all other addresses.

4 Selection of eligible adults

At each address only one adult aged 19 to 64 was selected for interview. Households that only contained adults aged under 19 or 65 and over were excluded as ineligible. Pregnant or breastfeeding women were also ineligible to take part in the survey. The diets and physiology of women who are pregnant or breastfeeding are likely to be so different from those of other women of the same age as to possibly distort the results. Since the number of pregnant or breastfeeding women identified within the overall interview set sample would not be adequate for analysis as a single group it was decided that they should be regarded as ineligible for interview.

Having established that there was an eligible adult in the household the interviewer carried out the selection procedure. If there was only one eligible adult they were automatically selected for interview. Where there were two or more eligible adults the interviewer used the set selection procedure to select at random one adult for interview. The interviewer completed a selection sheet by listing all eligible adults in age descending order. A Kish selection grid was then used to identify the person to be interviewed on the selection sheet (see *K1 and K2, Appendix A*).

If the individual selected was subsequently found to be ineligible, either by age or because they were pregnant or breastfeeding, the interviewer selected another adult aged 19 to 64 in the household. In some situations where it was not immediately obvious that the selected woman was pregnant; the interviewer began the CAPI interview which included a question about pregnancy, and, if the woman was identified as pregnant, the interview was concluded

at this stage. The interviewer would then select another eligible adult. Where it was necessary to select another adult, the interviewer revised the selection sheet, removing the ineligible person, renumbered the remaining eligible people in order and made a fresh selection using the Kish grid. If there were no eligible adults the interviewer withdrew from the household.

5 Response

Not all adults co-operated with all parts of the survey, and Chapter 2 gives response rates for the different components. The maximum response rate, defined as the proportion of the eligible sample who agreed to the dietary interview, was 61%; 37% of the eligible sample refused to take part in any aspect of the survey.

Response to the survey was lower than expected and steps were taken throughout fieldwork to improve response. These steps are discussed in Chapter 2. The combination of these steps increased the proportion of the eligible sample that completed the dietary interview, such that in Wave 4, 67% of the eligible sample completed the dietary interview compared with 56% to 60% in previous waves. There was also an increase in the proportion completing the dietary record, 44% in Wave 2 to 50% in Wave 4.

6 Weighting the survey data

6.1 Weighting for different sampling probabilities

Weighting was needed to compensate for unequal probabilities of selection because only one household was selected at multi-household addresses and only one adult was selected for interview from households containing more than one eligible adult. In the case of multi-households the probability of a household being selected was proportional to the number of households at the address. In cases where there was more than one eligible adult the probability of selection was proportional to the number of eligible adults in the household.

Weighting factors based on these sampling probabilities were calculated and each case assigned the appropriate weight.

6.2 Weighting for differential non-response

As shown in Chapter 2 the response to the survey was lower than expected. As the rate of non-response increases the potential for bias in the remaining data increases as there is the

possibility that little, if any, data are collected on particular groups within the population. An independent review of the potential impact of non-response bias was undertaken by the University of Southampton⁶. The authors concluded that there was no evidence to suggest serious non-response bias in the NDNS data. However, the dietary characteristics of the total refusals and non-contacts may be different from those of respondents, and thus any survey estimates need to be treated with care. The report recommended population-based weighting by age, sex and region. The report forms Appendix E.

Weighting factors were derived to compensate for differential non-response by comparing the proportions, by sex, age and region, taking part in the survey with the corresponding proportion in the population using population estimates. The University of Southampton report suggested two regional post-strata within age-sex groups: Scotland and all other regions. However, given the small numbers in age-sex group cells within the sample in Scotland, ONS methodologists suggested two regional strata of Scotland and Northern region; Central and South West regions of England and Wales and London and the South East.

Weighting factors were applied to the responding sample who completed the dietary interview, and the diary sample. Weighting factors were also calculated separately for each of the survey components.

6.3 Effect of non-response weighting

To demonstrate the effect of including a weight for non-response, Table D1 shows two sets of values for mean daily intake of total fat. The first set of values is weighted to adjust for differential sampling probabilities only and the second weighted for differential sampling probabilities and differential non-response. The figures are presented for the whole sample and by region.

Overall, there is little difference between the two sets of figures. With sampling weights only, mean daily intake of total fat was 73.1g. When cases were weighted using the combined weight for sampling and non-response the equivalent value was 73.5g⁷.

As discussed in Chapter 2, a higher proportion of the dietary records were completed in Wave 4, 34% compared with 19% in Wave 1. The weighting by sex, age and region has a greater effect on Wave 1 than on Wave 4 and reduces the non-response bias that was particularly evident in Wave 1.

6.4 Presentation of data

All data presented in the substantive volumes have been weighted using a combined weight based on the weighting factor for differential sampling probabilities and the weighting factor for differential response. Bases are presented weighted. Within each volume tables will be presented showing the unweighted base numbers by sex for the main components of the survey.

References and endnotes

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- ¹ Gregory J, Foster K, Tyler H, Wiseman M. *The Dietary and Nutritional Survey of British Adults*. HMSO (London, 1990).
- ² Data from the General Household Survey was used to estimate the proportion of households in Great Britain that contained at least one adult aged 19 to 64 years.
- ³ Interviewers in Wave 1 were issued with 30 addresses per quota. As it became apparent that we would not achieve 500 diaries per wave the number of addresses per quota was increased to 40. This was put in place for Waves 2, 3 and 4.
- ⁴ 1991 Census data were used.
- ⁵ Elliot D. Optimising sample design for surveys of health and related behaviour and attitudes. *Survey Methodology Bulletin*. Social Survey Division, ONS (1995) **36**: 8 - 17
- ⁶ Skinner C, Holmes D. *The 2000-01 National Diet and Nutrition Survey of adults aged 19-64 years: The impact of non-response*. University of Southampton (2001). The report forms Appendix E.
- ⁷ When the non-response weight is applied the estimates for mean daily intake of total fat (g) overall increase. This reflects the fact that the weighting for differential non-response, weights up the number of men in the sample, and as men have a greater intake of fat, this increases the overall estimate, even though estimates by sex show a slight decrease.

Table D1 A comparison of survey estimates with and without non-response weighting

Region	Dietary record data		
	Mean daily intake of total fat (g)		
	Sample weight only	Sample + non-response weight*	Base
All	73.1	73.5	1724
Scotland	72.4	73.5	
Northern	69.3	70.3	
Central, South West and Wales	74.9	75.1	
London and the South East	74.5	74.6	
Men	86.8	86.5	
Scotland	88.2	88.1	
Northern	81.5	81.6	
Central, South West and Wales	90.7	90.1	
London and the South East	86.4	86.4	
Women	61.5	61.4	
Scotland	58.8	59.0	
Northern	58.8	58.6	
Central, South West and Wales	61.6	61.8	
London and the South East	64.3	64.1	

* When the non-response weight is applied the estimates overall increase. This reflects the fact that the weighting for differential non-response weights up the number of men in the sample, and as men have a greater intake of fat, this increases the overall estimate, even though estimates by sex show a slight decrease.

Appendix E

The 2000-01 National Diet and Nutrition Survey of Adults Aged 19-64 years: The Impact of Non-response

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October 2002

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Executive Summary

The 2000/01 National Diet and Nutrition Survey (NDNS), for adults aged 19 to 64 years, was subject to unexpectedly high levels of non-response. This report considers the implications of this non-response for the survey estimates. The report does not consider whether a higher response rate might have been achieved.

The report assesses possible non-response bias by first investigating correlates of co-operation and contact behaviour. Estimates of biases are then obtained by weighting by these correlates, under alternative assumptions. Most of the estimated biases are extremely small, no more than 0.5% of the corresponding estimate. Sometimes the biases suggested are larger but the estimated relative biases rarely exceed 1%. These biases are estimated for means, medians and other percentiles of the average daily intake of a variety of nutrients. The reason the estimated biases are small is that the variables which appear to be correlated with response behaviour do not appear to be strongly related to the nutritional variables. In particular, variables relating to non-contact appear to be more correlated to health variables than variables relating to non-cooperation and reduction of non-contact to only 4% helps to keep the bias down¹.

Although there is no evidence to suggest serious non-response bias, this finding should be interpreted cautiously. The bias estimates are based upon assumptions regarding the total refusals and non-contacts, for whom there is very little information. The lower the response rate, the less robust bias estimates will tend to be to such assumptions, since small changes in these assumptions may have a greater effect.

The report also considers the use of weighting. It is recommended that weighting for unequal sampling probabilities and some post-stratified weighting is used. The possibility of further non-response weighting is considered. Although not judged essential for all survey estimates, it is felt that some alternatively weighted estimates for a subset of estimates may be helpful in assessing the sensitivity of the estimates to differential non-response.

Non-response may also lead to smaller than expected sample sizes in cells of interest and comments are made about the appropriate treatment of the possibly increased variances of the estimates.

1 Introduction

1.1 Scope and purpose of report

The latest round of the National Diet and Nutrition Survey (NDNS), covering adults aged 19 to 64 years living in private households in Great Britain, was subject to unexpectedly high levels of non-response. The purpose of this report is to consider what the implications of this non-response are for estimates based upon the data collected. The report does not consider whether or how a higher response rate might have been achieved. The level of non-response is taken as given.

The principal aim of the report is to investigate the implications of non-response for the properties of survey estimates, derived in standard ways. We also consider whether the analysis of the NDNS data should be modified in any way to allow for the potential impacts of the non-response: this might be via explicit adjustments, such as weighting, or by limiting the set of analyses undertaken. There is also brief consideration of the implications for the sample design.

1.2 Approaches to assessing the impact of non-response

Assessing the impact of non-response is difficult. One definition of the impact of non-response is the difference between a survey estimate, based on the data obtained, and the same survey estimate, based upon data from the whole sample had no non-response arisen. The problem, of course, is that the second quantity is hypothetical and not available from the NDNS data. There are broadly two approaches to getting round this problem.

First, one might attempt to use other data sources to estimate the population parameters which the NDNS seeks to estimate. These alternative estimates could then be compared with the NDNS estimates. The main problem with this approach is the lack of suitable alternative estimates. If these were available then there would be no need for the NDNS. Another problem is that, when making comparisons with estimates from other sources, the effects of NDNS non-response will often be confounded with other effects, for example definitional differences, measurement errors and the effects of non-response in the other source. In this report we do not attempt to use external estimates, other than some population estimates of age-sex distributions. We do comment further on possible comparisons that might be made in Section 7.

The second possible approach, and the one we adopt, is to use information on response behaviour from the NDNS. Evidence from the survey methodology literature (e.g. Groves and Couper, 1998²) suggests that, when investigating response bias, it is useful to separate out the two principal components of non-response: *non-contact* and *non-cooperation* (refusals), since these tend to act in different ways. There is information about both of these components from the NDNS data. In particular, data on the numbers of calls made by interviewers provides evidence on patterns of non-contact and data on the extent to which respondents to the interview agree to complete the diary provides evidence on patterns of non-cooperation.

In order to consider how such evidence may be used in assessing the impact of non-response, we need to be more precise about how the impact will be defined. The statistical properties of an estimate may be summarised in terms of the *bias* and the *variance* of the estimate. The bias is the difference between the expected value of the estimate and the population parameter it is estimating. Non-response may introduce bias by differential under-representation of different parts of the population. The variance reflects the variability in the estimate from sampling variation and variations in response behaviour. In particular, non-response increases variances by reducing the number of observations upon which estimates are based.

The variance impact of non-response may be assessed fairly straightforwardly by estimating standard errors (or equivalently variances or confidence intervals) for NDNS estimates in a standard way. As for any set of survey estimates, one might define a threshold above which a standard error or coefficient of variation (standard error divided by the estimate) becomes unacceptably large, and choose not to publish estimates for which this is the case. The basic problem of reduced sample sizes has, in any case, been addressed already by augmenting these sizes in Waves 2, 3 and 4 and by other steps to follow-up non-respondents. We comment further on the variance impact in Section 5.

The bias impact of non-response is much more difficult to assess and is the main focus of this report. Bias may arise from differential patterns of non-response. We therefore begin by investigating the evidence for differential non-response in Section 2. In order to infer the bias impact of non-response from this evidence we must make assumptions about the distribution of the survey variables for the non-respondents. This is discussed in Section 3, where estimates of bias are presented. The extent to

which the assumptions can be checked is limited, since by definition we do not know how the non-respondents would have responded. Therefore, we present bias estimates under alternative sets of assumptions, that is present a *sensitivity analysis*.

If there is evidence of bias in standard survey estimates then it is natural to consider whether it is possible to adjust these estimates to remove or reduce this bias. This issue is considered in Section 4.

2 Analysis of non-response

2.1 Overall non-response

Non-response is considered here only in relation to the interview and the diary. We do not consider whether the other measurements are also obtained. Some summary figures are given in Table E1, classifying the final response status of sample individuals by the wave in which the individuals were originally sampled. (The final response status will not always be the same as the response status in the original wave because non-respondents at one wave may be contacted again in later waves.) In the bottom row of the table are the sizes of the issued sample at each of the four waves of the survey.

Table E1 Final response status by original wave

Final Response Status	Wave 1	Wave 2	Wave 3	Wave 4	All
Completes diary	339 (45%)	436 (44%)	452 (46%)	518 (51%)	1745 (47%)
Completes interview only	112 (15%)	107 (11%)	129 (13%)	148 (15%)	496 (13%)
Refusal (no postal questionnaire)	233 (31%)	320 (32%)	290 (29%)	287 (28%)	1130 (30%)
Non-contact (no postal questionnaire)	20 (3%)	28 (3%)	54 (5%)	60 (6%)	162 (4%)
Postal questionnaire Only ²	50 (7%)	97 (10%)	68 (7%)	0 (0%)	215 (6%)
Total Eligible	754 (100%)	988 (100%)	993 (100%)	1013 (100%)	3748 (100%)
Ineligible	386	532	500	507	1925
Issued Sample	1140	1520	1493	1520	5673

Note: This table is based on the data received from ONS by 6th September 2001 and is not the “final” dataset. In particular, it does not include postal questionnaires from Wave 4.

In order to assess the extent of non-response, we need first to eliminate those cases in the issued sample which are ineligible. These consist primarily of addresses at which there is no-one aged 19 to 64. Subtracting the estimated number of ineligible cases from the size of the issued sample gives the estimated total eligible cases. This row of the table is used as the denominator for calculating the percentages in the table. These percentages may be considered as different components of the response rate (or non-response rate). In fact the resulting rates are likely to be slightly pessimistic since the refusals and non-contacts may include a small number of ineligibles.

The final column of Table E1 shows that 66% of the eligible sample provide some information, in the form of both the diary and the interview (47%), just the interview (13%) or just the postal questionnaire³ (6%). The 34% of the eligible sample who provide no information may be divided into the refusals (30%) and those not contacted (4%). These percentages do not vary greatly between the waves, although there is a slight improvement over the waves in the diary completion rate. Note that the postal questionnaire data for Wave 4 was not available to us for analysis within the timescale of the project.

The relevant response rate depends upon the choice of analysis. For survey analyses involving the diary data the basic relevant response rate is 47%.

Non-response involves two elements: non-contact and non-cooperation once contact is established. The problem of non-contact is of a smaller scale, involving only 4% of the eligible sample¹. Non-cooperation is treated here as taking two forms, either failure to complete the interview (whether or not the postal questionnaire is completed) or, having completed the interview, failure to complete the diary. Together, these account for 49% of the eligible sample, a numerically much greater percentage than for non-contact. Although it does not necessarily follow that non-cooperation *will be* a more important source of non-response bias than non-contact, it may reasonably be concluded that non-cooperation has the greater *potential* for creating bias. Non-cooperation will thus be considered first, in the following section, and we shall devote greater attention overall to investigating its potential impact. Non-contact will be considered briefly in Section 2.3.

2.2 Analysis of co-operation

In this section, we restrict attention to those individuals who have been contacted in the survey and have not been deemed ineligible. We study the extent to which these individuals co-operate with the requests made to them to take part in the survey. With the ultimate objective of investigating possible biases in Section 3, we investigate in this section the dependence of co-operation on a variety of factors.

Co-operation is classified according to three principal categories:

- 1) completes interview and diary;
- 2) completes interview but does not complete diary;
- 3) refuses interview.

These will be treated as ordered categories with category 1 denoting the highest level of co-operation and category 3 the lowest. In Section 2.2.3, we also consider breaking down category 3 between those who completed a postal questionnaire and those who do not.

Given these three categories, co-operation may be viewed as involving two stages:

- Stage 1:* agreement (vs. refusal) to complete interview, i.e. category 1 or 2 (vs. category 3);
- Stage 2:* agreement (vs. refusal) to complete diary, having completed interview, i.e. category 1 vs. category 2, conditional on being in one of these categories.

The principal difficulty in studying what factors affect co-operation is that little is known about those people in category 3. In contrast, all the interview variables are available for categories 1 and 2. This makes Stage 1 much harder to analyse than Stage 2. Our approach is first, in Section 2.2.1, to consider what evidence there is regarding both Stages 1 and 2 and to what extent these stages exhibit similar patterns of dependence on other factors. Some similarity is indeed found. We then focus in Section 2.2.2 on factors affecting Stage 2, for which we do not need information on category 3. When considering possible biases in Section 3 we shall base some estimates of bias on the assumption that differential co-operation at Stage 1 follows a similar pattern to that found at Stage 2.

2.2.1 Analysis of both Stages 1 and 2

Regional information is available for all sample individuals. Table E2 classifies three response outcomes by region and shows a clear difference between Scotland and the rest of the country (a chi-squared test of association is highly significant).

Table E2 Co-operation by region

Region	Level of Co-operation			
	Completes interview and diary	Completes interview only	Refuses interview	All
Scotland	124 (37%)	65 (19%)	148 (44%)	337 (100%)
Northern	459 (50%)	137 (15%)	328 (35%)	924 (100%)
Central, South West and Wales	632 (53%)	150 (13%)	400 (34%)	1182 (100%)
London and South East	514 (50%)	144 (14%)	365 (36%)	1023 (100%)
Total	1729 (50%)	496 (14%)	1241 (36%)	3466 (100%)

Table E3 is a simplified version of Table E2. It presents the percentages completing each of Stages 1 and 2 above for Scotland and the rest of the country. In each case the degree of co-operation is less in Scotland. The co-operation rate is 14% less at the interview stage and 17% less at the diary stage. The fact that the direction and magnitude of this effect is similar in each case is evidence that co-operation effects are similar at each stage.

Table E3 Co-operation by region – Stages 1 and 2

Region	Stage 1: Completing interview	Stage 2: Completing diary (having completed interview)
Scotland	56%	66%
Other	65%	79%
Ratio: Scotland vs other	0.86	0.83

The second factor we consider is age. Although this is not available for the refusals, we may make use of population estimates for the proportions falling into different age groups. Under the assumption that these proportions equal the proportions of the sample falling into these age groups, we may estimate the age distribution of the non-respondents. This is shown in Table E4, where the final two columns have been derived using population estimates.

Table E4 Co-operation by age group

Age Group	Completes interview and diary	Completes interview only	Other eligible*	Total eligible**
19-24	141 (32%)	53 (12%)	248 (56%)	442 (100%)
25-34	374 (41%)	115 (13%)	422 (46%)	911 (100%)
35-49	686 (52%)	188 (14%)	457 (34%)	1331 (100%)
50-64	527 (50%)	140 (13%)	397 (37%)	1064 (100%)
All	1728 (46%)	496 (13%)	1524 (41%)	3748 (100%)

Notes: * The figures in the Other eligible column are obtained by subtraction. The 'other eligible' include non-contacts as well as refusals.

** The figures in the Total eligible column are obtained by applying proportions in age groups from population estimates to the total eligible sample figure of 3748.

Based upon these figures, estimates of the proportions completing Stages 1 and 2 are given in Table E5. We find a similar pattern for each stage, with those under 34 years of age being less co-operative, especially those aged 19 to 24. In this sense, these findings reinforce those for region that factors affecting co-operation at each stage are similar. The differential is, however, much stronger for Stage 1 than Stage 2. It is possible that this is partly an artifact, either because of the omission of pregnant women or because of sampling error. Nevertheless, it seems sensible to allow for the possibility that the degree of differential co-operation in taking part in the interview is greater than the degree of differential co-operation in continuing to participate further in the survey, once initial agreement has been given.

Table E5 Co-operation by age group – Stages 1 and 2

Age Group	Stage 1: Completing interview	Stage 2: Completing diary (having completed interview)
19-24	44%	73%
25-34	54%	76%
35-49	66%	78%
50-64	63%	79%
All	59%	78%

2.2.2 Analysis of Stage 2

In this section we restrict attention to those who have completed the interview and investigate to what extent completion of the diary is dependent upon variables measured in the interview.

Following discussion with Social Survey Division staff running the survey, we identified the 14 interview variables in Table E6 as potential predictors of the diet and nutrition variables in the diary. The extent to which these variables do indeed predict

the diary variables is investigated in the Appendix and discussed at the end of this section.

Table E6 Interview variables considered as possible predictors of diary variables

1	Age of respondent (AGE)
2	Sex of respondent (SEX)
3	Region (REG)
4	Benefit status (BENEFIT)
5	Household type (TYPE)
6	Employment status (EMP)
7	Health – long-term illness/disability (HEALTH)
8	On a diet? (DIET)
9	Smoking status (SMOKE)
10	Alcohol status (ALCOHOL)
11	Ethnicity (WHITE)
12	Social class (SC)
13	Housing Tenure (OWN)
14	Marital Status (MSTAT)

We first present tables demonstrating statistically significant relationships between co-operation and these interview variables individually. We then consider the relationship between co-operation and the interview variables jointly, via logistic regression.

Using basic chi-squared tests of association, no statistically significant relationships were found between co-operation and sex of respondent, household type, social class, employment status, health status (presence of long-term illness or disability) or whether the respondent was on a diet. Age group and region are excluded from this section since they have already been considered in the previous section. There were statistically significant relationships with the remaining six variables. These results are presented in Tables E7 to E12.

Tables E7, E8 and E9 demonstrate fairly weak relationships. Table E7 indicates that those receiving benefit were slightly less co-operative in completing the diary. The p-value for the corresponding chi-squared test is 0.042. Tables E8 and E9 indicate that, although those who smoke appear to be slightly less co-operative, those who drink alcohol appear to be slightly more co-operative. The p-values for the chi-squared tests are 0.061 and 0.054 respectively.

Table E7 Co-operation by benefit status

Benefit Status	Completes interview and diary	Completes interview only	Total
Receives benefits	311 (74%)	109 (26%)	420 (100%)
Does not receive benefits	1416 (79%)	385 (21%)	1801 (100%)
All	1727 (78%)	494 (22%)	2221 (100%)

Table E8 Co-operation by smoking status

Smoking Status	Completes interview and diary	Completes interview only	Total
Current smoker	553 (75%)	181 (25%)	734 (100%)
Not current smoker	1175 (79%)	315 (21%)	1490 (100%)
All	1728 (78%)	496 (22%)	2224 (100%)

Table E9 Co-operation by alcohol status

Alcohol Status	Completes interview and diary	Completes interview only	Total
Drinks alcohol	1554 (78%)	431 (22%)	1985 (100%)
Does not drink alcohol	174 (73%)	65 (27%)	239 (100%)
All	1728 (78%)	496 (22%)	2224 (100%)

Tables E10, E11 and E12 display slightly stronger relationships in terms of statistical significance. It appears that non-whites, those who rent their home and those who are not married tend to be a little less co-operative. The p-values for the chi-squared tests corresponding to these tables are 0.007, 0.004 and 0.015 respectively.

Table E10 Co-operation by ethnicity

Ethnicity	Completes interview and diary	Completes interview only	Total
White	1632 (78%)	449 (22%)	2081 (100%)
Non-white	96 (69%)	44 (31%)	140 (100%)
All	1728 (78%)	493 (22%)	2221 (100%)

Table E11 Co-operation by housing tenure

Tenure	Completes interview and diary	Completes interview only	Total
Rents	451 (74%)	162 (26%)	613 (100%)
Owens home	1276 (79%)	333 (21%)	1609 (100%)
All	1727 (78%)	495 (22%)	2222 (100%)

Table E12 Co-operation by marital status

Marital Status	Completes interview and diary	Completes interview only	Total
Married/cohabiting	1128 (79%)	294 (21%)	1422 (100%)
Other	601 (75%)	202 (25%)	803 (100%)
All	1729 (78%)	496 (22%)	2225 (100%)

There are, of course, statistical associations between the interview variables in Tables E7 to E12 and significant relationships may arise spuriously from associations with 'third variables'. To investigate the dependence of co-operation on the interview variables jointly, a logistic regression model was fitted. All the interview variables listed in Table E6 were used in a stepwise selection procedure. The final selected model included only three interview variables: region, ethnicity and tenure. Conditional on these factors, there remained no statistically significant relationship between co-operation and the remaining interview variables considered. The results of the logistic regression are given in Table E13.

Table E13 Estimated Coefficients for Logistic Regression Predicting Completion of Diary given Completion of Interview

Variable	B coefficient (s.e)	Exp (B)	p-value
Region			0.00 (all 4 categories)
Scotland*	-0.70 (.19)	0.50	0.00
Northern*	-0.18 (.14)	0.83	0.20
Central, SW and Wales*	0.09 (.14)	1.10	0.50
Ethnicity (white)	0.61 (.20)	1.84	0.00
Housing Tenure (owns home)	0.27 (.12)	1.31	0.02

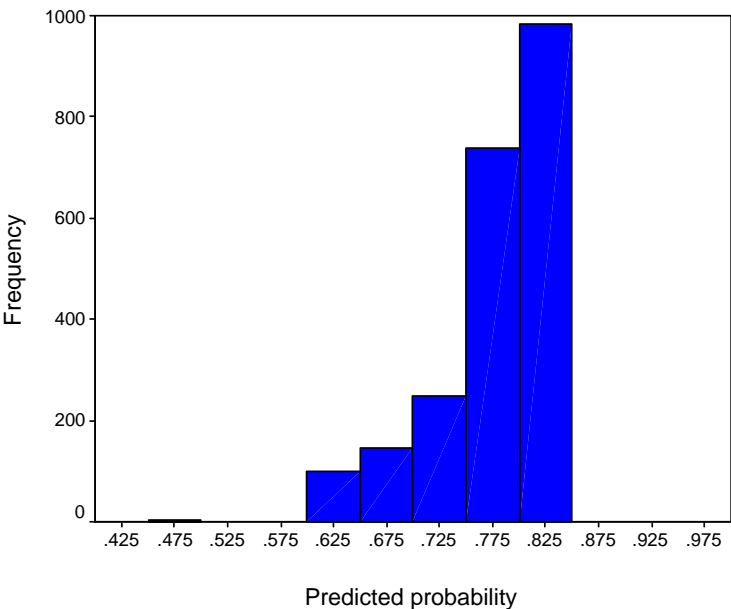
Notes: *Coefficients for Region are contrasts against London and SE

As found in Table E2, there is a strong Scotland effect with the odds of completing the diary there estimated as half [$\exp(B)=0.5$: see Table E13] that in London and the South East, for individuals of given other characteristics. Ethnicity remains a significant predictor, with non-whites less likely to complete the diary, as in Table

E10. Finally, housing tenure captures the remaining socio-economic effects with home-owners tending to be more co-operative, as in Table E11.

For the purpose of weighting later, it is of interest to consider the predicted probability of co-operation, that is the probability of completing the diary for those who have completed the interview. The distribution of predicted probabilities based upon the logistic regression in Table E13 is displayed in Figure E1. For this model, there are in fact only 16 possible values for the predicted probability (corresponding to the combinations of 4 regions, 2 ethnic groups and 2 tenure types). The distribution is skewed because the low predicted probabilities are associated with the minority categories (non-white, Scotland and renters).

Figure E1 Histogram of predicted probabilities of co-operation



Since our ultimate concern is with bias, primarily for estimates based upon the diary data, it is necessary to assess not only which factors affect co-operation but also which of these factors are significant predictors of the diary variables. Differential co-operation with respect to interview variables unrelated to the diary variables will not lead to bias.

To investigate which interview variables predict the diary variables, we ran stepwise regression analyses using all the 14 interview variables to predict each of 13 diary variables. The significant predictors together with R squared for the selected regression models are given in the Appendix. The predictive power of the interview

variables is modest with the highest value of R squared achieved being 36% for energy intake.

Fortunately, it appears that the variables which are most related to the diary variables are not the same as the variables which are most related to co-operation. In particular, sex, smoking status and whether on a diet appear to be relatively important predictors of the nutritional variables whereas they appear to have little effect on co-operation. Conversely, the variables region, ethnicity and housing tenure which appear as the most important predictors of co-operation do not appear as the most important predictors of the nutritional variables in the Appendix. These findings provide some explanation for the small estimated biases we find in Section 3.

2.2.3. Analysis of postal questionnaire completion³

There is relatively rich information about the characteristics of those who fail to complete the diary but do complete the interview, as analysed in the previous section. There is comparably poor direct information on those who refuse to complete the interview. In Section 2.2.1 we were only able to consider region and age group. In such circumstances, it is desirable if possible to obtain further direct information about the refusers. Some information was obtained by postal questionnaires and in this section we consider what can be learnt from these.

To consider whether those responding to the postal questionnaire might be considered representative of the refusals we first consider the regional distribution of these groups in Table E14. Those responding to the questionnaire do indeed appear to have a comparable regional distribution to the others who refused the main interview. This is reassuring.

Table E14 Regional distribution of postal questionnaire

Region	Completes Interview	Refuses interview but completes postal questionnaire	Other refusals	Total
Scotland	189 (8%)	22 (11%)	126 (12%)	337 (10%)
Northern	596 (27%)	55 (27%)	273 (26%)	924 (27%)
Central, SW and Wales	782 (35%)	70 (35%)	330 (32%)	1182 (34%)
London and SE	658 (30%)	55 (27%)	310 (30%)	1023 (30%)
Total	2225 (100%)	202 (100%)	1039 (100%)	3466 (100%)

We next consider the corresponding age distributions in Table E15, where the final two columns have been obtained as in Table E4. These results are much less reassuring. There seems strong evidence that the age distribution of those completing the postal questionnaires is not representative of the non-respondents to the interview. They seem to be much more skewed towards the older age groups than even those who complete the interview.

Table E15 Age distribution for postal questionnaire

Age Group	Completes interview	Refuses interview but completes postal questionnaire	Other eligible	Total eligible
19-24	194 (9%)	12 (6%)	236 (18%)	442 (12%)
24-34	489 (22%)	32 (16%)	390 (29%)	911 (24%)
35-49	874 (39%)	75 (37%)	382 (29%)	1331 (36%)
50-64	667 (30%)	82 (41%)	315 (24%)	1064 (28%)
Total	2224 (100%)	201 (100%)	1323 (100%)	3748 (100%)

Further comparisons are made for housing tenure and smoking status in Tables E16 and E17. In both cases those who complete the postal questionnaire tend to be skewed towards the characteristics of those who are more co-operative in the analysis in the previous section. Indeed, they have even higher proportions in the more co-operative category than those who complete both the interview and the diary. It thus appears that those who respond to the postal questionnaire are rather unrepresentative of all refusals. One alternative explanation for the rather unexpected findings in these tables is that they represent 'mode effects', that is the effect of using a self-completion postal questionnaire rather than a face-to-face interview. There might, for example, be question-wording effects or other effects, e.g. a light smoker might be more inclined to claim to be a non-smoker on a postal questionnaire than in a face-to-face interview in their own home.

Table E16 Tenure distribution for postal questionnaire

Tenure	Completes interview and diary	Completes interview only	Refuses interview but completes postal questionnaire	Total
Rents	451 (26%)	162 (33%)	35 (18%)	648 (27%)
Owns Home	1276 (74%)	333 (67%)	163 (82%)	1772 (73%)
Total	1727 (100%)	495 (100%)	198 (100%)	2420 (100%)

Table E17 Smoking status for postal questionnaire

Smoking Status	Completes interviews and diary	Completes interview only	Refuses interview but completes postal questionnaire	Total
Current smoker	553 (32%)	181 (36%)	40 (20%)	774 (32%)
Not current smoker	1175 (68%)	315 (64%)	161 (80%)	1651 (68%)
Total	1728 (100%)	496 (100%)	201 (100%)	2425 (100%)

Whatever the explanation for these patterns, we conclude that the responses of those who complete the postal questionnaires are unlikely to be very representative of the characteristics of those who refuse to participate in the survey. The postal respondents appear to demonstrate certain systematic characteristics of co-operative respondents, despite the fact that they refused to participate in the interview. We do not feel, therefore, that an analysis of the postal questionnaire data will be very helpful in assessing the likely biases which may arise from interview refusals, i.e. from Stage 1 considered in Section 2.2.1.

2.3. Analysis of non-contact

As for the complete refusals, there is little information about those who are not contacted. In particular, it is possible that some of the 4% of non-contacts in Table E1 constitute ineligibles. One way of investigating the possible bias from non-contact is by considering the number of calls that are required to establish contact with eligible individuals. It is supposed that the number of calls is a measure of 'contactability' and that the non-contacts will share characteristics with the least contactable, i.e. those requiring the most calls. A consequence of this assumption is that systematic relationships between the number of calls and survey variables may indicate possible biases.

A series of analyses were undertaken relating the number of calls to the 14 interview variables in Table E6. It was found that contactability, as measured by the number of calls, had a quite different relationship with these variables than co-operation as analysed in Section 2.2.2. Thus there seemed to be no significant relationship between contactability and two of the three most important variables identified in Section 2.2.2., region and tenure. There was some evidence of a relationship again with ethnicity, with non-whites being a little more difficult to contact. The strongest relationships were between number of calls and employment status and health status, as shown in Tables E18 and E19. Not surprisingly, those who are

unemployed, economically inactive or with a long-term illness or disability tend to be easier to find at home. Fortunately, these variables do not seem to be key predictors of the nutritional variables (see *Appendix*). Three variables which are related to the nutritional variables, sex, smoking status and diet status, appeared to have very little relationship with contactability.

Table E18 Number of calls required to establish contact by employment status

Employment Status	Number of calls required		Total
	1-3	4 or over	
Employed	679 (41%)	966 (59%)	1645 (100%)
Unemployed	43 (57%)	32 (43%)	75 (100%)
Economically inactive	303 (58%)	219 (42%)	522 (100%)
Total	1025 (46%)	1217 (54%)	2242 (100%)

Table E19 Number of calls required to establish contact by health status

Health Status	Number of calls required		Total
	1-3	4 or over	
With long-term illness or disability	446 (51%)	421 (49%)	867 (100%)
Other	576 (42%)	794 (58%)	1370 (100%)
Total	1022 (46%)	1215 (54%)	(100%)

Given the small percentage of non-contacts and the absence of evidence of an association between contactability and nutritional variables of interest, we conclude that it is reasonable to treat the impact of non-contact on bias as negligible, in particular relative to the possible effect of refusals.

There is limited evidence of a small positive relationship between contactability and co-operation. Those individuals who are only contacted after a very large number of calls (8 or more) do have a lower rate of completing the diary if they agree to the interview (65% vs 79%). Perhaps these are especially busy people. It is possible, therefore, that any very minor biasing effect of non-contact may increase the bias in the results.

3 Bias effects of non-response

In this section we consider the possible biases which non-response may introduce. We shall suppose, unless stated otherwise, that we are concerned with the bias of the estimator which applies 'sampling weights' to correct for the different sampling

probabilities for individuals in households of different numbers of eligible adults, but which applies no other weights to correct for non-response bias.

We conceive of non-response as involving an under-representation of different parts of the population of 19 to 64 year olds. If we knew how much the different parts of the population were under-represented then we could weight up these parts to obtain an unbiased estimator (provided no parts of the population had a zero chance of being represented in the respondents). The problem is, of course, that we do not know precisely how all parts of the population are under-represented. We do have some estimates. For example, Figure E1 displays estimated probabilities of completing the diary for 16 parts of the population. For any such set of estimated probabilities of response we may weight the estimates by the reciprocals of these estimated probabilities to obtain an adjusted estimate, which would be unbiased if the estimated probabilities were correct. The difference between the adjusted estimate and the original estimate provides an estimate of the bias of the original estimate, under the assumption that the assumed probabilities of non-response are the appropriate ones. Since we cannot be sure about such an assumption, we consider applying a variety of alternative sets of probabilities, or equivalently sets of weights, in order to undertake a *sensitivity analysis* under alternative assumptions about the possible nature of the non-response.

First, we consider estimators of the mean intake of the 12 nutrients listed in Table E20, separately for men (Table E20) and women (Table E21). The basic estimator is obtained by applying the sampling weights. Other estimators are obtained by using other weights. Since the units of the variables vary greatly, we have standardised by considering only the ratio of the value of each alternative weighted estimate to the value of the basic sample-weighted estimate. This provides an estimate of the relative bias of the basic estimate under the assumptions underlying the alternative estimate.

Table E20 Impact of alternative weights on estimated mean nutrient intakes: men

Variable	No sampling weight or non-response weight	Non-Response Weight by:				
		Region/ Ethnicity/ Tenure	Benefit Status	Region	Smoking Status	Region / Ethnicity / Tenure Squared
Total Sugars	0.964	0.997	0.998	1.001	1.001	0.995
Starch	0.971	0.999	0.999	1.000	0.998	0.999
Energy	0.973	0.999	0.998	1.002	0.999	0.998
Protein	0.978	1.001	0.999	1.003	0.999	1.002
Fat	0.966	0.999	0.999	1.002	0.999	0.998
Carbohydrate	0.968	0.998	0.999	1.001	0.999	0.997
Alcohol	1.029	1.000	0.995	1.005	0.998	1.000
Calcium	0.972	1.000	0.999	1.004	0.998	1.000
Iron	0.977	0.999	0.998	1.002	0.997	0.999
Vitamin C	1.069	1.003	0.997	1.003	0.996	1.006
Cholesterol	0.964	1.001	0.999	1.003	0.999	1.002
Food Energy	0.969	0.999	0.999	1.001	0.999	0.998

Notes: Figures are ratios of estimated mean using specified weights to estimated mean using sampling weights but no non-response weight.
Sample size is 153.

Table E21 Impact of alternative weights on estimated mean nutrient intakes: women

Variable	No sampling weight or non-response weight	Non-Response Weight by:				
		Region/ Ethnicity/ Tenure	Benefit Status	Region	Smoking Status	Region / Ethnicity / Tenure Squared
Total Sugars	0.979	0.996	1.001	0.998	0.999	0.991
Starch	0.982	1.001	0.997	1.000	0.999	1.003
Energy	0.986	0.999	0.998	1.000	0.999	0.999
Protein	0.982	1.000	0.999	1.000	0.998	1.001
Fat	0.989	1.000	0.996	1.000	1.000	1.001
Carbohydrate	0.981	0.999	0.999	0.999	0.999	0.997
Alcohol	1.042	0.993	1.003	0.999	1.005	0.985
Calcium	0.986	1.000	0.997	1.001	0.997	1.001
Iron	0.982	0.996	0.998	0.998	0.996	0.993
Vitamin C	0.938	0.993	0.999	1.001	0.994	0.985
Cholesterol	1.002	0.997	0.999	0.997	1.000	0.994
Food Energy	0.983	0.999	0.998	1.000	0.999	0.999

Note: sample size is 170.

To provide a benchmark for the effect of weighting, we consider in the first column the impact of using no weighting at all. The sampling weight is greater the more eligible adults there are in a household. Thus, a ratio of less than 1 in this column suggests that the variable is positively correlated with the number of eligible adults. This occurs with most variables. One exception is alcohol intake, where intake may

be greater on average for individuals living in single adult households. The ratios for Vitamin C are odd, being different sides of 1 for men and women. It appears that this may be an artifact of some (high) outliers, which occur more for Vitamin C than for any other variables in these small samples. Overall, the maximum effect of removing sample weighting for any of these variables is to change the estimate by 7%.

The first non-response weight we consider corresponds to the logistic regression in Table E13. The weights are proportional to the reciprocals of the probabilities in Figure E1. The impact of this weighting is seen to be very small. All the ratios in this column in Tables E20 and E21 lie between 0.993 and 1.003, i.e. the maximum estimated relative bias is 0.7%, much less than the effect of sample weighting. There are two basic reasons for this. First, the variables we are weighting for (region, ethnicity and tenure) are not strongly related to the nutritional variables. Secondly, most of the weights do not vary greatly (there are a small number of relatively large weights for the non-whites). This result is very encouraging.

To conduct a sensitivity analysis, under some alternative non-response models we also construct weights by benefit status, region and smoking status, by taking reciprocals of the probabilities of completing the diary given completion of the interview within categories of these variables. The results in Tables E20 and E21 for these weights are similarly close to 1. The ratios range from 0.994 to 1.005, i.e. the maximum estimated relative bias is 0.6%. These results are also encouraging, suggesting that the general magnitude of these effects is not greatly sensitive to the choice of interview variables controlled for.

A basic limitation of the results so far is that they only correct for differential rates of completion of the diary given completion of the interview. In this sense, they are therefore only correcting for non-response representing 13% of the sample (see Table E1). The results will therefore only be appropriate if the individuals in this 13% of the sample, those who complete the interview but not the diary, are representative of all non-respondents. There was some evidence in Section 2.2.1 that this is not so.

Following the discussion of the regional effects in Table E3, one possible statistical model for non-response is that each individual's probability P of completing the diary (once they have completed the interview) is proportional to the individual's probability of completing the interview. Under this model the individual's overall probability of completing the diary will be proportional to the square of P . The weights used so far

are simply proportional to the reciprocal of P . It follows that under this model for non-response, appropriate weights may be obtained by squaring the weights considered so far. The squares of the weights based upon the logistic regression are applied in the final column of Tables E20 and E21. As may be anticipated from mathematical calculations, the resulting ratios differ from 1 by around twice the amount the original weighted estimates do. Whereas the original weighted estimates differed from the sample-weighted estimates by no more than 0.7%, the maximum deviation of the new estimates is 1.5%.

The analysis of means in Tables E20 and E21 was repeated for medians and 10% and 90% percentiles. A summary of the largest and smallest ratios is given in Tables E22 and E23. The rows for means indicate as above that weighting for non-response never changes the estimated mean by more than 1.5%. The results for medians are similar, although there are two variables, total sugars and cholesterol for women, where there are changes between 1.5 and 2.6%. The results for the 10% and 90% percentiles show a little more variability with changes of up to 4%. This greater variability seems likely to be more a reflection of the sensitivity of these estimates to small numbers of observations rather than an indication of greater bias. There seems to be no evidence of systematic changes in the shapes of the distributions of nutrient intake as a result of non-response, for example no systematic shrinking of the variability in the distributions.

The magnitudes of the potential biases suggested by Tables E20 to E23 need to be considered against the magnitudes of the standard errors of the estimates. The coefficients of variation (standard errors divided by estimates) of the mean intakes of various nutrients by sex are presented in Table E24. The sample sizes of 153 and 170 are assumed to be realistic for the smaller cells to appear in the published estimates. It is supposed that the reduction in the size of the cells by the fact that Table E24 only refers to one wave of data is compensated for by the fact that we have pooled across all age groups. The coefficients of variation in Table E24 are variable but are never less than 1.8%. This occurs for mean energy intake for women. A corresponding relative bias figure suggested by Table E21 for this estimate is 0.1%. If the square of this figure is added to the square of the coefficient of variation to obtain a (relative) mean squared error, it is clear that the contribution of the bias is negligible. More generally, we consider that Tables E20 to E23 suggest that the relative bias will rarely be greater than 1%. For the kinds of coefficients of

variation in Table E24 such a figure will still make a relatively small contribution to the overall mean squared error.

Table E22 Maxima and minima of ratios of alternative weighted estimates for different statistics: men

Statistic	Non Response Weight by					
	No sampling weight or non-response weight	Region/ Ethnicity / Tenure	Benefit Status	Region	Smoking Status	Region/ Ethnicity/ Tenure Squared
<u>Mean</u>						
Maximum (Variable)	1.069 (Vit.C)	1.003 (Vit.C)	0.999 (several)	1.005 (Alcohol)	1.001 (Sugars)	1.006 (Vit.C)
Minimum (Variable)	0.964 (Sugars)	0.997 (Sugars)	0.995 (Alcohol)	1.000 (Starch)	0.996 (Vit.C)	0.995 (Sugars)
<u>Median</u>						
Maximum (Variable)	1.069 (Vit.C)	1.003 (Vit.C)	1.000 (Several)	1.011 (Sugars)	1.001 (Sugars)	1.011 (Vit.C)
Minimum (Variable)	0.964 (Chol.)	0.997 (Sugars)	0.996 (Vit.C)	1.000 (several)	0.989 (Vit.C)	0.996 (Sugars)
<u>10 Percentile</u>						
Maximum (Variable)	0.980 (Chol.)	1.002 (Starch)	1.000 (several)	1.006 (Vit.C)	1.010 (Vit.C)	1.003 (Starch)
Minimum (Variable)	0.857 (Vit.C)	0.977 (Carb.)	0.993 (Carb.)	0.995 (Carb.)	0.995 (Starch)	0.973 (Carb.)
<u>90 Percentile</u>						
Maximum (Variable)	1.068 (Alc.)	1.024 (Prot)	1.000 (Several)	1.024 (Prot.)	1.000 (Several)	1.024 (Prot.)
Minimum (Variable)	0.955 (Fat)	0.974 (Alc.)	0.976 (Alc.)	0.976 (Alc.)	0.974 (Alc.)	0.965 (Alc.)

Table E23 Maxima and minima of ratios of alternative weighted estimates for different statistics: women

Statistic	Non Response Weight by					
	No sampling weight or non-response weight	Region/ Ethnicity / Tenure	Benefit Status	Region	Smoking Status	Region/ Ethnicity/ Tenure Squared
<u>Mean</u>						
Maximum (Variable)	1.042 (Alcohol)	1.001 (Starch)	1.003 (Alcohol)	1.001 (Calc.)	1.005 (Alcohol)	1.003 (Starch)
Minimum (Variable)	0.938 (Vit.C)	0.993 (Vit.C)	0.996 (Fat)	0.997 (Chol.)	0.994 (Vit.C)	0.985 (Vit.C)
<u>Median</u>						
Maximum (Variable)	1.007 (Fat)	1.000 (several)	1.002 (Sugars)	1.004 (Calc.)	1.000 (several)	1.004 (Calc.)
Minimum (Variable)	0.967 (Iron)	0.982 (Chol.)	0.990 (Chol.)	0.984 (Chol.)	0.996 (Calc.)	0.974 (Chol.)
<u>10 Percentile</u>						
Maximum (Variable)	1.003 (Chol.)	1.021 (Chol.)	1.000 (several)	1.009 (Chol.)	1.000 (several)	1.039 (Chol.)
Minimum (Variable)	0.912 (Sugars)	0.998 (Iron)	0.996 (Food En.)	0.998 (Iron)	0.995 (Iron)	0.997 (Iron)
<u>90 Percentile</u>						
Maximum (Variable)	1.038 (Chol.)	1.000 (several)	1.001 (Sugars)	1.000 (several)	1.000 (several)	1.000 (several)
Minimum (Variable)	0.973 (Starch)	0.997 (Chol.)	0.987 (Starch)	0.996 (Chol.)	0.999 (Sugars)	0.986 (Chol.)

Table E24 Coefficients of variation and design effects of estimated means by sex

Variable	c.v (%)		Design effect	
	Men	Women	Men	Women
Total Sugars	4.6	4.0	1.39	1.81
Starch	3.2	2.0	1.38	0.80
Energy	2.4	1.8	1.22	1.03
Protein	2.3	2.0	1.34	1.21
Fat	2.8	2.5	1.14	0.84
Carbohydrate	3.2	2.3	1.46	1.40
Alcohol	8.6	13.3	1.05	1.36
Calcium	3.0	3.8	1.06	1.66
Iron	3.8	3.8	1.14	1.14
Vitamin C	11.2	13.4	0.66	1.96
Cholesterol	3.9	3.3	1.66	0.94
Food Energy	2.8	2.0	1.42	1.13

Note: Estimates are based upon Wave 1 data only - sample sizes are 153 (men), 170 (women).

4 Adjusting for the effects of non-response

In this section we consider possible adjustments to analyses of the NDNS data in order to compensate for the effects of non-response.

There are broadly three ways that adjustment might be carried out.

- 1) *weighting*: one or more sets of non-response weights might be produced, which would be applied to all analyses;
- 2) *imputation*: values of variables missing for eligible sample individuals might be imputed;
- 3) *model-based adjustment*: the variables could be modelled, enabling the use of estimation methods, such as maximum likelihood estimation, which allow for 'non-rectangular' datasets including missing values.

For the general purpose production of survey estimates and for standard analyses, we feel that only the first of these approaches is worth considering as a means of dealing with the major sources of unit non-response. Imputation might have some, relatively minor, uses for item non-response, but it seems impractical to consider using it, for example, to impute the full set of diary variables for each individual who completes the interview but not the diary. Model-based adjustment may be appropriate for some specialised scientific analyses of the data, but also seems impractical for the general production of survey estimates.

We thus only consider weighting in the remainder of this section. An initial question is whether weighting should be applied for the varying sampling probabilities. Should we attempt to compensate for the fact that individuals in households containing more eligible individuals have smaller sampling probabilities? The first columns of Tables E20 and E21 show that such weighting may change estimates of means by as much as 7%. We strongly recommend that sampling weights are used. Otherwise, bias is likely to arise, since many of the variables of interest are related to the number of eligible adults in the household. The use of sample weighting provides a straightforward approach to remove this bias.

One practical problem with weighting is that it does complicate the analysis. Nevertheless, this is a complication that survey organisations, such as SSD, are familiar with. If, as is recommended, sample weighting is to be employed, then there is little further complication if these weights are modified to adjust for non-response, provided only one set of weights is used.

Let us consider then the possible forms of weighting for non-response. There are broadly two possible approaches, which might be used together:

- 1) 'sample-based' weighting – this might involve, for example, using data for all interview completers to weight the data from the diary, for example using some of the results in Section 2.2.2.
- 2) 'population-based' weighting – this might involve, for example, using population estimates to weight estimates from either the interview or diary.

The most straightforward case seems to be for population-based weighting. There is evidence that there is differential non-response by both region and age group (see Tables E2 and E4). It therefore seems sensible to apply population-based weighting by age, sex and region. Since most estimates are produced by age-group and sex, we suggest that post-stratification by region be employed within age-sex groups. When estimates are to be produced across age-groups or sexes then the age-sex-specific estimates should be weighted together using population estimates. It seems likely that it should be adequate to have just two regional post-strata within age-sex groups: Scotland vs. the rest. Some empirical investigation of the impact of using more detailed regional post-stratification could be considered, however.

One might also consider using population-based weighting based upon other larger surveys, such as the Health Survey for England or the General Household Survey. However, it is not clear that there are variables (other than region, age and sex), which one might reasonably assume are measured identically in both surveys and which are related to non-response. Moreover, such surveys suffer themselves from non-response. Thus, this approach does not appear to us as promising, at least without further investigation.

In principle, the use of sample-based weighting, based upon the interview data, seems attractive, since we might conceive of increasing the 'effective response rate' from 47% towards 60%. It is not obvious, however, that there is much to be gained from such weighting. One of the key factors identified in Section 2.2.2 as relating to completion of the diary was region. But we may control for this through population-based weighting anyway. Even including region the impact of weighting in Section 3 was found to be minor. If weighting is to be used then it is desirable that its effect be robust to the specific choice of factors to weight by. Although some robustness was observed in Section 3, in the sense that the impact of alternative weighting factors was small, the direction of adjustment by different factors was rather variable. Given

that such weighting will in any case only adjust for part of the non-response, we do not see a strong case for sample-based weighting as a common approach across all estimates.

We do, however, think that the production of some estimates for alternative sets of weights may provide a useful sensitivity analysis, providing some indication of how sensitive estimates may be to differential non-response. Probably the most realistic set of weights we have considered is the squared weights in the final columns of Tables E20 and E21. If only one set of alternative estimates were to be produced, then we suggest that these weights be used (in addition to estimates using sample weighting and post-stratification weighting).

5 Implications of non-response for the analysis of NDNS data

As discussed in the previous section, we recommend that weighting be used for all estimates. The weighting should allow both for differential sampling probabilities and for post-stratification by region (and by age-group and sex for estimates which pool age-groups and/or both men and women). Further weighting for non-response does not seem essential but might be used for some estimates as a sensitivity analysis.

There is no evidence of bias serious enough to warrant certain estimates not being produced. It may be sensible to advise users of the survey estimates to interpret them with caution. They might be advised, on the basis of the evidence in Section 3, that estimates may be subject to non-response bias, which it is estimated will rarely exceed 1% of the estimate but may occasionally be as high as 2%. Users might, for example, interpret differences between estimates from this survey and estimates from the Dietary and Nutritional Survey of British Adults (1986/87 Adults Survey)⁴ as follows. Suppose the current estimate is 23 and the previous estimate was 20. If the standard error of the difference is estimated as 1 then the difference between 23 and 20 might normally be deemed statistically significant. To consider whether this finding might be an artifact of non-response, we might suppose, as a worst case, that the figure 23 is subject to about 2% non-response bias, so that it might be replaced by 22.5. In this case the difference between 20 and 22.5 is still 2.5 standard errors so that we might conclude that the statistical significance of the difference is unlikely to be an artifact of non-response bias.

An alternative crude rule of thumb might be to adjust sampling variances (squares of standard errors) by adding the square of 1% of the survey estimate to give an

estimate of the mean squared error. The square root of this estimate might then be used as an adjusted standard error or to produce adjusted confidence intervals.

Differential non-response by age suggests that the common practice of presenting estimates separately by age-group is sensible and that such age-specific estimates may be less prone to non-response bias than estimates pooled across age groups.

The respondents to the postal questionnaires do not appear to be representative of the total nonrespondents and we do not recommend that the data for these questionnaires be weighted to represent these nonrespondents. The data for these questionnaires might be included in analyses based upon the variables included in these questionnaires but we suggest that they should not be included in any other analyses.

The uncertainty in survey estimates due to sampling and non-response should be assessed using standard errors or confidence intervals. These should preferably allow for weighting and the sampling design of the survey. It may be appropriate to develop rules for not publishing estimates for which the standard errors or coefficients of variation are considered too large.

6 Sample design

We were asked to consider whether there are any implications from the above analyses for the sample design.

The decision to sample only one eligible adult per household seems sensible. Sampling all eligible adults would increase the response burden for the household and might prejudice non-response further.

The geographical clustering of the sample by postcode sector seems standard and reasonable for this survey. It represents a standard compromise between the need to control the sampling variance and the need to reduce interviewing costs. The design effects in Table E24 indicate that the clustering may lead to a modest increase in the sampling variance. We see no obvious reason to vary the number of addresses selected per sector. It is possible that an alternative deployment of interviewers, designed with non-response reduction in mind, might suggest a change to this number.

Other design considerations, such as reducing the burden on the respondent to increase co-operation, are outside the scope of this report.

7 Concluding remarks

In this report we have investigated patterns of non-response and considered whether differential non-response might lead to bias. Although there is evidence of some differential effects, there is no evidence that the bias implications for estimates based upon the nutritional variables in the diary are more than relatively minor. The estimates of the relative bias obtained here rarely exceed 1%. The main reason for this encouraging finding is that the variables which are associated with differential non-response do not appear to be strongly associated with these nutritional variables.

Lynn and Clarke (2001)⁵ investigated the relation between non-response and five health variables from the 1996 and 1997 Health Survey for England, distinguishing the effects of non-contact and non-cooperation. They found that non-contact was more strongly differential between these health variables, with non-cooperation only being slightly related. They argue that it is therefore more important to reduce non-contact to a minimal level in health related surveys. This fits in with our findings. Non-contact in the NDNS is low at 4% and so the bias effect of non-contact should be relatively minor¹. Non-cooperation in the NDNS is not low but, fortunately, does not appear to be strongly related to the nutritional variables of interest.

Our conclusions require some caveats. The evidence is primarily obtained from patterns of partial compliance and contact. We have very little information about the total refusals and the total non-contact and the inferences about non-response bias are based upon assumptions about the characteristics of these groups. We cannot be sure that these assumptions are realistic. A problem with low response rates is that the sensitivity of the results to these assumptions is greater than it would be with a higher response rate. When there is only around a 50% response rate, it would only take a moderate difference in the behaviour of non-respondents to generate a moderate non-response bias. With a 75% response rate, the same difference in behaviour will tend to produce only half this non-response bias. Thus, inevitably these conclusions must be cautious and emphasise that, while we have not observed evidence of important biases, we cannot be sure that such biases could not arise.

This report has not compared NDNS results with similar estimates from other sources such as the General Household Survey or the Health Survey for England. Such comparisons would be likely to be problematic in that the effects of non-response in the NDNS could be confounded with other effects of definitional or measurement differences or indeed non-response effects in the other surveys. Nevertheless, if further evidence is required some comparisons could be considered.

References and endnotes

- ¹ At the time of this review 4% of the eligible sample were non-contacts. After data cleaning and amalgamation of the results from the postal questionnaires, the final non-contact rate was 2%.
- ² Groves RM, Couper MP. *Nonresponse in Household Interview Surveys*. Wiley (New York, 1998).
- ³ The postal questionnaire did form part of the mainstage NDNS, but was a methodological piece of work. Non-responders were identified and sent a short postal questionnaire to ascertain the eligibility of the household and also to gain some basic demographic information on the household and the selected respondent.
- ⁴ Gregory J, Foster K, Tyler H, Wiseman M. *The Dietary and Nutritional Survey of British Adults*. HMSO (London, 1990).
- ⁵ Lynn P, Clarke P. Separating refusal bias and non-contact bias: evidence from UK national surveys. Manuscript. University of Essex (2001).

Appendix: Regression analysis for diary variables

For each of the 13 diary variables listed in Table A1, a stepwise linear regression analysis was conducted considering all of the 14 interview variables listed in Table E6 as possible predictors. The analyses were conducted using data from individuals who co-operated on both the interview and the diary at Wave 1. Log transformations for the diary variables were considered but gave fairly similar results. Since the results are only to be used for broad guidance, no interaction terms were used. The results of the analyses are summarised in Table A1. The labels for the predictor variables are given in Table E6 – note that REG(1), for example, indicates a dummy variable representing one particular category of the predictor (in this case Scotland). The order in which variables were introduced in a forward stepwise regression are indicated together with the value of (adjusted) R squared as each variable is introduced.

Table A1 Summary of stepwise regressions for diary variables as response and interview variables as predictors

Diary Variable	Interview Variable added at step ...						
	1	2	3	4	5	6	7
Total Sugars	SEX 0.076	OWN 0.098	DIET 0.123	REG(1) 0.137			
Starch	SEX 0.153	SMOKE 0.186	DIET 0.206	MSTAT 0.222	EMP 0.234		
Energy (kcal)	SEX 0.298	BENEFIT 0.322	DIET 0.341	REG(1) 0.355	OWN 0.363		
Energy (kJ)	SEX 0.297	BENEFIT 0.320	DIET 0.339	REG(1) 0.353	OWN 0.361		
Protein	SEX 0.238	SMOKE 0.275	MSTAT 0.298	BENEFIT 0.313	REG(1) 0.326	DIET 0.334	
Fat	SEX 0.197	DIET 0.233	OWN 0.249	REG(1) 0.270	AGE(3) 0.280	REG(2) 0.289	WHITE 0.297
Carbohydrate	SEX 0.161	EMP 0.187	DIET 0.210	MSTAT 0.225			
Alcohol	SEX 0.157	ALCOHOL 0.174	DIET 0.188	MSTAT 0.198	BENEFIT 0.211		
Calcium	SEX 0.067	SMOKE 0.120	REG(1) 0.140	WHITE 0.154	DIET 0.170		
Iron	SMOKE 0.077	SEX 0.153	BENEFIT 0.173				
Vitamin C	SMOKE 0.021	TYPE 0.030					
Cholesterol	SEX 0.138	MSTAT 0.160	DIET 0.183	SC(3) 0.194	REG(2) 0.202		
Food Energy	SEX 0.202	DIET 0.239	MSTAT 0.265	EMP 0.284	SMOKE 0.294	REG(1) 0.303	SC(3) 0.311

Note: The value of the (adjusted) R^2 statistic is given for each step of the stepwise regression. The figure in bold is the value of R^2 for the finally selected model.

Appendix F

Dietary methodology: details of the recording and coding procedures

1 Choice of dietary methodology

For each survey in the NDNS series, the weighed intake methodology has been the preferred method for collecting quantitative information on food and nutrient intakes^{1,2,3}. Compared with other methods, such as 24-hour recall methods and food frequency questionnaires the weighed intake methodology gives more precise estimates of intakes for individuals which can be related to health indices, such as nutritional status measured by blood analytes. This method also allows distributions of intakes for groups to be calculated. Applied properly, the method avoids recall errors, and for foods eaten at home, minimises the need to estimate quantities consumed^{4,5,6}.

The weighed intake method gives information on respondent's current diet, whereas food frequency questionnaires and recall methods, because they can cover a longer reference period, can provide information on a respondent's usual diet.

The weighed intake method does of course have disadvantages; it requires a high level of motivation and to some extent greater skill and understanding from respondents than other methods. To apply it properly requires a much greater level of support and assistance from interviewers with the need for frequent and regular calls. Precision scales, which are expensive, are required. All the above factors combined make the method resource intensive, and hence costly. In relation to the reliability of the information collected it has been argued that the method can lead to changes in eating habits and under-recording. In deciding to use a weighed intake methodology, the period over which to collect information for an individual also needed to be considered. Ideally it needed to be long enough to give reliable information on usual food consumption, but this had to be balanced against the likelihood of poor compliance if the recording period was lengthy.

For each NDNS these issues are tested in feasibility work, before deciding whether the weighed intake is a suitable methodology for the age group being studied. Appendix C describes the feasibility study carried out for this NDNS, including the results of the validation of the dietary intake method using the doubly labelled water methodology. The conclusion

from the feasibility work was that the weighed intake method would be suitable for use in the mainstage of this survey of adults.

For reasons of interviewer working arrangements, diaries were almost never placed on Saturdays or Sundays and only infrequently on Fridays; this means that the first day of recording was only rarely a Sunday or Monday. These arrangements were reviewed for Wave 4, and restrictions on weekend working lifted to allow interviewers to place diaries on whatever day was convenient to the respondent. Apart from this interviewers were not required to place diaries to a fixed placement pattern, for example placing equal numbers of diaries on each day of the week. The effects of this on the data have not been investigated in the series of volumes on this survey.

2 Recording in the 'Home Record' diary

The 'Home Record' diary was an A3 loose-leaf document designed to collect detailed information on foods weighed at home, including foods prepared at home but eaten elsewhere, for example lunches prepared at home and taken to work. On occasions someone other than the respondent would complete the diary. This was usually the person responsible for food preparation within the household. This meant that both the respondent and the main record-keeper had to be taught how to weigh and record items in the diary.

Respondents were asked to start a new diary page at the beginning of each day and record the day and date on every page used. Respondents were asked to indicate whether they were well or unwell on each day; if they were unwell for only part of the day then this was coded as being unwell.

Entries made up to midnight on the day the interviewer placed the diary with the respondent were discarded at the analysis stage as the dietary recording period started at midnight and then continued for seven days.

Before weighing each group of food items being served together respondents were asked always to weigh the empty plate or container before any item was added. To encourage weighing of the empty container each diary page had pre-printed 'empty plate/container lines' where the weight of the empty plate could be entered. Each 'empty plate line' was followed by lines for information on each item weighed and served on that plate. If there were insufficient lines following an 'empty plate line' for all the items being served together then the respondent was told to cross through the next 'empty plate line' and continue with recording the item information on the following lines. Each time a new set of items was weighed, recording started

at the next 'empty plate line'. For each set of items weighed together the respondent recorded the time the items were eaten, where they were eaten, at home, at work or elsewhere, and who did the weighing, the respondent or someone else.

Respondents were each provided with a set of Soehnle Quanta digital scales. These are calibrated in one gram units up to 1kg, and in two gram units from 1 to 2kg. The scales can be zeroed after each item is weighed.

After weighing and recording the weight of the empty container the scales were then set to zero and the first food item put on the plate, weighed and recorded. The scales were then 'zeroed' again and subsequent items added, weighed and recorded in the same way. Each food item was recorded in the diary on a separate line, with a full description including brand information, as shown on the example page of the 'Home Record' diary, reproduced in Appendix A.

Second helpings

Second helpings were weighed and recorded in the same way as the initial serving; the plate, with any items remaining was put on the scales and the scales zeroed. Each second serving of a food was then added to the plate and weighed and recorded separately. These items were then flagged for the attention of the ONS nutritionists who combined the weights of first and second helpings giving an overall weight for each food item consumed.

Items too light to be weighed

For items which were too light to be weighed, for example a very small quantity of instant coffee granules, a description of the quantity was recorded in household measures, for example half a level teaspoon. These were converted to gram weights by the nutritionists.

Leftovers

The individual weighing of leftovers was felt to be too burdensome, and might have led to reduced compliance with keeping the dietary record. Therefore at the end of each eating occasion the plate or container was re-weighed with all the leftover items; the total weight was recorded in the leftover column on the 'empty plate line' with a tick in the leftovers column to indicate each food item that was left. Respondents were encouraged also to record additional information on leftovers, for example, that half the mashed potato was left or all the serving of carrots. For foods that have inedible parts such as some meats, fish, fruit and nuts, the respondent was asked to note whether the weight of leftovers included the weight of inedible parts, such as bones, peel or shells.

Foods eaten straight from containers

Items such as yogurts and desserts eaten straight from the pot were treated in a similar way to leftovers. The full pot was weighed on the plate, and after the contents were eaten the empty pot or pot and any remaining contents were weighed again on the plate.

Spilt or dropped food

If any item was spilt or dropped after weighing, the respondent was encouraged wherever possible to recover and re-weigh it on the original plate together with any other leftovers. In some cases this was not possible, for example because the spilt food was eaten by the dog, so an estimate was made of how much of the original item was lost, and recorded in the spillage column of the 'Home Record'.

Recipes

Recipes for home-made dishes were recorded on the back of the recording sheets in the 'Home Record' diary. Respondents were asked to give as much detail as possible about quantities of ingredients used, including liquids added during cooking, and the cooking method used.

Home-grown items

For any fresh fruit or vegetable item recorded in the diary the respondent was asked to indicate whether it was home grown, defined as being grown in their own household's garden or allotment.

An aide-memoire on using the scales and recording in the Home Diary was left with respondents (*W1* and *W2*, *Appendix A*).

3 Recording in the 'Eating Out' diary

The 'Eating Out' diary was an A4 document designed for recording information on everything that was eaten or drunk while the respondent was away from home. This included details of items prepared and weighed at home, and recorded in the 'Home Record' diary, but eaten elsewhere, such as a packed lunch taken to work. The 'Eating Out' diary also contained pages for recording details of physical activities over the same seven-day recording period.

For every item eaten away from home the respondent was asked to record a full description of the item, including its brand name, together with information on where and when it was eaten, portion size and details of any leftovers. If the item had been bought, then price and place of purchase were required. A centimetre rule printed around the edges of the diary

pages could be used to measure the size of items, for example a slice of pizza or pie, if the weight was not known.

Interviewers checked the 'Eating Out' diary at each visit and probed for any more information needed to code the food items. At the coding stage interviewers transcribed the entries from the 'Eating Out' diary to the 'Home Record' and split composite items such as sandwiches into their constituent parts (bread, spread and filling). ONS coders and nutritionists carried out a 100% quality check on all the information transcribed from the 'Eating Out' diaries, checking food codes and where necessary estimating gram weights from the quantity described.

3.1 Strategies for obtaining information about items which had not been weighed

Weight information for foods eaten away from home, which could not be weighed, was collected in a variety of ways and added to the record. For items purchased from local shops or cafes, such as cakes, sandwiches and chips, interviewers used the information about price and place of purchase to buy a duplicate item which was either weighed directly or, if it was a composite item, for example a sandwich, split into its component parts and weighed. Interviewers were also asked to find out further details of foods purchased from takeaway outlets so that they could be correctly coded; for example the type of fat used for frying and the type of spread used in sandwiches.

For pre-packaged foods eaten outside the home, for example confectionery and soft drinks, weight information was obtained from the packaging. To encourage respondents to keep wrappers and cartons they were given plastic bags, which were then returned to the interviewer.

All estimated weights entered by the respondent or interviewer were checked by the nutritionists to make sure they were consistent, for example that the weight recorded for a standard chocolate bar corresponded with the weight on the packaging.

Where it was not possible to collect information on the weights of the components of a composite item, individual weights were estimated by the nutritionists using information from *MAFF Food Portion Sizes*⁷. Wherever possible weights allocated were based on similar items recorded elsewhere in the diary that had been weighed, or were allocated to correspond to the general eating habits of the respondent over the recording period.

3.2 Food and drink items obtained from the workplace

If the respondent had food or drink items provided by their workplace or college, the interviewer invariably needed additional information about the items before they could be

transcribed onto pages for coding. Generally the respondent did not weigh the items eaten at work, so the interviewer ideally needed either to have weight information from duplicates or to have information on standard portion sizes served at the workplace canteen. More detail about the items was also frequently required before they could be food and brand coded. Interviewers therefore had to contact the person responsible for food preparation and serving. In most cases this was the workplace canteen/catering manager, but in some workplaces where food was prepared 'off-premises' an external catering manager as well as at the workplace had to be contacted.

Experience on previous NDNS surveys, had shown there was some common information required from workplace canteens, and that this could be collected on a short standard questionnaire, which the interviewer could either leave with the catering manager to complete, or could use as an interview document (*F3, Appendix A*). The catering questionnaire used in this NDNS included questions on:

- fats used for frying
- types of spread used in sandwiches and baking
- types of milk, cheese and yogurts purchased
- cooking methods for items such as sausages, burgers and fish
- type and method of cooking chips
- type and preparation of mashed potatoes
- ingredients in pastry
- purchase of vegetables (fresh/chilled, frozen or canned)
- type of fruit and custard used
- type of soft drinks available
- standard portion sizes for a range of foods.

The questionnaire was completed for every respondent who consumed food at a workplace canteen. Additionally the interviewer probed for and recorded further information on specific items recorded in the respondent's 'Eating Out' diary. The information was used by the interviewers and subsequently by the ONS nutritionists in checking and coding the respondent's eating out information.

4 Pocket diary

Respondents were provided with a small pocket diary. This was to encourage them to record all items eaten out of the home and their physical activity where it would be

impractical to carry the A4 'Eating Out' diary. Information written in the pocket diary was transferred to the 'Eating Out' diary by the respondent.

All diaries and notes made by the respondent were returned to the office.

5 Checks by the interviewer

Interviewers were required to call back to the household approximately 24 hours after placing the diary. Experience on previous surveys has always shown that this call is essential in giving encouragement to continue keeping the record and to help with any problems with the weighing or recording^{1,3,8}.

At this call interviewers checked in particular that each food item on a plate was being weighed separately and weights were not being recorded cumulatively, that edible and inedible leftovers were being weighed and recorded correctly, that descriptions of foods consumed were sufficiently detailed, that recipes for home-made items were recorded and that composite items were being split before weighing. To help interviewers identify cumulative weights they were provided with a list of typical portion weights for commonly consumed foods, such as breakfast cereals (see *F5, Appendix A*)⁹.

Interviewers were also required to make at least one mid-week call to the household. This would usually include the anthropometric measurements (see *Appendix J* for further details), and provided the interviewer with the opportunity to check on the diaries and offer further support and encouragement. Interviewers would make additional calls throughout the recording period depending on how much support the respondent appeared to need. At these calls interviewers checked for any obvious difficulties in recording and probed for more details of foods that were inadequately described, they also checked for items eaten at home and away from home that might have been forgotten, for example drinks taken to bed, or sips of water when taking pills/vitamin tablets. Where necessary a duplicate item was weighed, recorded in the diary and noted as an estimated weight. Reasons for any apparent omission of meals were probed by the interviewers and noted on the diaries. If the interviewers probing uncovered food items that had been consumed but not recorded, these were added to the diary at the appropriate place.

Before returning the coded diaries to ONS headquarters interviewers were asked to make an assessment of the quality of the dietary record, in particular the extent to which they considered that the diary was an accurate reflection of the respondent's actual diet. This information was recorded on an 'dietary record quality assessment questionnaire' (see *F7*,

Appendix A). The CAPI questionnaire also asked the interviewer to record their assessment of the quality of the dietary record.

6 Eating pattern check sheet

As part of the checking process interviewers completed an eating pattern check sheet for each respondent at the dietary interview (*F2, Appendix A*). This collected information which would be of use to the interviewer when checking the dietary record, for example respondents' usual eating pattern on weekdays and at weekends, the types of certain common food items eaten, such as milk, bread and fat spreads, and the number of drinks, crisps and savoury snacks, biscuits, sweets and dietary supplements they had each day. This check sheet was designed to alert the interviewer to marked changes in the dietary record from day to day, such as a decline over time in the number of snacks or drinks being recorded, which could then be checked at the next call. This information was recorded on a paper form rather than in the CAPI program so that the interviewer could use it to check diary entries during the recording period.

7 Coding

Interviewers were responsible for coding the food diaries so they could readily identify the level of detail needed for different food items, and probe for missing detail at later visits to the household. They were therefore trained in recognising the detail required for coding foods of different types at the briefing and by exercises they completed before and during the briefing.

After the interviewers had coded the entries in the dietary records, ONS headquarters coding and editing staff checked the documents. ONS nutritionists carried out initial checks for completeness of the dietary records, dealt with specific queries from interviewers and coding staff and advised on and checked the quality of coding, with advice from Food Standards Agency nutritionists. They were also responsible for converting descriptions of portion sizes to weights, and checking that the appropriate codes for recipes and new products had been used.

Interviewers were responsible for coding the food diaries before returning them to ONS. This enabled them readily to identify the level of detail needed for different food items, and probe for missing detail at later visits to the household. At each checking call interviewers took away completed diary pages to be coded; any additional information needed to code the food item was asked for at the next visit.

The first diary returned by each interviewer received a 100% check by ONS nutritionists, which included checks on all aspects of the diary, including coding, recorded weights and descriptions

of items consumed. Feedback was given to interviewers on the quality of their coding and probing.

Codes were assigned to identify food items, brand (for selected food types only) and the food source. Any item which could not be coded, for example because it was a new product or a home-made recipe that did not appear in the food code list, was 'flagged' for the attention of the nutritionists at ONS.

ONS nutritionists and coders, advised by the Food Standards Agency, completed the coding of the diaries and for certain food items carried out a 100% coding check on each item. All food codes were checked for the following items: soft drinks, yogurts, artificial sweeteners, liver and liver products and vitamin and mineral supplements. As a further quality check on food coding, as the food code was keyed into the data entry program the text description of the food item was displayed on the screen so that the code could be visually checked against the diary entry.

7.1 Food code list

A food code list giving code numbers for about 3500 items and a full description of each item was prepared by nutritionists at the Food Standards Agency and the ONS for use by the interviewers. The list was organised into sections by food type, for example milk and cream, soft drinks, breakfast cereals, fruit, vegetables and different types of meat. Interviewers were provided with a hard copy of this list and an alphabetical index to help them find particular foods. A page from the food code list is reproduced in Appendix A. The food code list was updated after each wave, to take account of new products eaten by the respondents that became available during the fieldwork period, and interviewers working on subsequent waves sent a revised list. By the end of survey the food code list contained over 6,000 food codes. A number of additional check lists were prepared for interviewers by ONS and the Food Standards Agency which helped interviewers correctly code particular food groups which required a lot of detail, for example for savoury snacks and fats used for spreading and cooking. A separate list of raw foods not expected to occur in food diaries but used in recipes, for example raw chicken, was also provided for use by the ONS nutritionists.

It was necessary to collect very detailed information about all items consumed in order to meet the aims of the survey. This level of detail is required to provide accurate information on food and nutrient intakes for respondents, to relate these to physiological measures and to be able to characterise those respondents with nutrient intakes above and below average values. Only with this detailed information could the correct food code, with its associated

nutrient composition data, be assigned to the item consumed. For example, detailed information on the types of fat spreads used by the respondent was needed in order to assign the correct food code according to the different types of fatty acids the spread contained.

In order to code food items to the required level of detail the following types of information were required:

- the form in which the food was bought, for example whether it was fresh, frozen or canned
- whether the product was low fat and whether any fat had been trimmed or skimmed from meat or meat dishes
- the cooking method, for example whether the food item had been boiled, microwaved, baked, grilled, roasted or fried, and if fat was added in cooking the type of fat used
- whether there were any inedible leftovers, such as bones in meat or fish, or stones in fruit
- whether a coating was used for fish and meat, and whether sauces and gravies were thickened
- whether foods had been sweetened and, if so, whether sugar or an artificial sweetener had been used
- whether soft drinks were low calorie or decaffeinated; whether they were bottled or canned
- whether fruit juices were UHT, pasteurised or freshly squeezed
- whether dairy products were full or reduced fat
- details of the type of fat and flour used in home-baked items
- whether products such as cheese, fish and meat were smoked or not.

Interviewers were provided with a prompt card as an aide-mémoire for the kind of detail needed in order to code different food types (*F1, Appendix A*).

The food code list included a number of different codes for tap water, which were assigned according to whether the water was used as a diluent, or drunk as plain water. For example, different codes distinguished tap water used to dilute concentrated soft drinks, low calorie and not low calorie, used to make up instant coffee, used to make up dried milk and used to make up instant beverages such as Horlicks and Ovaltine. Although the nutrient information attached to each food code for tap water is the same, by having different food codes it is possible to

determine the total volume of liquids of different types drunk by respondents, for example total amounts of diluted soft drinks, instant coffee and plain water.

For any new products not on the food code list, the nutritionists contacted the manufacturer to obtain the nutrient information in order to decide whether an existing food code could be used or if a new food code was needed.

7.2 Composite and recipe items

Composite items which could be split into their constituent parts

Where foods could be split into their individual components they were weighed, recorded and then coded separately, for example a cup of tea as tea infusion, milk and sugar; a sandwich as bread, spread and filling(s).

If such composite items had not been split and weighed separately then the interviewer recorded an estimate of the quantity of each of the constituent parts; this could be a relatively standard amount, such as the number of slices of bread, or could involve a description of the quantity or relative proportions of each component, for example the quantity of each vegetable in a mixed salad. Using this information the ONS nutritionists apportioned the total weight between the components of the dish. The components of the composite dish were coded in the normal way.

Recipe items

Diary keepers were asked to record recipes, ingredients with brand names and their quantities, for most home-made dishes, such as chicken casserole or apple crumble. Where such dishes were included in the food code list they were identified by 'R' preceding the code number; this indicated that their nutrient values were based on standard recipe ingredients. The ONS nutritionists individually checked each recorded recipe and the type and proportions of ingredients used were compared with those of the standard recipe to which the food code referred. If the ingredients differed from the standard recipe in a way that was nutritionally significant the existing food code was not used. A new food code was allocated to the item and the ONS nutritionists recorded the recipe for each new food code. This comprised the gram weight for each ingredient, percentage vitamin losses for each ingredient where appropriate and, for a cooked dish, a percentage water loss for the whole dish. Each new recipe was added to the nutrient databank by the Food Standards Agency and the nutrient content calculated (see *Appendix H*).

Where recipe items were eaten away from the home, for example lasagne eaten at a restaurant, and it was not possible to establish details of the ingredients, the standard food code for that

item was used. However, interviewers were encouraged to collect details of ingredients used in such recipes wherever possible as this information enabled items to be coded appropriately. Codes were also included in the food code list for menu items purchased from national fast-food chains, for example McDonalds, where data on the nutritional content of the foods are available.

7.3 Brand information

Brand information was recorded for all pre-packaged foods. For some food items, for example, confectionery, biscuits and some breakfast cereals, the brand name was needed in order to code the food item correctly.

Artificial sweeteners, herbal and fruit teas, fruit juices and soft drinks and bottled water were the only food items to be brand coded.

7.4 Coding food source

As noted in Chapter 1 there is interest in the contribution made to the total nutrient intake of respondents by foods from different sources. It was therefore necessary to 'source' code food items. The source codes identified where the food item was eaten, for example at home, at work or elsewhere, when it was eaten and where the food came from, for example home, work, takeaway outlet, or other retail outlet. These codes allow us to identify separately, for example, food eaten at commercial catering establishments from food eaten in the work canteen. Food source coding was at plate entry level, rather than at individual food level, and where items on the same plate came from different sources, for example some items from a 'takeaway' and some from the home food store, the food source code was allocated on the basis of the source of the main food item(s) on the plate. Only food eaten out of the home was coded for food source (*FC8, Appendix A*).

8 Data entry and editing

After the interviewers had coded the entries in the dietary records, ONS headquarters coding and editing staff checked the documents. ONS nutritionists carried out initial checks for completeness of the dietary records, dealt with specific queries from interviewers and coding staff and advised on and checked the quality of the coding, with advice from the Food Standards Agency nutritionists. They were also responsible for converting descriptions of portion sizes to weights and checking that the appropriate codes for recipes and new products had been used.

Dietary information was keyed by the coding and editing team into an intelligent keying program which incorporated initial edit checks at the point of data entry. At this stage the weight of each

food item consumed was automatically calculated by subtracting the weight of any leftovers from the weight of food served. Where a combined weight was given for a number of leftover items the total weight of leftovers was divided among the food items indicated as being leftover, usually in proportion to the served weights of those items. The keying program incorporated checks to identify food items where the weight of food consumed was outside a specified range; such cases were individually checked by the nutritionists and any errors corrected.

Checks were run to identify cases where the intake of any nutrient was outside the expected range for normal intakes, although in most cases only a maximum value could be specified; again such cases were individually checked by the ONS nutritionists and any errors corrected. The Food Standards Agency supplied range information for both food weights and nutrient intakes. Consistency checks between the dietary and questionnaire data were also carried out at this stage.

References and endnotes

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- ⁴ Fehily AM. Epidemiology for nutritionists: four survey methods. *Hum Nutr: App Nutr.* 1983; **37A**: 419-425.
- ⁵ Bingham SA. The Dietary assessment of individuals: methods, accuracy, new techniques and recommendations. *Nutr Abstr Rev.* (series A) 1987; **57**:10; 705-742.
- ⁶ Medical Research Council, Environmental Epidemiology Unit. *The Dietary Assessment of Populations. Southampton 1983.* Southampton (1984) (Conference Proceedings: Scientific Report No 4).
- ⁷ Ministry of Agriculture, Fisheries and Food. *Food Portion Sizes.* 2nd Ed. HMSO (London, 1993).
- ⁸ Gregory J, Foster K, Tyler H, Wiseman M. *The Dietary and Nutritional Survey of British Adults.* HMSO (London, 1990).
- ⁹ ONS nutritionists had final responsibility for identifying cumulative weights as part of the HQ checking and coding procedures.

Appendix G

Food types, main and subsidiary food groups

Food types consist of one or more food groups.

Food groups are expressed as integers.

Subsidiary food groups are integers with an alphabetical suffix.

1 Pasta, rice and other miscellaneous cereals

1A	Pasta	all types - dried, fresh and canned; including egg noodles, macaroni cheese, ravioli, canned spaghetti bolognaise
1B	Rice	fried and boiled, savoury rice, egg fried rice, rice flakes, rice flour. (Not rice pudding)
1C	Pizza	all types - thin & crispy, deep pan, French bread
1R	Other cereals	includes flour, bran, oats, dry semolina, papadums, dumplings, Yorkshire pudding

2 White bread

2R	White bread	sliced, unsliced, toast, fried; includes French stick, milk loaf, slimmers, pitta bread, rolls, chappatis, soda bread
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3 Wholemeal bread

3R	Wholemeal bread	sliced, unsliced, toast, fried; includes chappatis, pitta bread, rolls, hi-bran bread, wholemeal soda bread
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4 Other breads

4A	Softgrain bread	sliced, unsliced, toast, fried, rolls, fortified and not fortified
4R	Other breads	sliced, unsliced, toast, fried; includes brown, granary, high fibre white, rye bread, gluten free, garlic bread, continental breads e.g. ciabatta, oatmeal bread, Vitbe, Hovis, crumpets, English muffins (white & wholemeal), pikelets, brown and granary rolls, bagels, brioche, naan, paratha

5 Wholegrain and high fibre breakfast cereals

5R	Wholegrain and high fibre breakfast cereals	all with non-starch polysaccharide (Englyst fibre) of 4g/100g or more, e.g. All Bran, muesli, Shredded Wheat. Includes porridge & Ready Brek
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6 Other breakfast cereals

6R	Other breakfast cereals	all with non-starch polysaccharide (Englyst fibre) of less than 4g/100g, e.g. cornflakes, Coco Pops, Sugar Puffs. Includes Pop Tarts
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7 Biscuits

7R	Biscuits	all types, sweet and savoury; includes cream crackers, flapjacks, breadsticks, crispbread, cereal crunchy bars, ice cream cornet
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8 Buns, cakes, pastries and fruit pies

8A	Fruit pies	all types, one and two crusts; includes apple strudel, individual fruit pies from takeaways
8R	Buns, cakes and pastries	includes Danish pastries, currant bun, doughnuts, eccles cakes, bakewell tarts, jam tarts, scones (sweet and savoury), sponge cakes, fruit cakes, eclairs, currant bread, malt loaf, gateaux, pastry, mince pies, sponge fingers, scotch pancakes, croissants, custard tart, lemon meringue pie

9 Puddings

9A	Cereal-based milk puddings	rice pudding (including canned), custard (not egg custard), Angel Delight, blancmange, confectioners custard, semolina, sweet white sauce
9B	Sponge puddings	steamed, canned, suet pudding, jam roly poly, sponge flan, upside down pudding
9R	Other cereal-based puddings	includes trifle, fruit fritters, pancakes, crumble, bread pudding, cheesecakes, tiramisu, rum baba, Christmas pudding

Food Type: Cereals and cereal products (Groups 1-9)

10 Whole milk

10R	Whole milk	all types of cow's milk including pasteurised, UHT, sterilised, Channel Island
11	Semi-skimmed milk	
11R	Semi-skimmed milk	all types of cow's milk including pasteurised, UHT, sterilised, canned, milk with added vitamins
12	Skimmed milk	
12R	Skimmed milk	all types of cow's milk including pasteurised, UHT, sterilised, canned, milk with added vitamins, Vital, Calcia
13	Other milk and cream	
13A	Infant formula ¹	
13B	Cream	all types, including imitation cream, aerosol, dream topping, Tip Top, creme fraiche
13R	Other milk ³	includes soya alternative to milk, goats, sheeps, evaporated, condensed, dried milk, milk shake, coffee whitener, buttermilk, flavoured milk drink
14	Cheese	
14A	Cottage cheese	includes diet and flavoured
14R	Other cheese	all types, including hard, soft, cream cheese,
15	Yogurt, fromage frais and other dairy desserts	
15A	Fromage frais	includes fromage frais mousse, Quark
15B	Yogurt	all types including soya, goats, sheeps, yogurt mousse, yogurt drink, frozen yogurt, custard style yogurt, Greek yogurt
15R	Other dairy desserts	includes chocolate and fruit cream desserts, mousse, milk jelly, junket, egg custard, buttermilk desserts, fruit fools, creme caramel
53	Ice Cream	
53R	Ice cream	all types, including non dairy, choc ices, ice cream desserts, ice cream containing lollies, milk ice lollies, low fat/low calorie ice cream

Food Type: Milk and milk products (Groups 10-15 & 53)

16 Eggs and egg dishes

- | | | |
|-----|------------|--|
| 16A | Eggs | includes boiled, fried, scrambled, poached, dried, omelettes (sweet and savoury) |
| 16B | Egg dishes | includes quiches, flans, souffles, scotch eggs, egg bread, apple snow, meringue, pavlova, curried eggs |

Food Type: Eggs and Egg dishes (Group 16)

17 Butter²

- | | | |
|-----|--------|---|
| 17R | Butter | salted and unsalted, butter ghee, spreadable butter |
|-----|--------|---|

18 Polyunsaturated margarine and oils²

- | | | |
|-----|---------------------------|--|
| 18A | Polyunsaturated margarine | margarine claiming to be high in polyunsaturated fatty acids |
| 18B | Polyunsaturated oils | includes corn oil, sunflower oil, solid sunflower oil |

19 Low fat spread²

- | | | |
|-----|--------------------------------|--|
| 19A | Low fat spread polyunsaturated | spreads containing 40% or less fat, claiming to be high in polyunsaturated fatty acids |
| 19R | Other low fat spread | spreads containing 40% or less fat, not claiming to be high in polyunsaturated fatty acids |

20 Margarine and other cooking fats and oils not polyunsaturated²

- | | | |
|-----|--|---|
| 20A | Block margarine | all hard margarine |
| 20B | Soft margarine not polyunsaturated | tub margarine not claiming to be high in polyunsaturated fatty acids |
| 20C | Other cooking fats and oils, not polyunsaturated | includes blended vegetable oil, suet, lard, compound cooking fat, dripping, olive oil, rapeseed oil |

21 Reduced fat spread²

- | | | |
|-----|-------------------------------------|--|
| 21A | Reduced fat spread, polyunsaturated | spreads containing more than 40% and less than 80% fat, claiming to be high in polyunsaturated fatty acids |
|-----|-------------------------------------|--|

21B	Other reduced fat spread	spreads containing more than 40% and less than 80% fat, not claiming to be high in polyunsaturated fatty acids; includes spreads made with olive oil, rapeseed oil or fish oil
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Food Type: Fat spreads (Groups 17-21)

22 Bacon and ham

22R	Bacon and ham	including bacon and gammon joints, steaks, chops and rashers; all types of ham, pork shoulder, bacon and cheese grills
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23 Beef, veal and dishes

23R	Beef, veal and dishes	includes beef and veal joints, steaks, minced beef, stewing steak, beef stews, casseroles, meat balls, lasagne, chilli con carne, beef curry, bolognese sauce, shepherds pie, canned beef
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24 Lamb and dishes

24R	Lamb and dishes	includes lamb joints, chops, cutlets, fillets, lamb curries, Irish stew, lamb casseroles and stews
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25 Pork and dishes

25R	Pork and dishes	includes joints, chops, steaks, belly rashers, pork stews and casseroles, sweet and sour pork, spare ribs, roast roll
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26 Coated chicken and turkey

26R	Coated chicken and turkey	chicken and turkey pieces coated in egg and crumb; drumsticks, nuggets, fingers, burgers etc. Includes Kentucky Fried Chicken, chicken kiev
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27 Chicken and turkey dishes

- | | | |
|-----|---------------------------|--|
| 27R | Chicken and turkey dishes | includes roast chicken and turkey, barbecued, fried (no coating), curries, stews, casseroles, chow mein, tandoori, in sauce, spread, chicken/turkey roll |
|-----|---------------------------|--|

28 Liver, liver products and dishes

- | | | |
|-----|----------------------------------|---|
| 28R | Liver, liver products and dishes | includes all types of liver - fried, stewed, grilled, braised; liver casserole, liver sausage, liver pate |
|-----|----------------------------------|---|

29 Burgers and kebabs

- | | | |
|-----|--------------------|--|
| 29R | Burgers and kebabs | includes beefburgers, hamburgers, cheeseburgers, (with or without roll) doner/shish/kofte kebabs (with or without pitta bread and salad), grillsteaks, steaklets |
|-----|--------------------|--|

30 Sausages

- | | | |
|-----|----------|--|
| 30R | Sausages | includes beef, pork, turkey sausages, polony, sausage in batter, saveloy, frankfurters, sausage dishes |
|-----|----------|--|

31 Meat pies and pastries

- | | | |
|-----|------------------------|--|
| 31R | Meat pies and pastries | any type of meat; includes chicken/turkey pies, vol-au-vents, beef pies, steak and kidney pudding, pork pies, veal and ham pie, pasties, sausage roll, meat samosas, pancake rolls |
|-----|------------------------|--|

32 Other meat and meat products

- | | | |
|-----|------------------------------|--|
| 32R | Other meat and meat products | includes game (e.g. venison, grouse, rabbit, pheasant), duck, goose, all offal (except liver), faggots, black pudding, haggis, haslet, meat paste, tongue, luncheon meats, corned beef, salami, pepperami, meat loaf |
|-----|------------------------------|--|

Food Type: Meat and meat products (Groups 22-32)

33 White fish coated and/or fried including fish fingers

- | | | |
|-----|---|---|
| 33R | White fish coated and/or fried including fish fingers | cod, haddock, plaice, etc. fried without coating, or coated in egg and crumb, batter or flour and fried, grilled or baked. Includes fish fingers and fish cakes - fried and grilled, fried cartilaginous fish, scampi, filet-o-fish, cod roe fried, prawn balls, fish feasts, fish pancakes |
|-----|---|---|

34 Other white fish, shellfish and fish dishes

- | | | |
|-----|----------------------------------|--|
| 34A | Other white fish and fish dishes | cod, haddock, plaice etc. poached, steamed, baked, grilled, smoked, dried; includes curried fish, fish in sauce, fish pie, kedgerree |
| 34B | Shellfish | all types including mussels, prawns, crabs, shellfish dishes |

35 Oily fish

- | | | |
|-----|-----------|--|
| 35R | Oily fish | includes herrings, kippers, mackerel, sprats, eels, herrings roe (baked, fried, grilled), salmon, tuna, sardines, trout, taramasalata, mackerel pate, fish paste |
|-----|-----------|--|

Food Type: Fish and fish dishes (Groups 33-35)**36 Salad and other raw vegetables**

- | | | |
|-----|----------------------------------|--|
| 36A | Carrots raw | |
| 36B | Salad and other vegetables (raw) | all types of raw vegetables, including coleslaw, fresh herbs. Not salads made with cooked vegetables or potato salad |
| 36C | Tomatoes (raw) | |

37 Vegetables (not raw)

- | | | |
|-----|--------------------------------------|--|
| 37A | Peas (not raw) | includes canned, dried, mushy, frozen, mange tout, pease pudding canned |
| 37B | Green beans (not raw) canned, frozen | includes French, runner, green beans; fresh, |
| 37C | Baked beans | canned baked beans in sauce. Includes baked beans with additions e.g. sausages, burgers, pasta |
| 37D | Leafy green vegetables (not raw) | includes broccoli, spinach, cabbage (all types), brussels sprouts; fresh and frozen |

37E	Carrots (not raw)	includes fresh, frozen, canned
37F	Tomatoes (not raw)	includes fried, grilled, canned, sundried tomatoes
37G	Vegetable dishes (not raw)	includes curries, pulse dishes, casseroles and stews, pies, vegetable lasagne, cauliflower cheese, vegieburgers, bubble and squeak, vegetable samosas, pancake rolls, ratatouille, vegetable fingers etc.
37R	Other vegetables (not raw)	includes lentils, dried beans and pulses, mushrooms, onion, aubergine, parsnips, sweetcorn, peppers, leeks, courgettes, cauliflower, mixed vegetables, TVP/soya mince, quorn, tofu

38 Chips, fried and roast potatoes and potato products

38A	Chips	fresh and frozen, including oven and microwave, French fries
38B	Fried or roast potatoes and fried potato products	roast potato, fried sliced potato with or without batter, fried waffles, croquettes, crunchies, alphabites, fritters, hash browns
38R	Potato products not fried	croquettes, waffles, fritters, hash browns, alphabites, ketchips, grilled or oven baked

39 Other potatoes, potato salads and dishes

39R	Other potatoes, potato salads and dishes	includes boiled, mashed, baked (with or without fat), canned, potato salad, instant potato, potato based curries, cheese and potato pie
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42 Crisps and savoury snacks

42R	Crisps and savoury snacks	includes all potato and cereal based savoury snacks, popcorn (not sweet), twiglets
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Food Type: Vegetables, potatoes & savoury snacks (Groups 36-39, 42)

40 Fruit

40A	Apples and pears not canned	includes raw, baked, stewed (with or without sugar), dried, apple sauce
40B	Citrus fruit not canned	includes oranges, grapefruit, limes, tangerines, ortaniques etc.
40C	Bananas	includes baked bananas, banana chips
40D	Canned fruit in juice	includes canned in water
40E	Canned fruit in syrup	
40R	Other fruit, not canned	includes plums, grapes, apricots (raw and stewed) etc. fruit pie fillings, dried fruit, fruit salad

56 Nuts and Seeds

56R	Nuts and seeds	includes fruit and nut mixes, salted peanuts, peanut butter, tahini, bombay mix
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Food Type: Fruit and nuts (Group 40 & 56)**41 Sugars, preserves and sweet spreads**

41A	Sugar	all types, including golden syrup, fructose
41B	Preserves	includes jam, fruit spreads, marmalade, honey, lemon curd
41R	Sweet spreads, fillings, icings	includes ice cream topping sauce, chocolate spread, mincemeat, glace cherries, mixed peel, icing, brandy/rum butter, marzipan

43 Sugar confectionery

43R	Sugar confectionery	includes boiled sweets, gums, pastilles, fudge, chews, mints, rock, liquorice, toffees, chewing gum, sweet popcorn, ice lollies (without ice cream)
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44 Chocolate confectionery

44R	Chocolate confectionery	includes chocolate bars, filled bars, assortments
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Food type: Sugar, preserves and confectionery (Group 41, 43, 44)

45 Fruit juice

- 45R Fruit juice includes 100% single or mixed fruit juices, vegetable juices, canned, bottled, cartons; carbonated, still, freshly squeezed

57 Soft drinks, not low calorie

- 57A Concentrated soft drinks, all types including squashes and cordials not low calorie³
- 57B Carbonated soft drinks, not low calorie all types, including tonic water. Not carbonated mineral water; not alco-pops
- 57C Ready to drink soft drinks, not low calorie all types of still soft drinks, not carbonated

58 Soft drinks, low calorie

- 58A Concentrated soft drinks, low calorie³ all low calorie, no added sugar, sugar free types
- 58B Carbonated soft drinks, low calorie all low calorie, no added sugar, sugar free types, including slimline tonic water. Not carbonated mineral water
- 58C Ready to drink soft drinks, low calorie all low calorie, no added sugar, sugar free types. Not carbonated.

47 Spirits and liqueurs

- 47A Liqueurs includes cream liqueurs, Pernod, Southern Comfort, Tia Maria, Cherry Brandy
- 47B Spirits 70 % proof spirits - brandy, gin, rum, vodka, whisky

48 Wine

- 48A Wine white, red, sparkling, rose
- 48B Fortified wine port, sherry, champagne, vermouth
- 48C Low alcohol and alcohol free wine includes fruit juice and wine drinks

49 Beer, lager, cider and perry

49A	Beers and lagers	premium and non premium, stout, strong ale (bottled, draft and canned)
49B	Low alcohol and alcohol free lager and beer	includes shandy
49C	Cider and perry	includes Babycham
49D	Low alcohol and alcohol free cider and perry	
49E	Alco-pops	includes alcoholic lemonade

51 Tea, coffee and water

51A	Coffee (made up)	includes instant and leaf bean, decaffeinated, vending machine with whitener, coffee essence
51B	Tea (made up)	infusion, instant, decaffeinated, vending machine with whitener
51C	Herbal tea (made up)	includes fruit teas
51D	Bottled water	includes carbonated and still, herbal tonics, (not sweetened drinks or tonic water)
51R	Tap water	includes tap water as a drink or used as a diluent for powdered beverages only. Includes filtered tap water. Not water as a diluent for concentrated soft drinks, instant coffee or instant tea

Food type: Total beverages⁴ (Group 45, 47-49, 51, 57-58)**50 Miscellaneous**

50A	Beverages (dry weight) ⁵	includes drinking chocolate, cocoa, ovaltine, horlicks, malted drinks etc.
50B	Soups ³	includes homemade, dried, condensed, cartons,
50R	Savoury sauces, pickles, gravies, condiments	includes white sauces, cook in sauces, sauce mixes, tomato ketchup, pickles, chutney, stuffing, gravy, mayonnaise, salad cream, dried herbs, spices

can

52 Commercial toddlers foods and drinks¹

- | | | |
|-----|----------------------------|---|
| 52A | Commercial toddlers drinks | includes powdered, concentrated and ready to drink beverages specifically manufactured for young children |
| 52R | Commercial toddlers foods | includes instant and ready to eat foods specifically manufactured for young children |

Food type: Miscellaneous (Groups 50 & 52)**54 Dietary supplements**

- | | | |
|-----|------------------------------------|--|
| 54A | Tablets and capsules | vitamin and mineral tablets and capsules; includes cod liver oil and other oil based capsules |
| 54B | Oils and syrups | includes cod liver oil etc (not capsules), malt extract, multivitamin syrups, iron syrups and tonics |
| 54C | Drops and powders | includes cold relief powders with vitamin C, multivitamin drops |
| 54R | Nutritionally complete supplements | liquid or powdered supplement drinks containing protein/fat/carbohydrate plus vitamins/minerals. Includes Complan, Build Up, Fortisip, Ensure, Provide, Fresubin |

55 Artificial sweeteners

- | | | |
|-----|-----------------------|--|
| 55R | Artificial sweeteners | includes granulated table top sweeteners, tablet, liquid or mini cube sweeteners |
|-----|-----------------------|--|

References and endnotes

- ¹ Infant formula (13A) was consumed by none of the respondents in the survey and commercial toddlers foods and drinks (52) each by one respondent. They do not, therefore, appear in the food consumption tables provided in volume 1.
- ² Fats and oils used in cooking are reported with the food they are cooked with.
- ³ Concentrated soft drinks, dried milk and dried soups are reported as made up.
- ⁴ Food type 'beverages' does not include powdered beverages (subsidiary group 50A).
- ⁵ Subsidiary group 50A covers only the dry weight of the powdered beverage. The water or milk used to make up the beverage is reported elsewhere.

Appendix H

The nutrient databank and details of nutrients measured

1 The nutrient databank

Intakes of nutrients were calculated from the records of food consumption using a specially adapted nutrient databank. The nutrient databank was originally developed for the Ministry of Agriculture, Fisheries and Food¹ for the Dietary and Nutritional Survey of British Adults². It was updated for the National Diet and Nutrition Surveys of children aged 1½-4½ years³, people aged 65 years and over⁴, young people aged 4-18 years⁵, and was revised again for this survey of adults aged 19 to 64 years. Many nutrient values were updated, and some new codes were added to accommodate new products that had become available. The databank now contains nutritional information on over 7,000 foods and drinks, including manufactured products, home-made recipe dishes and many types of dietary supplements.

Each food on the databank has values assigned for 54 nutrients and energy. The nutrient values assigned to the foods in the databank are based on data from the Food Standards Agency's rolling programme of nutrient analysis of foods. These data are also incorporated into McCance and Widdowson's *The Composition of Foods*⁶ and its supplements. New analytical values for bread, cheese, various ice creams and desserts, ethnic takeaway foods, yogurt, fromage frais and various milks and creams were incorporated for this survey. Data obtained from food manufacturers were also used in the databank, as was nutritional information given on labels. All data were carefully evaluated before being incorporated onto the databank.

In order to calculate the nutrient intakes from the consumption data it is important that there are no missing nutrient values on the databank. For some foods reliable information was not available for all nutrients. Therefore it was sometimes necessary to estimate values for foods for which there were few available data, by referring to similar foods. For home-made dishes and manufactured products for which no data were available, nutrients were calculated from their constituents using a computer recipe program that allows adjustments to be made for weight and vitamin losses in cooking.

During the survey fieldwork period the range of foods included in the databank was extended as new products and recipe dishes with different nutrient contents were consumed. For each new product or recipe dish a decision was made by the survey nutritionists, with advice from Food Standards Agency nutritionists, as to whether it required a new code, based on the nutritional composition compared with that of existing codes and the quantity consumed.

Information on dietary supplements was also included in the nutrient databank. Full details of the brand name, form, strength and quantity of each supplement taken were collected in the dietary record. A supplement was given a new code if it contained different levels of nutrients from existing supplement codes.

Further details of the nutrient databank have been published⁷.

2 Details of nutrients measured and units

<u>Nutrient</u>	<u>Units</u>
water	(g)
sugars	(g) total sugars, expressed as monosaccharide
starch	(g) expressed as monosaccharide
non-starch polysaccharides	(g) expressed as Englyst method ⁸
energy (kJ)	(17 x protein) + (37 x fat) + (16 x carbohydrate) + (29 x alcohol)
energy (kcal)	(4 x protein) + (9 x fat) + (3.75 x carbohydrate) + (7 x alcohol)
protein	(g)
nitrogen	(g)
fat	(g)
carbohydrate	(g) sum of sugars plus starch, expressed as monosaccharide equivalent
alcohol	(g)
sodium	(mg)
potassium	(mg)
calcium	(mg)
magnesium	(mg)
phosphorus	(mg)
iron	(mg)

haem iron	(mg)
non-haem iron	(mg)
copper	(mg)
zinc	(mg)
chloride	(mg)
iodine	(µg)
manganese	(mg)
retinol	(µg) all <i>trans</i> retinol equivalents
total carotene	(µg) β carotene equivalents
α-carotene	(µg)
β-carotene	(µg)
β-cryptoxanthin	(µg)
thiamin	(mg)
riboflavin	(mg)
niacin equivalent	(mg) niacin + (tryptophan / 60)
vitamin B ₆	(mg)
vitamin B ₁₂	(µg)
folate	(µg)
pantothenic acid	(mg)
biotin	(µg)
vitamin C	(mg)
vitamin D	(µg)
vitamin E	(mg) α-tocopherol equivalents

fatty acids

saturated	(g)
<i>cis</i> monounsaturated	(g)
<i>cis</i> n-3 polyunsaturated	(g)
<i>cis</i> n-6 polyunsaturated	(g)
<i>trans</i> fatty acids	(g)
cholesterol	(mg)

sugars

glucose	(g)
sucrose	(g)
fructose	(g)
lactose	(g)

maltose	(g)
other sugars	(g) includes oligosaccharides
non-milk extrinsic sugars	(g) includes all sugars in fruit juices, table sugar, honey, sucrose, glucose and glucose syrups added to food + 50% of the sugars in canned, stewed, dried or preserved fruits ⁹
intrinsic and milk sugars	(g) includes all sugars in fresh fruit and vegetables + 50% of the sugars in canned, stewed, dried or preserved fruits + lactose in milk.

References and endnotes

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- ¹ Responsibility for the nutrient databank transferred from MAFF to the Food Standards Agency on its establishment in April 2000.
 - ² Gregory J, Foster K, Tyler H, Wiseman M. *The Dietary and Nutritional Survey of British Adults*. HMSO (London, 1990).
 - ³ Gregory JR, Collins DL, Davies PSW, Hughes JM, Clarke PC. *National Diet and Nutrition Survey: children aged 1½ to 4½ years. Volume 1: Report of the diet and nutrition survey*. HMSO (London, 1995).
 - ⁴ Finch S, Doyle W, Lowe C, Bates CJ, Prentice A, Smithers G, Clarke PC. *National Diet and Nutrition Survey: people aged 65 years and over. Volume 1: Report of the diet and nutrition survey*. TSO (London, 1998).
 - ⁵ Gregory JR, Lowe S, Bates CJ, Prentice A, Jackson LV, Smithers G, Wenlock R, Farron M. *National Diet and Nutrition Survey: young people aged 4 to 18 years. Volume 1: Report of the diet and nutrition survey* TSO (London, 2000).
 - ⁶ Holland B, Welch AA, Unwin ID, Buss DH, Paul AA, Southgate DAT. McCance and Widdowson's *The Composition of Foods*. 5th edition. Royal Society of Chemistry (Cambridge, 1991).
 - ⁷ Smithers G. MAFF's Nutrient Databank. *Nutr & Fd Science* 1993; **2**: 16-19.
 - ⁸ Englyst HN and Cummings JH. An improved method for the measurement of dietary fibre as the non-starch polysaccharides in plant foods. *J Assoc Off Anal Chem* 1988; **71**: 808-814.
 - ⁹ Buss DH, Lewis J, Smithers G. Non-milk extrinsic sugars. *J Hum Nutr Diet* 1994; **7**: 87.

Appendix I Physical Activity Diary Coding Guide for Occupations

Note: These codes are a guide to what occupations should be coded under which activity level - if an occupation is not listed or does not seem to fit within the descriptions given, please call research for advice.

Code 1 – very light/light occupations

Code 2 – moderate occupations

Code 3 – hard occupations

VERY LIGHT/LIGHT OCCUPATIONS - AVERAGE 1.5 METS

– OCCUPATION ACTIVITY CODE 1

Very light occupations involve mainly sitting, including office or clerical work, the use of light tools, light assembly or repair.

Chemistry lab work

Factory work – very light (involving mainly sitting)

Office or clerical work

Printing

Student – including subjects with no aspect of physical activity, mainly attending lectures and reading or studying

Typing – including electrical, manual or computer

Light occupations involve mainly standing or walking, but no heavy lifting or carrying, including operating automated machinery.

Cleaning – light (including mainly dusting, straightening up, emptying rubbish bins)

Cooking or food preparation

Factory work – light (involving mainly standing or walking)

Machine tooling, working with sheet metal

Laundry work

Repair work (including electrical)

Shoe repair

Tailoring – including cutting, hand or machine sewing

MODERATE OCCUPATIONS - AVERAGE 4.0 METS

– OCCUPATION ACTIVITY CODE 2

Occupations that involve mainly walking, lifting or carrying light loads

Carpentry

Cleaning work – hard (including mainly scrubbing floors, sweeping, washing windows, mopping)

Delivery work – light (mainly driving and the lifting of light loads)

Electrician

Factory work – moderate (involving mainly lifting, carrying light loads or operating heavy machinery)

Locksmith

Masseuse

Painting and decorating, including hanging wallpaper

Plumbing

Police work

Farming – light (including feeding small animals, shovelling grain)

HARD OCCUPATIONS - AVERAGE 6.0 METS

– OCCUPATION ACTIVITY CODE 3

Occupations that involve mainly hard physical labour

Coal mining

Delivery work – hard (mainly walking, lifting and carrying heavy loads)

Factory work – hard (involving mainly carrying heavy loads, shovelling, rolling steel)

Farming – hard (including baling hay, poultry work, forking straw bales)

Fire fighter

Labourer – any job involving carrying heavy loads, shovelling, digging

Road or house construction (including driving heavy machinery)

Using heavy power tools e.g. pneumatic drill

Any other occupations need to be classified as very light/light, moderate or hard at interviewer's discretion

Appendix I Physical Activity Diary Coding Guide

Activities marked with an asterisk * are coded under more than one intensity level

Any activities not included on this list need to be classified as light, moderate or hard/very hard at the interviewer's discretion, by comparing the activity with those listed under each level of intensity.

If you are not sure whether an unlisted activity should be light, moderate or hard/very hard, use the following guidelines:

- think about the amount of body movement involved in the activity – if it involves not very much body movement or slow body movement, code the activity as light
- if the activity involves more body movement and/or quickly, then check the whether the respondent answered 'Yes' or 'No' to the question 'Did doing this activity make you out of breath or sweaty?'
- if the answer is 'No', code it as moderate; if the answer is 'Yes', code it as hard/very hard

Note: These codes are a **guide** to what activities should be coded under which intensity level - if an activity is not listed or you are not sure how to code something, **please call research for advice.**

VERY LIGHT or LIGHT ACTIVITIES - AVERAGE 1.5 to 2.5 METS

This section has been included simply to give you some examples of very light and light activities. If the respondent records any of these, or any similar, activities in his/her diary, you do not need to key it into Blaise.

Card or board games

Drawing or painting

Inactivity

Knitting

Listening to music

Playing a musical instrument

Reading for work or pleasure

Sewing

Sexual activity, general

Studying (including reading, writing, note-taking, class discussion)

Talking with friends

Travelling as a passenger in a car

Using a computer/playing computer games

Watching television or videos, going to the cinema

Writing a letter

Bowling

Caring for pets

*Cleaning – light (mainly dusting, ironing, laundry, washing up or tidying up)

Cooking or food preparation

*Cricket - light

Darts

*DIY – light (including mainly wiring, plumbing, light carpentry, sweeping)

Driving a car, motorbike, van

*Golf - light

Horse riding

*Playing with children – sitting or standing, rather than active play

Pool, snooker

Shopping, walking around the shops

Table tennis

*Walking, strolling – include with 'walking at an average pace'

Working on the car

MODERATE ACTIVITIES - AVERAGE 4.0 METS

*Aerobics, step aerobics, keep fit, gymnastics - light

*Badminton - light

Canoeing

Child care activities – including mainly grooming, feeding, bathing, occasional lifting of child

*Cleaning – hard (mainly scrubbing floors, sweeping, washing windows, mopping)

Coaching sports (including football, hockey, rugby, netball, softball, swimming)

*Cricket - heavy

*Cycling - light

*Dancing (including disco, line or step) - light

*DIY – hard (mainly refitting a kitchen, or bathroom, laying concrete, sawing wood)

Gardening

*Golf – heavy

*Netball - light

Painting, plastering, home repair

*Playing with children – walking or running

*Rounders - light

*Softball - light

Stretching exercises

*Swimming - light

Tai Chi

Volleyball

*Walking briskly

Yoga

HARD or VERY HARD ACTIVITIES - AVERAGE 6.0 to 10.0 METS

*Aerobics, step aerobics, keep fit, gymnastics - heavy

Athletics

Backpacking

*Badminton - heavy

Basketball

Circuit training

*Cycling - heavy

*Dancing (including disco, line or step) – heavy

Football (soccer), including refereeing

Hockey – field or ice

Ice skating

Jogging

Martial arts – including judo, karate, kick boxing, jujitsu

*Netball - heavy

Rock or mountain climbing

*Rounders - heavy

Rowing

Rugby, touch rugby

Running

*Softball - heavy

Squash

*Swimming – heavy

Tennis, NOT table tennis

Weight lifting or weight training

Appendix I Physical activity

1 Introduction

This appendix describes in detail the methodology for collecting information on physical activity for adults aged 19 to 64 years. The main purpose in collecting this information was to allow an investigation of the relationships between dietary intakes, particularly energy intake, body composition, that is body mass index, and physical activity levels. If the body does not use all the energy it takes in as food for activity, growth, thermogenesis etc, then it will be stored. Over time this will lead to an increase in body weight, which if it continues leads to an increased risk of obesity. The risk of cardio-vascular disease increases with obesity and many other illnesses and conditions are related to being overweight¹. This survey provided the opportunity to relate activity levels to energy intake and body size.

Details are given of how the activities that respondents participated in were coded, of the data editing process and quality checks performed and of the derivation of different measures of physical activity level. Possible sources of both over and under-estimation in activity level are identified and finally differences in the methodology for collecting physical activity information between this survey and the Health Survey for England² are described.

2 Data collection methodology

2.1 Overview

In line with previous NDNS studies it was agreed that collecting information on physical activities from respondents over a seven-day period by retrospective questioning was likely to be unreliable and that record keeping would be likely to provide more complete and accurate information.

One objective of the NDNS feasibility study was to develop and trial a method of assessing habitual physical activity. This included asking some lifestyle activity questions as part of the dietary interview and asking respondents to do 'same day recall of physical activity' in a diary during each day of the seven-day dietary recording period. The physical activity diary was adapted from that used in the NDNS of young people who are generally more active than most adults (see *Appendix C*).

Physical activity data was collected over the same seven-day recording period as the dietary diary. Information on activities was recorded in the 'Diary of Physical Activity and Eating and Drinking Away from Home', the 'Eating Out' diary (see *Appendix A*).

At the dietary interview the respondent was shown how to complete the diary and taken through what they had done on the previous day to demonstrate how to record the information. Respondents were told to record only activities that were not part of their everyday work. For example, a gardener should not record heavy gardening activities that he or she did as part of his/her everyday job because these were counted as part of the time he/she spent working that day. Respondents were asked to record the total time that they spent on an activity that day. If the activity was done more than once then the individual times were added together. This means that information on the number of activity occasions cannot be obtained from the data.

At each visit interviewers checked the entries in the diary with the respondent to probe for any activities that had been overlooked, and to collect any additional information need to code the activities. The interviewer also checked that any time spent in related activity, for example time travelling to and from the activity, changing clothes, or taking a break from the activity were not included in the time that was recorded. Entries were also checked where the respondent might have recorded an activity twice. For example, walking and pushing a child in a pushchair. This should have been recorded as active childcare and not also as time spent walking.

2.2 Information collected

In order to collect complete data on physical activity, information on three dimensions of physical activity was required, on duration, intensity and frequency. This information was used to calculate an activity score which can be used as an indicator for energy expenditure (see *section 3.1* below).

2.2.1 First page of the diary day

The first page for each day collects information about:

- which day it is, the date and the recording day
- time spent in bed asleep
- whether they were at work that day (including paid and unpaid work)
- if at work, time spent at work (in their main job and any second job)

- whether they went to college that day
- if at college, time spent at college
- any other time spent sleeping during the day, for example napping
- an opinion question asking them to assess whether they were more active, about as active or less active than usual that day.

Time spent sleeping per 24 hour day

To allow the hours of sleep to be calculated, all respondents recorded the time they went to bed and got up on each of the seven recording days. Respondents were also asked to record any other time they had spent sleeping during the day.

To calculate the time spent sleeping on the 7th day of the diary period the respondent was asked to record the time they went to bed on the last day. This was recorded on the front cover of the diary.

Interviewers were briefed to explain to respondents who worked night shifts that the question 'what time did you go to bed last night?' meant 'what time was it the last time you went to bed?'.

When the data were keyed the program checked that the 24-hour clock was used.

Whether the respondent was at work and/or college on each diary day

As part of the post-dietary record interview all respondents were asked if they had done any paid or voluntary work during the dietary recording period. For each job, up to two, they were asked to describe the kind of tasks they did on a day-to-day basis. The interviewer probed whether the job involved mainly sitting and/or use of light tools, or mainly standing and/or walking, or mainly walking, lifting or carrying light loads, or mainly hard physical labour. The interviewer used this information to code the activity level of the occupation as very light/light, moderate or hard work. This coding was completed by the interviewer at home using the occupation activity coding guide, which is reproduced at the end of this appendix.

In the diary information was collected from all respondents for each diary day about whether they were at college and/or work. If they were, they were asked to record how long they had spent at college/work that day. The diary allowed the respondent to record time spent at up

to two different jobs. The interviewer checked that all break times had been excluded from time recorded as being at work.

In deriving an activity score, time spent at work was combined with the intensity information derived at the post-dietary interview (see *section 3.1* below).

2.2.2 *Second page of the diary day*

The second page for each day collected information about:

- time spent walking at an average pace
- time spent walking briskly
- time spent on a range of listed activities – light and heavy housework, gardening, DIY jobs and active caring
- time spent on any similar activities.

Respondents were asked to record only activities they had done for at least 10 minutes. Time was recorded to the nearest ten minutes.

Respondents were asked to give a few details about each of the activities they had done. Interviewers used this information to check whether the activity was correctly classified by intensity. The information was also used to help code the activity level of ‘other’ activities the respondent had listed.

2.2.3 *Third page of the diary day*

The third page for each day collected information about:

- time spent on a range of listed sports and leisure activities
- whether the respondent had got ‘out of breath or sweaty’ doing the activity, to help establish the intensity of the activity³
- time spent on any other similar activities and whether these had made the respondent ‘out of breath or sweaty’.

Respondents were asked to record only activities they had done for at least 10 minutes. Time was recorded to the nearest ten minutes.

2.4 Coding the intensity level for physical activities

Energy expenditure data for many activities have been established, most through research on adult subjects. Data from existing research⁴ were used to estimate the intensity level for each activity on the prompted list and to develop the Physical Activity Diary Coding Guide for interviewers which is reproduced at the end of this appendix.

This Physical Activity Diary Coding Guide provided the interviewer with a list of activities by intensity level to assist them in checking that any 'other' activities recorded by the respondent had been correctly classified. Interviewers checked for duplicate entries, that is activities recorded in both the prompted list and in the list of 'other' activities.

2.5 Editing the data on physical activities

Interviewers entered the physical activity diary data into their lap top computer and internal consistency checks were applied to avoid mis-keying, for example to check that the time spent in all activities did not add up to more than 24 hours.

Subsequent data editing involved further consistency checks and the examination at HQ of some completed activity diaries.

Diaries were examined:

- if, for Wave 1 of fieldwork, the case was in the top 10% of the distribution of calculated activity score (see *section 3.1*). For Waves 2 to 4 of fieldwork, those cases with a calculated activity score greater than the cut-off point established using the Wave 1 data were examined.
- If the time spent in any 'other' activity was greater than 3 hours.
- If less than 1 hour or more than 12 hours of sleep were recorded for any day.
- If less than 60 minutes of light activity were calculated for any diary day.

Checks were also made for duplicate entries. These were most frequent where time spent at work was entered both for work and either a prompted activity or an 'other' activity, or where time spent in an activity was recorded both for a prompted activity and an 'other' activity. For example, someone who worked as a childminder recording eight hours at work and also eight hours active childcare for the same day. Entries were only edited where duplication was clear and in deciding which entry to delete priority was given firstly to time at work, and then to activities which were on the prompted list.

Further details of the editing of the physical activity data and data quality will appear in Volume 4 of this NDNS survey.

3 Derived measures of physical activity

3.1 Calculating the activity score

Resting metabolism, defined as 1 MET, is approximately equal to an energy expenditure of one kilocalorie (kcal) per kilogram per hour (kcal/kg/hour). For adults an average body weight of 60kg is assumed and therefore for an average adult 1MET is equal to 60kcal/hour or 1kcal/min. For adults METs are therefore taken as numerically equivalent to energy expenditure. An example of how the calculated activity score is derived for one day is given below.

Example of calculated activity score for one day:

Type of activity	Total time spent (hours)	MET value for the type of activity	Activity score
Sleep	9.0	1.0	9.00
Very light/light activities	13.5	2.0	27.00
Moderate activities	1.0	4.0	4.00
Vigorous/very vigorous activities	0.5	7.5	3.75
Total	24.0		43.75

The total for each day is taken and the average daily total energy expenditure calculated.

The MET values for the categories are calculated as an average for the activities corresponding to that category. For example, vigorous/very vigorous activities have MET values ranging from 6.0 to 10.00. An average of 7.5 was taken based on the type of activities that could be coded as vigorous/very vigorous.

Further details of the calculation of activity scores is given in Volume 4.

4 The Health Survey for England² and the NDNS: physical activity methodologies compared

The addition of the question asking respondents if an activity made them out of breath or sweaty brings the NDNS into line with other surveys that look at physical activity, such as the Health Survey for England and the Health Education Monitoring Survey.

In the feasibility study for this NDNS, an attempt was made to validate the physical activity data collected by diary methodology⁵. It was found that the activity data collected by diary methodology provided estimates of energy expenditure that were not on average biased in relation to energy expenditure measured with doubly labelled water.

In the main stage of this NDNS and in the Health Survey, physical activity data were collected by self-report methodology with no attempt to validate against objective measures such as heart rate monitoring or doubly labelled water. However there are several differences in methodology which should be taken into account when comparing the data:

- the recall period for the Health Survey was longer than for the NDNS. The Health Survey used a seven-day recall while the NDNS used a seven-day diary, which is more likely to equate to a one-day recall over seven consecutive days.
- On the Health Survey activities lasting less than 15 minutes were excluded (with the exception of walking where any walk lasting less than 5 minutes was excluded). On the NDNS, activities (including walks) lasting less than 10 minutes were excluded.
- Data on 'at least moderate intensity activity' for the Health Survey were collected using broader categories than those used for the NDNS; the categories used in the Health Survey were:
 - sports and exercise
 - active play
 - walking
 - housework or gardening.

References and endnotes

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- ¹ Royal College of Physicians of London. Obesity. Report. *J Roy Col Phys*. London 1983; **17**: 3-58.
 - ² Prescott-Clarke P, Primatesta P. (Eds.) *Health Survey for England. The Health of Young People '95-97. Volume 1: Findings*. TSO (London,1998).
 - ³ For example, cycling leisurely along a flat road is in a different category (moderate intensity) to cycling off road up a hill (vigorous activity).
 - ⁴ Blair SN. How to assess exercise habits and physical fitness. In: Matarazzo JD et al (Eds) *Behavioural Health*. John Wiley & Sons (1984).
 - ⁵ Coward WA, Wright A, Bluck LJC *The significance of physical activity measurements in comparisons between energy intake and energy expenditure in the NDNS survey, adults aged 19-64 years*. MRC Resource Centre for Human Nutrition Research.

Appendix J

Protocols for anthropometry and blood pressure measurement

1 Introduction

One of the main aims of this survey is to provide anthropometric data on a representative sample of adults, which can be related to socio-demographic and dietary data. Anthropometry, the measurement of body size, weight and proportions, is an intrinsic part of any nutritional survey and can be an indicator of health, development and growth. Derived indices, for instance to assess the proportion of body weight that is fat, provide additional information.

In deciding which measurements should be taken a number of factors were considered. These included the acceptability of the measurement to the respondent, whether there was equipment suitable for use in the home available, and whether interviewers could be trained to take the measurements accurately.

Measurements of standing height, weight, waist and hip circumferences were taken for all respondents. Height and weight can also be used to calculate the Quetelet or Body Mass Index ($\text{weight}[\text{kg}]/\text{height}[\text{m}]^2$) or other indices which control for variations in body weight associated with height. The ratio of waist to hip circumference gives indirect information on the distribution of body fat stores. Several studies in adults have shown that the location of body fat is associated with health risks, in particular cardio-vascular disease¹. This study provides normative information about body fat distribution in adults.

ONS interviewers have taken measurements of height, weight, waist and hip circumferences on surveys of adults and young people^{2, 3, 4, 5, 6}. At the main stage all interviewers were trained in accurate measurement techniques at personal briefings. Once trained, any interviewer working on a subsequent, non-consecutive wave of fieldwork attended a one-day refresher briefing where they were retrained in these techniques. Interviewers were able to practice the measurement techniques at the briefings.

Interviewers were allowed to take the measurements at any point after the dietary interview had been completed; it was thought that specifying a particular time to take the measurements could affect response.

Interviewers recorded the measurement, the date on which it was taken, and if there were any special circumstances which might have affected the accuracy of the measurement (see *M1, Appendix A*). The Department of Health advised on circumstances that were likely to affect the accuracy to such an extent that the measurement should be excluded from the analysis. This included, for example, the respondent being unable to keep the correct posture when standing height was being measured, or their hair being arranged in a 'permanent' style which affected the measurement of standing height. Each measurement was made twice, repeating the same protocol.

2 Stature (height)

Height was measured using the Leicester Height Measure⁷. This was the instrument of choice for the NDNS of young people aged 4 to 18 years⁵.

The Measure consists of a base plate, four measuring rods, which slot together, two stabilising bars and a head plate, which slides up and down the vertical measuring rods. A frame on the head plate with arrows indicates the point at which the measurement should be read. Each rod is marked in metric (centimetres and millimetres) and imperial (feet and inches) units.

The Measure was constructed and the base plate placed on a hard level surface, uncarpeted where possible, with the two stabilising bars against a vertical surface, such as a wall or door.

The respondent was asked to remove their shoes and socks and to wear as few clothes as possible. If the respondent's hairstyle was likely to affect their height they were asked to adjust the style. If the hairstyle could not easily be changed for the measurement, for example the respondent had dreadlocks or braids, then the interviewer made a note on the recording document and the measurement was excluded from the survey analysis. Interviewers were advised to contact the field office if this was likely to be a significant issue in their area. The interviewer would be briefed on specialised techniques for measuring height in these circumstances. No interviewer contacted the field office about this.

The respondent was positioned with their feet together and flat on the base plate of the Measure, their arms loosely at their side, and with their head and back straight and against the vertical measuring rods. The respondent's head was correctly positioned in the Frankfort plane⁸ by the interviewer and the alignment checked using a card. Once the correct position

was achieved the interviewer lowered the head plate until it just touched the top of the respondent's head. The interviewer then asked the respondent to take a breath and stand as tall as possible, without lifting their heels off the base plate.

After checking the respondent's feet were still flat on the base plate and that the head was still in the correct position the interviewer read the measurement from the vertical rod. Interviewers were instructed that the arrows indicating the point of measurement had to be at eye level, and if necessary they should ask the respondent to step off the Measure so that it could be moved and this achieved.

The measurement was recorded by the interviewer in centimetres and millimetres on the measurement schedule, together with an indication of any unusual circumstances which might have affected the measurement.

The complete procedure was then repeated and a second measurement made. The height measurements were recorded on the respondent's Record Card for them to keep (*M2, Appendix A*).

3 Weight

Weight was taken using Soehnle Quantatron scales, Models 7300 and 7306, calibrated in 100 gram units. The scales were checked for accuracy and calibrated by a specialist contractor prior to the start of fieldwork⁹. During the fieldwork period the batteries were regularly changed.

The time of day for taking the measurement was not standardised.

The scale was placed on a hard, level surface. If only a carpeted surface was available then the interviewer noted this.

Since the scales have a memory facility, the previous weight taken needed to be cleared from the scale before each measurement. This was achieved by the interviewer always weighing something of a different weight to the respondent after each weighing.

The respondent was asked to wear only light clothing while being weighed; heavy items of clothing, including shoes, trainers and jackets and any heavy jewellery, keys and money

were removed where possible. A record was made of which items of clothing the respondent was wearing while being weighed.

The scale was switched on and when the zero reading was displayed the respondent was asked to stand on the scale, with both feet fully on the weighing platform, heels towards the back edge, and their arms loosely at the side. While the scale was calculating the weight the respondent was instructed to remain still with their head forward facing. Weight was recorded to one tenth of a kilogram (100 grams). The respondent was then asked to step off the scale while the interviewer cleared the weight from the scale's memory. The measurement was then repeated.

Any unusual circumstances affecting the weight measurement were noted by the interviewer on the recording document. The weight measurements were recorded on the respondent's Record Card for them to keep.

4 Waist and hip circumferences

Waist and hip circumferences were measured for respondents but interviewers were instructed not to attempt to measure any respondent who was chairbound or bedfast, or had a colostomy or ileostomy.

In preparation for these measurements the respondent was asked to wear only light clothing and to have recently emptied their bladder. In particular they were asked to remove any belts or items in pockets that might affect only one of the circumferences and therefore change the ratio between the waist and hip measurements. Respondents were also asked to adjust the position of their clothing to try to achieve a similar thickness at both measurement positions.

The waist is defined as the midway point between the iliac crest and the lower rib. The point of measurement was located by asking the respondent to bend to one side and place their finger at the point where their body bent. If there was more than one indentation the respondent was asked to identify the greatest indentation. They were then asked to straighten, keeping their finger in the same place; this identified the position for the tape for measuring waist circumference.

An insertion tape was passed around the circumference, adjusted and checked for horizontal alignment¹⁰. Having achieved satisfactory positioning of the tape the interviewer then asked

the respondent to continue breathing normally, that is, not to hold in the breath, and the measurement was made at the end of a normal expiration.

The hip circumference is defined as being the maximum circumference over the buttocks and below the iliac crest. The insertion tape was passed around the respondent's hip area and then adjusted upwards and downwards until the maximum circumference was achieved. After checking the horizontal alignment of the tape and that the respondent was not contracting their gluteal muscles the measurement was made.

When making the measurements interviewers were told to kneel or sit at the side of the respondent and to make any adjustments to the tape from the side of the body. Any adjustments needed to the tape at the front or back of the body were made, under instructions from the interviewer, by the respondent being measured or another adult present.

Interviewers were asked to measure the waist and hip circumference and then to repeat the two measures. Measurements were made and recorded to the nearest millimetre. Any factor which affected the measurements, such as differences in the thickness of clothing at the waist and hip, were recorded on the measurement schedule. The waist and hip measurements were recorded on the respondent's Record Card for them to keep.

5 Blood pressure

Blood pressure could only be taken if written consent from the respondent to take the measurement was obtained¹¹. Consent to notify the respondent's GP of their participation in the survey and signed consent to send a record of the blood pressure measurements to the respondent's GP was also sought, but if not obtained, or the respondent was not registered with a GP, the blood pressure measurement was taken and duty of care passed to the survey doctor. If the respondent did not consent to informing their GP or the survey doctor then a blood pressure measurement was not taken.

Blood pressure was measured using the Dinamap 8100 oscillometric monitor¹². This device was previously used to measure blood pressure on the NDNS of young people aged 4 to 18 years⁵ and the Health Survey for England¹³, and was the instrument of choice principally for reasons of methodological comparability between all these surveys, instrument reliability and ease of use. A summary review of studies comparing the Dinamap with other devices, including the standard mercury syphgmomanometer, was reported in the NDNS of young

people aged 4 to 18 years⁵. Although the mercury sphygmomanometer is relatively cheap, it requires more training to use correctly than an automated device. For epidemiological purposes, automated devices have the advantage that observers need not be highly trained medical or nursing personnel¹⁴. ONS interviewers are easily able to learn the technique and the risk of inter-observer bias is reduced.

Measurements were made on the respondent's right arm. Three different size cuffs were available and each has markings to indicate, whether, after wrapping the cuff around the upper arm, the cuff selected is the appropriate size¹⁵.

The time of day when the measurements were taken was not standardised but when arranging an appointment interviewers asked the respondent not to eat, drink, smoke or exercise in the 30 minutes prior to the measurement being made. Interviewers subsequently checked whether these instructions had been carried out, and if not and they were unable to reschedule the visit they recorded the relevant details on the measurement schedule.

The respondent was asked to remove any jacket, jumper or cardigan they were wearing, and if they were wearing a garment with sleeves, to remove their right arm from the sleeve. If they were unwilling to comply with this, and provided their circulation was not impeded, they were asked to roll the sleeve so that it would be above the top edge of the cuff.

The respondent was seated so that they were relaxed and had their feet flat on the floor. The right arm was rested on a support at a height that brought the antecubital fossa to approximately heart level. The lower edge of the cuff was placed about 2cm above the elbow crease and the arrow marked on the cuff placed over the brachial artery. The cuff was wrapped to a tightness that allowed two fingers to be inserted between it and the respondent's arm at the top and bottom edges of the cuff.

The respondent was then asked to sit quietly for about 5 minutes before the measurements were taken while the interviewer explained what would happen when the Dinamap was switched on. Three measurements were then taken at one-minute intervals, recording diastolic, systolic and mean arterial blood pressure and pulse rate.

The measurements were recorded on the measurement schedule, with details of any difficulties that might have affected the readings.

Difficulties in wrapping the cuff

If a respondent had a particularly large arm, an appropriate circumference cuff could sometimes be too deep for the length of the upper arm. In these circumstances the correct circumference cuff was used with a note made on the measurements schedule. If a respondent's upper arm increased markedly in circumference along its length, it could be difficult to fit the cuff evenly and correctly at both its upper and lower edges. In these circumstances effort was made to fit the lower edge of the cuff properly and a note was made on the measurements schedule.

The three blood pressure readings were recorded on the respondent's Record Card for them to keep and the interviewers were instructed not to discuss the readings with the respondent. If asked, interviewers suggested that the respondent should contact his or her GP or the survey doctor for advice and interpretation of the measurements. The blood pressure readings were also recorded on the consent form which was sent to the survey doctor for forwarding to the respondent's GP.

Immediately after the blood pressure measurements were taken, the interviewer sent a copy of the readings to the Medical Research Council Human Nutrition Research where they were scrutinised by the survey doctor and then sent with an appropriate covering letter to the respondent's GP (see *Appendix L*). If the respondent did not have a GP or had not consented to their notification the survey doctor would feed the results back to the respondent. It was a requirement for obtaining approval for the protocol from the MREC and LRECs that a procedure for immediate reporting of seriously abnormal blood pressures to the respondent's GP/survey doctor was established. Unusually high readings were defined as all three readings being equal to or above 160mmHg systolic pressure and/or equal to or above 95mmHg diastolic pressure. If the readings were unusually high the interviewer immediately delivered a copy of the results with a standard accompanying letter to the respondent's GP. In order that the survey doctor was sufficiently informed to discuss the readings with the GP should the need arise, the interviewer also contacted the survey doctor by telephone, giving the respondent's details, including age and weight. If the respondent had no GP or had not consented to their notification, then in the case of high BP readings the interviewer would inform the survey doctor immediately and the survey doctor would contact the respondent to discuss and advise him/her on what further action to take.

References and endnotes

- ¹ Lapidus L, Bengtsson C, Larsson B, Pennert K, Rybo E, Sjöström L. Distribution of adipose tissue and risk of cardiovascular disease and death: a 12 year follow up of participants in the population study of women in Gothenburg, Sweden. *Br Med J* 1984; **289**: 1257-1260.

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- ² Gregory J, Foster K, Tyler H, Wiseman M. *The Dietary and Nutritional Survey of British Adults*. HMSO (London, 1990).
- ³ White A, Nicolaas G, Foster K, Browne F, Carey S. *Health Survey for England 1991*. HMSO (London, 1993).

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- ⁴ Knight I. *The Heights and Weights of Adults in Great Britain*. HMSO (London, 1984).
- ⁵ Gregory JR, Lowe S, Bates CJ, Prentice A, Jackson LV, Smithers G, Wenlock R, Farron, M. *National Diet and Nutrition Survey: young people aged 4 to 18 years. Volume 1: Report of the diet and nutrition survey*. TSO (London, 2000).
- ⁶ Gregory JR, Collins DL, Davies PSW, Hughes JM, Clarke PC. *National Diet and Nutrition Survey: children aged 1½ to 4½ years. Volume 1: Report of the diet and nutrition survey*. HMSO (London, 1995).
- ⁷ The Leicester Height Measure is available from the Child Growth Foundation, 2 Mayfield Avenue, Chiswick, London W4 1PW, UK.
- ⁸ To achieve the correct Frankfort position, the bottom of the orbital socket should be in a horizontal line with the external auditory meatus.
- ⁹ Scales were checked and calibrated by CHASMOR, 18 Camden High Street, London NW1 6JH, UK.
- ¹⁰ Insertion tapes, fitted with a metal buckle and calibrated in centimetres and millimetres, were supplied by CHASMOR, 18 Camden High Street, London NW1 6JH, UK.
- ¹¹ Details of the consent procedures are given in Appendix N.
- ¹² Dinamap monitors were supplied by GE Medical Systems, DINAMAP Centre of Excellence, Monitor House, Unit 3 Cherrywood, Chineham Business Park, Basingstoke, Hampshire, RG24 8WKF and maintained by Marquette Hellige, Montagu Court, Keitering Parkway, Keitering, Northamptonshire NN15 6XR, UK.
- ¹³ Erens B, Primatesta P, Prior G (Eds) *Health Survey for England The Health of Minority Ethnic Groups 1999: Volume 2: Methodology and Documentation*. TSO (London, 2001).
- ¹⁴ Gillman MW et al. Blood pressure measurement in Childhood Epidemiological Studies. *Circulation* 1995; **92**: 4: 1049-1057.
- ¹⁵ Small adult cuff: 17-25cm; standard adult cuff: 23-33cm; large adult cuff; 31-40cm.

Appendix K

Consent forms and information sheets on blood and urine

Blood Consent forms

GP notification consent form	Z1
GP notification letter	Z2
Blood pressure	Z3
Blood sample (without witness) ¹	Z4
Flagging on NHSCR	Z5

Urine Consent form

Taking PABA	Z8
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Information and Instruction sheets

Blood and urine analyses (short) ²	L6
Blood and urine analyses (long) ²	L6A
The blood sample (information)	L6B
PABA-check (information)	L5A
The 24hr urine test (with PABA) ³	L5
The 24hr urine test (without PABA) ³	L5
The urine samples (instructions)	W3
24 hr urine sample record form (without PABA) ³	M3A
24 hr urine collection volume form	M3B

Endnotes

¹ The initial terms of the MREC approval for the survey required signed and witnessed consent for a blood sample to be taken. However, when the need for a witness to the consent for blood was queried the MREC confirmed that it was not needed. The revised blood consent form (Z4) (without witness signature) was introduced at the start of Wave 3 of fieldwork.

² The information sheet L6 was designed to give respondents information about the kinds of tests that would be performed on the blood and urine samples. The information sheet L6A provided a little more in depth information about these tests.

³ See Appendix P for details of the urine samples taken with or without PABA.

**NATIONAL DIET AND NUTRITION SURVEY: ADULTS AGED 19 TO 64 YEARS
GP NOTIFICATION**

Address label

(if incorrect - use serial number label

and write in correct address)

Today's date

--	--	--	--	--	--

Day Month Year

Name : (BLOCK CAPITALS)

Mr/Mrs/Miss/Ms

First name

Surname

Marital status: Single / Married

Gender: Male / Female

Date of birth

--	--	--	--	--	--

Age last birthday:

--	--

 years

Day Month Year

GP DETAILS:

Name of GP: Dr.....(BLOCK CAPITALS)

Address of GP:.....

.....

..... Postcode.....

Telephone number (incl. Area code):

Interviewer use only

Ring one code

Consent to notify GP given 1

No GP 2

Consent to notify GP refused 3

Copies: GP/HNR/ONS/Respondent



Medical Research Council • Resource Centre for
Human Nutrition Research

Downhams Lane
Milton Road
Cambridge CB4 1XJ

Tel: +44 (0) 1223 437541
Fax: +44 (0) 1223 437540
<http://www.mrc-hnr.cam.ac.uk>



Dear Dr.

National Diet and Nutrition Survey: ADULTS AGED 19 to 64 YEARS

I am writing to let you know that the person whose details are given on the enclosed form, and who is one of your patients, has agreed to take part in the forthcoming National Diet and Nutrition Survey.

This survey of adults is the fourth in a programme of surveillance of diet and nutrition covering the whole age range of the population. The survey has been commissioned jointly by the Departments of Health and the Food Standards Agency and is being carried out by the Office for National Statistics with Medical Research Council Human Nutrition Research.

The Study will include a random sample of about 2000 adults living in private households in Great Britain. Fieldwork will take place from July 2000 to June 2001. I have enclosed a leaflet which has been left with the respondents that describes the aims of the survey and what is involved.

As part of the Study the respondents are asked to provide a blood sample and to have their blood pressure measured. We will also be asking respondents to provide a 24-hour urine sample. MRC Human Nutrition Research is responsible for all the procedures associated with obtaining and analysing the samples. Blood will be analysed for haematinics and for other diet-related analytes. Consent will be sought for me to report clinically relevant blood results and blood pressure readings to you in due course. The subjects are advised that such information becomes part of their medical record and will not be revealed in medical reports by you without their permission. A copy of the results and normal ranges will also be sent to your patient.

IF YOU FEEL YOUR PATIENT IS NOT SUITABLE FOR ANY ASPECT OF THIS SURVEY, PLEASE LET ME KNOW.

I can assure you that the protocol for this study has been examined and approved by both a Multicentre Research Ethics Committee and also the Local Research Ethics Committee of your Area Health Authority, and Directors of Public Health. Your Chief Constable has also been informed that the survey is taking place, although not of the names of the people taking part.

I hope that this covering letter provides sufficient explanation for you. Should you require any further information please contact the Survey Office, telephone number 01223 437541.

Yours sincerely,

Maureen Birch MB BS, DCH, DRCOG, MRCP
Survey Doctor

Z2

**NATIONAL DIET AND NUTRITION SURVEY: ADULTS AGED 19 TO 64 YEARS
BLOOD PRESSURE CONSENT FORM**

Serial number label

Name:..... Gender: Male / Female

Age last birthday

Date of birth

Day		Month		Year	

I(BLOCK CAPITALS)

Mr/Mrs/Miss/Ms

- understand that this survey is designed to add to medical knowledge;
- have read the information about the survey, have had time to consider it, and have had the survey explained to me to my satisfaction;
- have been told that I may withdraw my consent to any or all of the survey elements at any time, without needing to give a reason, and without prejudice to further medical treatment;
- have been told that none of the results from the survey will be presented in any way that can be associated with the name and address of anyone in this household;
- have been given a telephone number for further information about the survey, which is 01223 437541 (NDNS Survey Office);

and hereby consent to having my blood pressure measured

Signature..... Date.....

and hereby consent to MRC HNR informing my GP of my blood pressure measurement. I am aware that the results of my blood pressure measurement may be used by my GP to help him/her monitor my health and that my GP may wish to include the results in any future report about me.

Signature.....

Date.....

PLEASE RECORD BLOOD PRESSURE RESULTS BELOW

BP readings

Systolic (mm Hg)

Diastolic (mm Hg)

1st reading→

2nd reading→

3rd reading→

Wave

Copies: HNR/Subject/ONS



Z4

NATIONAL DIET AND NUTRITION SURVEY: ADULTS AGED 19 TO 64 YEARS
BLOOD SAMPLE CONSENT FORM

Serial number label

Name:
Mr / Mrs / Miss / Ms

Sex: Male / Female

Age last birthday Date of birth

--	--

years

--	--	--	--	--	--

Day
Month
Year

I(BLOCK CAPITALS)
Mr/Mrs/Miss/Ms

- Understand that this survey is designed to add to medical knowledge;
- Have read the information about the survey, have had time to consider it, and have had the survey explained to me to my satisfaction;
- Have been told that I may withdraw my consent to any or all of the survey elements at any time, without needing to give a reason, and without prejudice to further medical treatment;
- Have been told that none of the results from the survey will be presented in any way that can be associated with the name and address of anyone in this household;
- Have been given a telephone number for further information about the survey, which is 01223 437541 (National Diet and Nutrition Survey - Adults aged 19 - 64 years. Survey Office).

And hereby consent to taking part in the following aspects of the survey:

- Providing a blood sample for analyses which are related to nutrition

SignatureDate.....

- Permitting MRC HNR to inform my GP of the results of the blood sample analyses. I am aware that the results of my blood sample analysis may be used by my GP to help him/her monitor my health and that my GP may wish to include the results in any future report about me.

SignatureDate.....

- For any remaining blood to be stored for analyses relating to nutrition in the future

Signature.....Date.....



Serial number label

Z5

**NATIONAL DIET AND NUTRITION SURVEY: ADULTS AGED 19 TO 64 YEARS
CONSENT TO FLAG ON NHS CENTRAL REGISTER**

Name, in full:.....(BLOCK CAPITALS)

Previous names, in full, (if any):.....(BLOCK CAPITALS)

Gender: M / F

Date of birth

Day Month Year

--	--	--	--	--	--

National Health Number

--	--	--	--	--	--	--	--	--	--

--

Age last birthday

I hereby consent to my name being flagged on the NHS Central Register for the purposes of future research.

Signature..... Date.....

Z8

**SURVEY: ADULTS AGED 19 TO 64 YEARS
CONSENT FOR TAKING PABA TABLETS TO VERIFY COMPLETENESS OF 24 HOUR
URINE COLLECTION**

Serial number label

Name: Gender: M / F

Age last birthday

Date of birth

--	--	--	--	--	--

Day Month Year

I(BLOCK CAPITALS)
Mr/Mrs/Miss/Ms

- understand that this survey is designed to add to medical knowledge;
- have read the information about the survey, have had time to consider it, and have had the survey explained to me to my satisfaction;
- have been told that I may withdraw my consent to any or all of the survey elements at any time, without needing to give a reason, and without prejudice to further medical treatment;
- have been told that none of the results from the survey will be presented in any way that can be associated with the name and address of anyone in this household;
- have been given a telephone number for further information about the survey, which is 01223 437541 (NDNS Survey Office);
- have been given and have read the information leaflet on the PABA-check test;

and hereby consent to taking para-aminobenzoic acid (PABA) tablets to verify the completeness of a 24 hours urine sample

Signature.....

Date.....

Wave

Copies: HNR/Subject/ONS

L6



National Diet and Nutrition Survey - Adults aged 19 - 64 years

BLOOD ANALYSES

The blood samples will be sent to medical laboratories in London, Southampton and Cambridge for a number of measurements. These include:

FATS – such as cholesterol

VITAMINS – including vitamins A, B, C and D

MINERALS – such as iron

CELLS – red and white blood cells

URINE ANALYSES include:

SODIUM for salt intakes

POTASSIUM for fruit and vegetable intakes

UREA for protein intakes

Traces of fungal chemicals

None of the samples will be used, either now or in the future, to look for diseases such as AIDS.

NDNS – Adults aged 19 to 64 years

The components of your blood and urine which will be measured are:

A. BLOOD

1. Blood cell count Blood contains a wide variety of types of cells, all with different functions. Examples are the red cells which carry oxygen, and the white cells which fight infection.
2. Haemoglobin This is the protein in the red cells that carries oxygen.
3. Iron and other minerals Iron is an essential part of haemoglobin and can be measured, and the body also has extra reserves in forms such as ferritin, which can also be measured directly. Your iron status can be assessed from certain proteins which bind iron as well. The essential element selenium will also be measured in plasma and red cells. The metal mercury will be measured in whole blood.
4. Vitamins The amount of these in your blood helps to tell us whether you are getting enough in your diet, and are absorbing them efficiently. These include vitamin A and related “carotenoids”, B group vitamins and folate, C, D, and E and K. We will measure each of them separately. PTH or parathyroid hormone will give additional information about Vitamin D and bone health.
5. Lipids (fats) We will measure total cholesterol and also the “protective” form called HDL-cholesterol.
6. Amino acids and proteins We will measure the amino acid homocysteine, which may be related to vascular disease risk. We will measure the protein anti-chymotrypsin which helps to reveal inflammation; this is helpful in judging whether some results might be incorrect due to a current infection, say with a virus.

B. URINE

1. Sodium and potassium Your sodium excretion is a reflection of your salt intake, which is also related to blood pressure in some people. Potassium is provided especially by fruit and vegetables, and is a useful diet indicator.
2. Nitrogen compounds Urea and creatinine. These are related to protein intake and turnover.
3. Fluoride Some water authorities add fluoride to drinking water to reduce tooth decay and it is present in some toothpastes. It is excreted in the urine.
4. Traces of fungal chemicals These may be measured to check food exposure.

None of the samples will be tested for viruses such as HIV(AIDS).

NDNS – Adults aged 19 to 64 years

The components of your blood and urine which will be measured are:

A. BLOOD

1. Blood cell count Blood contains a wide variety of types of cells, all with different functions. Examples are the red cells which carry oxygen, and the white cells which fight infection.
2. Haemoglobin This is the protein in the red cells that carries oxygen.
3. Iron and other minerals Iron is an essential part of haemoglobin and can be measured, and the body also has extra reserves in forms such as ferritin, which can also be measured directly. Your iron status can be assessed from certain proteins which bind iron as well. The essential element selenium will also be measured in plasma and red cells. The metal mercury will be measured in whole blood.
4. Vitamins The amount of these in your blood helps to tell us whether you are getting enough in your diet, and are absorbing them efficiently. These include vitamin A and related “carotenoids”, B group vitamins and folate, C, D, and E and K. We will measure each of them separately. PTH or parathyroid hormone will give additional information about Vitamin D and bone health.
5. Lipids (fats) We will measure total cholesterol and also the “protective” form called HDL-cholesterol.
6. Amino acids and proteins We will measure the amino acid homocysteine, which may be related to vascular disease risk. We will measure the protein anti-chymotrypsin which helps to reveal inflammation; this is helpful in judging whether some results might be incorrect due to a current infection, say with a virus.

B. URINE

1. Sodium and potassium Your sodium excretion is a reflection of your salt intake, which is also related to blood pressure in some people. Potassium is provided especially by fruit and vegetables, and is a useful diet indicator.
2. Nitrogen compounds Urea and creatinine. These are related to protein intake and turnover.
3. Fluoride Some water authorities add fluoride to drinking water to reduce tooth decay and it is present in some toothpastes. It is excreted in the urine.
4. Traces of fungal chemicals These may be measured to check food exposure.

None of the samples will be tested for viruses such as HIV(AIDS).

**NATIONAL DIET AND NUTRITION SURVEY:
Adults aged 19 to 64 years**

THE BLOOD SAMPLE: WHAT IS IT FOR, AND WHAT WILL HAPPEN?

What is it for?

Everyone's blood is a little bit different. Your blood can tell us very interesting things about your health, and about the ways in which your body benefits from the food you eat.

A blood sample is part of the survey. By using modern hospital laboratory methods, we will be able to measure a very wide range of things in your blood. We can look at the blood cells, which carry oxygen and help fight disease, and we can measure fats (like cholesterol); vitamins; important trace minerals; and proteins. All these measurements will help add to the information that we will get from the other records of what you eat, and all of the measurements will be related to nutrition. We will **not** be checking for viruses, such as HIV (Aids).

Is the blood test part of my normal health care?

These tests are not intended to benefit you directly, but to go towards improving our general knowledge of the population. We do not expect any results to be abnormal as this is a study of healthy people. However, we will advise you or your GP, so your GP can advise you, if there is anything unexpected in the results.

Is the blood test compulsory?

No. You have the right to refuse. To protect your rights and to ensure that we have your considered opinion, we need to have from you signed and witnessed consent for blood taking. Even after signing, you can still withdraw your permission, or ask the blood taker to stop at any time.

What will happen?

If you do agree to the blood sample, then the interviewer will arrange for a specially-trained blood-taker (called a phlebotomist) who works at a nearby hospital to take the sample. The interviewer will accompany the blood taker to your home; you do not need to go to the hospital or to a doctor.

The blood will be taken from a vein on the inside of your arm, just about where the crease is when you bend your elbow.

Does there need to be more than one needle-prick in my arm?

No. Filling the tubes can usually be done from one single needle-prick. The amount of blood that we take is equivalent to five or six teaspoons full, and is very quickly replaced by new blood. If you would like more information, do talk to the blood taker about it, and ask him or her to explain it all, beforehand. Very occasionally, if the blood taker cannot fill the tubes from one needle-prick, you may be asked if you are willing for the blood taker to try again on your other arm. As before, you have a perfect right to refuse, if you are at all worried about it.

Are there any side-effects from blood taking?

There is a possibility of some bruising after blood taking near where the needle goes in, but this will always clear away completely after a few days. If you feel at all faint, the phlebotomist will lie you down, or you can choose to lie down from the start if that is more comfortable.

Will I get any information back about my results?

Yes, those measurements that are most directly related to your health will be sent back to you, and also to your doctor (for his or her records about you), if you agree. You are not obliged to give permission for your GP to be sent the results. Some of the results should reach you (by post) within a few weeks; others will take a few months, because it takes time to gather and analyse all of the survey samples from all over the country. Your GP cannot use the results in medical reports about you without your permission.

What will happen to any blood left over?

We ask for your permission to keep any blood left over, and sometimes further tests are carried out, but these will always be related to nutrition. Usually, the type of additional tests we do are alternative ways of measuring vitamins. No further tests can be carried out which might be important for your personal health. Investigators in the future not connected with the original survey would have to ask for ethical approval in order to do further nutritionally related tests.

Your blood will never be tested for viruses (such as HIV/Aids) nor for genetic tests.

Thank you very much for helping us with this survey.

Maureen Birch
Survey Doctor



Tel: 020 7533 5465



Tel: 01223 437541

The PABA-check test (information for participants)

We use a naturally occurring substance (PABA), which is part of the B vitamin folic acid, to test how complete the 24-hour urine collection is. During the 24 hours you are collecting the urine, we would like you to take three of these tablets spread evenly throughout the day and these can be taken with meals if you wish. We then measure the level of PABA in your urine.

PABA is part of the diet and is eaten in small amounts in foods such as yeast, cereals, meat and milk. Larger amounts are included in some vitamin tablets, so we need to know if you are taking any vitamin tablets while you are providing the urine sample. The interviewer will ask you if you have any allergies. Substances like PABA are sometimes used in some hair dyes and PABA is sometimes used as a sunscreen. If you are allergic to sun screen lotions (e.g. Spectraban), vitamin preparations or hair dyes please tell us.

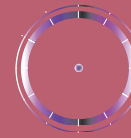
Some medicines interfere with the test we use for PABA in the urine, and PABA may interfere with a small number of medicines, and so we also need to ask you for details of any medicines you may be taking. We will not ask you to stop taking any of your regular medication, but simply ask you not to take PABA instead. The Survey Doctor checks a form which you fill in with the interviewer, and will let the interviewer know if you should not take it. This will usually be because of the fact that you might be on certain medicines. You can still collect a 24 hour urine sample. If you think there is any chance that you might be pregnant, you will not be asked to take PABA, as a precaution.

Once you have completed your collection

As soon as possible after you have completed your 24 hour urine collection, the interviewer will arrange a time with you to weigh the complete urine collection and help you take 4 small samples which will be sent to our laboratory for analysis.

The interviewer will show you how to do this, but it would be useful if you could read the Urine Samples leaflet beforehand. In the meantime please store your complete collection in a cool dark place.

Thank you.



the 24hr urine test

The amount of salt in the food people eat can have an effect on their health.

We cannot accurately measure the amount of salt in your diet from the information collected in your food and drink diary but we can get this information from analyses of the urine sample you provide.

We cannot get this essential information in any other way!

We are not testing for drugs or viruses.

L5

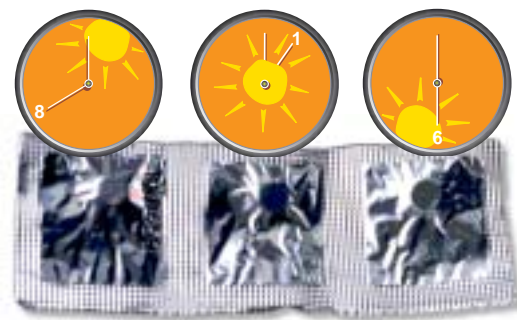
MRC
Medical Research Council



Why 24 hours?

We need a full collection of urine, rather than a single sample, as the level of salt in urine fluctuates according to what was eaten at the last meal, and how much fluid we drink; a collection over 24 hours gives much more reliable information on the usual levels of salt in a person's diet. We also ask that you take three tablets of a marker, called Para-aminobenzoic acid (PABA), which helps to check the completeness of the collection. However, if you would rather not take the PABA tablets we can still analyse the urine sample you collect – so you could still help us.

We will provide the urine collection bottle, jug and funnel for you to use in making your collection. We will also provide a smaller bottle for any collections made outside the home.



Equipment Provided

The interviewer will give you the following:

1. **A blister-pack of 3 PABA tablets**, to be taken at different times spread over the day. The exact times are not important, but it is important that they are spread fairly evenly throughout your waking hours. They do not have to be taken with food, but if you eat regular meals, you can plan to take them at mealtimes.
2. **Urine-collecting equipment for the home:**
 - a: a 5 litre screw-capped plastic bottle (containing boric acid)
 - b: a 1 litre plastic jug
 - c: a safety-pin

Attached to your underclothes or nightwear, the safety pin is used simply as a reminder for you to make your collection.



3. Urine-collecting equipment for outside the home:

- a: a 2 litre screw-capped plastic bottle (without any preservative)
- b: a plastic bag for carrying the equipment.

Don't forget to take the plastic funnel and jug out with you if you need to.

NOTE: the larger (5 litre) plastic bottle contains a boric acid preservative. This could cause skin or eye-irritations by contact or could cause stomach upset if swallowed. There is a warning label on the bottle but please be sure to keep it out of the reach of unsupervised young children.

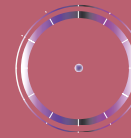
How to make your collection

Our interviewer will help you choose the day on which you would like to make the 24-hour urine collection. You may prefer to choose a day when you will be mostly at home or only going out of the home for a short time. If you are female, you may prefer not to make your collection during your period.

Please do not start your collection until you have taken the first PABA tablet. From then on please collect all of your urine for the next 24-hours (all day and all night). For example, if you take the first PABA tablet at 8.10am then you will collect all of your urine from then on until 8.10am the following morning. If during the collection a sample is missed for any reason, such as because of a bowel motion, we simply ask you to record this on a urine collection record sheet.

Each time you add a new urine specimen to the large plastic bottle, swirl it around a few times, to mix the preservative thoroughly. Please add any urine collected in the small bottle, to the large bottle, as soon as possible after returning home, so as to mix it with the preservative.





the 24hr urine test

The amount of salt in the food people eat can have an effect on their health.

We cannot accurately measure the amount of salt in your diet from the information collected in your food and drink diary but we can get this information from analyses of the urine sample you provide.

We cannot get this essential information in any other way!

We are not testing for drugs or viruses.

L5

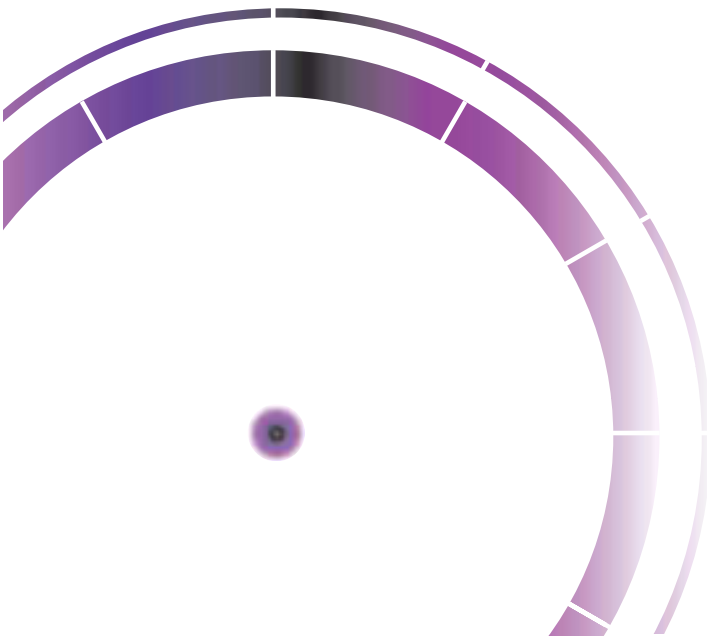
MRC
Medical Research Council



Why 24 hours?

We need a full collection of urine, rather than a single sample, as the level of salt in urine fluctuates according to what was eaten at the last meal, and how much fluid we drink; a collection over 24 hours gives much more reliable information on the usual levels of salt in a person's diet.

We will provide the urine collection bottle and jug for you to use in making your collection. We will also provide a smaller bottle for any collections made outside the home.



Equipment Provided

The interviewer will give you the following:

1. Urine-collecting equipment for the home:

- a: a 5 litre screw-capped plastic bottle (containing boric acid)
- b: a 1 litre plastic jug
- c: a safety-pin

Attached to your underclothes or nightwear, the safety pin is used simply as a reminder for you to make your collection.

2. Urine-collecting equipment for outside the home:

- a: a 2 litre screw-capped plastic bottle (without any preservative)
- b: a plastic bag for carrying the equipment.

Don't forget to take the jug out with you if you need to.

NOTE

The larger (5 litre) plastic bottle contains a boric acid preservative. This could cause skin or eye-irritations by contact or could cause stomach upset if swallowed.

There is a warning label on the bottle but please be sure to keep it out of the reach of unsupervised young children.



How to make your collection

Our interviewer will help you choose the day on which you would like to make the 24-hour urine collection. You may prefer to choose a day when you will be mostly at home or only going out of the home for a short time. If you are female, you should not make your collection during your period.

If during the collection a sample is missed for any reason, such as because of a bowel motion, we simply ask you to record this on a urine collection record sheet.

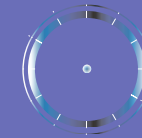
Each time you add a new urine specimen to the large plastic bottle, swirl it around a few times, to mix the preservative thoroughly. Please add any urine collected in the small bottle, to the large bottle, as soon as possible after returning home, so as to mix it with the preservative.

Once you have completed your collection

As soon as possible after you have completed your 24 hour urine collection, the interviewer will arrange a time with you to weigh the complete urine collection and help you take 4 small samples which will be sent to our laboratory for analysis.

The interviewer will show you how to do this, but it would be useful if you could read the Urine Samples leaflet beforehand. In the meantime please store your complete collection in a cool dark place.

Thank you.



the urine samples

We would be most grateful if you could help us to take the four small samples of urine from the 24 hour urine collection you have made.

The samples you provide will give us even more information about your diet, which we cannot get from your dietary recording alone.

We are not testing for drugs or viruses.

A separate leaflet tells you what we are looking for.

W3

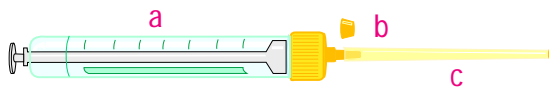


As soon as possible after you have completed your 24 hour urine collection, the interviewer will arrange a time with you to take the four small samples.

The interviewer will show you how to do this sampling but it would be useful if you could read this leaflet beforehand.

The interviewer will give you the following:

- four plastic syringes (a) with small push-on caps (b) and plastic extension tubes (c).



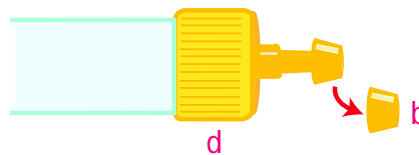
- gloves
- disposable paper
- a disposable work mat

1 The interviewer will weigh the whole of the 24 hour urine collection in the container.

2 We would then like you to take the four small samples.

3 If your 24-hour collection container is very full you can take the small samples straight from it.

If the container is not very full please pour some urine from the container into the jug provided – half fill the jug.



4 Remove the small push cap (b) from the syringe. Do not remove the larger screw-cap (d).

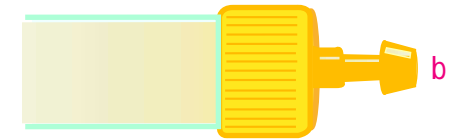
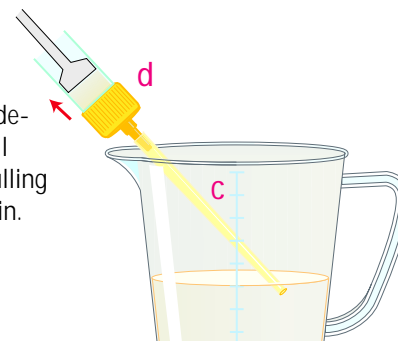
5 Push the extension tube (c) tightly on the exposed syringe nozzle.



6 Put the extension tube into the urine in the jug or container.

Pull back the syringe plunger right to the end to fill the syringe.

Expel about one-tenth of the sample back into the jug. Turn the syringe upside-down and pull a small bubble of air in by pulling the plunger back again.



7 Remove the extension tube and replace the cap (b), pushing it on firmly. Break off the plunger stalk by snapping it off.

8 Repeat all steps with the other three syringes.

9 Pour the remaining urine down the toilet, carefully, not from a height.

10 Rinse the jug, extension tubes and 24 hour urine container.

11 Dispose of the 24 hour urine container, jug, gloves, extension tubes and paper waste along with your usual household waste.

Thankyou.

M3A

NATIONAL DIET AND NUTRITION SURVEY: ADULTS AGED 19 TO 64 YEARS

24 HOUR URINE SAMPLE RECORD FORM

Serial Number label

SAMPLE COLLECTION

Today's date – at start of urine collection

Day		Month		Year	

Time of first urine collection

--	--

24 hour clock

Time of last urine collection

24 hour clock	
---------------	--

24 hour clock

Today's date – at end of urine collection

Day		Month		Year	

Were any urine sample collections missed?

YES / NO

If so, how many collections were missed?

1 2 3 or more

Please tell us here any other information about your collection:

Thank you for your help. Please return this form to the interviewer at the end of the collection.

NATIONAL DIET AND NUTRITION SURVEY: ADULTS AGED 19 TO 64 YEARS

24 HOUR URINE COLLECTION VOLUME RECORD

SECTION 7

To be completed by the interviewer

Please complete one of these record forms for each respondent

Please return this completed form with the urine subsample to HNR

If you have any queries please contact Steve Austin at HNR on 01223 426356

Serial number label

Sex: M / F

Age last birthday

¹ years

Date of birth

Day Month Year

Please record the weight **in kilograms** of the 5 litre plastic container, containing the urine below

Weight 1

kg

Weight 2

kg

SECTION 2

For laboratory use

Appendix L

Blood and blood pressure results reported to respondents and General Practitioners: normal ranges and copies of letters¹

The following results were reported to the respondent and his or her GP. For each result the normal ranges are shown. Any result for an individual which was outside the normal range was indicated by an asterisk in the letter to the respondent and their GP.

Sex	Results and normal ranges ²	
	<u>Blood pressure (mmHg)-all three readings³</u>	
	<u>Systolic</u>	<u>Diastolic</u>
Both	less than 140mmHg	less than 90mmHg
	<u>Blood haemoglobin (g/dl)</u>	<u>Blood haematocrit (l/l)</u>
Men	13.5-16.5g/dl	0.41-0.51l/l
Women	12-16g/dl	0.36-0.46l/l
	<u>Mean cell volume (fl)</u>	<u>Platelet count (x 10⁹/l)</u>
Both	80-100fl	150-450 x 10 ⁹ /l
	<u>White cell count (x10⁹/l)</u>	<u>Plasma cholesterol (mmol/l)⁴</u>
Both	4-11 x 10 ⁹ /l	less than 5mmol/l and cholesterol/HDL cholesterol molar ratio less than 5.
	<u>Serum folate (µg/l)⁵</u>	<u>Red cell folate (µg/l)⁴</u>
Both	3-20µg/l	150-650µg/l
	<u>Serum vitamin B₁₂ (ng/l)⁴</u>	<u>Plasma homocysteine (µmol/l)⁶</u>
Both	150-900ng/l	less than 100µmol/l

	<u>Serum ferritin (µg/l)</u>	<u>Plasma iron saturation (%)</u>
Men	20-200µg/l	16-60%
Women	10-150µg/l, rising to 20-200µg/l above 50 years.	16-50%
	<u>Plasma 25-hydroxyvitamin D (nmol/l)</u>	<u>Blood mercury (nmol/l)</u>
Both	greater than 12.5nmol/l	toxic level: greater than 250nmol/l

References and endnotes

- ¹ The letters reproduced are those used if the respondent provided a sample of blood for analysis as well as having his or her blood pressure measured. Suitably modified versions of these letters were used if blood pressure was measured but no blood sample provided or vice versa. Results were sent in two stages, the first included the blood pressure measurements and the first group of blood results; the second stage reported the remaining blood results.
- ² The normal ranges were obtained from a variety of sources as there was no single definitive source of these. The suitability of these ranges was judged by the survey doctor after discussion with the HNR NDNS Laboratory team and Great Ormond Street Laboratory.
- ³ Normal range based on British Hypertension Society Guidelines for Hypertension Management (*Br Med J* 1999; **319**: 630-5).
- ⁴ Cholesterol normal range is stated in the reports as 'ideally <5mmol/l but depends on other risk factors', as based on the Joint British Recommendations on Prevention of Coronary Heart Disease in Clinical Practice (*Br Med J* 2000; **320**: 705-8).
- ⁵ Reference ranges for serum and red cell folate as µg/l, and for serum vitamin B₁₂ as ng/l were supplied by Great Ormond Street Hospital and as reported to respondents and GPs. In Volume 4, results for serum and red cell folate are shown as nmol/l and serum vitamin B₁₂ in pmol/l. For the conversion factor see *Appendix 0*.
- ⁶ The cut-off for plasma homocysteine is designed to flag extreme values only since this analyte does not have a well-established clinical significance.

CONFIDENTIAL

Our Reference No:

Dear Dr.....

Re: Name & DOB of respondent

Your patient recently agreed to participate in the National Diet and Nutrition Survey of Adults and consented to us informing you of any clinically relevant results. I enclose these results. A copy has also been sent to your patient.

(If all results normal)

As you can see all the results are normal.

(If any asterisked blood test results)

Those blood test results that fall outside our normal ranges and which may be clinically significant have been marked with an asterisk. Your patient may contact you to discuss them.

(If any BP readings asterisked)

Blood pressure readings that are above our normal range are marked with an asterisk. Your patient may contact you for advice if they have three or more asterisks on their readings.

To achieve consistent results some analyses are carried out in batches. Some additional results (including cholesterol, cholesterol/HDL ratio, % iron saturation and 25-hydroxyvitamin D) will be sent to you in due course.

Please do not hesitate to contact me on 01223-437541 if you have any queries.

Yours sincerely

Dr Maureen Birch MRCGP
NDNS Survey Doctor

CONFIDENTIAL

Our Reference No:

Dear

National Diet & Nutrition Survey: Adults aged 19-64 Years

Thank you for taking part in this survey. Please find your results enclosed. *A copy of these results has also been sent to your GP. (If GP consent)*

(If all normal)

I am pleased to confirm that all these results are normal.

(If BP readings asterisked)

Any blood pressure reading that is above our normal range is marked with an asterisk. Isolated high readings are unlikely to be significant unless repeated on a number of occasions. If you have three or more asterisks on your blood pressure readings I suggest you contact your GP for advice. Depending on your medical history and the level of the readings your doctor may wish to check your blood pressure again.

(If any blood results asterisked)

Those blood tests results that fall outside our normal ranges are marked with an asterisk. The significance of these to your health depends on how far outside the normal range they are, and also on other details of your medical history. I suggest you contact your GP to discuss these results.

If you wish to speak to me I can be contacted via the survey office direct line on 01223-437541.

Further blood test results (including cholesterol) will be sent to you in due course. This may take several months. If you are likely to move house or wish to give an alternative address for these results (to cover a period of up to 12 months), please complete the enclosed change of address and/or GP slip and return it in the reply paid envelope provided.

We are most grateful for your help with the survey.

Yours sincerely

Dr Maureen Birch
Survey Doctor

Appendix M

Blood analytes in priority order for analysis, and urine analytes

Analyte	Unit of measurement	Conversion from SI units (factor)	Resulting metric units
<i>Haematology</i>			
Haemoglobin concentration	g/dl	*	
Red blood cell count	$\times 10^{12}/l$	*	
Haematocrit	l/l	*	
Mean cell volume	fl	*	
Mean cell haemoglobin	pg	*	
Mean cell haemoglobin concentration	g/dl	*	
Red cell distribution width	%	n/a	
Platelet count	$\times 10^9/l$	*	
White cell count	$\times 10^9/l$	*	
Neutrophil count	$\times 10^9/l$	*	
Lymphocyte count	$\times 10^9/l$	*	
Monocyte count	$\times 10^9/l$	*	
Eosinophil count	$\times 10^9/l$	*	
Basophil count	$\times 10^9/l$	*	
Serum folate	nmol/l	$\times 0.441$	$\mu\text{g/l}$
Red cell folate	nmol/l	$\times 0.441$	$\mu\text{g/l}$
Serum vitamin B ₁₂	pmol/l	$\times 1.357$	ng/l
Serum ferritin	$\mu\text{g/l}$	*	
Blood mercury	nmol/l	$\times 0.201$	$\mu\text{g/l}$
Plasma selenium	$\mu\text{mol/l}$	$\times 0.079$	mg/l
Red cell selenium	$\mu\text{mol/l}$	$\times 0.079$	mg/l
Plasma 25-hydroxyvitamin D	nmol/l	$\times 0.400$	$\mu\text{g/l}$
<i>Blood lipids</i>			
Plasma total cholesterol	mmol/l	$\times 0.387$	g/l
Plasma high density lipoprotein cholesterol	mmol/l	$\times 0.387$	g/l
Non-HDL cholesterol	mmol/l	$\times 0.387$	g/l
Plasma iron	$\mu\text{mol/l}$	$\times 55.8$	$\mu\text{g/l}$
Plasma total iron binding capacity	$\mu\text{mol/l}$	$\times 55.8$	$\mu\text{g/l}$
Plasma iron % saturation	$\mu\text{mol/l}$	n/a	
Plasma retinol	$\mu\text{mol/l}$	$\times 0.286$	mg/l
Plasma retinyl palmitate	$\mu\text{mol/l}$	$\times 0.525$	mg/l
Plasma α -tocopherol	$\mu\text{mol/l}$	$\times 0.552$	mg/l
Plasma γ -tocopherol	$\mu\text{mol/l}$	$\times 0.417$	mg/l
Plasma α -cryptoxanthin	$\mu\text{mol/l}$	$\times 0.552$	mg/l
Plasma β -cryptoxanthin	$\mu\text{mol/l}$	$\times 0.552$	mg/l
Plasma lycopene	$\mu\text{mol/l}$	$\times 0.537$	mg/l
Plasma lutein + zeaxanthin	$\mu\text{mol/l}$	$\times 0.569$	mg/l

Analyte	Unit of measurement	Conversion from SI units (factor)	Resulting metric units
Plasma α -carotene	$\mu\text{mol/l}$	x 0.537	mg/l
Plasma β -carotene	$\mu\text{mol/l}$	x 0.537	mg/l
Plasma vitamin C	$\mu\text{mol/l}$	x 0.176	mg/l
Plasma creatinine	$\mu\text{mol/l}$	x 0.113	mg/l
Erythrocyte transketolase: basal activity	$\mu\text{mol/g Hb/min}$	*	
activation coefficient	ratio	n/a	
Erythrocyte glutathione reductase activation coefficient	ratio	n/a	
Erythrocyte aspartate aminotransferase activation coefficient	ratio	n/a	
Plasma α_1 -antichymotrypsin	g/l	*	
Whole blood glutathione peroxidase	nmol/mg Hb/min*		
<i>Urinary analytes</i>			
Urine sodium	mmol/l	x 23.0	mg/l
Urine potassium	mmol/l	x 39.1	mg/l
Urine creatinine	mmol/l	x 113	mg/l
Urine sodium:creatinine ratio	ratio	n/a	
Urine potassium:creatinine ratio	ratio	n/a	
Urine urea	mmol/l	x 60.1	mg/l
Urine fluoride	$\mu\text{mol/l}$	x 19.0	$\mu\text{g/l}$

* Conversion not possible or not appropriate.
n/a : not applicable.

Appendix N

The blood sample: collecting and processing the blood

1 Introduction

One of the main aims of the NDNS programme is to measure haematological and other blood indices that give evidence of nutritional status and to relate these to dietary and social data (see *Appendix M* for a full list of blood analytes).

This appendix gives further information about the blood sampling procedure, including details of the selection and training of the phlebotomists, the fieldwork procedures for obtaining the blood, the local laboratory procedures for processing blood samples and the system for reporting the clinically significant results to respondents and their General Practitioners (GPs). All the procedures associated with obtaining and analysing the blood samples were contracted to Medical Research Council Human Nutrition Research (HNR).

All the procedures associated with the blood sample were tested in the feasibility study, to ensure that they were safe and acceptable to the respondents, those taking the blood samples and to the medical profession, and found to be suitable for use in the mainstage (see *Appendix C*).

2 Ethics Committee approvals

This survey, in common with other surveys in the NDNS series, includes physiological procedures which are invasive - venepuncture procedure to take a blood sample and measurements with possible clinical significance – venepuncture and measurement of blood pressure. It was necessary, therefore, to obtain approval for the survey protocol from a Multi-centre Research Ethics Committee (MREC). Approval then had to be sought from National Health Service Local Research Ethics Committees (LRECs) in the areas where fieldwork would be taking place¹. There were a number of changes in the application to the MREC and LRECs for mainstage following the feasibility study (see *Appendix C*).

In particular approval was sought for the following components of the survey:

- taking a venepuncture blood sample for nutritional status analyses
- storing the residue of blood for future analyses

- flagging the respondent's details on the National Health Service Central Register (NHSCR) for subsequent outcome follow up
- taking PABA (para-aminobenzoic acid)².

However, approval from the MREC and LRECs for the whole survey package was required, as it would not have been acceptable to proceed only with those aspects of the survey not specifically requiring approval, if approval for some aspects was withheld.

Aspects of the research reviewed by the ethics committees included:

- the scientific quality and relevance of the proposal
- respondent recruitment procedures
- information to be made available to the respondent
- the nature of any procedures to be undertaken
- methods of seeking and obtaining consent
- confidentiality issues
- scrutiny of the researchers
- safety and indemnity issues.

The survey doctor at HNR applied for ethics approval. Because the fieldwork was to take place within the geographical boundaries of more than five LRECs, approval was initially sought from a MREC. The application was made to South Thames MREC who had approved the feasibility study for this survey.

A standard application form and copies of the study protocol were submitted in January 2000. South Thames MREC approved the application in February 2000 in principle, subject to two minor typographical amendments³. These amendments were made and full approval was subsequently given.

Having achieved MREC approval, it was then necessary to make applications for ethics approval to the 93 LRECs which covered the 152 geographical areas selected for the fieldwork. The remit of the LRECs at that time was to consider the application with respect to local issues. Of the 93 LRECs approached, seven required clarification and justification of the procedures to be used. No

amendments were necessary as a result of LREC concerns and all were eventually satisfied and gave full ethics approval for the survey before fieldwork commenced.

Prior to the commencement of fieldwork and once the survey was underway further approval from the MREC and LRECs was sought and given for minor amendments to the protocol and survey documentation.

3 Consent

Because the survey included measurements of possible clinical significance, that is blood pressure levels and results for blood analytes, it was necessary to obtain consent from the respondent for various components of the survey. Consent was required for participation in all components, although for the majority only verbal consent was required. Signed consent was required from each respondent:

- to notify their GP of their participation in the survey
 - to notify their GP of their blood pressure
 - to inform their GP of the results of the blood analyses
- to take a venous blood sample
- to store any unused blood sample for possible nutritional analyses at some time in the future
- to measure and record their blood pressure (see *Appendix J*)
- to pass their name to the NHS Central Register (NHSCR) for the purposes of further research
- to administer PABA tablets to monitor completeness of 24-hour urine collections (see *Appendix P*).

In all cases, even after consent signatures were obtained, the assent of the respondent to the procedure was confirmed before it was undertaken. The urine collection and other measurements only required verbal consent.

GP notification of subject participation

At the first visit to the respondent's home the interviewer sought consent for the respondent's GP to be informed that the respondent was taking part in the survey and to record the GP details. The name, marital status, sex and age of the respondent were sent to the GP to help them easily identify the

person. Consent for the GP to be informed meant the GP would be informed of the blood pressure and blood analyte results.

If this was given the interviewer immediately sent the GP a standard letter explaining that the respondent was taking part in the survey, together with a copy of the survey purpose leaflet, which described the procedures with which the respondent would be asked to co-operate. The letter was signed by, and gave a telephone number for the survey doctor. The GP could contact the survey doctor if they required more information or if they felt that the respondent should not be participating in the survey.

If the respondent was not registered with a GP, or consent to pass information to the GP was not given, the respondent could still take part in all components of the survey, including the blood sample and blood pressure, provided written consent was obtained to take the sample and measurement. In these circumstances the duty of care passed to the survey doctor.

Obtaining a blood sample and storing remaining blood

Explicit formal consent was required for taking the blood sample from the respondents. Interviewers were required to tell the respondent at the time they conducted the dietary interview that their consent to a blood sample being taken would be sought. This was to avoid the possibility that having built a rapport with the interviewer, respondents might have felt obliged to consent to the venepuncture procedure against their true wishes.

A written statement of the purpose and procedures involved in taking the blood sample was provided. Respondents were given time to consider whether they wished to participate in this element or not. Written consent for the procedure was sought, as well as consent for the HNR to inform the respondent's GP (if appropriate) of the results for the clinically significant analytes.

It should be noted that agreement to this aspect of the survey was independent of agreement to other components in the survey, and was not associated with the £10 gift voucher given to the respondent for completing the full seven-day dietary record.

The respondent was also asked for their consent for any remaining blood to be stored and analysed in the future. Any future analyses would be nutrition related and would not involve screening for viruses such as HIV or hepatitis B. If consent to the storage was refused, blood was still taken as long as all other necessary consents were signed, and any remaining blood disposed of.

Flagging on the NHSCR

Every respondent taking part in the survey was asked if they consented to their name being flagged on the NHSCR. This would allow monitoring of specific aspects of the respondents' future health.

Respondents were told that they were free to withdraw their consent to any procedure any point, even after the consent form had been signed.

Consents obtained are summarised in Table N1.

(Table N1)

4 Exclusion from participation in venepuncture

Screening questions were asked by the phlebotomists before attempting to obtain the sample. Questions were asked to ensure exclusion of any respondents with known clotting or bleeding disorders or those taking anticoagulant drugs. If the respondent volunteered that they were HIV or hepatitis B positive blood would not be taken. However, neither the interviewer nor the blood-taker were permitted to specifically ask the respondent about HIV or hepatitis B status.

5 Equipment used

The blood samples were collected by the phlebotomist using the Sarstedt Monovette blood-collection system with butterfly or fixed needle, according to their preference. The Monovette system of blood collection is an enclosed system which allows the safe, spill-free collection of blood which is critical in the home environment. It can also offer trace element contamination control and is manufactured from plastic which allows the safe transport of the sample, inside an outer container, through the postal system.

HNR provided each phlebotomist with the following equipment:

Carrying box	Plasters
Sharp safe box	Tissues
Cold box plus two freezer packs	Stasis pads
Disposable gloves	Cryo-pen
Parcel tape	Milton disinfectant
Pair of scissors	Steri-swabs

Table N1 Consents given by respondent by wave of fieldwork*

Unweighted data

	Wave of fieldwork								All	
	Wave 1 : July to September		Wave 2 : October to December		Wave 3 : January to March		Wave 4 : April to June			
	No.	%	No.	%	No.	%	No.	%	No.	%
Respondents who gave GP details	367	85	414	84	439	80	609	78	1829	81
Consent given to:										
blood pressure measurement	347	80	397	81	409	75	597	76	1750	78
blood sample	290	67	328	67	325	59	476	61	1419	63
of whom:										
consented to having blood stored	278	96	326	99	316	97	465	98	1384	98
inclusion on the NHS Central Register	323	75	375	76	354	65	531	68	1583	70
PABA**	148	34	..	..	..	..	..	..	..	..

* Fieldwork wave is defined as the wave (quarter) in which the case was issued (or reissued) for interview.

** PABA was withdrawn from the survey midway through Wave 1.

Tourniquet (adjustable)

NDNS-labelled, to wrap cold packs before freezing and to contain samples within cold box.

Stamped labelled jiffy bag envelopes, addressed to Great Ormond Street (GOS) and Southampton laboratories.

Sarstedt butterfly needles: 21G and 23G 60mm tube length, 21G 300mm tube length

5 ml plain capped tubes, for the plasma after blood separation in the laboratory.

Phlebotomists were employed only if they had recent experience of phlebotomy. Suitable phlebotomists were sought via recommendations from Consultant Haematologists in hospitals in the fieldwork areas and a written reference was obtained from their current or previous employer to ensure their suitability.

All were invited to attend personal briefings where they were given training in the protocols for obtaining the blood sample and despatching it. For the first three fieldwork waves of the survey the training sessions for phlebotomists were held as part of the interviewer briefing sessions. This provided the opportunity for the phlebotomist to meet the interviewer with whom they would be working, and for the roles and responsibilities of the phlebotomist and interviewer to be clearly defined. Emphasis was placed on the need to standardise procedures and adhere strictly to the protocol that had been presented to and agreed by the MREC and the LRECs.

Each phlebotomist was provided with specific training on the Sarstedt Monovette system, both at the training courses before each wave of the fieldwork and also, if necessary, by Sarstedt Ltd. The training was provided by the survey doctor and the HNR survey team. The phlebotomists were also provided with a full set of written instructions, record forms and a checklist reminder of the sequence of the procedures. A total of 99 phlebotomists were employed during the survey.

ONS interviewers were responsible for making the arrangements for the phlebotomy visit to the respondent's home, and the phlebotomists were always accompanied in the home by an ONS interviewer. Before phlebotomy, the phlebotomist was responsible for contacting the local laboratory to which blood would be taken, to ensure the availability of laboratory staff. As local laboratory processing facilities were generally not available on Saturdays the samples could only be collected on weekdays from Monday to Thursday inclusive, and not on Bank Holidays. To ensure sufficient time for processing at local laboratories, samples needed to be obtained (usually) before 3.30pm each day.

All sample tubes were labelled with the respondent's serial number. These were pre-printed using waterproof ink on adhesive labels designed to withstand moisture and temperatures down to -80°C.

The phlebotomist, carried out the procedures in the following order:

Before visit

- obtain appointment details from interviewer
- contact local laboratory
- freeze cold pack
- prepare necessary blood taking equipment, record forms and postal containers.

At visit

- obtain copy of signed blood sample consent form from interviewer (Z4)
- obtain serial number labels from interviewer
- ask whether the respondent has a clotting or bleeding disorder or is on anticoagulants - **IF**
SO DISCONTINUE VISIT
- obtain blood sample
- fill tubes in priority order for GOS (1 serum, 1 EDTA), Southampton (1 EDTA) and local laboratory (2 heparin)
- mix all samples by inversion
- add serial number label to each tube
- place blood samples in postal containers and jiffy bags
- complete postal record forms for GOS and Southampton
- complete phlebotomist record form.

Immediately after the visit

- post blood samples with record forms to GOS and Southampton
- post completed phlebotomist record form and consent form copy to HNR
- either take blood sample and contaminated waste to the local laboratory in cold box or inform field laboratory if no blood sample was obtained.

The approved protocol allowed for two attempts at phlebotomy provided that the respondent consented. Ethics approval allowed for a maximum of 30ml blood to be taken from the brachial vein. Phlebotomists were advised on precautions to avoid and deal with any cases of fainting. The number of bloods obtained are summarised in Table N2.

(Table N2)

7 Liaison with, and procedures at, the local hospital laboratories

For each area covered by the survey a local laboratory was recruited to receive and process a portion of the blood from each respondent. The phlebotomists delivered samples to these laboratories by hand in a cool box. Great Ormond Street Hospital Haematology Department and Southampton University Trace Elements Laboratory were contracted to receive and analyse other portions of the blood, for haematology and trace element analysis respectively, collected from all areas in all waves of the survey. The remaining analyses were carried out at HNR in Cambridge. At the end of each wave of fieldwork the blood stored at the local laboratory was couriered frozen to HNR.

Several of the required analytes, particularly certain vitamins and vitamin status index analytes, are known to be very labile and therefore need to be stabilised, either by chemical treatment or by low temperature storage or both, at the earliest possible opportunity. This was done at the local laboratories.

Ideally local hospital laboratories needed to be close to the fieldwork areas, accessible by road, have appropriate staff availability, have a refrigerated centrifuge and storage facilities at -40 C or below. The local laboratories were usually at the hospital where the phlebotomist was based. In a few instances, because of the limited choice of laboratories, it was necessary to relax the requirement for a chilled centrifuge, or to accept storage at -25 C. A total of 90 local laboratories were used for processing and storing blood samples during the study.

Table N2 Number of blood samples obtained by wave of fieldwork*

Unweighted data					Numbers
	Wave of fieldwork				All
	Wave 1 : July to September	Wave 2 : October to December	Wave 3 : January to March	Wave 4 : April to June	
No. of blood samples obtained	278	311	313	442	1344

* Fieldwork wave is defined as the wave (quarter) in which the case was issued (or reissued) for interview.

Each local laboratory was provided with the following items:

- written blood-processing instructions and record forms for each respondent
- aliquots of 10% w/v metaphosphoric acid for vitamin C stabilisation, in 2ml pre-labelled and colour-coded screw-cap containers.

The stabilising solutions, frozen in solid CO₂, were delivered from HNR to the hospital laboratories, and were kept frozen until used.

Immediately upon receiving a respondent's heparinised blood samples from the phlebotomist the analyst was required to:

- transfer an aliquot of the whole blood to an empty container for the glutathione peroxidase assay
- centrifuge the remaining blood at 4 C and then remove the plasma to an empty container
- transfer an aliquot of plasma to the metaphosphoric acid container for subsequent vitamin C analysis
- wash the red cell pellets with normal saline to yield a red cell concentrate depleted of buffy coat
- label and store all samples in a polythene bag at -40 C or below
- complete a record form for each sample giving processing dates, times and portions created
- send the collected samples on dry ice, plus the associated paperwork, to HNR by a road transport carrier. This transfer occurred at the end of each wave of fieldwork and was organised by HNR.

8 Further subdivision, freezer filing and assay auditing

As soon as the blood sample fractions created at the local laboratory arrived at HNR they were stored at -80 C. Their receipt and respondent details were recorded in both a hard copy log book and computer spreadsheet and were cross checked against records of analysis performed by Great Ormond Street and Southampton University Laboratories. The priority order for analysis and the units of measurement are listed in Appendix M. The analytical procedures are summarised in Appendix O.

After a single thawing, each plasma sample was further subdivided into discrete sub-samples for assays of: a) 25(OH)-vitamin D and other fat-soluble micronutrients (vitamins A, E and carotenoids); b) iron status; c) lipid profile and d) clinical chemistry analytes. These samples were then filed in the storage freezer strictly in order of receipt. Analysis was conducted in a sequence so as to avoid bunching within the fieldwork areas during each batch analysis. For each analyte type analytical work was performed in small batches, together with the appropriate quality controls and quality assurance samples. Each assay was performed in duplicate; if agreement between duplicates failed to meet the pre-set criteria for each assay, repeat assays were performed.

9 Reporting procedures

Respondents and their GP's, if consent to inform the GP was given, were informed by letter of the results of a selected number of analytes which were of clinical significance (see *Appendix L*). This letter also reported the blood pressure measurements for the respondent where these had been taken. Letters to GPs and respondents contained identical results sheets together with information on normal ranges. On request, the survey doctor provided advice to GPs about the need for follow up tests. Any incidental abnormality of potential clinical significance was also separately reported to the respondent and to their GP if consent was obtained.

References and endnotes

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- ¹ The information in this section refers to the mainstage application and approval. For details of the application and approval for feasibility see Appendix C.
 - ² Use of PABA was discontinued during Wave 1 following an adverse reaction experienced by one respondent. It was later established that this was not related to PABA.
 - ³ The MREC requested an increase in the font size used on the information leaflets L1 and L2, and change to the spacing of the text on the blood consent form Z4 to make it appear less cramped and easier to read.

Appendix O

Methods of blood analysis and quality control

The assays described in sections 1 and 2 below were conducted at the Department of Haematology, Great Ormond Street Hospital, London. Throughout fieldwork, samples of coagulated and ethylenediaminetetraacetate (EDTA) anticoagulated blood were sent directly to the laboratory by post after their collection. Serum samples were obtained by centrifugation of the coagulated blood sample.

The assays described in sections 3 to 14 below were conducted at Medical Research Council Human Nutrition Research (HNR) in Cambridge. Samples of lithium heparin anticoagulated blood were collected and stored in a coolbox, at about 4°C, and delivered to a local processing laboratory in the region of the fieldwork typically within 5 hours of collection. These local laboratories undertook the processing and initial stabilisation of this blood sample into whole blood, red cells, plasma and metaphosphoric acid stabilised plasma portions. The metaphosphoric acid had been previously prepared, aliquotted at HNR and delivered to each local laboratory. The blood sample subfractions were stored frozen, typically at -40°C at these laboratories until their removal on dry ice to HNR, where they were stored frozen, at -80°C, until further subdivided and analysed.

The assays described in sections 15 and 16 below were conducted at the SAS Trace Element Unit at the University of Southampton. Throughout fieldwork, samples of ethylenediaminetetraacetate (EDTA) anticoagulated blood were sent directly to the laboratory by post after their collection. Plasma samples were obtained by centrifugation of the anticoagulated blood sample.

For some of the analytes measured in the samples that were sent through the post at room temperature, there was a significant linear correlation between the assay values and the magnitude of the delay time. In some there was also a small but significant difference in values obtained from the small number of slightly haemolysed samples and the majority which exhibited no visible haemolysis. In order to correct for these two potential errors, the following mathematical corrections were employed. For each analyte where there was a significant correlation with delay time, each result was corrected (up or down) by the product of the number of hours delay and the slope of the overall rate of change per hour. For each analyte where there was a significant effect of haemolysis, the results from the haemolysed

samples were multiplied by a correction factor (between 0.969 and 1.023) which represented the ratio of the overall mean values of the haemolysed and non-haemolysed samples.

Tables showing the results of the quality control procedures are given at the end of this appendix.

1 Full blood count

Full blood counts were performed using a Bayer H3 Haematology Analyser. The analyser uses a colorimeter for measuring haemoglobin at wavelength 546nm. From samples of EDTA anticoagulated blood, red cells, white cells, differential counts and platelets were diluted and hydrodynamically focused through a flow cell and were counted using light and laser detection systems. The samples were analysed on the day of receipt.

Quality control procedures comprised both internal and external procedures. Daily internal quality control checks were used to establish the running means of the stable red cell indices, mean cell volume (MCV), mean cell haemoglobin (MCH) and mean cell haemoglobin concentration (MCHC) and daily commercial controls (Bayer Testpoint Haematology control) were used to monitor drift in all measured and calculated parameters. External quality assessment schemes included the National External Quality Assessment Scheme (NEQAS) for haematology and External Quality Assessment Scheme (EQAS) for haematology run by Addenbrookes Hospital, Cambridge.



(Table O1)

2 Serum ferritin, vitamin B₁₂, folate and red cell folate

These assays were performed on the Abbott IMx semi automated analyser which uses Microparticle Enzyme Immunoassay (MEIA) technology. Individual assay kits were used for each of the analytes, but all are based on the same principle. Microparticles coated with analyte-specific 'capture' molecules bind to the analyte in the sample. The resulting immune complex binds to a glass fibre matrix. An alkaline phosphatase-labelled conjugate bound to the matrix then reacts with a fluorogenic substrate and the rate of increase of fluorescence is measured. This is proportional to the concentration of analyte originally present in the sample. Concentrations were determined by comparison with a curve constructed from standards from known concentrations. Samples were analysed as soon as possible after receipt.

Quality control procedures comprised both internal and external procedures. For the serum assays, an internal pooled serum sample was used as a drift control with each run. Drift

control for the red cell folate assay was by use of a commercial red blood cell folate control. External quality assessment was by NEQAS for the haematinic assays.

(Table O2)

3 Plasma homocysteine

This was measured by the Abbott IMx assay on the IMx analyser. Homocysteine in samples and standards is converted to S-adenosyl-L-homocysteine, followed by coupling with an antibody which is quantified by a fluorescence polarisation immunoassay. To ensure that all of the homocysteine is in the reduced, free form, dithiothreitol is added to the samples.

Quality control is achieved by participation in an international external quality assessment scheme based in Denmark¹, as well as by the manufacturer's QC samples. A quality assurance running check uses a subdivided pool of heparinised plasma.

(Table O3)

4 Retinol, tocopherols, lutein/zeaxanthin, lycopene, cryptoxanthin, α -carotene and β -carotene in plasma

These determinations were achieved by high performance liquid chromatography using a method derived from that of Thurnham *et al*². Rapidly-thawed subsamples of plasma, typically 250 μ l, were extracted with n-heptane in the presence of absolute ethanol, butylated hydroxytoluene (BHT) and α -tocopherol acetate (internal standard). The upper organic phase was evaporated nearly to dryness under vacuum, and was then redissolved in 250 μ l of the mobile phase, with sonication to achieve dissolution. If necessary a small volume of dichloromethane was added to achieve complete dissolution. 50 μ l aliquots were then injected onto a 4 μ Waters C₁₈ column which was preceded by a 0.5 μ reduced stainless steel filter frit, to remove any particles. The mobile phase was acetonitrile 44%, methanol 44%, dichloromethane 12%, by volume, with added BHT at 10mg/l. The flow rate was 1.5ml/min and the column temperature control jacket was maintained at 25°C. A Waters Millennium-controlled HPLC system, with a photodiode array detector, was used. A triple internal standard of retinyl acetate, tocopherol acetate and ethyl β -apo-8'-carotenoate was used. Retinol and retinyl palmitate are estimated at 325nm, and tocopherols at 292nm, at which wavelength the tocopherol acetate is also measured. All the carotenoids are measured at 450nm. Peak area response factors were obtained from semi-pure, commercially available carotenoids, and from retinol, retinyl palmitate, α - and γ -tocopherols. These were then corrected to 100% purity, by means of their HPLC patterns, and from their absolute optical densities and known extinction coefficients. This procedure was able to separate and quantify all of the following plasma components: retinol and retinyl palmitate at 325nm; α -

and γ -tocopherols at 292nm; α - and β -carotenes, lycopene and β -cryptoxanthin at 450nm. Lutein and zeaxanthin eluted as a single peak and were estimated together at 450nm. Run time was 13 minutes, thus permitting a throughput of about four samples per hour. A mixed standard was run with every batch of extracted samples to check the performance characteristics of the column and detectors, the former being replaced when necessary, to ensure adequate peak separation. Extraction performance is based on the recovery of each of the three internal standards, and column performance is based on retention time shift and peak area recovery of standards.

Quality control procedures comprised both internal and external procedures including:

- two internal subdivided pools of heparinised human plasma from the Cambridge Blood Transfusion Service, used for long-term drift control and to provide an early warning of any changes in sensitivity of the assay. These are run every 20 samples.
- External freeze-dried plasma samples, including 'SRM 968c Fat-Soluble Vitamins, Carotenoids and Cholesterol in Human Serum', provided by the National Institute of Standards and Technology (NIST), USA which have assigned values for all of the analytes of interest, and participation in the regular NIST round robin exchange scheme for these analytes.

The criterion of adequacy is a 5% coefficient of variation (CV) or better for each internal standard, for both unknowns and for quality assurance (QA) samples.

The method used to determine these analytes in plasma samples in this survey was very similar to that used in the NDNS of children aged 1¹/₂ to 4¹/₂ years³, of people aged 65 years and over⁴, and of young people aged 4 to 18 years⁵.

(Table O4)

5 25-hydroxyvitamin D in plasma

The DiaSorin (previously Incstar, Minnesota, USA) 25(OH)-vitamin D radioimmunoassay (RIA) kit assay was used, which was based on the developmental work of Hollis *et al*⁶. The antibody to 25(OH)-vitamins D ($D_2 + D_3$) had been generated in goats by the vitamin D analogue, 23,24,25,26,27-pentanoic-C(22)-carboxylic acid of vitamin D coupled to bovine serum albumin. Firstly, duplicate extraction of the fat-soluble analyte from the plasma samples and from standards was achieved into pure acetonitrile, precipitating plasma proteins. The extracted 25-hydroxyvitamin D was then diluted with tracer 25-hydroxyvitamin D labelled with ¹²⁵I. Exposure of this impure mixture to a specific goat antibody against 25-hydroxyvitamin D resulted in specific binding of a proportion of the labelled vitamin,

dependent on its concentration. Addition of a second antibody then achieved precipitation. Separation of this precipitated protein-bound fraction was achieved by centrifugation and was followed by gamma-counting of the sedimented fraction.

Quality control procedures comprised both internal and external procedures including:

- an internal subdivided pool of heparinised human plasma from the Cambridge Blood Transfusion Service, used for long-term drift control and to provide an early warning of any changes in sensitivity of the assay
- a spiked serum with an assigned 25(OH)-vitamin D value, provided with the kit
- serum with an assigned (DiaSorin) 25(OH)-vitamin D level, obtained from BioRad Inc
- participation in the 'DEQAS' external quality assurance scheme for vitamin D metabolites, run from Charing Cross Hospital, London.

We chose not to use the second high spiked serum that was provided with the kit because its concentration lay outside the region of good precision of the assay, and it was preferable to dilute any survey samples which fell into this range.

This method was also used to measure 25-hydroxyvitamin D in plasma in the NDNS of children aged 1½ to 4½ years⁷, of people aged 65 years and over⁸, and of young people aged 4 to 18 years⁹.

(Table O5)

6 Erythrocyte transketolase for thiamin status, in washed red blood cells

This assay was based on that of Vuilleumier *et al*¹⁰. It depends on the coupling of pyridine nucleotide (NADH) oxidation to glycerol phosphate dehydrogenase, which produces glycerol-3-phosphate after the transketolase-catalysed conversion of ribose-5-phosphate. The rate of oxidation of NADH was monitored at 340nm, on the Cobas Bio analyser. The reaction rate was measured in both the absence and presence of the transketolase enzyme cofactor, thiamine pyrophosphate (cocarboxylase). Thiamin status was measured by both the basal enzyme activity, expressed per unit of haemoglobin in the sample, and by the activation coefficient, which was the ratio of cofactor-stimulated activity to the basal activity without any added cofactor. Haemoglobin was measured separately by the cyanomethaemoglobin procedure.

Quality assurance was achieved with stored red cell preparations from heparinised blood obtained from the Cambridge Blood Transfusion Service and a pooled sample from

Tanzanian blood. No commercial materials with assigned values or EQAS were available for this analyte.

(Table O6)

7 Erythrocyte glutathione reductase activation coefficient for riboflavin status in washed red cells

This assay has been adapted 'in-house' for use with a Cobas Fara centrifugal analyser from the manual technique developed by Glatzle *et al*¹¹. Washed red cell samples were thawed, diluted in water and buffer, centrifuged and the extract was incubated with and without flavin adenine dinucleotide (FAD). Addition of assay reagents, oxidised glutathione and reduced pyridine nucleotide coenzyme, took place in the centrifugal analyser, and was followed by a 5 minute measurement of the reaction rate at 340nm and 37°C. The ratio of FAD-stimulated to unstimulated activity is the erythrocyte glutathione reductase activation coefficient (EGRAC) and is a reliable and robust measure of riboflavin status. The initial reactivation of the unsaturated apoenzyme in the sample was carried out for a relatively long period, 30 minutes at 37°C, in order to ensure full reactivation of apoenzyme. The assay is conducted at a low final concentration of (FAD) (1.5µM). We have found this to be necessary, in order to eliminate activation coefficients (ratios) less than 1.0, which can result from enzyme inhibition by FAD, or its breakdown products, if the final concentration of FAD is too high.

Quality control samples comprised pools of United Kingdom, Gambian and Tanzanian red cell haemolysates, stored in aliquots at -80°C and thawed on the day of analysis. No commercial materials with assigned values or EQAS were available for this analyte.

(Table O6)

8 Erythrocyte aspartate aminotransferase activation coefficient (EAATAC) for vitamin B₆ status in washed red cells

This method is based on the procedure described by Vuilleumier *et al*⁷ and uses the Cobas Bio centrifugal autoanalyser to monitor the stimulation of erythrocyte aspartate aminotransferase (EAAT) by pyridoxal-5-phosphate (PLP) at 340nm and 37°C. Washed red cell samples were thawed, diluted in water and buffer, centrifuged, and the extract was incubated with and without PLP. The ratio of PLP-stimulated activity to the basal unstimulated activity is known as EAATAC.

Quality control samples comprised separate pools of United Kingdom, Gambian and Tanzanian red cell haemolysates, stored frozen and thawed on the day of analysis. No commercial QC materials or EQAS were available for this analyte.

9 Vitamin C in plasma

The assay was based on the procedure described by Vuilleumier and Keck¹². The assay is performed on a Roche Cobas Bio centrifugal analyser with fluorescence attachment. It begins with conversion of ascorbic acid in the metaphosphoric acid stabilised plasma sample to dehydroascorbic acid by a specific enzyme, ascorbate oxidase purified from cucumbers, obtained from Sigma, London. This is followed by coupling of the resulting dehydroascorbate with o-phenylene diamine to give a fluorescent quinoxaline. The formation of this quinoxaline is linearly related to the amount of vitamin C in the sample, at least over the range 0-10µg/ml (0-5µM), which is a typical range for vitamin C in plasma, after its pre-storage dilution 1:2 with 10% metaphosphoric acid. The assay was calibrated daily with freshly prepared vitamin C standards. The validity of the fluorimetric assay procedure used was by cross-correlation with HPLC-based assays, and by vitamin C spiking experiments. Preliminary trial runs and literature-assessment verified the stability of the vitamin C under the collection, stabilisation and storage conditions used.

A selection of internal quality controls were included in each run, which comprised aliquots of heparinised plasma spiked with each of three levels of vitamin C and stored at -80°C in metaphosphoric acid. No commercial quality control materials or EQAS were available for this analyte.

10 Plasma iron, Total Iron Binding Capacity (TIBC) and iron % saturation (Roche Unimate Iron; Iron binding capacity test)

Measurement of plasma iron by this method depends on the reaction of free ferrous iron with ferrozine, after iron liberation from protein-binding with guanidine, followed by reduction of ferric to ferrous iron with ascorbic acid. The colour was measured on a Hitachi 912 analyser at 546nm. The calibrator was a Roche human serum with assigned value.

For samples in which there was obvious lipaemia, centrifugation ensured that the sample used for analysis was free from potentially interfering lipids.

Quality control procedures comprised both internal and external procedures including heparinised human plasma samples from the Cambridge Blood Transfusion Service, Roche human sera 'N' and 'P' (normal and pathological) at stated, half and quarter dilution and NEQAS for plasma iron.

For assay of TIBC (total iron binding capacity), plasma samples were first mixed with a fixed amount of ferrous chloride in excess of the unsaturated iron-binding capacity. The excess unbound iron was then physically removed by addition of basic magnesium carbonate powder, followed by mixing and centrifugation, leaving only the transferrin-bound iron in solution. This transferrin-bound iron was then measured by the ferrozine reaction in the presence of guanidine giving a direct measure of the total amount of transferrin (iron-binding protein) present in the sample. Percent saturation of transferrin was calculated as $100 \times [\text{plasma iron}/\text{TIBC}]$, both being expressed on a molar basis. Again for this assay the calibrator was a Roche human serum with assigned values.

Quality control procedures comprised internal procedures including heparinised human plasma samples from the Cambridge Blood Transfusion Service and Roche human sera 'N' and 'P' (normal and pathological) at stated and half dilution.

(Table 08)

11 Glutathione peroxidase in whole blood (selenium status)

This assay was based on that of Paglia and Valentine¹³. It was further developed into a standardised procedure during a European Community FLAIR Concerted Action: "Measurement of Micronutrient Absorption and Status"¹⁴. The assay involves the coupling of glutathione peroxidase-catalysed oxidation of reduced glutathione, in the presence of diethylenetriamine, cyanide, ferricyanide and tertiary butyl hydroperoxide, with the glutathione reductase-catalysed reduction of the resulting oxidised glutathione. This results in oxidation of NADPH, measured as a rate reaction at 340nm and 37°C on the Cobas Bio analyser. The samples were diluted with diethylenetriamine and Drabkins reagent in a two-stage dilution procedure before the assay. Necessary precautions included precise pH control (pH 7.0) conservation of reagent stability on ice, and rapid processing of the samples. The enzyme was measured in diluted whole blood and its activity was expressed in nmol/mg haemoglobin/min, the latter having been measured on separate, but equivalent subsamples of whole blood at Great Ormond Street Haematology Laboratory.

Running quality assurance was achieved with aliquots of heparinised whole blood from the Cambridge Blood Transfusion Service. The enzyme is stable during storage in the frozen state, and the samples were assayed after only a single freeze-thaw cycle after storage. No commercial QC materials or EQAS were available for this analyte.

(Table 09)

12 α_1 -antichymotrypsin in plasma

Different plasma acute phase proteins respond at different rates following the onset of an inflammatory stimulus¹⁵. α_1 -antichymotrypsin was selected as the most suitable choice of acute phase reactant, with respect to this time course of response as it remains elevated for longer than other acute phase proteins. This Hitachi 912-based nephelometric assay relied on a specific antibody to α_1 -antichymotrypsin, raised in rabbits, purchased from Dako and diluted in buffer containing polyethylene glycol. The six-point calibration curve used calibration sera with assigned values. The assay has proved robust and reliable over several years of use in the NDNS laboratory and samples were analysed after not more than two freeze-thaw cycles. The analyte is stable in frozen plasma, and the assay is highly sensitive, requiring only a few microlitres of sample.

Internal quality control procedures included heparinised human plasma from the Cambridge Blood Transfusion Service and serum samples with assigned values from Dako.

(Table O10)

13 Cholesterol and HDL-cholesterol in plasma

These colourimetric assays were performed on the Cobas Fara analyser.

Cholesterol was measured by the oxidation of cholesterol (liberated by cholesterol esterase), by cholesterol oxidase to 7-hydroxy-cholesterol. Hydrogen peroxide thus liberated then reacts with phenol and 4-amino-antipyrine in the presence of peroxidase, to yield a quinoneimine chromophore measurable at 520nm. The cholesterol assay was calibrated by use of the Roche human calibrator.

HDL-cholesterol has been defined as that fraction of total cholesterol which remains in solution after precipitation of low density lipoprotein (LDL) and very low density lipoprotein (VLDL) cholesterol with magnesium chloride plus phosphotungstic acid.

For this assay magnesium/phosphotungstic acid reagent was added to the plasma sample. The sample was then centrifuged, and the clear supernate was assayed by the cholesterol assay described above. The HDL assay was calibrated by the use of Roche P human calibrator. Studies have shown that this precipitation methodology yields results very similar to those of ultracentrifugal separation, which is the reference method for this assay.

Quality control procedures for the cholesterol assay comprised an internal procedure using heparinised human plasma from the Cambridge Blood Transfusion Service and a double-

strength Roche N sample. External quality control comprised NEQAS for cholesterol. For HDL-cholesterol, an ABX control serum N was used at x0.5, x1.0 and x2.0 concentrations.

(Table O11)

14 Creatinine in plasma (Roche Unimate 7 CREA)

This Hitachi 912 assay is based on the Jaffé reaction (alkaline picrate). It is a rate assay and was calibrated with Roche human serum calibrator of known creatinine concentration. Samples were analysed after not more than two freeze-thaw cycles.

Quality control was achieved with Roche human serum samples with assigned values, and for the running quality assurance human heparinised plasma from the Cambridge Blood Transfusion Service was used. External quality control procedures were NEQAS for creatinine.

(Table O12)

15 Selenium in plasma and red cells

Plasma and whole blood selenium concentrations were measured by using inductively coupled plasma mass spectrometry (ICP-MS)¹⁶ following 1 + 15 dilutions of 200µl sample volumes with a diluent which contained 1.0% v/v butan-1-ol, 0.66% m/v Triton X-100, 0.01M ammonia, 0.0002M ammoniumdihydrogen ethylenediaminetetraacetic acid and 0.002M ammoniumdihydrogen phosphate. This diluent destabilised argon-adduct ion species which otherwise would interfere with ICP-MS measurements of selenium and allows accurate analyses at ⁷⁸Se. Matrix-matched standards prepared from bovine serum were used for calibration. Red cell selenium was calculated from the whole blood and plasma concentrations, together with the haematocrit.

Internal quality control sera were prepared by adding selenium to pools of bovine sera to give increases of 0, 0.40 and 1.60 µmol/l. An additional internal quality control was provided by using a Seronorm preparation. The internal quality controls were analysed at a frequency of not less than one set of four internal quality controls per 10 duplicate test samples. Participation in quality assessment schemes from Centre du Toxicologie de Quebec and TEQAS provided external quality control.

(Table O13)

16 Mercury in blood

Measurements of mercury in whole blood were made by inductively coupled plasma mass spectrometry¹⁷. The diluents used were: (a) 2% w/v Virkon; (b) 25% w/v tetramethyl ammonium hydroxide; (c) 0.14M ammonia, 0.003M diammonium-dihydrogen EDTA, 0.03M ammonium dihydrogen phosphate, and (d) 0.7M ammonia in 1% v/v Triton X-100. To 300µl blood was added 300µl (a), then 100µl (b), then after 30 min, 5.0ml (c), 5.0ml (d), 0.3ml water and 40µl 1.0mg/l thallium solution. For calibration, mercuric nitrate standards were prepared in the presence of control bovine blood containing <1µg mercury/l. These contained the equivalent of 0, 5, 10, 20, 40 and 80 µg mercury/l blood.

The validity of the blood mercury data was established by use of 3 Seronorm samples with assigned values and participation in two external quality assessment schemes, one in the UK and one in Canada.

(Table O14)

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Crawley Hospital, Crawley
Darent Valley Hospital, Dartford
Darlington Memorial Hospital
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 Royal Cornwall Hospital, Truro
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 Royal Lancaster Hospital
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Table O1 Quality control data for haemoglobin and blood counts

*National External Quality Assessment Scheme for haematology**

Analyte**	Result	Mean***	Deviation Index
<i>haemoglobin Hb (g/l)</i>			
1A	108	110	-1.08
1B	107	106	0.33
2A	122	121	0.51
2B	108	107	0.37
3A	124	124	0.00
3B	110	111	-0.63
<i>red cell count RCC ($\times 10^{12}$ /l)</i>			
1A	3.70	3.69	0.21
1B	3.43	3.44	-0.19
2A	4.03	3.99	0.61
2B	3.64	3.55	1.43
3A	3.88	3.90	-0.31
3B	3.54	3.57	-0.36
<i>PCV (l/l)</i>			
1A	0.319	0.316	0.43
1B	0.303	0.304	-0.11
2A	0.353	0.346	0.83
2B	0.323	0.312	1.43
3A	0.349	0.353	-0.42
3B	0.321	0.323	-0.20
<i>mean cell volume MCV (fl)</i>			
1A	86.2	85.6	0.38
1B	88.4	88.1	0.20
2A	87.6	86.7	0.55
2B	88.7	88.0	0.46
3A	90.0	90.3	-0.18
3B	90.3	90.4	-0.08
<i>mean cell haemoglobin MCH (pg)</i>			
1A	29.3	29.9	-0.89
1B	31.2	30.9	0.40
2A	30.2	30.3	-0.13
2B	29.6	30.2	-0.88
3A	32.0	31.7	0.35
3B	31.1	31.2	-0.15
<i>mean cell haemoglobin concentration MCHC (%)</i>			
1A	34.0	34.9	-0.90
1B	35.3	35.0	0.28
2A	34.5	34.9	-0.41
2B	33.3	34.3	-1.06
3A	35.5	35.1	0.36
3B	34.2	34.5	-0.30
<i>white cell count WCC ($\times 10^9$ /l)</i>			
1A	4.7	4.5	0.77
1B	4.0	3.8	0.99
2A	5.5	5.4	0.15
2B	5.5	5.1	0.90
3A	0.6	0.6	0.53
3B	1.6	1.5	1.03
<i>platelet count PLT ($\times 10^9$ /l)</i>			
1A	177	171.0	0.53
1B	261	253.0	0.44
2A	224	215	0.55
2B	227	208	1.10
3A	10	10.0	-0.26
3B	72	69.0	0.52

*NEQAS samples were analysed throughout the survey.

**Data are given for two samples at three timepoints in the survey.

***The mean indicates the mean value calculated for participating laboratories using a particular type of analytical technique.

Table O2 Quality control data for red cell and serum folate, serum ferritin and serum vitamin B₁₂

*National External Quality Assessment Scheme for haematinics**

Analyte**	Result	Mean***	Deviation Index
<i>Red cell folate (μg/l)</i>			
1C	247	270	-0.57
2C	229	266	-0.93
3C	241	294	-1.51
<i>Ferritin (μg/l)</i>			
1A	861	927	-0.71
2A	10	10	-0.16
2B	2370	2370	0.00
3A	92	88	1.05
3B	358	386	-0.72
<i>Vitamin B₁₂ (ng/l)</i>			
1A	406	402	0.09
1B	275	276	-0.05
2A	422	475	-1.11
2B	395	439	-1.01
3A	309	319	-0.31
3B	212	227	-0.66
<i>Serum folate (μg/l)</i>			
1A	4.7	4.6	0.25
1B	5.8	5.5	0.46
2A	5.1	6.1	-1.59
2B	2.1	2.6	-1.96

*NEQAS samples were analysed throughout the survey.

**Data are given for two samples at three timepoints in the survey.

***The mean indicates the mean value calculated for participating laboratories using a particular type of analytical technique.

Table O3 Quality control data for homocysteine

Test (units)	Wave*	In-house Control				Control low					Control medium					Control high				
		Mean	sd	n	% CV	Mean	sd	n	%CV	Target range	Mean	sd	n	%CV	Target range	Mean	sd	n	%CV	Target range
Hcy** ($\mu\text{mol/l}$)	1	10.86	0.19	16	1.75	7.25	0.18	8	2.45	7.0 (5.25 - 8.75)	12.26	0.18	16	1.49	12.5 (10.0 - 15.0)	24.88	0.32	8	1.29	25.0 (20.0 - 30.0)
	2	10.86	0.33	20	3.01	6.97	0.20	14	2.86	7.0 (5.25 - 8.75)	12.22	0.31	13	2.50	12.5 (10.0 - 15.0)	25.09	0.53	13	2.11	25.0 (20.0 - 30.0)
	3	10.75	0.46	18	4.26	6.82	0.29	11	4.20	7.0 (5.25 - 8.75)	11.73	0.46	15	3.95	12.5 (10.0 - 15.0)	23.95	0.46	10	1.94	25.0 (20.0 - 30.0)
	4	10.80	0.36	27	3.32	7.08	0.47	18	6.69	7.0 (5.25 - 8.75)	12.44	0.26	17	2.07	12.5 (10.0 - 15.0)	24.84	0.64	19	2.59	25.0 (20.0 - 30.0)

*Fieldwork wave

1: July-Sept 2000

2: Oct-Dec 2000

3: Jan-March 2001

4: April-June 2001

** Participation in the NEQAS scheme for iron for 57 samples yielded a mean deviation index of -0.2 for sample concentrations between 7.52 and 44.8 $\mu\text{mol/l}$.

Table O4 Quality control data for Vitamin A, E and carotenoids

Test	Wave	In-house Control (PQA)				In-house Control (CQA)				NIST (all waves)**		NEQAS (all waves)**	
		Mean	sd	% CV	n	Mean	sd	% CV	n	Mean DI	DI Range	Mean DI	DI Range
Retinol (µmol/l)	1	1.703	0.005	0.30	16	1.279	0.007	0.57	16	0.59	-0.19 to 1.43	-0.25	-0.97 to 0.59
	2	1.701	0.004	0.25	20	1.279	0.007	0.56	20				
	3	1.701	0.003	0.19	18	1.277	0.005	0.36	18				
	4	1.701	0.005	0.28	37	1.281	0.008	0.60	37				
β-carotene (µmol/l)	1	0.300	0.008	2.80	16	0.325	0.008	2.41	16	-0.56	-1.61 to -0.43	0.72	-0.17 to 1.33
	2	0.296	0.006	2.08	20	0.329	0.005	1.43	20				
	3	0.294	0.006	2.11	18	0.327	0.005	1.50	18				
	4	0.296	0.005	1.85	37	0.328	0.008	2.53	37				
α-carotene (µmol/l)	1	0.121	0.002	1.99	16	0.157	0.005	2.95	16	-0.37	-0.86 to 1.00		
	2	0.122	0.005	4.19	20	0.154	0.007	4.45	20				
	3	0.125	0.002	1.94	18	0.163	0.005	2.94	18				
	4	0.122	0.003	2.83	37	0.163	0.004	2.58	37				
α-cryptoxanthin (µmol/l)	1	0.022	0.003	12.39	16	0.030	0.003	10.45	16				
	2	0.022	0.002	11.08	19	0.031	0.002	6.88	19				
	3	0.022	0.003	14.37	18	0.031	0.004	11.52	18				
	4	0.022	0.003	13.43	37	0.029	0.005	17.60	37				
β-cryptoxanthin (µmol/l)	1	0.127	0.003	2.51	16	0.232	0.004	1.63	16	-0.25	-1.00 to 1.50		
	2	0.127	0.004	3.40	20	0.232	0.004	1.73	20				
	3	0.129	0.003	1.95	18	0.231	0.003	1.30	18				
	4	0.128	0.004	3.01	37	0.232	0.004	1.73	37				
Xanthophyll (µmol/l)	1	0.106	0.003	3.18	16	0.115	0.004	3.65	16	-0.22	-0.80 to 1.00		
	2	0.103	0.003	3.14	20	0.117	0.005	4.08	20				
	3	0.100	0.003	2.67	18	0.122	0.003	2.67	18				
	4	0.103	0.005	4.80	37	0.122	0.004	3.03	37				
Lycopene (µmol/l)	1	0.659	0.009	1.34	16	0.446	0.005	1.10	16	-0.89	-1.35 to 0.00		
	2	0.661	0.005	0.72	20	0.446	0.007	1.63	20				
	3	0.662	0.004	0.59	18	0.460	0.014	3.06	18				
	4	0.662	0.005	0.82	37	0.464	0.011	2.30	37				
α-tocopherol (µmol/l)	1	16.336	0.321	1.97	16	16.446	0.051	0.31	16	0.35	-0.35 to 1.18	-0.5	-1.92 to 3.08
	2	16.296	0.265	1.63	20	16.476	0.052	0.32	20				
	3	16.300	0.228	1.40	18	16.476	0.061	0.37	18				
	4	16.476	0.216	1.31	37	16.483	0.074	0.45	37				
γ-tocopherol (µmol/l)	1	1.028	0.025	2.40	16	1.428	0.036	2.51	16	0.66	0.09 to 1.14		
	2	1.040	0.050	4.78	20	1.410	0.027	1.94	20				
	3	1.024	0.037	3.65	18	1.405	0.051	3.61	18				
	4	1.014	0.039	3.89	37	1.414	0.020	1.42	37				
Retinyl palmitate (µmol/l)	1	0.004	0.001	28.93	16	0.006	0.001	18.79	16	0.13	-1.00 to 1.42		
	2	0.008	0.004	54.06	20	0.011	0.006	57.50	20				
	3	0.009	0.003	33.28	18	0.011	0.008	76.56	18				
	4	0.007	0.004	56.47	37	0.009	0.005	60.79	37				

*Fieldwork wave

1: July-Sept 2000

2: Oct-Dec 2000

3: Jan-March 2001

4: April-June 2001

**NIST and NEQAS data are given for the entire survey duration.

Table O5 Quality control data for 25-hydroxyvitamin D

Test (units)	Wave*	QA				BioRad Lyphochek Control				Kit Control**			
		Mean	sd	n	% CV	Mean	sd	n	Target	Mean	sd	n	Target
25OH Vit D (nmol/l)	1	67.7	6.9	24	10.2	33.31	3.2	21	30 (27 - 32)	43.4	4.8	9	30.75 (24.3 - 51.3)
										38.2	2.9	15	37.25 (24.3 - 50.8)
	2	60.6	10.1	38	16.7	32.46	4.8	38	30 (27 - 32)	38.7	4.3	15	42.50 (23.8 - 50.8)
										38.7	7.1	18	37.00 (23.8 - 50.8)
										38.2	7.3	5	34.50 (23.5 - 50.0)
										34.6	3.1	31	38.75 (23.5 - 50.0)
	3	61.5	8.7	31	14.07	30.94	2.6	31	30 (27 - 32)	36.3	2.6	35	32.80 (23.5 - 50.0)
	4	51.9	5.9	39	11.4	27.77	3.8	39	30 (27 - 32)	35.2	1.9	4	39.80 (23.5 - 50.0)

*Fieldwork wave

1: July-Sept 2000

2: Oct-Dec 2000

3: Jan-March 2001

4: April-June 2001

**Kit QC (Low) had target ranges based on Incstar kit. Bio Rad based on Immunodiagnostic RIA. Participation in the EQAS scheme for Hydroxyvitamin D for 24 samples yielded a mean deviation index of -0.4 for sample concentrations between 8.98 and 74.75µmol/l.

Table O6 Quality control data for Erythrocyte Glutathione Reductase Activation Coefficient, Erythrocyte Asparate Aminotransferase Activation Coefficient, and Erythrocyte Transketolase Activity and Activation Coefficient

Test	Wave*	In-house controls - UK				In-house control - Gambian				In-house control - Tanzanian				In-house Control - FAD Addition			
		Mean	sd	n	% CV	Mean	sd	n	% CV	Mean	sd	n	% CV	Mean	sd	n	% CV
EGRAC (Ratio)	1	1.36	0.03	53	2.29	1.68	0.05	16	2.9	2.45	0.12	12	4.86	1.04	0.02	16	2.15
	2	1.36	0.02	59	1.55	1.70	0.06	12	3.6	2.38	0.14	13	5.73	1.04	0.02	11	1.64
	3	1.36	0.02	55	1.58	1.72	0.05	11	2.8	2.51	0.13	11	5.07	1.03	0.02	13	1.97
	4	1.36	0.02	88	1.79	1.70	0.05	22	2.9	2.45	0.13	18	5.43	1.02	0.02	19	2.28
In-house Control - PLP addition																	
EAATAC (Ratio)	1	1.83	0.02	54	1.18	2.07	0.04	15	1.7	2.00	0.02	14	1.08	1.16	0.01	15	0.98
	2	1.82	0.01	59	0.80	2.07	0.02	12	1.2	1.97	0.01	13	0.69	1.16	0.01	12	1.03
	3	1.81	0.02	56	1.14	2.05	0.03	12	1.3	1.98	0.01	12	0.73	1.16	0.01	12	0.94
	4	1.83	0.02	82	1.29	2.08	0.04	16	2.1	1.99	0.02	16	1.22	1.16	0.01	16	1.16
ETK-basal activity (μ mol/g Hb/min)	1	0.64	0.02	50	2.51	0.41	0.02	13	5.4	0.55	0.02	15	3.47				
	2	0.68	0.02	57	2.69	0.50	0.03	13	5.5	0.58	0.03	15	4.47				
	3	0.67	0.02	54	2.36	0.51	0.03	14	5.4	0.58	0.02	14	3.10				
	4	0.67	0.02	80	2.49	0.51	0.02	20	4.5	0.58	0.01	20	2.41				
ETKAC (Ratio)	1	1.19	0.03	52	2.24	1.16	0.04	14	3.7	1.23	0.03	16	2.47				
	2	1.19	0.02	59	1.91	1.15	0.04	13	3.3	1.21	0.03	14	2.14				
	3	1.20	0.02	54	1.89	1.16	0.03	14	2.8	1.22	0.04	14	3.32				
	4	1.20	0.02	82	1.84	1.16	0.03	19	2.9	1.22	0.03	21	2.18				

*Fieldwork wave

- 1: July-Sept 2000
- 2: Oct-Dec 2000
- 3: Jan-March 2001
- 4: April-June 2001

Table O7 Quality control data for vitamin C

Test (units)	Wave*	Low Control				Mid Control				High Control			
		Mean	sd	n	% CV	Mean	sd	n	% CV	Mean	sd	n	% CV
Vitamin C ($\mu\text{mol/l}$)	1	2.49	0.15	15	5.99	5.37	0.25	16	4.74	9.25	0.34	15	3.68
	2	2.51	0.10	18	3.90	5.52	0.15	18	2.67	9.52	0.17	18	1.77
	3	2.57	0.12	35	4.53	5.59	0.16	35	2.78	9.59	0.21	34	2.20
	4	2.78	0.08	24	2.89	5.53	0.19	26	3.42	9.03	0.19	26	2.15

*Fieldwork wave

1: July-Sept 2000

2: Oct-Dec 2000

3: Jan-March 2001

4: April-June 2001

Table O8 Quality control data for iron and Total Iron Binding Capacity

Test (units)	Wave*	In-house Control				Roche N				Roche P			
		Mean	sd	n	% CV	Mean	sd	n	Target range	Mean	sd	n	Target range
Iron (µmol/l)**	1	15.23	0.54	20	3.57	17.72	0.45	20	17.7 (15.9 - 19.5)	31.76	0.42	20	32.8 (29.5 - 36.1)
	2	15.93	0.63	17	3.95	18.35	0.93	17	17.7 (15.9 - 19.5)	32.85	1.09	17	32.8 (29.5 - 36.1)
	3	15.79	0.70	7	4.41	18.55	0.59	7	17.7 (15.9 - 19.5)	33.31	0.60	7	32.8 (29.5 - 36.1)
	4	15.74	0.36	13	2.27	18.41	0.59	13	17.7 (15.9 - 19.5)	33.04	0.75	13	32.8 (29.5 - 36.1)
TIBC(µmol/l)***	1	54.00	2.14	13	3.96	61.73	2.15	13	61.3 (55.2 - 67.4)	50.62	1.76	13	49.1 (44.2 - 54.0)
	2	55.72	2.18	15	3.91	62.35	2.03	15	61.3 (55.2 - 67.4)	51.14	1.44	15	49.1 (44.2 - 54.0)
	3	57.75	2.01	7	3.48	65.89	2.20	7	61.3 (55.2 - 67.4)	52.55	2.36	7	49.1 (44.2 - 54.0)
	4	57.20	1.17	12	2.05	66.18	1.51	12	61.3 (55.2 - 67.4)	51.70	1.07	12	49.1 (44.2 - 54.0)

*Fieldwork wave

1: July-Sept 2000

2: Oct-Dec 2000

3: Jan-March 2001

4: April-June 2001

**For iron, in addition to the results obtained on undiluted samples given in the table, some values were also obtained on 1:2 and 1:4 dilutions of one Roche N Control in order to check linearity for a wide range of sample concentrations.

Participation in the NEQAS scheme for iron for 60 samples yielded a mean deviation index of -0.2 for sample concentrations between 10.8 and 36.8 µmol/l.

***For TIBC in addition to the results obtained on undiluted samples given in the table, some values were also obtained on 1:2 dilution of one Roche N Control to check linearity for a wide range of sample concentrations.

Table O9 Quality control data for glutathione peroxidase

Test (units)	Wave*	In-house Control			
		Mean	sd	n	% CV
GPx (nmol NADPH/min/mg Hb)	1	162.83	9.03	26	5.55
	2	169.38	9.59	28	5.66
	3	162.05	10.00	27	6.17
	4	166.13	7.39	41	4.45

*Fieldwork wave

- 1: July-Sept 2000
- 2: Oct-Dec 2000
- 3: Jan-March 2001
- 4: April-June 2001

Table O10 Quality control data for α_1 -antichymotrypsin

Test (units)	Wave*	In-house Control				Dako Low Control				Dako High Control			
		Mean	sd	n	% CV	Mean	sd	n	Target range	Mean	sd	n	Target range
α_1 -antichymotrypsin (g/l)	1	0.24	0.01	7	4.71	0.25	0.01	7	0.24 (0.20-0.28)	0.62	0.02	7	0.63 (0.54-0.72)
	2	0.24	0.01	8	3.19	0.25	0.01	8	0.24 (0.20-0.28)	0.64	0.02	8	0.63 (0.54-0.72)
	3	0.23	0.01	7	5.79	0.25	0.01	7	0.24 (0.20-0.28)	0.64	0.03	7	0.63 (0.54-0.72)
	4	0.24	0.01	11	3.39	0.25	0.01	11	0.24 (0.20-0.28)	0.63	0.01	11	0.63 (0.54-0.72)

*Fieldwork wave

1: July-Sept 2000

2: Oct-Dec 2000

3: Jan-March 2001

4: April-June 2001

**In addition to the results in the table, values were obtained for Dako High 1.5 times the normal concentration to check the linearity over a wide range of sample concentrations.

Table O11 Quality control data for total cholesterol and HDL-cholesterol

Test (units)	Wave*	In-house Control				Roche N**				Roche P**			
		Mean	sd	n	% CV	Mean	sd	n	Target range	Mean	sd	n	Target range
Total cholesterol (mmol/l)	1	4.40	0.08	14	1.78	5.35	0.09	14	5.31 (4.78 - 5.84)	3.90	0.06	14	3.83 (3.45 - 4.21)
	2	4.56	0.08	18	1.81	5.65	0.05	18	5.31 (4.78 - 5.84)	4.10	0.05	18	3.83 (3.45 - 4.21)
	3	4.59	0.05	17	1.02	5.60	0.06	17	5.31 (4.78 - 5.84)	4.04	0.05	17	3.83 (3.45 - 4.21)
	4	4.55	0.07	26	1.54	5.60	0.07	26	5.31 (4.78 - 5.84)	4.07	0.04	26	3.83 (3.45 - 4.21)
HDL- cholesterol (mmol/l)						ABX Control Normal							
	1	0.95	0.02	16	2.01	0.82	0.04	16	0.89 (0.69 - 1.09)				
	2	0.96	0.03	17	3.42	0.80	0.03	17	0.89 (0.69 - 1.09)				
	3	0.96	0.02	16	2.39	0.81	0.03	16	0.89 (0.69 - 1.09)				
	4	0.95	0.03	28	3.38	0.82	0.04	28	0.89 (0.69 - 1.09)				

*Fieldwork wave

1: July-Sept 2000

2: Oct-Dec 2000

3: Jan-March 2001

4: April-June 2001

** For Cholesterol in addition to the results obtained on undiluted samples given in the table, some values were also obtained on double strength of one Roche N Control to check linearity for a wide range of sample concentrations. For HDL Cholesterol in addition to the results obtained on undiluted samples given in the table, some values were also obtained on double strength and 1:2 dilution of one ABX Control Normal to check linearity for a wide range of sample concentrations. Participation in the NEQAS scheme for iron for 78 samples yielded a mean deviation index of 0.63 for sample concentrations between 2.05 and 4.97 mmol/l. Participation in the NEQAS scheme for iron for 11 samples yielded a mean deviation index of 0.4 for sample concentrations between 0.89 and 2.43 mmol/l.

Table O12 Quality control data for plasma creatinine

Test (units)	Wave*	In-house control				Precinorm U				Precipath U			
		Mean	sd	n	% CV	Mean	sd	n	Target range	Mean	sd	n	Target range
Plasma creatinine** (μ mol/l)	1	90.21	2.22	7	2.465	111.21	2.71	7	98.1 (80.4-115.8)	349.2	7.65	7	359 (293-425)
	2	89.75	3.97	8	4.422	110.97	2.86	8	98.1 (80.4-115.8)	352.4	11.32	8	359 (293-425)
	3	87.71	5.22	7	5.955	110.61	4.28	7	98.1 (80.4-115.8)	358.6	17.03	7	359 (293-425)
	4	92.23	2.21	11	2.395	112.34	1.48	11	98.1 (80.4-115.8)	361.7	9.34	11	359 (293-425)

*Fieldwork wave

1: July-Sept 2000

2: Oct-Dec 2000

3: Jan-March 2001

4: April-June 2001

**For plasma creatinine, NEQAS participation for 40 samples yielded a mean deviation of -1.21 with a concentration range for samples of 59.20-65.30 mmol/l.

Table O13 Quality control data for plasma and whole blood selenium

Internal Quality Control	Target (μmol/l)	Observed (μmol/l)		
		Mean	sd	n
Plasma selenium (μmol/l)				
SE1	0.27	0.30	0.015	125
SE2	0.69	0.69	0.032	117
SE3	1.32	1.34	0.059	123
SE4	1.75	1.77	0.057	126
SEN	0.92	0.92	0.030	100
Whole blood selenium (μmol/l)				
QCA	0.35	0.35	0.024	155
QCB	0.71	0.71	0.028	145
QCC	1.47	1.48	0.049	140
QCD	1.97	2.00	0.061	127
S1	1.01	1.03	0.038	129
S2	1.42	1.46	0.053	153

Table O14 Quality control data for whole blood mercury

Internal Quality Control	Observed ($\mu\text{g/l}$)		
	Mean	sd	<i>n</i>
QC1	2.70	0.152	70
QC2	4.88	0.183	70
QC3	9.77	0.274	61
NQC1	2.43	0.129	190
NQC2	5.05	0.245	184
NQC3	10.10	0.414	172

Appendix P

Urine and tap water collection, transport and analysis procedures, and quality control data

1 Introduction

The relationship between dietary intakes of sodium, present in salt (sodium chloride), and blood pressure has been investigated in relation to the established association between hypertension and cardio-vascular disease but the evidence regarding the relative importance of dietary sodium intakes remains unclear¹. Nevertheless the COMA Panel on Dietary Reference Values accepted the possibility that by reducing sodium intakes “public health benefits such as reduced cardiovascular disease mortality might arise..” while acknowledging that “...other interventions such as reduction of obesity, increased potassium, reduced energy intakes, altered quantity and quality of fat intake and reduced alcohol consumption may also have at least as great an impact on such diseases”². It was considered important therefore that this survey obtained information on both sodium intakes and blood pressure.

It is not possible to obtain accurate estimates of dietary intake of sodium from weighed food intake information, mainly because it is not possible to assess accurately the amount of salt added to food in cooking or at the table. Estimates of sodium and potassium intakes can be obtained by measuring their urinary excretion, assuming the body is in balance for these minerals.

Since the rate of excretion of both sodium and potassium varies with intake, the best estimate of intake is obtained from the analysis of a urine sample taken from a complete 24-hour collection, which allows for the fluctuations in intake over the collection period. A spot urine sample is not sufficiently robust to estimate intakes of sodium, potassium, and fluoride as well as to measure urea (necessary to monitor nitrogen turnover). There were some concerns about the acceptability of a 24-hour collection among this population following the response in the feasibility study for the NDNS of respondents aged 65 or over. However, the feasibility study for this NDNS found the 24-hour collection method to be acceptable to respondents (see *Appendix C*).

2 Collection and transport

The aim was to have a complete collection of urine over a 24-hour period from as many of the respondents as possible, and to analyse a sample from the complete collection for sodium, potassium, creatinine, urea and fluoride. An additional sample from the same urine collection was stored for the assay of excreted fungal metabolites at a later date. In addition, a single tap water sample was collected from each household, for fluoride analysis only.

The collection of a complete 24-hour urine sample is a demanding task, and previous experience has shown that samples are frequently incomplete. Therefore, an additional procedure ('PABA-check') has been devised. This is designed to monitor the completeness of the collection by asking respondents to take three 80mg tablets of para-aminobenzoic acid (PABA) at suitable intervals during the 24-hour collection period. Measurement of the PABA concentration and total volume of the collected sample permits the calculation of the percentage recovery of the administered PABA, which in turn is a measure of completeness of the 24-hour urine collection. The taking of PABA required signed consent from the respondents.

This procedure was approved by the Multi-centre and Local Research Ethics Committees and was successfully piloted in the feasibility study. It was included in part of Wave 1 of the mainstage survey. One respondent in Wave 1 exhibited an acute allergic reaction with generalised urticaria and periorbital oedema soon after taking the three PABA doses. Although this occurrence may have been a chance association, the survey doctor decided, after seeking external advice, to recommend the discontinuation of the PABA-check procedure as a precaution. A challenge test performed later, in July 2001, concluded that PABA was not the cause of the respondent's allergic symptoms. From part-way through Wave 1 until the end of the survey, all subsequent 24-hour urines were collected without PABA-check. In the following sections the method described for collecting the urine sample includes both the PABA-check and the non-PABA-check procedures.

All equipment was provided by HNR, but the delivery of equipment to the individual respondents, the supervision of procedures and the preparation and posting of the samples of urine for subsequent analysis was carried out by the interviewers in or from the respondent's home.

2.1 Urine collection procedure when PABA was taken

Respondents were provided with an explanation of the procedures and their purpose (*L2 and L5, Appendix K*). Interviewers used form L5A to check whether the respondent had a history

of allergy or regular use of drugs that would contraindicate the taking of PABA, and the survey doctor scrutinised all reported cases. If there were no contraindications, interviewers asked the respondent to sign the consent (Z8) for the taking of PABA, and a date was arranged for the urine collection to take place. Just before the agreed date, the interviewer provided the respondent with the following:

- a blister pack of three 80mg tablets of PABA
- instructions on when to take the PABA tablets and how to make the 24-hour collection (L5)
- instructions (W3) on how to take subsamples of the urine for postal delivery, under supervision by the interviewer
- a form (M3A) to record the date of collection, the times of taking the PABA tablets and any problems with the urine collection or PABA procedures
- a safety-pin to be attached to an item of under-clothing as a reminder for urine collection
- a 5-litre plastic bottle for the urine, containing approximately 5g boric acid as preservative
- an empty 2-litre plastic bottle for urine collections outside the home, together with a plastic carrying bag
- a 1-litre plastic jug for initial collection of each urine sample before transfer to the 5- or 2-litre bottles. All urine was to be transferred to the 5-litre bottle with swirling to mix in the preservative, as soon as possible after each collection.

The usual (suggested) procedure was for the respondent to take the first PABA tablet at breakfast time and then to begin the urine collection after breakfast, and continue collecting it until just before breakfast the following day. The other two PABA tablets were usually taken at lunchtime and suppertime, respectively.

On the day after starting the collection, the interviewer paid another visit to the respondent to complete the procedure. The following items were provided:

- protective disposable gloves
- an electronic balance weighing up to 10kg in 0.01kg divisions
- four 10ml Sarstedt³ syringe-type urine containers without preservative, plus extension tubes
- disposable absorbent paper and mats

- pre-printed cryo-labels with the respondent's serial number and barcode; plus a cryo-pen to add the date to these
- postal containers consisting of four plastic screw-cap containers with absorbent paper liners, inside a cardboard box, inside a padded 'Jiffy' bag
- parcel tape and scissors
- record forms (M3B), to record the weight of the 5-litre bottle plus urine collection.

Once the 24-hour collection was completed, the urine collection was thoroughly mixed. The interviewer weighed the total collection and the weighing was repeated, and the weight recorded on M3B. Completed forms M3A and M3B were placed in the Jiffy bag. The respondent was then asked to take four aliquots, each 10ml, from the total collection using Sarstedt syringes. If the respondent was unable, or unwilling, to take the aliquots themselves, the interviewers were asked to take the subsamples if they were happy to do so. If the collection was tainted with blood no subsamples were taken. The interviewer added the pre-printed cryo-labels; added the date to these, and then transferred all four to the postal plastic containers, which were then transferred to the cardboard box and then to the Jiffy bag, which had a prepaid postage label addressed to HNR. The Jiffy bag was finally sealed with parcel tape and posted.

If the respondent failed to make a full 24-hour collection ethics approval did not allow for a second attempt. Aliquots were still taken, from the incomplete collection, and a note made of the reasons why a full collection had not been made. The respondent was asked to discard any remaining urine in the WC and the used plastic containers and other waste materials were discarded as household waste. Samples were sent by first class post to HNR where they were analysed. On arrival at HNR the samples were stored at -40°C or lower.

2.2 Urine collection procedure when PABA was not taken

The procedure was essentially the same, except that all of the equipment, forms and procedural elements that were specific to the PABA-check procedure, were omitted. More detailed information was collected on M3A about missed voidings.

3 Tap water collection procedure

A collection of tap water was made from the respondent's home to measure levels of fluoride in domestic water supplies. In both fluoridated and non-fluoridated areas, the level of fluoride in the domestic water fluctuates, therefore it was important to obtain samples from each participating household at the time of the survey.

A sample of tap water, if possible from the mains cold water supply to the house, was collected by the respondent in a clean plastic container, and a single 10ml sample was transferred to a Sarstedt monovette without preservative. This was sent, in a postal container in a Jiffy bag (as described for the urine samples except that it was a single sample) to HNR for fluoride analysis.

Results of the tap water analysis will not be included in any of the four volumes.

4 Analysis Procedures

4.1 Para-amino benzoic acid (PABA)

The basis of this assay is the Bratton and Marshall diazo coupling reaction⁴ following diazotisation of the aromatic amine with nitrous acid, as modified and adopted by Bingham and Cummings⁵. A further modification (Bingham, personal communication) has been the transfer of the colour-development and measurement steps to a microtitre plate procedure to increase sample throughput.

An acceptable recovery range, mean \pm 2 standard deviations (sd), based on the theoretical 180mg PABA is 93 \pm 4% or 85 to 101%, that is, 153 to 182 mg. This makes allowance for factors such as individual variance in completeness of excretion, and the presence of small amounts of substances giving the same colour reaction as PABA which are natural components of the diet or of body chemistry.

There are no external quality control samples or assurance schemes available for PABA; an internal running control urine sample was used to monitor assay drift.

(Table P1)

4.2 Sodium and potassium

The assay measures both analytes simultaneously, and was performed by flame photometry with an 'Instrumentation Laboratory' photometer, calibrated by a lithium nitrate internal calibrant of known concentration. Quality Control (QC) material was Randox QC urine with assigned values for sodium and potassium, which was measured at normal strength, double and half strength, to check linearity. Quality assurance used an in-house human urine sample and National External Quality Assurance Scheme (NEQAS) was available. The concentration of each alkali metal was expressed as a molar ratio to creatinine, measured as

described below. These analytes are stable and were thus unaffected by the duration or temperature of storage.

(Table P2)

4.3 Creatinine

This Hitachi 912 assay is based on the Jaffé reaction (alkaline picrate). It is a rate assay and was calibrated with Roche serum calibrator of known concentration. A 1:10 dilution was necessary, and a Randox Urine Control with an assigned value was used for quality control. Linearity was checked with double and half strength concentrations of the QC materials.

(Table P2)

4.4 Urea

In this Hitachi 912 assay, urea in the samples was degraded to ammonia plus carbon dioxide. The released ammonia converted 2-oxoglutarate to glutamate, which was coupled with the oxidation of NADH, measured at 340nm. The assay used a kinetic rate-measurement and was calibrated by a human Roche serum calibrator of known urea content.

Quality control procedures comprised internal quality assurance with a pool of boric-acid-stabilised urine and external quality control used NEQAS for urea.

(Table P3)

4.5 Urinary Fluoride

This was measured by a Jenway pH/Ion Analyser Meter model 3340, with a Jenway Fluoride Ion Selective Electrode. Samples and standards were diluted with a buffer pH 5. Quality control was with urine with assigned fluoride values from Randox Laboratories Ltd., N.Ireland, plus a running internal quality assurance control urine sample.

The procedure for measurement of fluoride in tap water was essentially the same as that for its measurement in urine, except that urine-based quality controls were not required.

(Table P4)

References and endnotes

- ¹ Swales JD. Salt saga continued. *Br Med J* 1988; **297**: 307-308.
- ² Department of Health. Report on Health and Social Subjects: 41. *Dietary Reference Values for Food Energy and Nutrients for the United Kingdom*. HMSO (London, 1991).
- ³ Sarstedt Ltd, 68 Boston Road, Beaumont Leys, Leicester LE4 1AW: 'Urine Monovette without stabiliser'.

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- ⁴ Bratton AC, Marshall EK. A new coupling component for sulphonamide determination. *J. Biol. Chem.* 1939; **128**: 537-541.
- ⁵ Bingham S, Cummings JH. The use of 4-aminobenzoic acid as a marker to validate the completeness of 24 hr urine collections in man. *Clin. Sci.* 1983; **64**: 629-635.

Appendix Q: Units of measurement used in the Report

Units of energy

- kcal kilocalorie; 1000 calories. A unit used to measure the energy value of food.
- kJ kiloJoule; 10^3 or 1000 Joules. A unit used to measure the energy value of food. 1kcal = 4.18kJ.
- MJ megaJoule; 10^6 or 1000,000 joules. A unit used to measure the energy value of food.

Units of length

- cm centimetre; one-hundredth of 1 metre
- m metre; 100 centimetres
- mm millimetre; one-thousandth of 1 metre

Units of volume

- dl decilitre; one-tenth of 1 litre
- fl femtolitre; 1 litre $\times 10^{-15}$
- l litre; 1000 millilitres
- l/l litre per litre (ratio)
- ml millilitre; 10^{-3} litre; one-thousandth of 1 litre

Units of weight

- g gram
- kg kilogram; 1000 grams
- mg milligram; 10^{-3} grams; one-thousandth of 1 gram
- mmol millimol; the atomic or molecular weight of an element or compound in grams $\times 10^{-3}$
- μ g microgram; 10^{-6} grams; one-millionth of 1 gram
- μ mol micromol; the atomic or molecular weight of an element or compound in grams $\times 10^{-6}$
- ng nanogram; 10^{-9} grams; one-thousand-millionth of 1 gram
- nmol nanomol; the atomic or molecular weight of an element or compound in grams $\times 10^{-9}$
- pg picogram; 10^{-12} grams; one-million-millionth of 1 gram
- pmol picomol; the atomic or molecular weight of an element or compound in grams $\times 10^{-12}$

Appendix Q: Units of measurement used in the Report

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- dl decilitre; one-tenth of 1 litre
- fl femtolitre; 1 litre $\times 10^{-15}$
- l litre; 1000 millilitres
- l/l litre per litre (ratio)
- ml millilitre; 10^{-3} litre; one-thousandth of 1 litre

Units of weight

- g gram
- kg kilogram; 1000 grams
- mg milligram; 10^{-3} grams; one-thousandth of 1 gram
- mmol millimol; the atomic or molecular weight of an element or compound in grams $\times 10^{-3}$
- μ g microgram; 10^{-6} grams; one-millionth of 1 gram
- μ mol micromol; the atomic or molecular weight of an element or compound in grams $\times 10^{-6}$
- ng nanogram; 10^{-9} grams; one-thousand-millionth of 1 gram
- nmol nanomol; the atomic or molecular weight of an element or compound in grams $\times 10^{-9}$
- pg picogram; 10^{-12} grams; one-million-millionth of 1 gram
- pmol picomol; the atomic or molecular weight of an element or compound in grams $\times 10^{-12}$

Appendix R The oral health survey

1 Introduction

The NDNS programme presents a unique opportunity to link accurate and detailed information on diet and nutrition with data on oral health for a representative sample of the population of Great Britain. There are established associations between diet and oral health, e.g. dietary sugars and tooth decay or micronutrient deficiency and mucosal disease. There are also associations between oral health and foods selection, particularly for people who have few or no natural teeth. It has been shown that the number of teeth can be related to food consumption and an individual's haematological status may also be associated with their oral health.

The oral health component of the NDNS adults aged 19 to 64 years differed from earlier NDNS surveys. Previously, the oral health component comprised an oral health interview and a dental examination conducted by dentists. At the time of the NDNS feasibility study the Food Standards Agency and DH were interested in validating an alternative method to collecting oral health information. Details of the method and the findings of the feasibility study and two validation exercises, including recommendations for mainstage, are reported on in a separate report¹. The feasibility study and the validation exercises supported the revised technique for collecting information on oral health status. The oral health component of the NDNS Adults thus comprised an oral health interview and a self-reported tooth and amalgam filling count. Detailed information on the oral health status of adults is available from the most recent survey of Adult Dental Health².

2 Objectives of the oral health survey

The oral health component of the NDNS had four main objectives:

- To identify whether or not the participants in the survey had any natural teeth. In those who had, to identify by means of a self-reported count the number of teeth present and the number of teeth containing amalgam fillings;
- To investigate, through an interview and by analysis of the food diaries, dietary and other behaviour that may affect the mouth and teeth;

- To investigate through an interview perceived ability to chew and swallow foods and the affect of numbers of teeth upon that ability;
- To enable oral health status to be correlated with data on food and nutrient intake and nutritional status.

3 The oral health survey

All respondents to the NDNS were eligible to participate in the oral health component, although only those screened at the placement interview as having natural teeth were eligible to take part in the tooth and amalgam filling count. Verbal consent was required for participation in this component.

As respondents could take part in some but not all components, there were some that completed the oral health component but did not complete a dietary diary. There were a smaller number who completed a dietary diary but not the oral health component.

3.1 Self-tooth and amalgam filling count

Prior to fieldwork, interviewers were trained to conduct the tooth and amalgam filled tooth count in a face-to-face briefing. The purpose of the exercise was explained in detail and interviewers were briefed on how to instruct respondents. Interviewers were also given time to practise the protocol for themselves.

Interviewers were instructed to explain the procedure for completing the tooth and amalgam filling count at the dietary interview and to leave the instruction card (*D7, Appendix A*), the leaflet to help identify amalgam fillings (*D8, Appendix A*), and the disposable dental mirror with the respondent. The mirror was provided to help respondents count their teeth and amalgam fillings and in particular filled teeth in the upper jaw. Respondents were asked to count the number of natural teeth they had in their upper and lower jaws separately. Having firstly removed any dentures, all natural teeth were counted, including crowns and any part of a tooth if visible (or that could be felt) above the gum. Respondents were encouraged to carry out the exercise as many times as they liked within the period between the dietary interview and the post-dietary recording period interview until they were satisfied that their count was accurate.

Respondents were asked to record on the instruction card the number of teeth they counted in the upper and lower jaws separately. The number of teeth containing amalgam fillings in the upper and lower jaws was also recorded. The record cards were collected by the interviewers at their final call at the end of the dietary recording period.

3.2 Oral health interview

The oral health questionnaire was developed in consultation with Professor Angus Walls from the Dental School at the University of Newcastle-upon-Tyne and Ian Cooper at the Department of Health.

The oral health interview was administered as part of the post-dietary recording period interview and included questions on:

- number of natural teeth;
- use of dentures and problems associated with denture use;
- problems with natural teeth (sensitivity, discomfort, toothache);
- problems experienced with mouth, teeth or dentures and action taken;
- difficulties experienced when biting, swallowing, chewing food;
- reported ease of biting, chewing and swallowing representative food types;
- attendance at the dentist;
- brand of toothpaste used and fluoride content.

4 The response

Overall, 1737 respondents completed the self count of teeth and amalgam fillings. This represents 77% of the responding sample and 96% of the diary sample. Response is covered in more detail in Chapter 2 and Appendix D of this Report.

References and endnotes

¹ Wilmot A, Bacon J. *National Diet and Nutrition Survey of Adults aged 19-64 years. Feasibility study. Report on respondent ability to count number of own teeth and teeth filled with amalgam.* ONS (London, 2000).

² Kelly M, Steele JG, Nuttal N, et al. *Adult Dental Health Survey, Oral Health in the United Kingdom 1998.* TSO (London, 2000).

Appendix S

The Dietary and Nutritional Survey of British Adults¹

The last national survey of the diets of British adults was conducted in 1986/87. This survey of adult dietary habits and nutritional status was requested and commissioned jointly by the Ministry of Agriculture, Fisheries and Food (MAFF) and the Departments of Health (DH). The overall aim was to provide detailed information on the current dietary behaviour and nutritional status of the adult population living in private households in Great Britain.

The survey was carried out between October 1986 and August 1987 and covered adults aged 16 to 64 years living in private households. A seven-day weighed dietary record was kept by respondents and their height, weight, wrist diameter, mid-upper arm circumference, and for men only, calf circumference were measured. Their blood pressure was also measured and a sample of blood taken. Respondents were also asked to make a 24-hour urine collection. Physical activity, bowel movements and oral health were not assessed.

1 The sample

The sample was recruited using a multi-stage random probability design, with wards as first stage units. The Electoral Register was used as the sampling frame. The frame was stratified by region, and within each major stratum, wards were ranked according to the proportion of heads of household in socio-economic groups 1 to 5 and 13, using Census data. A total of 120 wards were selected as first stage units, and from each ward 33 addresses were selected. Thirty wards were systematically allocated to each of four fieldwork waves. Fieldwork was distributed over four waves to allow for seasonality, with waves beginning in October 1986, and January, April and July 1987. Pregnant women were excluded from the sample eligible for interview. All other adults aged between 16 and 64 living in private households were eligible for interview and one eligible person was selected at random from each household.

Overall, 70% of the eligible sample completed a full seven-day dietary record, 1087 men and 1110 women (2197 total). A further 14% co-operated with some other

aspects of the survey. A 24-hour urine collection was made by 77% of respondents and 76% of respondents aged 18 to 64 gave a blood specimen.

2 National averages

2.1 Differences by age and sex

2.1.1 Foods

A wide range of foods was consumed by the respondents. Broad categories of foods consumed by 75% of the sample included whole milk, cheese, eggs and egg dishes, beef and veal dishes, bacon and ham, white bread, biscuits, potatoes, potato chips, and coffee and tea. There were differences between men and women in both the types and quantities of foods consumed. Men generally consumed larger quantities of foods during the seven-day recording period. A larger proportion of women than men consumed wholemeal bread, reduced fat milks, salad vegetables, fresh fruit and confectionery. Conversely, men were more likely than women to have eaten fried white fish, sausages, meat pies and potato chips. Older respondents were more likely than younger respondents to have eaten potatoes, milk puddings, butter, preserves and fresh fruit and vegetables. Younger adults more commonly ate savoury snacks and takeaway items, such as meat pies and burgers and kebabs than those aged 35 and over.

2.1.2 Energy intakes and body mass index

The average daily recorded energy intake for men was 2450kcal (10.3MJ) and 1680kcal (7.05MJ) for women. These recorded energy intakes were similar to those reported in other large population studies. There was little variation in the average recorded energy intake up to the age of 50 years, but recorded energy intakes were lower in the 50 to 64 year age group. Exclusion of people on slimming diets and those who were unwell during the recording period and who reported that their eating had been affected gave recorded average energy intakes of 2480kcal (10.4MJ) for men and 1750kcal (7.3MJ) for women. The relatively low ratios of recorded energy intakes to calculated basal metabolic rate (27% of men and 40% of women less than 1.2) suggested that the recorded intakes may not have represented habitual intakes. Average energy intakes were below the current recommended daily amounts (RDAs), particularly for women. On average, however, no group was underweight, although overweight was common.

The Quetelet or Body Mass Index was used as a measure of body fatness. Average body mass index was 24.9 in men and 24.6 in women, and tended to be higher in older groups. Although in those aged 16 to 49 years body mass index was higher in men, in the 50 to 64 year age group, it was higher for women. The prevalence of obesity defined as body mass index of 30 or more, was 12% in women and 8% in men.

The average height of men was 174.5cm, and of women 161.7cm. Average height was lower in older age groups in both sexes.

2.1.3 Fat intakes and blood lipids

Average daily recorded fat intake was 102.3g for men and 73.5g for women. This represented 37.6% of total energy for men and 39.2% for women. Fat provided 40.4% and 40.3% of food energy, that is, excluding alcohol, for men and women respectively. The percentage of food energy derived from fat was similar across all age groups. Only 12% of men and 15% of women had fat intakes which met the Committee on Medical Aspects of Food Policy (COMA) target of 35% or less of food energy from fat.

Men consumed on average 42.0g of saturated fatty acids and 5.6g of trans fatty acids compared with 31.3g and 4.0g respectively for women. Intake of saturated fatty acids did not vary by age. Saturated fatty acids contributed 16.5% and 17.0% of food energy in men and women respectively. Only 11% of men and 12% of women derived less than the COMA target of 15% of food energy from saturated plus trans fatty acids, and only 6% of men and 8% of women met both targets. Thirty per cent of men and 27% of women obtained 15% or less of their food energy from saturated fatty acids alone. Saturated fatty acids provided a greater proportion of food energy for the oldest group compared with the youngest group.

The average ratio of polyunsaturated to saturated fatty acids (P:S) was similar for men and women (0.40 and 0.38 respectively; medians 0.35 and 0.34). However, both men and women over the age of 50 years had lower average P:S ratios than the younger age groups. The major sources of fat were meat and meat dishes, 24%, cereal products, 19%, fat spreads, 16%, milk and milk products, 15%, and vegetables, 11%. For saturated fatty acids, meat and meat dishes provided 23% of the total, as did milk and milk products. Cereal products, 18%, and fat spreads, 17%, were also major sources.

Blood samples were analysed for total and high-density lipoprotein (HDL) cholesterol. Low-density lipoprotein (LDL) cholesterol was not measured directly but was estimated as total minus HDL cholesterol. No correction was applied for triglycerides, which were not measured as samples were not collected while fasting. Average serum total cholesterol concentration was 5.8mmol/l in men, and was higher in older age groups. Overall, only 32% of men had serum total cholesterol less than 5.2mmol/l, and that proportion fell with age so that 13% of men aged 50 to 64 years had serum total cholesterol below this level. Conversely, 6% of men had serum total cholesterol of 7.8mmol/l or greater, and this rose to 10% in those aged 50 to 64. In women, average serum total cholesterol was also 5.8mmol/l, but the rise with age was especially marked over 50 years of age. Only 36% of all women, and 10% of those aged 50 to 64, had serum total cholesterol less than 5.2mmol/l. Overall, 8% of women had serum total cholesterol of 7.8mmol/l or more, but in those aged 50 to 64 this proportion rose to 21%.

Apart from age the main predictor of serum total cholesterol for both sexes was body mass index. Serum total cholesterol increased with increased body mass index, but the relationship with other variables was less marked. Both the proportion of food energy derived from saturated fatty acids, and dietary cholesterol intake, but not total fat intake, were associated with serum total cholesterol. In contrast, the proportion of food energy derived from total fat showed an association with HDL cholesterol. Average HDL cholesterol concentration was 1.2mmol/l in men and 1.4mmol/l in women. Although not consistently associated with age, HDL cholesterol tended to be lower in those of both sexes who smoked or had higher body mass index, and rose with the amount of alcohol consumed.

2.1.4 Carbohydrate and dietary fibre

On average men consumed 272g and women 193g of carbohydrate per day. This represented 44.7% and 44.2% of food energy respectively. Total sugars provided 42% of the carbohydrate for men, 115g, and 45% for women, 86g. Carbohydrate intake was lower for the older respondents, aged 50 to 64 years, than the youngest group. Intakes of total sugars decreased through the age range for women but not for men. The major sources of carbohydrate were cereal products, 46%, vegetables, 16%, and sugar, confectionery and preserves, 13%. For sugars the major sources were cereal products, 23%, beverages, 17%, and milk and milk products, 13%.

The average daily intake of dietary fibre (modified Southgate method) was 24.9g (10.3g per 1000kcal) for men and 18.6g (11.2g per 1000kcal) for women. On average, older women consumed more dietary fibre than younger women, particularly when expressed per 1000kcal. Forty-five per cent of men and 16% of women consumed 25g or more dietary fibre per day while 25% of men and 6% of women had daily intakes of at least 30g. Almost half the dietary fibre was derived from cereal products, wholemeal and other non-white bread providing 17% and white bread a further 13%. Vegetables provided 38% of the total of which potatoes provided 12%.

2.1.5 Protein

On average the daily intake of protein was 84.7g for men and 63.0g for women. The current RDAs for protein are based on protein providing 10% of energy. In this study protein provided 15.2% of total energy for women and 14.1% for men, well in excess of the RDA. The main sources of protein were meat and meat products, 36%, cereal products, 23%, milk and milk products, 17%, and vegetables, 9%.

2.1.6 Vitamins and Minerals

Intakes of a wide range of vitamins, minerals and trace elements were calculated from the food consumption data. They have been compared with the UK RDAs where they exist. Average intakes of vitamins from food (excluding dietary supplements) were well above the RDAs for all age groups studied. For most vitamins men had higher total intakes than women, but when expressed per 1000kcal women had higher intakes. Younger respondents tended to have lower vitamin intakes per unit energy. Within the sample 17% of women and 9% of men took dietary supplements. A wide range of dietary supplements was taken. The most common categories were multivitamins, cod and halibut liver oil, vitamin C and B complex vitamins. Respondents who took dietary supplements had higher intakes of vitamins from food than respondents who did not take supplements. The dietary supplements increased these differences further. However, the average intakes from food for both groups were above the RDAs.

Average intake of pre-formed retinol was 1277 μ g (median 618 μ g) for men and 1133 μ g (491 μ g) for women. Average intakes of carotene were 2414 μ g (median 1895 μ g) for men and 2129 μ g (median 1696 μ g) for women. There was a tendency for intakes of both retinol and carotene to rise through the age range for both men and women.

Plasma levels of retinol (vitamin A) do not reflect short-term dietary intake. No values below 10 μ g/100ml (0.03 μ mol/l), suggestive of long-term dietary deficiency, were found. Of the carotenoids, only β -carotene is an important precursor of retinol, but all the carotenoids have been shown to contribute to antioxidant status.

Circulating levels of β -carotene, α -carotene and β -cryptoxanthin all tended to increase with age in both men and women, and women had higher levels than men of all these substances. Circulating levels of lycopene tended to decrease with age in both men and women, and men had higher average levels than women. In both sexes dietary intake of carotene was positively associated with circulating α -carotene and β -carotene.

Average daily intakes of vitamin E from all sources were 11.7mg (median 9.3mg) in men and 8.6mg (median 6.8mg) in women. Average plasma levels of tocopherol (vitamin E) were 27.1 μ mol/l in men and 26.2 μ mol/l in women. The levels increased with age in both sexes, being about 50% higher among 50 to 64 year olds than 18 to 24 year olds. Plasma tocopherol can also be expressed as a ratio of tocopherol to cholesterol. This averaged 4.65 for men and 4.58 for women and did not vary significantly with age. Both plasma tocopherol concentration and tocopherol:cholesterol ratio were positively related to dietary intake of vitamin E.

Average riboflavin intake was 2.29mg (median 2.03mg) for men, and 1.84mg (median 1.56mg) for women. Riboflavin status was assessed as the activity coefficient in erythrocytes of the enzyme glutathione reductase, which requires riboflavin as a cofactor. The higher this activity coefficient (EGRAC) the lower the levels of riboflavin available. A value of less than 1.30 is generally regarded as normal. The mean values for men and women were 1.09 and 1.10 respectively. One per cent of men and 2% of women had EGRAC of 1.30 or greater.

Average intakes of calcium, 940mg for men and 730 mg for women, were well above the RDA. For both sexes calcium intake increased through the age groups. The main sources of calcium were milk and milk products, 48%, cereal products, 25%, and vegetables, 7%.

Average daily intake of iron from food for men was 13.7mg (median 13.2mg) and 14.0mg (median 13.2mg) from all sources. This compares with the RDA of 10mg for

men. Average intake of iron from food for women was 10.5mg (median 9.8mg). This increased to 12.3mg (median 10.0mg) when dietary supplements were included. Iron intakes were lower in younger women (median 9.5mg and 9.6mg in the 16 to 24 and 25 to 34 age groups respectively compared with 10.3mg in the 35 to 49 and 50 to 64 age groups). Median intakes for women under the age of 50 were below the RDA of 12mg. The main dietary sources of iron were cereal products, 42%, meat and meat products, 23%, and vegetables, 15%.

Four per cent of all women, but virtually no men, had haemoglobin concentrations below 11g/dl. There was no relationship between haemoglobin concentration and age in either sex. Serum concentrations of ferritin were measured to assess iron stores. A value below 25µg/l is generally considered to indicate low iron stores. Average ferritin concentration in men was 106.9µg/l, and rose steadily with age. Average ferritin concentration in women was 46.8µg/l, being 35.3µg/l in those aged 18 to 49, but 76.2µg/l in those aged 50 to 64. Overall, 4% of men and 33% of women had serum ferritin concentration less than 25µg/l, but this proportion rose from 12% in women aged 50 to 64 to 42% in women aged 18 to 49. For men, serum ferritin and haemoglobin rose with increasing alcohol consumption. For women, only serum ferritin was associated with drinking behaviour. Neither haemoglobin nor ferritin showed a consistent linear relationship with total dietary iron intake.

Average daily intakes of potassium were 3187mg and 2434mg in men and women respectively. Estimated average daily food sodium (that is, making no allowance for salt added during cooking or at the table) was 3376mg for men and 2351mg for women.

Urine collections were assayed for their potassium and sodium content. Potassium excretion averaged 77mmol/24h (3000mg/24h) in men and 62mmol/24h (2610mg/24h) in women, and this was unrelated to age. Average sodium excretion was 173mmol/24h (3980mg/24h) in men and 132mmol/24h (3040mg/24h) in women, tending to decrease in both sexes with age. Dietary intakes of potassium and of sodium were positively related to their 24-hour urinary excretion both in men and women.

2.1.7 Blood pressure

Blood pressure was measured using an automated technique which had been used in previous large scale studies. However, the particular instruments used have been

reported to overestimate pressures below, and to underestimate those above, 80mmHg, whether systolic or diastolic. It is therefore possible that the use of these instruments may have affected the results. Of those on no medications which might have affected their blood pressure, average blood pressure was 125/77mmHg among men, and 118/73mmHg among women, and tended to rise with age in both sexes. Overall, 3% of untreated men had systolic blood pressure of 160mmHg or more, though this proportion was 6% in those aged 50 to 64. Six per cent of all men, and 9% of those aged 50 to 64, had diastolic blood pressure of 95mmHg or more. Systolic blood pressure of 160mmHg or more was almost confined to those aged 50 to 64; 6% of men and 8% of women were in that category. Overall, 3% of women had diastolic blood pressure of 95mmHg or more, and the proportion rose with age to 6% in those aged 50 to 64. In men, but not in women, both systolic and diastolic blood pressure rose consistently with increasing alcohol consumption. Higher body mass index was consistently associated in both sexes with higher blood pressure. Diastolic blood pressure was not associated with urinary sodium or potassium excretion in either sex.

2.1.8 Alcohol and smoking

Twenty-one per cent of men and 35% of women were classified as non-drinkers on the basis of the seven-day dietary record. In the youngest group these figures were 32% and 46% respectively. For those respondents who recorded alcohol consumption during the survey week, mean daily intakes were 31.5g (median 23.2g) for men and 10.6g (median 6.8g) for women. Among consumers, those over the age of 50 recorded lower alcohol intakes on average than younger respondents. On average the proportion of energy provided by alcohol for consumers was 8.7% (median 6.9%) for men and 4.3% (median 3.0%) for women. For the total dietary sample 7% of women and 28% of men had intakes of 10% or more of their energy from alcohol. Twenty-one per cent of women and 47% of men obtained 5% or more of their energy from alcohol.

Body mass index, blood pressure and serum total cholesterol were significantly higher among men, but not among women, who drank alcohol. HDL cholesterol showed a consistent trend in both sexes to rise with increasing recorded alcohol consumption, γ -glutamyl transpeptidase and ferritin concentrations as well as mean corpuscular volume (MCV) were higher in both men and women who drank alcohol and increased with increasing intake. Plasma concentrations of carotenes expect

lycopene fell with increasing alcohol intake in men, but there was no similar consistent trend in women.

Approximately two thirds of the total responding sample described themselves as non-smokers; the proportion was similar for the diary sample. Women who smoked were more likely to be light smokers (fewer than 20 cigarettes a day) than men, 22% and 17% respectively. Smoking was more prevalent in women below the age of 50 compared with the oldest group of women. For both sexes smoking was less common in Social Classes I and II.

Classification of individuals by smoking and alcohol consumption was included with a number of other characteristics in analysis of variance. After allowing for other characteristics included in the analyses, in both men and women, energy intake rose with increasing alcohol consumption. The proportion of food energy from saturated fatty acids was lower for non-drinkers compared with drinkers. Intakes of protein, sugars and dietary fibre were higher in non-drinkers than drinkers.

For women, but not for men, energy intake was significantly lower in smokers. The proportion of energy provided by alcohol was higher in smokers than in non-smokers. The diets of male smokers contained less fibre, iron, vitamin C, folate, protein, thiamin and niacin equivalents, and more sugars than non-smokers. The proportion of food energy they derived from saturated fatty acids was higher, and their P:S ratio lower, than non-smokers. For women, differences reached statistical significance for fibre, iron, vitamin C, folate, riboflavin and calcium.

In men, body mass index fell with increasing numbers of cigarettes smoked. Serum total cholesterol levels were not related to smoking behaviour but serum HDL cholesterol showed a significant trend to decline with increasing numbers of cigarettes smoked in both sexes. Potassium excretion in both men and women, and sodium excretion in men, were lower in smokers. EGRAC rose and plasma carotenoids and tocopherol:cholesterol ratio fell with increasing number of cigarettes smoked among men and women.

2.2 Differences by region

Average recorded energy intake was lower for those men living in Scotland, 2240kcal/day compared with 2450kcal/day for all men. On average, men and women in Scotland were shorter and had lower body mass index than those from

other parts of Great Britain. Men in Scotland and the Northern region consumed more alcohol on average, and derived a greater proportion of their energy from alcohol, than men in other regions. However, after allowing for other factors this difference no longer reached statistical significance. Serum ferritin and γ -glutamyl transpeptidase concentrations and MCV were all on average higher in men in Scotland than in men elsewhere, but a similar trend was not seen for women. Men and women in Scotland had lower intakes of fibre and lower values per unit energy. After allowing for other factors men, but not women, in Scotland and London and the South East had lower fibre intakes than men in other regions.

Although men in Scotland consumed less fat and both saturated and polyunsaturated fatty acids than men in other regions, these differences were not apparent when expressed in terms of percentage of food energy. However, after allowing for other factors included in the analyses, men in Scotland and London and the South East derived a significantly higher proportion of food energy from fat and saturated fatty acids than men in other regions. The average P:S ratio did not vary significantly between regions.

Although men in Scotland had lower intakes of a number of vitamins and minerals these differences were not apparent when expressed per 1000kcal. Plasma carotenoids tended to be higher in London and the South East for both men and women. In Scotland, urinary sodium excretion in men was higher, and urinary potassium excretion in both men and women was lower, than in other regions. There were no significant regional differences in blood pressure, in total serum cholesterol or in HDL cholesterol concentration.

2.3 Differences by socio-economic characteristics

Recorded energy intake was lower for unemployed men than for other men. Recorded energy intakes were also lower for both men and women living in households receiving benefits. For women there was a trend towards lower average recorded energy intake in lower social classes. Women from Social Classes IV and V had the highest body mass index but there was no consistent trend with social class in men. Men and women from Social Classes IV and V were found to be 1.8cm and 2.8cm shorter respectively than those from Social Classes I and II.

A higher proportion of both men and women who were working consumed alcohol during the recording week. However, on average those unemployed men who did

consume alcohol had higher intakes than other men. Unemployed men and respondents living in households receiving benefits had lower intakes of protein and carbohydrate, but there was no difference in the proportion of energy derived from either. Among men and women intakes of sugars and fibre tended to be higher among those in Social Classes I and II than those in Social Classes IV and V. Unemployed men and those living in households receiving benefits had lower intakes of fat and fat as a percentage of food energy. These differences persisted after allowing for other factors. The intake of polyunsaturated fatty acids was higher for men in Social Classes I and II and the P:S ratio tended to be lower for lower social classes, but these differences were no longer apparent when allowance was made for other factors. Blood pressure and serum total and HDL cholesterol concentrations were not significantly related to social class in either men or women.

Unemployed men and women had lower intakes of many vitamins and minerals. These differences were not explained totally by their lower recorded energy intakes. However, average intakes of the unemployed met the RDAs. Respondents in households receiving benefits showed a similar pattern. Potassium excretion in both men and women, and sodium excretion in men, were lower in the unemployed. There were no significant differences in height, body mass index, blood pressure or serum total or HDL cholesterol between those working and those unemployed for either sex. Plasma carotenoid levels and the tocopherol:cholesterol ratio tended to be lower among the unemployed, especially men.

The recorded intakes of many vitamins and minerals were lower for respondents classified to Social Classes IV and V than for Social Classes I and II. In women there was a linear trend for consumption of more vitamins and minerals to decline with social class. With the exception of iron, average intakes by all social classes met the RDAs.

Serum concentrations of all carotenoids were consistently lower among men and women from Social Classes IV and V compared with I and II. Tocopherol:cholesterol ratio also tended to fall with social class, EGRAC tended to be higher in those from Social Classes IV and V, especially in men.

2.4 Slimmers

At the time of the dietary record, 12% of women and 4% of men reported that they were on a slimming diet. The average length of dieting was 6.5 and 10.0 weeks for

women and men respectively. Respondents who reported that they were on a slimming diet recorded lower energy intakes than other respondents and had higher body mass index. After allowing for other factors, slimmers had higher intakes of protein and most minerals and vitamins, and for women higher fibre intakes. Male and female slimmers derived a lower proportion of energy from fat and saturated fatty acids.

2.5 Consumption of food outside the home

Over 90% of respondents recorded consumption of some food outside the home during the seven-day recording period. On average men consumed 34% of their total energy, 31% of food energy, outside the home compared with 24%, and 23%, for women. Both men and women consumed a smaller proportion of their fibre, protein, iron, carotene and thiamin intake than of food energy outside the home. Men consumed 55%, and women 36%, of their alcohol intake outside the home. Men, but not women, consumed a greater percentage of their intake of sugars than of food energy outside the home. Younger respondents consumed a greater proportion of their food energy outside the home than did older respondents.

References and endnotes

¹ Gregory J, Foster K, Tyler H, Wiseman M. *The Dietary and Nutritional Survey of British Adults*. HMSO (London, 1990).

Section 2 Questionnaire and diary coding

This section describes the main coding instructions that were issued to interviewers and office coders. All fieldwork documents are reproduced in Appendix A of the Technical Report (see Section 1).

2.1 Dietary interview coding instructions for interviewers

2.1.1 Purpose of the interview

A face-to-face Blaise interview is conducted when the diaries are placed with the respondent and again when the diaries are collected at the pick-up call. The Blaise interview is designed to collect demographic information about the respondent as well as information about their eating preferences and patterns. The interview questionnaire is available in Appendix A of the Technical Report.

2.1.2 Whom to interview

Eligible households are those containing an adult aged between 19 and 64 years. Pregnant women, or those who suspect that they might be pregnant, or those who are breastfeeding are ineligible. One adult aged 19 to 64 years, not pregnant or breastfeeding, is selected at random (further details are provided in Appendix D of the Technical Report).

2.1.3 Definitions

Household members

Having identified the members of the household you will need to identify the following individuals:

1. Head of Household (HoH)
2. Highest Income Householder (HIH)
3. Respondent – person to be interviewed

Head of Household

The definition for this is as follows:

- In a household containing only husband, wife and children under 16, the husband is always the HoH.
- Similarly, when a couple are living together/cohabiting the male partner will be the HoH.

In all situations where there are relatives in the household or where some or all of the household are unrelated, you should ask the following question:

'In whose name is the accommodation owned or rented?'

Except that a husband always takes precedence, the person named in reply to this question should be recorded as HoH.

Occasionally more than one person will have equal claim to be HoH. In these cases, the following rules apply:

1. Where they are of the same sex, the eldest is HoH
2. Where they are of different sexes, the male is HoH

Highest Income Householder

For many years, the HoH has been used by data analysts as the 'household reference person'. But HoH has been criticised for being outdated and sexist. Therefore for government surveys there is a new definition of the household reference person – the Highest Income Householder.

Similar to HoH, you will start with asking in whose name is the accommodation owned or rented.

- Where the accommodation is owned or rented by only one person, that person will automatically become the new reference person (HIH) without needing to ask about income.
- Where there are two or more householders, this question will appear:

'You have told me that [names] jointly own or rent the accommodation. Which of you/who has the highest income (from earnings, benefits, pensions, and any other sources)?

*'INTERVIEWER: THESE ARE THE JOINT HOUSEHOLDERS:
[display of names and person numbers up to 10]*

ENTER PERSON NUMBER – IF 2 OR MORE HAVE SAME INCOME, ENTER 11.'

- If respondent asks for period to average over – 1 year.
- Prompt as necessary for joint householders: is one of them the sole person with paid work or occupational pension?

If you code one person, there are no more questions.

If two or more householders have the same income, you enter code 11, in which case you then need to enter the eldest at the next screen.

Respondent

The respondent refers to the person you have selected for interview at this household.

2.1.4 Self-completion sections

There are two self-completion sections, one during the initial dietary interview and one during the pick-up interview. These self-completion sections are completed by the respondent on the laptop, although they are offered the opportunity to complete the eating habits questionnaire on paper. If the respondent prefers then the interview can ask these questions in the manner of a normal interview.

Oral contraception

These questions are asked during the initial dietary interview of women and ask, for those under 50 about oral contraception, and for women aged 40 and over about the menopause and use of Hormone Replacement Therapy (HRT).

The first question, SELFINTC, introduces the section and records whether the respondent agreed to answer these questions and if so how the questions were administered. Questions are then asked of women aged under 50 years, whether they are taking the contraceptive pill or having a contraceptive injection or implant, and if so the brand name of the contraceptive and the type, that is whether it's an injection, mini pill, combined pill or an implant. Women aged 40 years and over are then asked if they have started or had the menopause (change of life) yet. Respondents are prompted to include early or surgical menopause, for example as a result of hysterectomy. Those that have started the menopause, or are not sure, are asked whether they are currently taking or having any type of HRT, that is hormone replacement therapy, this includes prescribed HRT even if only taken occasionally.

Eating behaviour questionnaire

This section is asked as part of the pick-up interview.

Purpose

The investigation of disorders of eating and weight has led to the suggestion that there are a number of eating style characteristics which are relevant to the development of obesity, anorexia nervosa and bulimia. Research has shown that overweight subjects are over-responsive to external food cues and under-responsive to internal cues of hunger and fullness. Overweight subjects have also been found to eat more under stress, in contrast to normal subjects, who eat less. Both concepts, externality and emotionally triggered eating, are important in models of obesity.

Bulimia nervosa is also marked by excessive eating when food cues are prominent and attractive, and under conditions of emotional stress. However, vomiting and strict dieting usually ensure that bulimic people do not actually get fat.

The balance of controlled versus undercontrolled eating is different in anorexic patients, who generally keep their food intake at a very low level. It is thought that loss of body fat might trigger a variety of psychological and physiological adaptations tending to restore weight. However, there are problems in identifying people who are restricting their diets or who have sub-optimal weight.

Measuring restraint can be one method of identifying these people. A questionnaire, the Dutch Eating Behaviour Questionnaire (DEBQ), has been developed as a means of investigating the issue of the relationship between restraint and loss of control over eating. A number of academic researchers have used the DEBQ in their studies and this is one of the few questionnaires the use of which has actually been validated. This is why we are using this questionnaire in our study.

Administration

The questionnaire is administered as part of the pick-up interview and is a self-completion questionnaire, which can be completed by the respondent either using the laptop or on paper. You will be asked at the start of the section which method the respondent prefers. If the respondent chooses to answer on paper then you will need to key the information into your laptop at home, later.

It is important that you stress to the respondent that they complete the questionnaire on their own and in one sitting. It will only take about 5 or 10 minutes for them to answer the questions.

For the full text of this questionnaire see Appendix A of the Technical Report.

2.1.5 Home coding tasks

Interviewers are required to complete some coding tasks at home following the initial dietary and/or pick-up interviews.

These include, from information collected at the initial dietary interview:

- Brand coding of herbal teas, green teas or herbal drinks
- Brand coding of artificial sweeteners
- Coding of respondent/head of household/household reference person's occupation and industry.

These include, from information collected at the pick-up interview:

- Occupation activity coding (using the occupation activity coding list, see Figure 2.5)

Recording and coding herbal teas

During the interview:

If the respondent drinks herbal teas you should ask to look at the packages and record the FULL BRAND NAME and the FLAVOUR.

Remember: only record the details for herbals teas or drinks that the respondent themselves drinks – not brands or flavours drunk by other members of the household.

Remember: if the respondent has multiple flavours in one box, each of which they drink, you should code each separately.

Make sure you write down the full description to the level of detail needed to assign a brand code e.g. Brand name – Net Foods Ltd; Flavour – Hedgerow Rose Flavour Tea.

Please take special care to distinguish between 'blackcurrant' and 'blackberry' - it's easy to mix them up, but they are coded differently

ONLY if the container is not available, should you ask the respondent whether they know the brand and flavour – you can use the key strokes for 'don't know' if they can't remember – we still need to know that they drink herbal teas or drinks even if the brand information is not available.

At home:

The details about brand and flavour copied down from the container at the placement interview are displayed on the screen. Using the BRAND CODES FOR HERBAL AND FRUIT TEAS AND GREEN TEAS coding list, you should find the correct brand code for this product (see Figure 2.4).

If the brand of drink you have recorded is not on the list or you have entered 'don't know' for brand you can use the following codes:

- Code 600 – Other brand
- Code 601 – Brand not known

Recording and coding artificial sweeteners

During the interview:

If the respondent uses artificial sweeteners you should ask to look at the container and record the FULL BRAND NAME and the FORM the sweetener takes .

Remember: only record the details for artificial sweeteners that the respondent themselves uses.

Remember: the respondent may use a granulated sweetener for some purposes and tablets for others.

Make sure you write down the full description to the level of detail needed to assign a brand code e.g. Brand - Hermesetas New Taste, Form – tablets.

ONLY if the container is not available, should you ask the respondent whether they know the brand and form – you can use the key strokes for 'don't know' if they can't remember – we need to know whether they use artificial sweeteners even if the brand information is not available.

At home

The details about brand and form of artificial sweetener copied down from the container at the placement interview are displayed on the screen. Using the BRAND CODES FOR ARTIFICIAL SWEETENERS coding list (see Figure 2.1), you should find the correct brand code for this product.

If the brand of artificial sweetener you have recorded is not on the list or you have entered 'don't know' for brand you can use the following codes:

- Code 600 – Other brand
- Code 601 – Brand not known

Occupation and Industry coding

At home

You will need to complete occupation and industry coding for:

- HOH;
- HIH if they are not HOH;
- The respondent if they are not HOH or HIH;

At SOC you are asked to review the occupation details of this household member's current or most recent job before entering a 3-digit occupation code. You should be using the edition revised in 1995 to do your coding. If you are unable to allocate a SOC code you can use code 0.

At SIC assign a 3-digit SIC code using the industry description. You should be using the November 1993 edition to do your coding. Codes 459 to 462 are allocated to Inadequate description/no reply, No answer, Workplace outside UK and DNA respectively.

Occupation activity coding

During the pick-up interview

You will ask the respondent whether they worked at all during the diary-keeping week. If the answer is yes, the respondent will be asked to give a description of the kinds of tasks they do on a day-to-day basis. The kind of information you should be probing for should include whether the respondent's job involves mainly sitting, standing or moving about; using light or heavy machinery; carrying light or heavy loads etc. There is also space for you to record similar details about the respondent's second job, if they have one.

At home

OACTCODE Using the PHYSICAL ACTIVITY DIARY CODING GUIDE FOR OCCUPATIONS (see Figure 2.5) you should code the respondent's occupation into one of the three available codes:

Code 1 – very light/light occupations

Code 2 – moderate occupations

Code 3 – hard occupations

Remember: these codes are only a guide to what occupations should be coded under which activity level - if an occupation is not listed or does not seem to fit within the descriptions given, please call HQ for advice.

2.2 Coding instructions for the dietary diary

2.2.1 Weighing and recording

This section describes the method of weighing and recording the foods eaten. Detailed instructions on weighing and recording are given, followed by a summary, which should help you introduce the task to the respondent.

A Weighing the Food Items

The scales

You will be issuing people with a lightweight electrical scale, powered by a 9v battery, called the Soehnle Quanta. The scales are easy to read because they give a digital readout. But apart from the weight of an object, the readout panel can tell you other things about the scale.

When you first switch on the scales, 8888 appears briefly, then a zero should appear. The scale is now ready for the container to be added.

If ---- appears, then the scale cannot register any weight as the item is too light for the scale.

If when something is weighed - - - appears, the scale has been overloaded, so use a lighter plate or cup.

If the digits appear disjointed, it means the batteries are failing. Replace with a new 9 volt battery, and claim for the cost.

If the plate is removed from the scale to add more food to it, a minus number will appear. When the plate is placed back on the scale the number will be positive.

The food scales are calibrated in 1 gram units up to 1kg, and in 2 gram units from 1-2kg.

The machine will switch off automatically after about two minutes.

Remember: The plate or cup can be removed from the scale to add food items, but the scale must be zeroed before removing the plate. In this way, when the plate and food items are put back on the scale, only the weight of the last food item added, is displayed.

Note: you may have difficulty in getting the scales to work if the battery has been kept in a very cold place (e.g. the boot of your car); try to keep the spare batteries at room temperature. Please also remove the battery from the scales when they are not being used and check that all batteries have been removed from all scales before returning them at the end of your quota of fieldwork.

Weighing and recording with the scales

- 1) Switch on the scale by pressing firmly on the word "on".
- 2) Place the plate / container on the scale and record its weight in column A on the '**empty container**' line.
- 3) Leaving the plate on the scale, press the tara pad firmly so that the scale reads zero again.
- 4) Write down the description of the first food in the brand and food description columns (B and C), e.g. Birds Eye, 2 economy cod fishfingers in breadcrumbs, grilled.
- 5) Place them on the plate (still on the scale) and record their weight in column E.
- 6) Leaving the plate on the scale, press the tara pad firmly so that the scale reads zero again.
- 7) Record the next food item – e.g. Tesco frozen peas, boiled - in the diary.
- 8) Place the helping of peas on the plate and record the weight, and so on.

If a large plate is being used, e.g. a dinner plate, placing it on the scale obscures the digital display. To overcome this you have been given a plastic bowl which should be used as a spacer to raise the plate so that the digital display can be read.

If the spacer is needed follow the procedure below:

- a) Turn on the scale and place the spacer on it.
- b) Press the tara button to zero the scale.

- c) Place the plate on top of the spacer, and record its weight in the Home Diary.
- d) Food items should be described and recorded in the diary as described earlier.

Remember: Once the scale has been zeroed, the plate (and previously weighed foodstuffs) can be removed to add the next food to it. When the plate is returned to the scale, the weight shown will only be that of the last food added. But remember that when the scale has been zeroed, and the food has been removed (for example, bread taken off the scale to spread butter on it), the scale will only stay switched on for about two minutes. If more time is taken to spread the bread, when the scale is switched on again the weight will be the weight of bread AND butter. If this happens, "bread and butter" should be written in the diary, and the combined weight which the scale shows recorded.

Where several items served on the same plate need to be weighed and recorded, it may be easier to record in the diary all the separate items being served, before starting to weigh the portions. This avoids having to eat cold dinners!

B The Food Diaries

We need a record of all food and drinks consumed which can be coded in such a way that a computer can convert it to a measure of the intake of energy, protein and a wide range of other nutrient values. Brand names of foods are also required so that we can identify the additives, colourings, etc., in the foods; for the same food type these may vary between manufacturer, for example, the amount of artificial sweetener in different brands of soft drink. In order to do this we need very exact details of the food and its preparation.

Obviously we do not expect respondents to remember or understand all the detail required and you must expect omissions and mistakes in the recording of the food information; you will need to identify and correct these at checking calls. Notes on the sort of detail required are given later.

There are two food diaries; a large A3 diary with green & white recording pages (called the 'Home Diary') which is used for all foods eaten or prepared in the home; and a smaller A4 diary (called the 'Eating and Drinking Away from Home Diary') used for all foods and drinks consumed away from home and not weighed - this will include snacks and drinks, as well as meals. The Eating and Drinking Away from Home Diary (i.e. the Eating Out Diary) also includes pages for recording details of physical activities. Ideally the Eating Out Diary should always be carried when the respondent is away from home during the recording period, together with a small pencil or the survey pen. Less information is recorded in the Eating Out Diary than in the Home Diary, but the Eating Out Diary should show the description and brands of foods eaten, and, if they were purchased, the place of purchase, as well as where and when they were eaten.

We appreciate that not all respondents will be prepared or able, to take the diary with them when they are away from home; they should be encouraged to do so, but if they refuse then they should take the small notebook - P3 - to jot down details of what they eat and drink while they are out of the home, and then fill in the Eating Out Diary at the end of each day.

We have provided a plastic zip wallet for each respondent to keep their diary in, together with an envelope to keep their diary private, a survey pen & a notebook.

You should also leave the respondent a white plastic carrier bag, with a serial number label attached. This should be used by the respondent to collect any wrappers from snacks eaten away from home; where the recording of brand or weight information is incomplete, referring to these wrappers might help you in your coding and checking. Please return any wrappers or containers for items where you have a coding, weight or other query to ONS, in the serial number-labelled plastic bag, with the completed diary. It is not necessary to return every wrapper and container that the respondent collects. For health and hygiene reasons, please ensure that all containers returned to ONS are clean.

The following instructions apply to both recording in the Home Diary and in the Eating Out Diary, unless otherwise stated.

C Completing the Diaries: General Points

1. Put serial number labels on the cover of the Home Diary and Eating Out Diary, on the back cover of the small pocket diary and on the white plastic carrier bag. Make sure that every page in the Home Diary, including any pages you re-write, and all blue & white transcription pages should have either a serial number label or the serial number written in.
2. On the front cover of the Home Diary you will find an appointment table. Use this to record the time of your next visit (checking calls) as a reminder to your respondent.
3. For both the Home Diary and the Eating Out Diary, a new page should be started at the beginning of each day. In the Home Diary, any continuation sheets for the same day should have the day of the week and the date filled in.
4. Both the Home Diary and the Eating Out Diary have a space for recording the time of day (specifying am or pm) when the item is consumed; this information is required for ALL container entries in the Home Diary and for all entries in the Eating Out Diary. You should check that each '**empty container**' line has a time recorded against it. If it is missing, you should probe for the information when you pick up the completed pages. You will need to convert the time recorded by the respondent into the 24 hour clock.
5. In the Home Diary, each food item or drink should be described on a separate line. Where there is more than one component to a food item, for example, a cup of tea, each component should be weighed and fully described on a separate line. See the example page at the front of the Home Diary for examples of this.
6. Home Diary only:
 - a) Everything eaten should be weighed on a plate or in a container. The plate / container should be weighed first, and the weight entered on the '**empty container**' line.

It is important that all items are weighed on a plate so that any leftovers can be correctly allocated (see *later*), and for your own purpose when checking the entries in the diary.

Items not normally eaten from a plate, e.g. an apple, should be weighed on a plate or container with a plate / container entry in the diary. The '**empty container**' line is there as a reminder to always weigh on a plate; if the respondent forgets to weigh on a plate you should write in a weight of 1 gram against the '**empty container**'.

If more than 7 items are served on the same plate then, after the 7th item, the respondent should cross through the '**empty container**' line and continue using the following line for the 8th and subsequent items served on that plate.

If a food is eaten from the container in which it was purchased, e.g. yoghurt, Pot Noodles, etc., then the following method should be used:

Weigh the food and container together, and note the weight in column E. Then weigh the empty container after eating the food, and note the weight in column A. The description should look like this:

A	C	E
Wt of empty container = 10 g	EMPTY CONTAINER	
	Low fat, vanilla flavoured, sweetened yoghurt, not fortified <u>and container</u>	120

When you code the completed record, you must subtract the weight of the container from the combined weight of yoghurt plus container, and enter the net weight of the yoghurt in column E. The entry will now look like this:

A	C	E
Wt of empty container = 10 g	EMPTY CONTAINER	
	Low fat, vanilla flavoured, sweetened yoghurt, not fortified <u>and container</u>	120 <u>110</u>

Alternatively, if you find it easier to weigh the item on a plate and record the pot/container as a leftover (column F), then please use this method. For example, you would record an empty plate weight as normal, then weigh the yoghurt and pot and record the weight in column E. When the yoghurt has been eaten, the weight of the empty plate plus the pot would be recorded in column F – don't forget to tick, and write 'pot' in column F.

b) Second helpings should be weighed on the original plate and recorded in the diary using the following procedure.

Original serving of baked beans, one fried egg and chips. The respondent eats all the chips and has another helping. The plate still has an egg and beans on it when the second helping of chips is weighed:

- (i) The plate (with egg and beans) is placed on the scales and the scales are zeroed.
- (ii) Put the second helping of chips on the plate and record the weight of chips as another chips entry.
- (iii) Flag the second helping for the attention of the nutritionists at Head Office.

Any leftovers should be recorded in the usual way. The entry in the diary should be as follows:

A	C	E
Wt of empty container = 150 g	<i>EMPTY CONTAINER</i>	
	One egg, fried in lard	50
	Baked beans, canned	50
	Chips, crinkle cut, deep fried in lard	100
	Chips, crinkle cut, deep fried in lard	50

c) Weighing a cup of tea made with a tea bag:

As this seems to cause some difficulty, it may be worthwhile demonstrating the procedure if your respondent drinks tea made with a tea bag.

In the food code list, you will find that the food code refers to 'tea infusion'; if you remember that you need the weight of tea infusion, then the method for weighing is straightforward.

- weigh the empty cup / mug and record the weight in the diary;
- zero the scales;
- remove the empty mug / cup from the scales, add the tea bag and hot water and allow to infuse; remove the tea bag;
- place the mug / cup containing the tea infusion back on the scales - record the weight of tea infusion in the diary;
- zero the scales;
- add milk; record the weight of milk in the diary;
- zero the scales;
- add sugar; record the weight of sugar in the diary;
- drink the tea;
- if any remainder, weigh and record as leftovers in the usual way.

D Summary: Completing the Diaries

- Everything eaten or drunk must be recorded either in the Home Diary or in the Eating Out Diary, including drinks of water, medicines, vitamin supplements (tablets or drops) and fluoride supplements.
- A new page must be started each day in both the Home Diary and the Eating Out Diary.

- iii) Each day in the Home Diary should show whether the respondent was well or unwell (and if 'unwell' was recorded whether their eating habits were affected that day) by a tick in the boxes at the top of the recording page.
- iv) The time of day (specifying am or pm) when the item is consumed must be written in column A of the diary.
- v) The place the food was eaten, i.e. whether eaten at home or elsewhere, and the person who weighed the food, i.e. respondent or other person, should also be shown in column A of the diary page.
- vi) The food should be described, and for foods eaten or prepared at home, weighed. It is particularly useful to include a description of the portion size here, i.e. 2 slices of medium-cut bread, or half a large banana.
- vii) Each item of food must be weighed and recorded on a separate line of the diary. For example, for a cup of coffee, the weights and descriptions of the coffee granules, milk, water and sugar should be shown separately.
- viii) There must be a completed '**empty container**' line preceding every item or group of items served together.
- ix) Liquids added during cooking should be recorded as part of any recipe (*see later*). If eggs are used in a recipe, the size of the egg should be recorded.
- x) Condiments used at the table, other than salt and pepper, should be recorded in the diary with the weight and a description of how much was used, e.g. 1 tablespoon of tomato ketchup. Descriptions of amounts should be recorded in column C, not in the 'weight' column (column E) - the entry should be flagged for the nutritionists. Salt and pepper should not be recorded in the diary. Where no weight has been registered for items, e.g. Marmite or vinegar, the quantity should be fully described but the weight column left blank and the entry flagged.
- xi) For medicines, prescribed or bought without a prescription, artificial sweeteners, in tablet or liquid form, vitamin or fluoride supplements, etc., the quantity taken or used must be fully described and recorded in the diary. The description should include the quantity; e.g. the *number* of tablets, the *number* of 5ml spoonfuls, the *number* of drops, etc. (i.e. NOT the weight), and the entry flagged. This information should be recorded as part of the food description, NOT in the weight column. Ask to see the container for any medicine recorded in the diary and write down the full product name from the container (on the back of the diary page, if necessary). Proprietary medicines normally have a product number printed on the packaging. You should record this as it can provide nutritional information. All medicines should be flagged. For liquid oral medicines, check and record as part of the description whether the medicine is labelled as a sugar-free formulation.
- xii) You have been given a card which gives advice on using the scales (**W1**), and on the other side on recording in the Home Diary (**W2**). This should be left with the respondent as an aide-memoire.

2.2.2 Recording leftovers

When food is left over we need to know the total weight of all leftovers (including the weight of the plate) and what items were left.

Respondents should weigh the plate or container containing all the leftovers and record this total weight in the leftovers column (column F), against the '**empty container**' line, then put a tick next to those items that were leftover. Here is an example of how it should look:

A	C	E	F
Wt of empty container = 140 g	EMPTY CONTAINER		207 g
	1 slice, cheese and tomato pizza, deep pan, home made	168	✓
	Frozen, crinkle cut chips, fried at home in corn oil	140	
	Baked beans in tomato sauce, canned	74	✓

Here the leftovers consisted of some of the pizza and some baked beans. Weighed on the plate this was 207 grams - entered in the leftovers column opposite '**empty container**'. The pizza and the beans lines are ticked to show that both were left.

Remember: Ticks should appear next to ALL items which are leftover. For example, if the respondent had a bowl of cornflakes with sugar and milk, and some was leftover, there should be ticks next to the cereal, sugar and milk, as all these items would be leftover.

The weight recorded in column F should be the weight of the plate and leftovers. Please check that the weight given for leftovers is greater than the weight of the plate alone, but not greater than the weight of the plate plus all the original served weights – i.e. the plate cannot weigh less with leftovers than empty, and you cannot have more leftovers than the original servings.

On other dietary surveys, we have found that some people were able and willing to weigh the different leftover items on the same plate individually, and entered the separate weights in the leftovers column. If this appears to have happened on a recording sheet you are checking, ask the respondent if this is what they have done, and if so, flag the entry for the attention of the nutritionists. There is no need to change it back to the conventional way of recording leftovers.

A Summary: Recording Leftovers

- i) The total weight of any leftovers plus the plate weight, should be recorded against the '**empty container**' line and all the leftover items ticked. If food is left over when eating away from home, then the respondent should write in the Eating Out Diary, against the relevant entry, an indication of how much was left, e.g. "half a round of sandwiches", "2 slices of tomato". If all of a particular item is left, this should be indicated in the description. For example, "cheese and tomato sandwich, all tomato left and half the sandwich".
- ii) Make sure that ticks appear next to ALL food items that are left over. Assuming there is spread on bread, toast, rolls, etc., if any bread is left over, then there should always be

a tick in the leftovers column against the entry for spread. Similarly, if cereals are served with milk (and sugar) then if any cereal is left, there should be ticks next to the milk and sugar as well.

2.2.3 Spilt and lost food

It is very important that we collect accurate information on the amount of food and drink being consumed, which may be different from the amount served. It is not unlikely that some food will be split, or lost in other ways.

If the respondent eats some of the food and leaves the rest on his / her plate then the leftovers can be recorded in the normal way. However, there may be several situations when this does not happen. Some examples of possible situations are:

- ❖ half a mug of coffee is spilled on the table;
- ❖ some food may be accidentally dropped onto the floor;
- ❖ some food may be fed to the dog;
- ❖ someone else consumes some of a weighed item.

Wherever possible, we want any food lost due to spillage, etc., re-weighed. If something is spilt or dropped, then an attempt should be made to pick it up and re-weigh it on the original plate together with any other leftovers. In some cases however it will just not be possible to re-weigh food that has been lost and sometimes this may be a considerable amount of food. In cases where lost food cannot be re-weighed, we would like an estimate of how much of the original item was lost, and a record of this in column G of the Home Diary. For example, if the respondent has a slice of toast, and half the toast gets fed to the dog, then the diary should show in column G that half of the original serving of toast was lost, and that it was not possible to re-weigh it.

2.2.4 Keeping the dietary diary

You will notice that both the Home Diary and the Eating Out Diary are tagged documents - loose pages held together with a treasury tag. This means that you can collect completed pages at mid-week calls for checking and coding. Please ensure:

- that the respondent realises that there is space on the back of each page for recording notes and queries;
- that each page is serial numbered (either a label or written in by you);
- that the pages are tagged back into the diary in the correct day order before returning the diary back to Titchfield.

The respondent should weigh everything s/he can. If food is brought into the home from outside (e.g. fish and chips, other takeaway), the respondent should be encouraged to weigh this. If s/he is eating somewhere where the food and drink cannot be weighed (e.g. at work, in a café, or on the move), then s/he should write down as much information as possible in the Eating Out

Diary. The Eating Out Diary should only be used when food cannot be weighed. It is important that details of where the food was purchased from, and eaten, are recorded in all Eating Out Diaries. It will be needed by you for coding; it is also needed in order to buy duplicates (see later).

Remember: For food and drink purchased from, or consumed at, work or college, you will probably need to get in touch with the workplace / college catering staff to find out further information, for example, on portion sizes, fats used for cooking and spreading, etc. (see instructions on the Catering Questionnaire).

2.2.5 Transfer of information from the eating out diary to the home diary

The Eating Out Diary will contain entries for all items bought and eaten away from the home which were not weighed. If the respondent is able to weigh food eaten outside the home, or bought from outside the home (e.g. fish and chips), then it should be recorded on a green & white Home Diary page. If food or drink has been prepared at home but eaten away from it, e.g. a sandwich lunch, this should be noted in the Eating Out Diary as well as being fully recorded in the Home Diary, as it was made at home.

All Eating Out Diary entries must be transferred onto the blue & white Home Diary transfer sheets. These should be inserted in the Home Diary at the appropriate place. If the food was prepared and weighed at home, but eaten away from home, then the time the item was eaten should be copied from the Eating Out Diary onto the green Home Diary page where details of the food have already been recorded. Also copy over any details about leftovers, etc. This is the only situation in which foods recorded in the Eating Out Diary will appear on green sheets.

All entries require a container entry. However, when transferring information from the Eating Out Diary to the Home Diary, the weight of the plate will generally not be known, so record it as 1g.

The foods entered in the Eating Out Diary will generally not have their weights given. This information is required where at all possible, and can be obtained in a number of ways:

1) Buying duplicates: when food is bought out as a 'take-away' you may, in certain circumstances, need to buy a duplicate of what was eaten and weigh it yourself (and then you can eat it if you want to!). The Eating Out Diary should show you where the food was purchased. You should expect to have to buy duplicates of items from *local* shops:

- cakes and buns;
- ice creams: weigh the ice cream and wafer components separately;
- sandwiches: weigh the bread and fillings separately;
- fish and chips; and
- take away hamburgers, kebabs, pizzas, etc., from LOCAL and NON-NATIONAL cafes and shops.

When buying duplicates of sandwiches you need to ask about the spread used. When buying duplicates of fish and chips or other fried foods, you need to check what type of fat or oil they were fried in and record this.

Remember: Take-away food purchased from NATIONAL fast food chains, e.g. Wimpy, McDonalds, Kentucky, Pizza Hut, Burger King, Huckleberry's, Little Chef, Happy Eater, etc., will be dealt with by the nutritionists, as portion sizes are roughly similar from all outlets in a chain.

Duplicates are NOT required for purchased pre-packaged foods that are widely available, e.g. confectionery, soft drinks, sandwiches. If you have any doubts as to whether you should purchase a duplicate, ring the nutritionists for guidance.

Please note that you are NOT authorised to purchase duplicate meals eaten out in a cafe or restaurant - sorry! In these and similar cases, e.g. meals at a friend's house, the respondent should have given as much detail about portion size as possible.

- 2) Weight information on packaging: bought snacks and drinks will often have packaging which gives information on weight. You have been provided with white carrier bags which you should give to the respondent and ask them to collect the wrappers and cartons of food items they consume while out of the home. You can use these to fill in the missing weight information in the Eating Out Diary. Return (clean) wrappers for products where you have queries in the serial number-labelled plastic bag to ONS with the completed diary.
- 3) Meal at work / college: where the respondent has food prepared by their college or workplace employer at lunchtime, we would like you to try to get some further information about the sizes of portions served and any other information which will allow you more accurately to code the foods. For example, type of spread used in sandwiches, type of fat used for cooking / baking; type of milk used; cooking methods, etc. Separate instructions are given on collecting this information (see the *Catering questionnaire*).

Where it is impossible to collect weight information by any of the above means, e.g. in a restaurant, or when the food scales have not been taken out to a friend's house where the respondent has eaten, then they should be encouraged to estimate the size of the portion or food item.

A Summary: the Eating Out Diary

- i) The Eating Out Diary should be taken with the respondent whenever they are away from home without the food scales. If they are not able to do this, then notes should be made in the small notebook provided - P3 - and the Eating Out Diary completed at the end of each day. Please return the notebook, whether or not it was used, with the Diary.
- ii) Anything eaten or drunk away from home which cannot be weighed, should be entered in the Eating Out Diary.
- iii) The time of day (specifying am or pm) that the item was consumed must be recorded in the Eating Out Diary.
- iv) The place where the item was consumed must be recorded in the Eating Out Diary.
- v) For items bought and consumed away from home, the place of purchase must be recorded.
- vi) The description of the item should be as detailed as possible with an indication of portion size.

- vii) Brand names should be recorded (when known); the respondent should keep wrappers / containers of food and drink items. These will be useful to you when checking / coding foods and brands, and you will need to see them for information on weight.
- viii) All entries in the Eating Out Diary (except food prepared and weighed at home and eaten out) must be copied onto the blue transfer sheets and tagged into the Home Diary in the appropriate place at the end of that day. Entries which appear as composite items in the Eating Out Diary must be split into their components when transferring to the blue sheets, even though the individual weights may not be known, e.g. a cup of coffee should have separate line entries for coffee granules / powder, water, milk and sugar; a toasted cheese sandwich should have separate line entries for toasted bread, butter / margarine and cheese. The total weight of the composite item, if known, should be recorded in the description column - column C, bracketing the components together, NOT in the weight column.
- ix) If so authorised, the weights of foods eaten away from home should be determined by buying duplicates.
- x) When transferring information from the Eating Out Diary to the Home Diary make sure every food entry has a corresponding container entry. Where the weight of the plate is not known, use 1g.
- xi) When transferring weight information from the Eating Out Diary to the Home Diary, if the weight information is taken from a wrapper, please tick the 'estimated weight column' in the OFFICE USE ONLY box. If the weight information is in household measures or in centimetres, record it as part of the food description. The nutritionists at Head Office will convert this information to grams.

2.2.6 Estimated weight column

The *estimated weight* column should be ticked when a food item has not been weighed but its weight has been estimated.

You are most likely to use this column as a result of probing and checking the diary with the respondent and finding that s/he has forgotten to record a drink or snack. For example, the respondent remembers a drink of tea that s/he had but did not record it in the diary. The weight of the drink is estimated using the recipe of a previously recorded drink of tea. The weight of the mug, tea infusion, milk and sugar are taken as standard. However you should tick the *estimated weight* column to indicate that the weight of the mug, tea infusion, milk and sugar are all estimates. They were not weighed by the respondent when s/he made this particular drink.

This procedure should be used whenever a substitute weight is used, i.e. when you have bought a duplicate or used the weight information from a wrapper or carton.

*** The respondent should not use this column ***

This column will also be used by the nutritionists to estimate the weight of foods eaten outside the home which could not be weighed, and for composite items which were split, for example oranges in jelly, where the weight of the composite is known but the individual weight of components will be estimated. All items on green Home Diary pages shown with estimated weights should be flagged.

Remember: This column should only be ticked to indicate a food item weight which has been estimated. It should not appear on a container line, whether the container / plate was weighed or not.

2.2.7 Food descriptions

A Introduction

The description of the food in either the Home Diary or the Eating Out Diary needs to be sufficiently detailed to allow the item to be coded. However, the food code list not only separates different food items, but also takes account of how any particular food item was processed before it was purchased, e.g. bought as frozen, canned, fresh or dehydrated produce; how it was cooked e.g. fried, boiled, roasted, grilled, etc.; and its fat content, e.g. low fat products, meat dishes with the fat skimmed or removed. This amount of detail is necessary in order to determine the nutrient value of the food item.

Because we need very detailed descriptions of the food items, and because respondents will not always record all the information we need, we are asking you, the interviewers, to undertake the coding of the food items. In this way you will see when an item cannot be coded because the description is inadequate, and you will have the opportunity to try to collect the information by calling back shortly after the diary entry was made. Also, as you become more familiar with the food code list you will be able to probe inadequate food descriptions when you call to collect the completed records.

You have been given a '**Food Descriptions**' prompt card (**F1**) to remind you about the sort of probing questions you will need to ask in order to get a description detailed enough for you to select the correct food code.

B Probes for Food Descriptions

As well as the basic, but full, description of the food item, e.g. All Bran cereal, Danish blue cheese, honeydew melon, etc., you will need to check that you have recorded information on:

- the bought form: e.g. fresh, frozen, canned, dehydrated, bottled, or was the item home made or home grown (fresh);
- any coatings: was the item cooked in a coating; what was the coating - flour, batter, egg, breadcrumbs, etc.;
- any thickenings in sauces, gravy, stews or casseroles;
- details of pastry products: what type of pastry was it - shortcrust, flaky, etc.; was there a pastry crust top and bottom or only one crust; what type of flour was used - wholemeal or white; what type of fat was used (see below);
- cooking method: grilled, shallow fried, deep fried, boiled, poached, roasted (with fat), baked (no fat), or reconstituted, i.e. water added to dried product, e.g. Pot Noodles. For poached items, record what the food was poached in - milk, milk and water, or water only. For fried items, record the type of fat the food was fried in (see below);

- the fat content: for dairy products check and record whether it is a low / high fat item, e.g. low fat milk (semi-skimmed or skimmed), low fat or creamy yoghurt, and low fat cheese. Also check for low fat sausages, ready meals, puddings and snacks.
- For items cooked in fat (fried or roasted) which will absorb fat in cooking, e.g. fried fish, chips, or products in batter or coated, record the type of fat used. Also record the type of fat used in home made pastry and cakes. *See later for notes on the different types of fats and oils.*
- For meat, meat products and meat dishes record whether the fat was removed before or after cooking (i.e. not eaten) or, if appropriate, whether fat was skimmed from the dish before serving.

NOTE: accurate information on the amount and nature of the fat in adult's diets is VITAL to this survey because of the apparent association between fat intake, cholesterol levels in the blood and coronary heart disease.

- Sweeteners used: record whether the item was sweetened or unsweetened. If sweetened, we need to know whether the sweetener was sugar or an artificial sweetener. For cooked items sweetened with an artificial sweetener, e.g. stewed fruit, the fruit and artificial sweetener should be weighed, recorded and coded separately, coding the fruit as 'unsweetened'.
- Smoked or not: for foods such as cheese, bacon, cold meat and fish, record if the item was smoked.
- As well as weighing each food item, it is useful if the description includes information on the portion size; e.g. 2 slices of bread; 1 teaspoon of brown sugar; 6 eating cherries. This information will alert us to any problems in weighing; or if a weight is omitted in error, it means we can make an estimate of the weight consumed.

C Brand Information

Brand names should only be coded for the following items; herbal and fruit teas, bottled waters, fruit juices and soft drinks and artificial sweeteners. However, because Food Standards Agency may require other types of food to be brand coded at a later date, and because recording brand names for only selected types of food may lead to omissions, the brand or product name should be recorded for every food item or drink EXCEPT fresh foods.

By 'fresh foods', we mean foods which are not pre-packaged, such as meat, fish, cheese or pasta sold loose, and unwrapped bread and cakes; doorstep delivered fresh milk, and all eggs. Fresh fruit and fresh vegetables do not require brands whether or not they are pre-packed. Foods bought as fresh, and then frozen at home, are regarded as fresh produce, and hence will not have a brand name.

NOTE: shrink wrapped / vacuum packed cheese and meats have a brand.

In many cases the brand name will be an "own brand", e.g. Sainsbury's, Tesco, St Michael, Leo's, etc. Local shops may also market "own brands".

It is important that the brand and product name are as detailed as possible. Again you will be coding the brand information because it may only be at the point of coding that a brand description is found to be inadequate.

D Summary: Food Descriptions

The detail required for food descriptions should answer these questions:

- i) What type of food or drink was it?
- ii) Did it have a brand or product name?
- iii) How was it bought - fresh, canned, frozen, etc?
- iv) How was it cooked - boiled, poached, fried, etc?
- v) If it was cooked in fat, or fat was used in pastry or cakes, what sort of fat or oil was used?
- vi) Was fat skimmed from any meat dish? Was fat on meat eaten or removed before or after cooking?
- vii) If it was a dried / dehydrated product, was it reconstituted using water, milk (type), both, etc. ?
- viii) Was the food item coated before cooking?
- ix) Were any sauces thickened?
- x) What type of flour was used in pastry?
- xi) Was it unsweetened, sweetened with sugar, or artificially sweetened?
- xii) Was it a low fat / low calorie item?
- xiii) Was it smoked or unsmoked?
- xiv) Is there a description of the portion size as well as the weight?
- xv) Was it home grown or not?

When introducing this part of the survey we suggest that you go over the foods that the respondent has eaten so far that day and ask them to record the descriptions as practice. Try also to get the person(s) who will be doing the weighing and recording to weigh something that they would normally eat, and to weigh and record the components. They may be willing to get a drink or make a sandwich, and you can help in the weighing and recording. If this is not possible then demonstrate the procedure using pens, pencils, or whatever you have to hand.

There is an example of what a completed diary page should look like at the front of the Home Diary. However, many interviewers who worked on previous dietary surveys did their own example page. If you can think of a more helpful example then please use it.

2.2.8 Coding the diaries

A Food Coding: General Points

The description of the food, with the recorded information on its bought form, how it was cooked, etc., should enable you to identify the correct food code.

The food code is a number with a maximum of 4 digits, and should be written in under the 'food' column of the recording sheet headed "*Office Use Only*" adjacent to the food weight to which it refers. The "*Office Use Only*" is to discourage respondents from writing in the boxes. Where a food code has fewer than 4 digits, the numbers should be "right adjusted"; there is no need to fill the empty boxes with leading zeroes.

Remember: On the '*empty container*' line, the food and brand code boxes should be left blank.

The food code list you have been given classifies foods according to their type - bread and rolls, fruit, eggs and egg dishes, etc., and within each group, food items are generally listed alphabetically. For some foods, inclusion in more than one group might be appropriate; where possible we have included them (with the same code number) in all places, but inevitably there will be some cases where the food item does not appear where you might first expect it.

Eventually every line entry in the Home Diary, **except** the '*empty container*' line, should have a food code. However, you may not be able to code all the entries. This is because:

- a) The code list does not cover every possible food item, only those for which information on the nutritional content is available or can be calculated.
- b) The food item as recorded is not discrete, but is a composite food item or a recipe dish, e.g. home made pies, cakes, casseroles, etc. Some common recipe dishes have their own single code in the food code list, but for others special treatment is required.

B Flags

You are provided with 'flags'. Flags indicate coding and other queries for the nutritionists. For example, you are unable to match a food description with a code, or a composite recipe item needs to be checked by the nutritionist.

* **The rule with flags is, 'If in doubt, flag'** *

Flags should be stuck to the right hand side of the diary page, so that they protrude over the edge of the page and can be seen: make sure they do not cover any coding columns. The flag should be as near to the item to which it refers as possible. The flag should contain a brief description of the item to which it refers and the nature of the query.

C Composite Foods and Recipe Dishes

a) Composite foods

Although you should be asking the respondents to make separate entries for each food item, some foods are served in combinations which cannot easily be weighed separately, e.g. fruit in jelly. In some cases, a single code covers a combination - for example, code 542 covers the fruit and sponge in a fruit sponge pudding. For other combinations, there are no such single codes and the foods must be split into their separate components and coded individually.

Examples:

- Mixed salad: no composite food code, therefore code individual food items, and flag.

How much lettuce: a few large leaves, half a small lettuce?

How many tomatoes: 3 large, half a pound?

How much celery: a few sticks, a medium sized head?

Anything else?

- Toad-in-the-hole: no composite food code, therefore code as separate food items, sausages and Yorkshire pudding, and flag.

How many sausages? Pork or beef sausages?

What quantity of Yorkshire (batter) pudding: made with one egg and half a

pint of whole milk?

What size of egg was used in the Yorkshire pudding?

b) Recipes

For all items in the food code list with a numerical code prefixed by the letter "R" (*Recipe*):

- (i) If the dish was home-made, you need to record, on the back of the diary page, the ingredients and their relative quantities in the whole dish (not just in their serving). If the recipe matches the description in the food code list, then allocate the code and flag. If the description of the recipe is different to that in the food code list then you cannot allocate a code - just flag the entry.

Examples:

Lasagne: composite food code 1348; therefore do not code separate items but record recipe, and flag

e.g. 8 oz Safeway dried lasagne
12 oz fresh minced beef
12 oz can of tomatoes
2 large onions
1 dessertspoon of cornflour
pinch of mixed herbs
½ pint – Coleman's packet mix cheese sauce, made with whole
milk
2 oz English cheddar cheese, unsmoked

Chilli Con Carne: no composite food code (recipe different to food code list description), therefore flag the entry.

e.g. 250g extra lean minced pork
half a can of kidney beans
1 large onion
2 medium sized fresh tomatoes
30g fresh mushrooms
1 teaspoon chilli powder
2 tbsp. Tesco's vegetable oil
one clove of garlic

Remember: To record the weight of the **serving** in column E.

NB: Food items recorded for recipes DO need their brand names recorded EXCEPT when a recipe dish was eaten away from home and it was not possible to obtain this information.

Recipe information should be recorded on the back of the diary page containing the original entry, in the space indicated for recipes. All recipe dishes recorded in this way should be flagged and referenced back to the original entry. Flags should not cover coding columns. Nutritionists at Head Office will allocate weights to the components of a recipe dish where there is no composite food code. They will also code items not on your food code list, and will check your coding of recipe data where there is a composite food code.

NB: For recipes using eggs, please record the size of the egg as part of the recipe.

- (ii) If the item is purchased, and the description matches the item in the food code list, then allocate that food code. If the description is different to that in the food code list, you cannot allocate a code, just flag the entry.

Remember: All composite and recipe items need to be flagged.

Where a combination food or recipe dish can be coded straight from the food code list, we need the recipe so that the nutritionists can check that the home recipe is sufficiently similar to the standard recipe on which the nutritional information for food is based, and hence that the single code can be used. If the recipe differs significantly, then the nutritionists will have the information in the Home Diary to allow them to code the separate components.

D Liquids Used in Cooking

The Food Standards Agency are interested in the amount of liquid consumed by adults. Liquids in recipes are important in order to know the 'concentration' of nutrients, e.g. vegetable soup - 2 pints of water in the recipe or ½ pint?

E Coding Fats and Oils

You have been given two cards; one (FC6) showing how all the various fats and oils that can be used in cooking are classified, i.e. what products are polyunsaturated fats and oils, what fats should be included under the heading of "dripping", etc. This will help you allocate the

correct food code to foods cooked in, or made with, fats and oils. The other card (FC5) shows the various fats used for spreading.

F Coding Leftovers

Some food codes relate to what has been consumed, thus the associated weight information should reflect the actual amount of the item consumed, and should not include the weight of any wastage. For example, for a banana, the food code relates to the edible flesh, and the weight recorded against that code should therefore be the weight of the edible flesh only, not the skin.

If foods are weighed with parts that are not eaten, e.g. nuts weighed in shells, bananas weighed in skins, the wastage or inedible portion should be weighed and shown as a leftover. The food code used will be for the edible portion only and the computer will calculate the net weight eaten, i.e. the total weight less the weight of the leftovers. For example, a fresh peach should be weighed whole, on a plate, eaten, and then the weight of the stone shown as a leftover, as follows.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		210 g	
	Fresh peach	100	✓ stone	2101

The food code for the peach is 2101 - "peach, fresh, flesh and skin only, no stones, or leftover stones weighed", i.e. weight of fruit eaten is known. The computer will calculate the weight associated with that code as 90 grams, i.e. 100 grams less 10 grams leftovers (stone).

Unfortunately, respondents will not always record in the way that we would like and may forget to weigh leftovers: for example a peach may have been weighed whole (on a plate) but the weight of the stone left over is not shown. The computer will then have to estimate the weight of the eaten fruit. To indicate this estimation, it is necessary that the food code should show that the stone was not weighed as a leftover, and the weight recorded is greater than the weight of the fruit eaten. In this case, code 2102 should be used, "peach, fresh, leftover stone not weighed". The entry should then look like this:

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		.....g	
	Fresh peach	100	✓ stone	2102

Please note: In cases where the fruit has not been weighed at all, always use the code for fruit 'without the inedible portion' (skin, stones, pips, etc.). This will apply to all Eating Out Diary entries, and any cases in the Home Diary where the fruit has not been weighed at all.

Here are some more complicated examples.

Example A: A Grilled Lamb Loin Chop

- i) Lamb loin chop, grilled, weighed with fat and bone. All the fat and the bone are not eaten, they are weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		260 g	
	Lamb loin chop, grilled, lean and fat	120	✓ bone & all fat	980

The code used, 980, is for a lamb loin chop, grilled, lean only, leftover bone weighed; the weight of meat is known. It is important to record whether any of the fat was eaten.

- ii) Lamb loin chop, grilled, weighed with fat and bone. The bone is not eaten, and is weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		240 g	
	Lamb loin chop, grilled, lean and fat	120	✓ bone	982

The code used, 982, is for a grilled lamb loin chop, lean and fat, leftover bone weighed; the weight of lean and fat meat eaten is known.

- iii) Lamb loin chop, grilled, weighed with fat and bone. All the fat and the bone are not eaten, but they are not weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		..... g	
	Lamb loin chop, grilled, lean and fat	120	✓ bone & all fat	981

The code used, 981, is for a grilled lamb loin chop, lean only, leftover bone not weighed; the weight of the lean meat is not known. It is important to record whether any of the fat was eaten.

- iv) Lamb loin chop, grilled, weighed with fat and bone. The bone is not eaten, and not weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		..... g	
	Lamb loin chop, grilled, lean and fat	120	✓ bone	983

The code used, 983, is for a grilled lamb loin chop, lean and fat, leftover bone not weighed; weight of lean and fat meat eaten is not known.

Example B: Skate (cartilaginous fish)

- i) Skate, fried in butter, weighed with flesh, skin and bones. Skin and bones not eaten, weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		220 g	
	Skate, fried in salted butter	130	✓ skin & bones	1549

Code 1549: skate, fried in butter, leftover bones and skin weighed; weight of flesh eaten is known.

- ii) Skate, fried in butter, weighed with flesh, skin and bones. Skin and bones not eaten, and not weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		..... g	
	Skate, fried in salted butter	130	✓ skin & bones	1550

Code 1550: skate, fried in butter, leftover bones and skin not weighed; weight of flesh eaten is not known.

G Coding Tap Water

The Food Standards Agency are interested in the amount of water that adults drink both on its own and as a diluent to make up other drinks, such as squash, coffee, instant chocolate drinks, etc.

The food code for tap water depends on how the tap water was used. Tap water drunk on its own, not used as a diluent, is food coded 5000; there are separate codes for water used to dilute concentrated soft drinks - non-diet and diet separately (5101 and 5102); to make up instant coffee (5103); instant tea (5104); dried milk (5105); instant beverages (5106); and to make up powdered medicines or dietary supplements (also 5106).

For water used in any other way, for example to dilute fruit juice, you should flag the entry.

The food codes for water are shown in the food code list on page 8 and on the pages with drinks they are used to dilute, and for ease of use on a card (Card FC7).

H Summary

- 1) Food codes have a maximum of 4 digits. Where a food code has fewer than 4 digits the number should be right adjusted.
- 2) Empty plates, bowls, etc., are NOT food coded.
- 3) All other diary entries should have a food code. If you cannot code the item because it does not appear in the code list or because it is a composite or recipe item, the entry should be flagged for the attention of the nutritionists at Head Office.
- 4) All home-made recipe items should be written out on the following diary page. Recipe food items in the food code list are indicated by an 'R'. All recipes should be flagged.
- 5) Composite items for which a food code cannot be found should be split into their constituent parts, showing the weight of each part in the serving, and flagged.
- 6) Use the *Fats and Oils for Cooking* and the *Fats for Spreading* cards to help you identify the type of fat or oil used.
- 7) Food descriptions need to contain details of leftovers, as some food codes relate to what has been consumed; i.e. have skin, bones or stones been weighed as leftovers or not? Ticks should appear next to the items left over, in the weight column, column F, with notes, e.g. leftover stone, bone or fat, etc.
- 8) Note the form of the artificial sweetener, i.e. liquid, granulated, tablet, etc., as the food code list is organised according to the form of the sweetener.
- 9) Code tap water according to whether or not it is used as a diluent.
- 10) 'B' to indicate brand information required, and 'R' to indicate recipe information required, are not part of the food code, and should NOT be written in the food code column.

2.2.9 Brand coding

Brand coding is not needed for all items at present; only the following types of food should be brand coded:

- ❖ herbal and fruit teas
- ❖ fruit juices and soft drinks
- ❖ bottled waters
- ❖ artificial sweeteners

We have decided, however, that respondents should be asked to record the brand names of all the items that are consumed; selective recording is likely to lead to lost information. Also it is likely that at some time in the future the Food Standards Agency will ask for other types of food to be brand coded. You will find that in the Food Code List, those foods or food groups that need to be brand coded are marked with a 'B' against the food code.

Brand codes are needed for items eaten in and outside the home. Artificial sweeteners should be brand coded when they are used 'at the table' and when they are used in cooking. Artificial sweeteners added to pre-packaged products, such as yoghurt and soft drinks, are not coded separately.

You have been provided with separate brand code lists (FC3) for each of the food types that need brand coding. These lists can be filed with your food code list if you wish, with the brand code pages following the relevant food code pages.

The brand code has a maximum of three digits and should be entered in the three digit space headed 'Brand' in the *Office Use Only* Column. Codes with fewer than three digits should be right adjusted; there is no need to enter leading zeros. If the food item is not one of those to be brand coded then the 'Brand' Column should be left empty.

A Herbal and Fruit Teas

Note that we are interested not only in the brand name, but also in the flavour of the tea.

Codes are included for 'own brand' herbal teas at the end of the list.

Any herbal tea sold loose (i.e. not pre-packed) should be brand coded 243.

Any herbal tea brand not separately listed should be brand coded 600.

If the brand of the herbal tea is not known then brand code 601

Note that all herbal and fruit teas should be flagged

B Bottled Waters

The codes listed cover the most popular brands of bottled water and those of specific interest to Food Standards Agency. We are not interested in the specific brand of any bottled water not listed, but we do need to know whether it is a British Isles product (code 318) or a foreign product (code 328). Therefore any 'own brand' bottled water not specifically listed will be coded according to its place of origin: there are no 'own brand' codes for bottled waters.

If the brand of bottled water is not known brand code 601.

C Fruit Juices and Soft Drinks

As for bottled waters, the brand codes for soft drinks cover the most popular brands. Codes for 'own brand' soft drinks are given at the end of the list.

Any brand (including own brands) not listed should be coded 600 (there is no need to flag).

If the brand of fruit juice or soft drink is not known brand code 601.

D Artificial Sweeteners

Note that we are interested not only in the brand name of the artificial sweetener but also in its form, that is, whether it is in tablet or minicube form, granulated (or powder), or a liquid.

The brand code list is organised according to the form the sweetener is in for non-own brand products. Codes for own brand artificial sweeteners are given at the end of the list; cross-checking with the food code will tell us the form (tablet / granulated / liquid) for own brands.

Any brand not given on the code list should be coded 600.

If the brand of artificial sweetener is not known, brand code 601.

Note that all artificial sweeteners should be flagged

E Summary:

- 1) Foods requiring brand coding are marked with a 'B' against the food code. Do not write this 'B' in the brand code section in the *Office Use Only* box.
- 2) Artificial sweeteners should be food and brand coded when added at the table or used in cooking. All artificial sweetener entries should be flagged.
- 3) Brand codes have a maximum of 3 digits. Where the brand code has fewer than 3 digits it should be right adjusted.
- 4) All herbal and fruit teas should be flagged
- 5) All own brand herbal and fruit teas should be brand coded as well as flagged.
- 6) Herbal and fruit teas sold loose and not branded should be coded 243 as well as flagged.
- 7) Any fruit juice or soft drink not listed on the brand code list should be brand coded 600. It does not need to be flagged.
- 8) Own brand bottled waters should be brand coded according to their country of origin. There are no own brand codes for bottled waters.
- 9) Any artificial sweetener not listed on the brand code list should be coded 600.
- 9) If the brand name is not known, use brand code 601.

2.2.10 Food source codes

The food source code is a single digit range 1-5. Start by checking whether the food was eaten at home or eaten out.

- If food is eaten **in** the home, whether it is from the 'larder', or a takeaway, or food of any kind brought into the home, then no food source code needs to be allocated. Food source codes are only required for **food eaten out of the home**.
- All eating out diary entries transcribed onto blue & white pages should have a food source code recorded. Also, all home diary entries on green & white pages, where the food is eaten outside the home (e.g. packed lunch), need to have a food source code recorded.
- Food is source coded at 'container level', therefore the code should be entered on the line immediately below the '**empty container**' line in the *Office Use Only* box.

Codes:

1. All food derived from the household food supply that is eaten outside the home, e.g. a packed lunch.
2. Food obtained from the work/college canteen, including vending machines in the canteen.
3. Food obtained from, and eaten at, a commercial catering establishment, e.g. restaurant, pub, café, fast food outlets. Includes any foods eaten on the premises of such establishments, e.g. a burger bought at, and eaten in, the cinema.
4. Takeaway food - food obtained from a commercial eating establishment but NOT eaten on the premises; food from a retail outlet NOT eaten at home. Includes food eaten on the move, e.g. a hot-dog bought from a stand and eaten in the park. Includes sandwich from a sandwich bar eaten in the office.
5. Other source – any food which cannot be allocated codes 1-4. Includes food given to respondent by some one else. Includes tea/coffee from office coffee club.

Examples: Biscuits brought into office by colleague	= code 5
Sandwich from sandwich bar eaten in the office	= code 4
Takeaway meal purchased and taken to friends house to eat	= code 4

- The codes should be assigned to foods in priority order:
 1. the source of the food, i.e. where the food was obtained from;
 2. where the food was eaten.
- Adopting a 'decision tree' approach may help you to decide which code to assign, i.e. consider codes 1 and 2 first, then codes 3 and 4. If none of these fits, assign code 5.

- Only one food source code is entered on the line immediately below the '**empty container**' line, not against every food on that container / plate. If the container is made up of food derived from different sources, the food should be sourced at container level, where the majority rules. E.g. a meal from the works canteen, and respondent adds salad bought from local sandwich bar, both eaten in the canteen together, would be coded 2. (The salad eaten on it's own in the workplace canteen would have been coded as 'takeaway' code 4).
- Flag any queries or entries you cannot code.
- Card FC8 is a quick reference card to the 5 food source codes, and is tagged in with your multi-coloured documents of brand codes/ fats for spreading/ tap water codes, etc.

2.2.11 Flagging entries on the home diary - Card F6

Card F6 is a summary of the items that you will need to flag on the green & white Home Food and Drink Diary pages. These are:

Weight information

- Any item not weighed
- Any item where the quantity is not in grams – e.g. drops / units / teaspoons / fl.ozs
- Cumulative weights
- Any item where an estimated weight has been recorded
- Items too light to register on the scale
- Condiments added at the table (not salt and pepper) and not weighed in grams
- All second helpings

Food descriptions

- All composite and recipe items
- All artificial sweeteners
- All herbal and fruit teas (both pre-packaged and loose)
- Any medicine recorded
- Any vitamin, mineral or other food supplement

Food codes

- Foods not shown in the food code list
- Tap water used to dilute fruit juice or in any other way not covered by the diluent codes

Leftovers

- All cases where some of the item was lost, spilt etc., and could not be re-weighed (entry in Column G of the Home Diary)
- Cases where individual leftovers have been weighed (rather than total weight of leftovers)
- Cases where the total weight of leftovers is more than the total weight served

All cases where food has been prepared and weighed at home, but eaten away from home (e.g. a packed lunch).

Any other queries on weights, food codes, brand codes (including tap water), and food source codes.

Remember: All entries recorded on blue & white diary pages will be checked by the nutritionist; there is no need to flag blue sheets.

We do not expect you to be able to code all the items in the diaries', but you should be flagging all your queries.

2.2.12 The Dietary Assessment Schedule (document F7, see Appendix A of the Technical Report)

This document contains three sections which relate to the dietary record:

- record of the respondent's typical eating pattern - Section A
- record of foods usually eaten by the respondent - Section B
- quality assessment of the dietary record - Section C

This schedule applies only to those who **fully or partially** complete a dietary record.

A: TYPICAL EATING PATTERN

Purpose

This Section is designed to help you, the interviewer, and the nutritionists and coders at HQ, when coding the dietary record. It will not be entered into the Blaise object, nor will it be analysed.

The Section collects information on the respondent's typical eating pattern, what meals they have, their approximate times, and the types of food eaten at the different times. We know from our own experience and from previous studies, that for most people behaviour on weekdays varies from that on weekend days, and that Saturdays are different from Sundays.

For example:

- if you know that the respondent has breakfast on weekdays and weekend days, and there is no entry at breakfast time for a particular day, you should be alerted to the fact that it is missing and check with the respondent whether they did skip breakfast that day, or whether they forgot to record what they ate.

- if a respondent has a drink to take to bed, this should alert you to checking that there is such an entry each day. If this record shows that typically the respondent has a cooked meal at lunchtime, but the entries show only a snack, again you should be ready to check whether their normal habit changed (and why) or whether they are failing to record accurately what they are eating.

Remember: this is not infallible information; people change their habits for good, and valid reasons, but you should be alert to these changes so that you can always check that the record is complete and accurate.

Timing

This section should be completed after carrying out the initial dietary interview, but before placing the 7-day dietary record.

Completing the information

- Q1 Record the approximate times that the various eating occasions take place on weekdays and on weekends days. If the respondent does not have a particular eating occasion listed, for example, does not have supper, then in the appropriate space, write “not taken”.

Remember that this document is initially for your use; you can change the names of the eating occasions if those listed do not correspond to what the respondent takes, e.g. dinner is “not taken” but “high tea” replaces dinner and supper.

- Q2 For each occasion on which the respondent eats, write in a short description of the type of ‘meal’ it is.

There is no need to collect detailed menu information; what is required is a basic record of the type of meal. For example, for breakfast on weekdays - juice, cereal, toast and tea; on weekend days - a cooked breakfast with toast and coffee; on weekdays - a sandwich lunch with fruit or yogurt; at weekends - “something on toast”.

We have found that drinks (and food) taken in bed before getting up, and at night, are frequently missed in the dietary record, so please make sure that you check carefully whether these are part of the respondent’s usual eating pattern.

Please use the additional space on the schedule to record any other information about the respondent’s eating pattern that will be useful to you and to us.

- Q3 The purpose of this question is to alert you to the fact that you will need to use a catering questionnaire (F3, see Appendix A of the Technical Report).
- Q4 Check which days of the week the respondent buys food from the canteen. This will give you an idea of how often they may eat canteen food. If the canteen menu varies according to the day of the week, this information will be useful when you visit with the canteen questionnaire.

Using the information

- You should have this information readily to hand when you are checking the entries in the dietary record with the respondent before you take the completed pages away for coding, and when you are coding.

- Make a note for yourself on the dietary record of any discrepancies that you find, which you can check when you next call.
- If you make notes on the dietary record of any such queries, please also annotate the record to show us that you did check the entry and the outcome.

B: USUAL FOODS

Purpose

Again this section is to help you and the nutritionists and coders with checking and coding the dietary record. As with section A, this information will not be transferred into the Blaise object or subsequently analysed. Information is collected about a range of foods that are likely to appear frequently in the diary, about which you will need some detail in order to code accurately.

If details are missing about frequently eaten items, and cannot be collected at a subsequent call, then there will be some information available from this section about the type of food item that is usually purchased and consumed.

Remember: you should not expect that the information in this section will always correspond to that in the diary. For example, the respondent may usually have semi-skimmed milk, but if they run out, and the shop only has whole milk, you would correctly find an entry for whole milk in the diary.

Timing

This section should be completed before leaving the dietary record, and is probably best collected immediately after completing section A.

Completing the information

- Q1 For codes 3, 4 and 5 record the brand of milk usually used, and at code 6 specify the type if it is not among the types listed, e.g. unpasteurised.
- Q2 The full brand name, copied from the container, will give you the best information, e.g. Tesco Olive Gold Reduced Fat Spread.
- Q3 Again, looking at the container, record full details of the type and brand, e.g. Mazola Pure Sunflower Oil.
- Q4 Collect information about what the respondent usually drinks.
- Q5 Make any notes which will help you, e.g. buys cans to take in their packed lunch, but bottles for drinking at home.
- Q6 Make any notes which will help you, e.g. has white bread for toast and brown for sandwiches; buys a granary loaf for Saturday lunch.
- Q9 Looking at the container, check which type of juice it is: longlife/UHT juices come in Tetrabrick/Tetrapack cartons, are not refrigerated, and have a long shelf-life; pasteurised juices come in bottles or tall cartons with a 'roof', are refrigerated and have a short shelf-life.

- Q10 You will have asked this question during the interview, so ask it as a check question. If fruit or vegetables are home-grown, you may find it a help to list what is grown, but only record what is available, fresh or from store, **at that time**. Remember that home-grown means in **their own** garden or allotment.

Using the information

You should have this section to hand when you are coding the dietary record.

Remember: if there is insufficient detail in the dietary record for you to code an item that is included in this section, you should **not** assume that it will be the same.

You must always check the dietary record with the respondent at your next call.

Remember: if you are unable to collect the missing information, you should still **not** make any assumption about coding a food item; flag the entry and the nutritionists will decide how it should be coded.

C: QUALITY ASSESSMENT

Purpose

In previous dietary surveys, an interview has been carried out at the end of the dietary recording period when the person who completed the record was asked about how well it was kept. Comparing the views of interviewers and our assessments of the diaries with those of the person who completed the record, it has been evident that record keepers, quite naturally, tend to under report or not report problems, errors and omissions. Moreover interviewers have always said that they have felt uncomfortable asking these sorts of questions.

We have decided therefore that interviewers should be asked to make this assessment of the quality of the dietary record.

It is very important that we have this assessment. The Food Standards Agency and other users of the data are naturally concerned to know that the results from the survey are reliable and accurate, and although we can carry out some independent checks on the information collected, it can be very difficult. For example, some respondents quite genuinely live on a diet of soft drinks and snacks; some people will only eat the same thing in their sandwiches every day; will never eat fruit or vegetables; will eat 4 yogurts at one sitting, etc. We are therefore looking to you, as the person with the closest knowledge of the respondent, to make the assessment of the quality of the recording and weighing.

Remember: we want an objective assessment of the quality of weighing and recording. Please do not let your answers be coloured by the ability, or personal circumstances, of the respondent. We know that some people will find it hard to keep the record and although they do their very best, it will not be an accurate record, because, for example, they copy over the weights of drinks and food items. Please, when making your assessment, disregard how difficult they found it; your answers must reflect what was actually done.

Remember: that we are interested in the final quality of the record; some people may need a great deal of support and help from you which will involve you in a lot of re-writing and perhaps helping them with the weighing. If however at the end of the day the record

does accurately reflect what was eaten, then your assessment should be based on this, the final product.

Most of this information will not be entered into the Blaise object; only the information at Q7 is keyed into Blaise by you. So, although the section takes the form of a structured questionnaire, please make any additional notes which you feel will be helpful, or add points which are not covered in these questions. This section will be carefully scrutinised by the nutritionists, and on the basis of your answers they will decide whether or not the dietary information is sufficiently accurate to be included in the dataset for analysis.

Timing

You should complete this section as soon as you have completed coding the dietary record.

Completing the information

Q1 & 2 Confectionery and snacks, biscuits and cakes, and drinks are the items most likely to be omitted. The Eating Pattern Check Sheet (F2) should alert you to occasions when these items are being missed, which is most likely to be during the middle days of the 7-day period.

Q3 When checking the dietary record you should be looking for weights which are repeated, especially for drinks. This suggests that a first drink was weighed and thereafter the weights have been copied over.

Remember: It is quite difficult to make a fruit drink or a cup of tea or coffee with exactly the same weights of the constituent items each time.

Q4 & 5 Apart from missing items, is the information about food items accurate; were you able accurately to collect information on fats used in cooking; were all leftovers identified; etc?

Q6 There are many circumstances which might have affected the respondent's eating habits during the recording period; these should be recorded at this question. They might include going to a party or other celebration, being unwell, eating out more frequently than normal; visiting or staying with someone else, etc. Details of these situations should be recorded at this question with some indication of what the effects on the eating habits of the respondent were, e.g. drinking more alcohol than normal; bigger meals; more meals out, etc.

Q7 This question summarises your opinion of the quality of the dietary information. It measures two dimensions; completeness and accuracy of weighing, both of which are covered separately by earlier questions.

Q8 This question must **always** be answered.

D Returning the Dietary Assessment Schedule

If a dietary record was refused: return this schedule, completed on the front page only, to HQ, with all other documents for this serial number.

If the dietary record was partially or fully completed: return this schedule, fully completed, to HQ, tagged to the front of the Home Record Diary, with all other documents for this serial number.

2.2.13 Weighing and recording in the dietary diaries: A step-by-step guide to field procedures

A At the Placement Call

1. Demonstrate the scales and how to use them, with an example.
2. Demonstrate how to record in the diaries, again using an example.

While you will have to explain that we need detailed descriptions in the diaries, if you go into too much detail at this stage, the respondent may be discouraged from participating - you can always explain and probe for more detail on the brand and food descriptions at subsequent calls and as the need arises.

3. Explain that you will be calling back after 24 hours to see how the respondent is getting on and to help with any difficulties. By way of explanation you can say that in our experience, most difficulties arise in the first day while people are getting used to the weighing and recording.

Remember: The 7-day diary recording period starts at 00:01 hours on the morning after your placement call. However, the respondent should start weighing and recording from the time you leave them. These items should be entered in the diary under day order "0"; this gives them the chance to try out the scales and practice the measuring techniques. The recording period lasts for 7 full days and always starts with the first item eaten or drunk on day 1, running through to the end of day 7. There should always be a practice page and it should be left in the diary for returning to ONS. However, entries during the practice period should be crossed through; there is no need to code / flag any of these entries.

B At the 24 Hour Checking Call

At your 24 hour recall, and any other checking calls, the aim is to:

1. encourage the respondent who may become disheartened or bored by the amount of weighing and recording required;
2. probe for missing detail, or even missed food, in the diaries;
3. query weights of items which seem excessively high or low, or so badly written that you are unsure of what they are;
4. make sure that the respondent is remembering to record items eaten away from home either in the Home Diary, or if not weighed, in the Eating Out Diary;
5. once checked, you can detach any completed sheets from the Home Diary and take them away to code them.

During the 24 hour call in particular, it is worth checking every single entry in the Home and Eating Out Diaries while you are still in the respondent's home.

Remember: It is VITAL that you keep up with your coding of the diaries and do not leave this work until the end of the recording period. If you do leave it, you will find the task onerous, and if you find you need additional information before you can code an item, the respondent may not remember the detail. You should therefore be calling back at least once more (after the 24 hour call) during the recording period.

C Checklist for Diary Checking

The following should help you when you come to checking the information recorded in the diaries.

1. **Recording day and date:** has this been recorded for each sheet? Has the respondent started a new sheet at the beginning of each day? If not, you should find, and clearly mark, where the new day starts and then re-write the necessary pages.
2. **Time eaten:** has this been entered for **each 'empty container' line** and specified am or pm? If this information is missing you should probe while you are still at the respondent's home or at your next call.
3. **Who weighed the food:** has this been entered for each empty container line on the green diary pages?
4. **Descriptions of foods and drinks:** must be adequate for you to code them. Can you code from the written description? Are the brand names included?
5. **Weight served must be correctly recorded:** has each food item been separately weighed? Are the individual weights sensible? If the weight of an item seems a bit unusual but not obviously mistaken, then query it, making a note to show you have done so. If you are very suspicious of the weight, it might be better to ask if the respondent has another example of the food item in question for which you could check the weight – you can explain this with "because we have found x food is often difficult to weigh".

To help you judge whether a weight is sensible or not:

- use the **Guide Weights (F5)** card;
- encourage respondents to include, as part of the food description, the number of units served, for example, 2 Weetabix or 3 fish fingers.

Watch out for 'g' for grams; this is already printed in the weight column. Weights not in grams, and volumes, should be written in the food description column and flagged.

6. Leftovers

- Leftovers should be weighed. Certain types of food are likely to include leftovers which are not eaten, such as bones from meat and poultry, cores from apples, stones from peaches, etc. Check for leftovers in these and other cases where they are likely.
- Check that the weight given for leftovers plus plate is greater than the weight of the empty plate, and that the weight of leftovers is no greater than the original weight of all foods served on that plate. Please check any such entries with your respondent and amend.

- We must have a weight and ticks to show us what was left from the items shown in the diary. For example, where chicken bones are left, a tick would appear by the chicken entry, with the word "bones" next to it.
 - Remember that if bread and spread appear in the diary, and bread is leftover, then there should be ticks next to the bread AND spread. Breakfast cereals served with milk and sugar which are leftover will also have milk and sugar as leftovers. Check ticks appear next to these items as they are commonly missed.
7. **Time periods:** most respondents will eat at breakfast, lunch and evening meals. While precise times and types of food consumed will vary, you should expect to have entries for all time periods - or a note to explain why not, e.g. "does not eat breakfast".
 8. **Drinks:** there should normally be a minimum of 2 litres of drink in a day's diet - if not probe for missed drinks. You may find, for instance, that nothing has been recorded because the respondent thought that water did not count. If the respondent genuinely has not had any fluids, note this clearly.

9. The Eating Pattern Check Sheet (F2)

- This lists particular types of food that are often missed in the diaries: drinks; crisps and savoury snacks; biscuits, cakes and confectionery and food supplements. This sheet is designed to help you check for under-recording of these food items.
- For each diary day you should ring the number of entries you find of each type of food in both the Home Diary and the Eating Out Diaries. If you find, for example, that the respondent has had no or very few drinks on a particular day you should query this with him/her at your next call.
- If the Eating Pattern Check Sheet identifies any daily differences in the intake of a particular food, you should query this at the next call, and write a note in the diary to explain why the difference occurred, for example, "the respondent was ill".
- If no snacks are recorded, this should be queried, and a note made of the answer.
- If a meat dish is recorded without any vegetables, this should be queried, and noted.
- Please complete the Eating Pattern Check Sheet as you pick up and code a few days completed pages. There is little point in finding out several days after the whole diary has been completed that items are being omitted; you need to identify the problem while something can still be done about it.

10. Separate Weighing

- However much you stress to the respondent the importance of separately weighing every item, our experience shows that some tend to forget. Some of the most commonly forgotten items are the separate components in bread and butter, cups of tea / coffee and glasses of squash. If possible, when this happens try to persuade the respondent to make a duplicate glass of squash or whatever and weigh the items (you may already have a duplicate example from the practice weighing on the placing day). If that is not feasible, try to gather sufficient information about the components to enable us to make a duplicate. Even with the most forgetful or careless person you should try to achieve at least one fully detailed weighed record of squash/ cup of tea, and bread and spread(s).

- However, when pointing out that the respondent has forgotten to separately weigh the items in a particular cup or bowl, don't forget to say that you are pleased that they did at least record the items. After all, we do not want to encourage people who have forgotten to separately weigh the components of a dish to "forget" to record it at all; we would rather have an inadequately weighed dish than a non-recorded one.
 - It is important to check soft drink concentrates made up with water, cups of tea / coffee with milk, and breakfast cereals with milk for cumulative weighing errors, with the respondent. It is almost impossible for us to tell whether a series of increasing weights are cumulative or not, especially for drinks of squash where dilution varies. Please check such entries and make a note to reassure us.
11. **Liquids used in cooking / recipes:** you should check that respondents are recording how much liquid they use in cooking, i.e. how much water they add to a casserole or how much milk they add to a sauce. This should appear in the recipe, and not separately in column E.
12. **Food supplements:** check that respondents who said at the interview that they take food supplements are recording them in the diary. If they are not, ask why and record the answer. Check that all medicines (prescribed and proprietary) that are taken by mouth are recorded. Also, check that the respondent has recorded any drinks (including sips of water) that have been taken with the medicines/supplements.

D Before Sending in the Diaries

Before sending in the diaries you should check:

- the food items and brand information have been coded as far as you are able. Any food descriptions or brand name that you cannot code should be checked with Head Office and, whether or not you get a ruling or a request for further information, you should flag the query for the attention of the nutritionists. Any code about which you have doubts should also be flagged, and detailed notes given;
- you have recorded all recipes for home-made dishes, including those for home-made dishes which are in the food code list, which are prefixed by the letter "R";
- every group of foods eaten together has the necessary plate line information in column A;
- all entries from the Eating Out Diary have been transferred to the blue & white transfer sheets (EXCEPT where food has been prepared and weighed at home to eat out); that the food and brand information has been coded; that a food source code has been allocated; and that where you bought a duplicate item, the weights are shown in the weight column. There should be a tick in the 'estimated weight column' if a duplicate was bought, and its weight recorded in the diary.
- any leftovers have been recorded against foods where leftovers would be expected; or that there is a note attached to explain an unexpected situation;
- that you have given empty containers which were not weighed a weight of 1 gram;
- that if more than one entry has been written on the same line, you have transferred the entries to two separate lines;

- that each page is correctly dated and serial numbered; if there are entries for more than one day on the same page, you should transfer one day's entries to a separate page; the pages should be tagged into correct day order; entries for day 0 should be crossed through but left in the diary.

NOTE: the entries on the green and blue pages do not have to be in time order, but the pages must be in date order and entries for more than one day should not appear on the same page.

- the *Eating Pattern Check Sheet* is completed and tagged to the front of the Home Diary;
- that you return the Eating Out Diary with the Home Diary in all cases, even when it has not been used;
- please use the green pen provided for all your notes on the diaries unless the respondent has used this colour. In this circumstance you should use a different colour and indicate this on the front cover of the Home Diary, so that your entries and amendments can be distinguished;
- if you rewrite any pages, return the original entry, crossed through;
- the bag for collecting food wrappers etc should be attached to the diary, whether used or not;
- the notebook (P3) should be returned with the diaries, whether used or not;
- the catering questionnaire should be returned, whether used or not
- the dietary assessment sheet should be returned with the diaries;
- send the completed Home Diary and Eating Out Diary with their cover pages back to the Office in the wallet provided, with a serial number label attached to the outside.

2.3 PHYSICAL ACTIVITY DIARY

2.3.1 Introduction

Some information on physical activity at work and in respondents' free time is collected in the placement interview and in the pick-up interview. There is also a physical activity diary which is included in the Diary of Activities...and Eating and Drinking Away from Home (document E2). **These instructions relate to the physical activity diary.** Instructions relating to the physical activity questions are included with the *Additional Recording and Coding Tasks* section.

2.3.2 Purpose

The information collected in the Activity Diary is used as an indicator of energy expenditure. This will then be related to energy intake - as recorded by the dietary diaries - and body composition – calculated using the anthropometric measurements. This survey provides a unique opportunity to directly relate these three elements with one another.

The health implications of physical activity relate to body composition and obesity; if the body does not use the energy it takes in as food, then it stores it; in time this will lead to an increase in body weight and Body Mass Index (BMI) and an increased risk of obesity. Many illnesses and conditions are related to obesity, such as the risk of cardio-vascular disease.

In the previous Adults' Survey we found that mean energy intakes were below the standard Estimated Average Requirements (EARs). Since people were not losing weight, it was presumed the EARs possibly overestimated energy requirements.

The current figures for EARs have been used for a number of years. It is thought that requirements may have changed over that period due to a number of factors, including a reduction in the amount and quality of physical activity people do. Some possible explanations are the reduction in manual jobs, an increase in the prevalence of labour-saving devices in the home and an increase in the number of car-owners. There are other reasons why energy requirements may be lower - including a reduction in the body's requirement to use energy to keep warm - our houses are more likely to be centrally heated, and a reduction in the body's requirement to use energy to fight infections - we are more disease resistant. Analysis of the relationships between energy intake, energy expenditure and body composition will be used to provide EARs for the population.

2.3.3 Background

Activities are divided into four categories according to how much energy they use. These are:

- Sleep
- Very light/light activities - very light activities include sitting watching TV, using a computer, reading, listening to music or playing cards etc; light activities include light cleaning, cooking, light DIY, walking around the shops, bowling
- Moderate activities e.g. active childcare activities, hard cleaning, swimming
- Hard/very hard activities e.g. aerobics, weight training, rugby, squash, athletics

We collect information on time spent doing all of these types of activity. The program adds up the time spent doing all the other activities, including time spent at work and college, and then subtracts this from 24 hours. Any remaining time is assumed by the program to be

spent doing very light/light activities. The information you collect and code in the pick-up interview on the level of activity involved in the respondent's job(s) is fed into this equation automatically by the program.

From this information we will be able to categorise respondents into a small number of groups - very inactive, inactive, moderately active and active. These results will then be analysed in relation to energy intake and body size.

2.3.4 Eligibility

All respondents are eligible to complete the seven-day physical activity record.

2.3.5 Timing

The physical activity diary should be kept for the same 7 days as the dietary record.

2.3.6 Documents

- A4 blue and green *Diary of Activities ...and Eating and Drinking Away from Home* (E2). This is a tagged document, so completed pages can be taken away for checking before the end of the 7-day recording period;
- envelope for the respondent to keep the diary;
- plastic zip wallet for the respondent to carry the diary around (and keep other documents together);
- survey pen;
- Pocket Notebook (P3).

2.3.7 The physical activity diary

Document E2, the *Diary of Activities...and Eating and Drinking Away from Home*, contains 6 pages for each of the 7 recording days. Information relevant to physical activity is collected on the first 3 pages for each day. You should explain to the respondent that they will need to fill in these pages at the END of EACH day.

The first page for each day collects information about:

- which day it is, the date and the recording day;
- time spent in bed asleep (calculated by asking the respondent to record what time they went to bed and what time they got up);
- whether they were at work that day (including paid and unpaid work);
- if at work, time spent at work – in their main job and any second job;
- whether they went to college that day;

- if at college, time spent at college;
- any other time spent sleeping during the day, e.g. napping
- an opinion question asking them to assess whether they were more active, about as active or less active than usual that day.

To summarise, this page collects information on all the time the respondent spent on sleep, and at work/college.

Remember: on the 7th and final recording day we need to know what time the respondent went to bed. There is a space for recording this information on the front cover of the diary, where hopefully it will not be forgotten. Please make sure that this piece of information has been recorded when you collect this diary at the end of the 7-day recording period.

The second page for each day collects information about:

- time spent walking at an average pace;
- time spent walking briskly;
- time spent on a range of listed light and heavy housework, gardening, DIY jobs and active caring;
- time spent on any other similar activities
- for each of the above, respondents are asked to give a few details about the activity; this information will help you to determine whether the activity the respondent has recorded is in the correct category.

To summarise, the second page for each day collects information about light and moderate activities.

The third page for each day collects information about:

- time spent on a range of listed sports and leisure activities;
- whether the exertion of doing each of these activities was enough to make the respondent 'out of breath or sweaty';
- time spent on any other similar activities and whether these made the respondent 'out of breath or sweaty';

The reason we ask respondents to record whether doing the activity made them out of breath or sweaty is that some activities can be categorised differently according to how strenuously they were performed. For example cycling leisurely along a flat road is in a different category to cycling off road up a hill. This question will help us to categorise activities more accurately. It also brings NDNS into line with other surveys that look at

physical activity, such as the Health Survey for England and the Health Education Monitoring Survey, and should therefore ease comparisons between the findings of the surveys.

To summarise, page 3 collects information on mainly moderate and hard/very hard activities.

Pages 4 to 6 for each day collect information about eating and drinking out of the home (see separate instructions). You have been supplied with additional 'eating out' pages to give your respondent if he/she needs them.

2.3.8 The procedure

A General points

- The diary should be completed for each of the 7-days of the dietary record.
- Ideally we would like respondents to take this diary with them when they are out of their home, so that they can record information at the time. You should therefore encourage them to take the diary with them, in the plastic wallet provided, together with the pen.
- We recognise that some people will not be prepared to do this or may forget. You should ask these people always to carry the small notebook (P3) and a pen or pencil with them when they are away from home, so that they can make notes about their activities (and what they are eating and drinking) and then complete the diary at the end of each day. There are some pages at the back of P3 for recording activities.
- In order to get accurate and reliable information the diary must be completed on a daily basis at the end of each day. Please give the respondent an envelope for them to keep their diary in, for their privacy.
- At each visit to the home, you must check that the Activity Diary is being kept, and help with any problems. Take away completed pages for transferring dietary information onto blue transcription pages and coding.
- Attach a serial number label to each page of the diary and to the small pocket notebook (P3).
- You should show the respondent how to complete the diary at the placement interview; there are instructions at the front of the diary. As a practice you could ask them what they did the previous day, and show them how that would be recorded.

B Completing the diary

Try to make sure you cover the following points when you are explaining how to complete the diary:

- The diary is private.
- It is not a test; there are no right or wrong answers.

- Respondents should record only activities that are not part of their everyday work. For example, a gardener should not record heavy gardening activities that he or she does as part of his/her everyday job, because these will be counted as part of the time he/she spent working that day. On the other hand, if, for example, an office worker has a game of golf during the working day, this should be recorded, and the recording of the number of hours spent at work that day should be reduced accordingly.

- Recording time spent:

should exclude any activities that lasted less than 10 minutes;

should be as accurate as possible, not rounded - to the nearest 10 minutes is acceptable;

should be in hours and minutes; 2.5 hours could mean 2 hours and 5 minutes, or 2 hours and 30 minutes; check and, if necessary, amend any times which are unclear each time you check the diary with the respondent - and at the end of the 7 days;

should be the total time spent on the activity that day; if it is done more than once then the times need to be added together;

should only include time spent actually doing the activity - not getting ready, changing, on breaks etc. For example, an hour spent at the swimming pool, with only 40 minutes swimming, should be recorded as 40 minutes. Please make this very clear to the respondent; there is a tendency for the total length of a football or squash session to be recorded rather than just the time spent on the activity; this obviously will lead to an overestimate of energy expenditure. Please carefully check times spent on disco dancing and the like; was all the time recorded spent actually dancing or does it include time chatting to others etc? This applies equally to activities such as active childcare - how much time was spent actually pushing a pushchair and lifting the child?

- Other activities:

At the end of each of the lists of household activities and sports/leisure activities there is space for respondents to write in any other activities which are not on the lists. You will be assigning a physical activity code according to how strenuous the activity is when you come to key the diary. The section on physical activity coding contains a list of activities grouped according to how much energy they use for you to do this. It also includes instructions on how to code any activities that are not included in the list. If you are not sure what the activity is or what it involves, you need to probe the respondent for a more detailed description. For example: tobogganing – did it involve lifting and carrying the toboggan; pushing the toboggan; pulling the toboggan uphill etc.

- more than one job

There is space on the first page for each day for the respondent to record the time they spent at work for a main job and a second job. If, when you are explaining to the respondent

how to fill in the diary, it emerges that they have more than two jobs (although this seems fairly unlikely), then call the office.

- night shifts

Some people will work night shifts and therefore sleep during the day and work at night. This is of course perfectly acceptable. However, the questioning asks 'what time did you go to bed **last night**' so you might want to explain to the respondents working night shifts that this means at what time did they go to bed last time they went to bed!

Remember: Although we are not doing a proper 'time-use diary', it is very important that the information we do collect is as accurate and reliable as possible. There will be a tendency for people to over-record both the length and the intensity of activities. The diary has been designed to minimise this, but the accuracy of the diaries will depend on your checking them carefully and probing respondents for additional detail.

2.3.9 Transferring the information to your laptop and into Blaise

The information on physical activity needs be entered into the Blaise object before you transmit all the data for the case. Separate instructions are given on how to do this.

You may like to know how the information is then stored.

For each day the following, calculations are made directly from the information you key in:

- total time spent on sleep
- total time spent on very light/light activities
- total time spent on moderate activities
- total time spent on hard/very hard activities

Any remaining time is assumed to have been used doing very light/light activities and is calculated by subtraction.

Each of these categories is then multiplied by a factor, called a MET value, **Metabolic Equivalent value**. These are then added together to give a total score for the person each day. The scores each day are then added together and divided by 7 to give an average daily score, and this represents the respondent's average activity score.

2.4 THE BOWEL MOVEMENTS RECORD

2.4.1 Documents

- Recording card B1

2.4.2 Purpose

Frequency (and type) of bowel movement is implicated in some diseases of the gastrointestinal system - some more serious than 'simple' constipation - and the relationship between diet and bowel movement has long been established. Hence we have been asked to collect information on the numbers of bowel movements the respondents in this sample have over a 7-day period.

2.4.3 Eligibility

All respondents should be asked to provide this information, even if they decline to complete a dietary record.

2.4.4 Timing

A record should be kept of each bowel movement the respondent has on each of the 7 dietary recording days, starting at just past midnight on the first recording day.

If a dietary record is not being kept then the bowel movement record should be kept for the 7 days immediately following the first interview.

2.4.5 Consent

Only verbal consent is required.

2.4.6 Procedure

(i) Assuming that the respondent is keeping a dietary record, after placing the record, give each respondent card B1.

(ii) Ideally the card should be carried around by the respondent so that all bowel movements can be recorded both in and out of the home. If they are unable or unwilling to do this then the record of bowel movements should be completed at the end of each of the 7 days.

(iii) Attach a serial number label to card B1 write in the days on which the record should be kept, before giving it to the respondent.

(iv) Go through the procedure for recording:

- explain that any bowel movement after midnight should be counted as the first bowel movement of the day;
- bowel movements during the day and in the evening up to midnight should count towards that day's total;
- the recording finishes at midnight on the final day of the dietary recording period;
- if the respondent does not have a bowel movement on a particular day either at home and/or away from home then they should ring '0' on card or chart.

(v) At the end of each day the respondent should write in the total for the day (at home plus away) in the column on card B1. If they did not have a bowel movement on any particular day they should enter '0' as the day's total.

(vi) Check any blanks.

(vii) The completed card B1 should be collected when you collect the Home Record Diary; please return Card B1 tagged to the front of the Measurement Schedule M1.

(viii) You should enter the total number of bowel movements for each of the 7 dietary recording days into the Blaise progress block.

(ix) Please use the remaining space on the reverse of card B1 to note any exceptional circumstances:

- explain why a full record has not been kept;
- if you think it may not be an accurate record;
- other comments about this aspect of the survey.

2.5 ORAL HEALTH: TOOTH COUNT PROTOCOL

2.5.1 Introduction

We know that for those over 65 years there is a two-way relationship between diet and oral health: not only does diet and nutrient intake and status affect our oral health, but also our oral and dental health affects our food choice. We would like to find out whether a similar relationship exists for younger people as well.

As an indicator of oral health we need to know how many natural teeth the respondents have and how many of their teeth have amalgam fillings. We are asking about amalgam fillings in particular because the survey dentists are interested in mercury: they want to know more about the associations between mercury status, diet and the number of mercury (dental or silver amalgam) fillings. This information will enable us to look at the relationship between diet and oral health.

We are using a self counting methodology to establish how many teeth respondents have and how many teeth they have with amalgam fillings.

2.5.2 Equipment and documents required

- Counting your teeth and amalgam-filled teeth: Examples leaflet (D8)
- Respondent's tooth count form: Counting your teeth and amalgam-filled teeth (D7)
- 1 serial number label
- 1 disposable dental check-up mirror

Leaflet D8 shows some examples of amalgam fillings to help respondents identify them; you should leave this at the placement interview when you give the respondent the tooth count form D7.

2.5.3 Eligibility

All respondents who have ANY natural teeth are eligible for the tooth count.

- During the placement interview you will have asked the following question:

Do you have any of your own natural teeth?

Yes/No

- If the respondent has **NO** natural teeth, you should ring the following option on the front of form D7:

Yes, I wear a complete denture in my upper and lower jaw..... 4

The respondent does **not** then need to complete the tooth count.

- If the respondent has some natural teeth they should answer the question on the front of the form about complete dentures. If they have a complete denture (ie no natural teeth) in either jaw they will only need to fill in the parts of the form relating to the jaw with teeth.

2.5.4 The tooth and amalgam-filled tooth count

A Counting teeth

We need the respondent to count how many natural teeth they have in their upper and lower jaws separately.

The tooth count has been designed as a **self-completion** form (D7), but you should be aware of what respondents are being asked to do in case you are required to give any clarification or further explanation.

Remember: you should not offer to help the respondent to carry out their tooth count and should politely refuse if asked.

They should count **every** tooth:

- crowns should be included;
- if any part of a tooth is visible (or can be felt) above the gum, this should be included as a tooth, eg younger respondents may have wisdom teeth coming through and some people may have very worn teeth.

B Counting the number of teeth with dental amalgam fillings

We also need the respondent to count the number of teeth they have that have dental amalgam fillings. A dental amalgam filling looks grey or black on the surface. They should only count the number of teeth that have these grey or black-looking fillings. They should not count any teeth with white, shiny gold or **very shiny silver** fillings. There are pictures of amalgam fillings in leaflet D8.

Remember: a filling can be on the top or sides of a tooth and some people have more than one filling in the same tooth. If the respondent has any teeth with more than one filling, they

should only count the filled tooth once – not the number of fillings. This is shown in Diagram 4 on form D7 and is illustrated in Pictures 3 and 4 in the Examples leaflet, D8.

C Protocol for the interviewer

- ***If you know the respondent has no natural teeth***, ring code 4 (Yes, I wear a complete denture in my upper and lower jaw) on the front page of the tooth count record D7 and return the form with the other documents for the serial number to ONS.
- ***If the respondent has ANY natural teeth***, leave the respondent tooth count form D7, a disposable mouth mirror and the Examples leaflet D8 at the placement interview, explaining that you will collect the completed form at the end of the 7-day record-keeping period.

At the end of the 7-day record-keeping period you should:

- Collect the form, checking that it has been completed;
- Return form D7 to ONS with the rest of the documents for the serial number.

D Protocol for the respondent

You will need to explain the procedure to the respondent using the following as guidelines. The respondent will be required to do the following:

- Record on the front page of form D7 whether they wear a **complete** denture in their upper jaw, lower jaw or both; partial dentures are not recorded as we only need to establish why no teeth are recorded for the upper or lower jaw.
- If they have any of their own teeth - continue with the tooth count.
- Dip the mirror into warm, not hot, water first to stop it fogging – they should use only lukewarm water or the surface of the mirror will melt.

The respondent may not need to use the dental mirror to help to count their teeth as this is done as much by touch as by sight. They may not need to use it to count the filled teeth in their lower jaw, because these can often be seen adequately in a well-lit mirror. They are most likely to need to use the dental mirror to help them count the filled teeth in their upper jaw, by holding the mirror behind their teeth and counting them in another mirror.

- Stand in front of a mirror so that when they open their mouth they can see into it. Good lighting in front of them will help – a bathroom mirror with a light above it is a good place.
- Take out any partial dentures they wear before starting to count.

Comments from respondents on this procedure from the Feasibility study indicated that it is very worthwhile practising the counting before writing anything on the form, and you should encourage respondents to do this.

If the respondent has difficulty in seeing or counting their teeth or filled teeth they could ask a member of their family or a friend to help them.

Counting teeth - the lower jaw

- If they have a complete denture with no natural teeth in their lower jaw, they should go on to count the teeth in their upper jaw.
- **If they have some natural teeth, they should follow these instructions:**
 - Open their mouth and look at the teeth in their lower, bottom jaw.
 - Put their index finger, right or left whichever is easiest, into their mouth and touch the outside of the very last back tooth on one side of their bottom teeth. By the outside of the tooth we mean the side that is closest to their cheek. See Diagram 1 on form D7.
 - Keeping their finger on the outside of the teeth they should move it slowly towards the middle of their mouth, counting each tooth as their finger moves over it, and carry on round, with the same finger, until they reach the very back tooth on the other side of their bottom jaw. This is shown in Diagram 2 on form D7.
 - As they move their finger over the outside of their teeth, they will feel the grooves between each tooth. These grooves will help them to find the end of one tooth and the beginning of the next as they are counting. This is shown in Diagram 3 on form D7.
 - They should practise feeling their teeth and grooves and counting them BEFORE they write down the number of teeth in their lower jaw. When they are happy with the way they are counting the teeth in their lower jaw they should write down the number of teeth they have in the box at the bottom of page 2 of form D7.

Counting teeth - the upper jaw

- If they have a complete denture with no natural teeth in their upper jaw, they should go on to count the number of filled teeth in their lower jaw.
- If they have some natural teeth, they should use the same methodology as described for counting the teeth in the lower jaw. Counting the upper teeth is generally a bit more difficult, because they are more difficult to see. The respondent may find using the mouth mirror helps or they might want to ask a member of the family or a friend to help.
- They should practise feeling their teeth and grooves and counting them BEFORE they write down the number of teeth in their upper jaw. When they are happy with the way they are counting the teeth in their upper jaw they should write down the number of teeth they have in the box on page 3 of form D7.

Counting the number of filled teeth – the lower jaw

- They should stand in front of a mirror so that when they open their mouth they can see into it. Good lighting in front of them helps – a bathroom mirror with a light above it is a good place.
- Take out any partial dentures they wear before starting to count.

- If they have a complete denture with no natural teeth in their lower jaw, go to the next section to count the filled teeth in their upper jaw.
- **If they have some natural teeth:**
 - Open their mouth and look at the teeth in their lower, bottom jaw.
 - Start with the very back tooth on one side and work round to the very back tooth on the other side of their lower jaw, counting the teeth which have grey or black-looking fillings.
 - They should practise counting their fillings BEFORE they write down the number of teeth with grey or black-looking fillings in their lower jaw. When they are happy with the way they are counting the number of filled teeth in their lower jaw they should write down the number of filled teeth they have in the box on page 4 of form D7. If they have no teeth with fillings in their lower jaw they should write '0' in the box.

Counting the number of filled teeth – the upper jaw

- If they have a complete denture with no natural teeth in their upper jaw, they have finished the tooth count.
- **If they have some natural teeth:**
 - They should open their mouth and look at the teeth in their upper, top jaw.
 - Start with the very back tooth on one side and work round to the very back tooth on the other side of their upper jaw, counting the teeth which have grey or black-looking fillings.
 - They should practise counting their fillings BEFORE they write down the number of teeth with grey or black-looking fillings in their upper jaw. When they are happy with the way they are counting the number of filled teeth in their upper jaw they should write down the number of filled teeth they have in the box on page 4 of form D7. If they have no teeth with fillings in their upper jaw they should write '0' in the box.

Remember: co-operation with the oral health component of the survey is voluntary and independent of co-operation with the dietary survey, although our experience on the Feasibility study was that very nearly all those who took part in the dietary survey also co-operated with the oral health survey.

2.6 PRESCRIBED MEDICINES

(Taken during the dietary diary record keeping period)

2.6.1 Purpose

The dietary record should include details of all proprietary and prescribed medicines being taken orally. This will include supplements, such as vitamin and mineral preparations and folic acid supplements, cough medicines and sweets, pain killers etc. Apart from the vitamin and mineral supplements we have little nutrient information available about medicines.

There is also a need to know about all prescribed medicines that are being taken by the respondent, not just those being taken by mouth. The information is needed because some prescribed medicines may have an effect on some of the blood or urine analytes being measured or the person's blood pressure. For example, it would be relevant to know when considering a person's blood cholesterol levels that they were taking drugs prescribed to lower their blood cholesterol. Similarly when considering blood pressure readings it would be relevant to know whether the person was taking anti-hypertensive drugs - to lower their blood pressure.

2.6.2 Documents

- Measurements Schedule M1

2.6.3 Eligibility

All respondents fully or partially co-operating with the survey should be asked about prescribed medicines.

2.6.4 Timing

If the dietary record is fully or partially kept:

- ask at the pick-up call at the end of the 7-day recording period;
- ask about any prescribed medicines taken since the start of the record keeping period.

If the dietary record is refused:

- ask at the end of the placement interview;
- ask about any prescribed medicines currently being taken.

2.6.5 Recording the information on the Measurements Schedule

Details should be recorded for every prescribed medicine, including any injections, inhalers, skin or eye preparations and the oral contraceptive pill.

NOTE:

Women aged 19 to 49 years will already have recorded whether they are currently taking the oral contraceptive pill, by keying their answers into your laptop computer. You will need to use your discretion as to whether you can now ask openly for details of the oral contraceptive pill being taken; if there is any possibility of it causing embarrassment, breaching confidentiality within the household, or affecting public relations or co-operation in any way, then do NOT ask for details, simply record that the oral contraceptive pill is being taken.

Ask to see each medicine bottle, packet or container and carefully copy down the details required - the full name of the preparation, including the brand name, if this is available, and the strength.

Some medicines are dispensed in the manufacturer's packaging, and for these the brand name should be obvious. Medicines dispensed into different containers may or may not have the brand name shown on the dispensing label. In either case the strength will be shown; do not confuse strength with dose and frequency.

Strength will be shown in units such as mg; dose is number of tablets/spoons/puffs etc taken each time; frequency is the number of times per day the dose should be taken. Information on dose and frequency is **not** required.

2.6.6 Recording the information in Blaise

In the Blaise progress block you will be asked to confirm that you have asked about prescribed medicines and code whether any prescribed medicines are being taken - 'Yes' or 'No'. No detail about the medicines is transferred from the Measurements Schedule into Blaise.

Section 2 List of figures

- Figure 2.1 Brand codes for artificial sweeteners
- Figure 2.2 Brand codes for bottled waters
- Figure 2.3 Brand codes for fruit juices and soft drinks
- Figure 2.4 Brand codes for herbal and fruit teas
- Figure 2.5 Occupation activity coding

Figure 2.1 BRAND CODES FOR ARTIFICIAL SWEETENERSTablets or Minicubes

501	Canderel (tablets)
502	Flix (tablets or minicubes)
533	Hermesetas Gold (tablets)
503	Hermesetas New Taste (tablets)
504	Hermesetas Original (tablets)
506	Medicare (tablets or minicubes)
507	Natrena
508	Natriblend
509	Saxin
510	Shapers (tablets or minicubes)
511	Shapers with Nutrasweet (tablets or minicubes)
512	Supatrim (tablets)
513	Sweetex (tablets)
514	Sweet 'n' Low (tablets or minicubes)
515	Ti'Light (tablets or minicubes)

Granulated

516	Canderel Spoonful
517	Flix granulated
518	Hermesetas Gold Granulated Sweetener
532	Supatrim Gold
529	Medicare (granulated)
520	Shapers Sugar Lite (granulated)

534	Silver Spoon Half Spoon Sugar
521	Sionin
522	Sucron
530	Sweetex (granulated)
531	Sweet 'n' low (granulated)
524	Sweet 'n' Slim
525	Ti'Light (granulated)
526	Trimspoon

Liquids

527	Original Hermesetas Liquid
528	Sweetex Liquid Sweetener

Own brands

1	Asda
2	Bejam
3	Best Buy
4	Boots NOT 'Shapers' (for 'Shapers' see codes 510, 511 & 520)
5	Budgen
6	Co-op
7	Family Choice
8	Fine Fare
9	Gateway
10	Hillards
11	Iceland
27	Kwik Save
12	Londis
13	Mace

20	Marks & Spencer (St Michael)
14	Morrisons
15	My Mums
16	Peacock
17	Presto
18	Safeway
19	Sainsbury's
26	Somerfield
21	Spar
20	St Michael (Marks & Spencer)
25	Superdrug
22	Tesco
23	VG
24	Waitrose
600	Other brand
601	Brand not known

Figure 2.2 BRAND CODES FOR BOTTLED WATERS**Code on place of origin.****British Isles Products**

301	Abbey Well
338	Aqua Pura
302	Ashbourne
303	Bally Gowan
339	Brecon Carreg
304	Buxton
341	Caithness Spring
340	Caledonian
342	Campsie Spring
334	Chiltern Hills
305	Cotswold Spring
329	Cwm Dale
343	Crystal Spring
308	Glens of Antrim
344	Devon Hills
345	Glenburn
346	Glencarin
309	Highland Spring
347	Hildon
310	Malvern Water
311	Manor Hopkin
348	Mountain Spring
356	Nature Springs

313	Northumbrian
354	Pennine Still
314	Penwith
355	Perthshire Mountain Spring
349	Strathglen Spring
315	Strathmore
350	Stretton Hills
316	Tipperary
351	Ty Nant
318	<u>Any other British Isles product</u>

Foriegn Products

319	Apollanaris
320	Badoit flavoured/unflavoured
330	Evian
321	Ferrarelle
322	Miral
331	Perrier, all varieties
323	Peters Val
324	Radin
325	San Pellegrino
326	Vals
327	Vichy St Yorre
353	Vittel
352	Volvic
328	<u>Any other foreign product</u>

601	Brand not known
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Figure 2.3 BRAND CODES FOR FRUIT JUICES AND SOFT DRINKS

401	Appletise
402	Alpine
499	Amé
610	Aqualibra
403	Baldwins
404	Barrs (NOT Irn Bru or Tizer)
478	Barracoughs Jucee
479	Barracoughs Rosetta
480	Barracoughs Vogue
611	Belvoir
405	Benshaws
406	Bon Accord
407	Britvic (code for fruit juices only; NOT 7-Up, Citrus Spring or Quosh)
474	Britvic 55: <u>fruit juice drink</u> only; NOT fruit juice, 7-Up, Citrus Spring or Quosh
408	Calypso
409	Canada Dry
496	Cape
410	Capri Sun
411	Cariba
412	Carters
482	Citrus Spring
413	Coca Cola
622	Copella
414	Corona
434	Cow and Gate

415	Cowley & Richardson
416	Curries
417	C-Vit
418	Dairy Gate
419	De L'Ora
420	Del Monte
450	Delrosa
421	Dexters
497	Don Simon
422	Dr Pepper
423	Energen/One-Cal
424	Fanta
425	Five Alive
483	Fruitopia
426	Full Swing
427	Gee Bee
428	Gini
618	Hartridges
484	Hero
429	Hunts
430	Idris
431	Irn Bru
432	Just Juice
478	Jucee
433	Kia Ora
435	Kiri
436	Laws
437	Libby's and Libby's C (NOT Libby's Um Bongo)

470	Libby's Um Bongo
438	Lilt
492	Lipovitan
439	Lowcocks
440	Lucozade
441	Mandora
442	Masons/Super-Jaff
624	Nisa
485	Oasis
612	Ocean Spray
481	One-cal
443	Orangina
444	Panda
445	Pepsi Cola
475	Pepsi Max
476	Princes
613	Purdeys
446	Quatro
447	Quosh
614	Red Bull
493	Red Devil
448	Ribena
486	Rio
620	Rio D'oro
615	Rivella
449	Robinsons
479	Rosetta
451	Roses

487	Rowntree
488	Rubicon
453	Schweppes
457	[Schweppes] Slimline
454	Seven-Up
495	Shandy Bass
455	[Boots] Shapers
452	Shloer
456	Silver Spring
490	Snapple
458	Sodastream
494	Solstis (Lucozade)
619	Solevita
477	Southern Delight
460	Sprite
461	St Clements
621	Summer Magic
462	Suncharm
463	Sunfresh
464	Sunkist
616	Sunny Delight
498	Sunpride
465	Sunquick
466	Tab Clear
467	Tango
623	Teisseire Sirop de Fruits
491	Tip Top
468	Tizer

469	Top Deck
617	Tropicana
470	(Libby's) Um Bongo
471	Vimto
489	Virgin
480	Vogue
472	Wells
473	R Whites
454	7-Up

Own brands

1	Asda
2	Bejam
3	Best Buy
4	Boots NOT 'Shapers' ('Shapers' = code 455)
5	Budgen
6	Co-op
7	Family Choice
8	Fine Fare
9	Gateway
10	Hillards
11	Iceland
27	Kwik Save
12	Londis
13	Mace
14	Morrisons
15	My Mums
16	Peacock

17	Presto
18	Safeway
19	Sainsbury's
26	Somerfield
21	Spar
20	St Michael (Marks & Spencer)
25	Superdrug
22	Tesco
23	VG
24	Waitrose
600	Other brand
601	Brand not known

Figure 2.4 BRAND CODES FOR HERBAL AND FRUIT TEAS AND GREEN TEAS

703	Alvita Chinese Green Tea
101	Bioforce Devil's Claw Tea
102	Bioforce Golden Grass Tea
103	Celestial Seasonings Inc Almond Sunset
104	Celestial Seasonings Inc Cinnamon Apple Spice
105	Celestial Seasonings Inc Cinnamon Rose
106	Celestial Seasonings Inc Emperor's Choice
107	Celestial Seasonings Inc Red Zinger
704	Clipper Green Tea
108	Cow & Gate Camomile with Apple Herbal Drink
109	Cow & Gate Fennel with Orchard Fruits Herbal Drink
110	Cow & Gate Fennel with Pear & Apple Herbal Drink
111	Cow & Gate Peppermint with Apple & Peach Herbal Drink
112	Culpeper Celery Tea
113	Culpeper Cowslip Flowers Tea
114	Culpeper German Chamomile Tea
115	Culpeper Lime Blossom Tea
116	Culpeper Mate Tea
117	Culpeper Peppermint Tea
118	Culpeper Raspberry Tea
119	Culpeper Rose Hip Tea
120	Dietade Day fresh Tea
121	Dietade Dreamtime Tea
122	Dietade Freshmint Tea
123	Dietade Wideawake Tea

296	Douwe Egbert Herbal Tea Kaneel
274	Dr Stuarts Camomile Tea
722	Dr Stuarts Elderflower and Lemon Tea
721	Dr Stuarts Wild Fennel Tea
700	Eden Herbal Tea with Ginseng
124	Golden Temple Yogi Tea
723	Green Dragon Jasmine Tea
263	Hambledon Camomile Tea
125	Health and Diet Food Company Ltd Pompadour - Chestea
126	Health and Diet Food Company Ltd Pompadour - Digestatea
127	Health and Diet Food Company Ltd Pompadour - Nervatea
128	Health and Diet Food Company Ltd Pompadour - Sennatea
129	Healtheries Nutritional Products Ltd Almond Spice Tea
130	Healtheries Nutritional Products Ltd C Sharp Tea
131	Healtheries Nutritional Products Ltd Camomile Tea
132	Healtheries Nutritional Products Ltd Herbs of Tranquility
133	Healtheries Nutritional Products Ltd Lemon Tea
134	Healtheries Nutritional Products Ltd Morning Fresh
135	Healtheries Nutritional Products Ltd Nightcap Tea
136	Healtheries Nutritional Products Ltd Peppermint Tea
137	Healtheries Nutritional Products Ltd Rosehip Tea
138	Healtheries Nutritional Products Ltd Verbena Tea
154	Heath & Heather Apple and Cinnamon
295	Heath & Heather Banana and Cinnamon
256	Heath & Heather Blackcurrant
155	Heath & Heather Camomile Tea
705	Heath & Heather Green Tea
156	Heath & Heather Lemon Grove

261	Heath & Heather Lime and Lemon
157	Heath & Heather Orange Grove
158	Heath & Heather Peppermint Tea
159	Heath & Heather Rosehip Tea
160	Heath & Heather Wild Cherry Herbal Tea
161	Heath & Heather Wild Strawberry Herbal Tea
162	Heath & Heather Wild Raspberry Herbal Tea
163	Heath & Heather Night Time
164	Heath & Heather Morning Time
253	Herba Hagenbuttentee Rosehip Herb Tea
297	Instantina Apple and cinnamon tea
244	Jacksons of Piccadilly any flavour
139	Life Tree Herbal Teas
265	The London Herb and Spice Co. Apple Tea
273	The London Herb and Spice Co. Blackcurrant Tea
264	The London Herb and Spice Co. Blueberry Bliss
299	The London Herb and Spice Co. Bright and Early
140	The London Herb and Spice Co. Camomile Flowers Tea
257	The London Herb and Spice Co. Cherry Pickers Punch Tea
718	The London Herb and Spice Co. Citrus Tea
141	The London Herb and Spice Co. Comfrey Tea
142	The London Herb and Spice Co. Elderflower Tea
143	The London Herb and Spice Co. Fennel Tea
144	The London Herb and Spice Co. Flower Garden Tea
282	The London Herb and Spice Co. Fruit and Herb Tea
287	The London Herb and Spice Co. Golden Slumbers Tea
145	The London Herb and Spice Co. Hibiscus Tea
720	The London Herb and Spice Co. Lemon and Blackcurrant Tea

719	The London Herb and Spice Co. Lemon, Honey and Ginger Tea
146	The London Herb and Spice Co. Lemon Verbena Blend Tea
147	The London Herb and Spice Co. Mate Tea
148	The London Herb and Spice Co. Melissa Tea
251	The London Herb and Spice Co. Mixed Fruit Tea
149	The London Herb and Spice Co. Nettle Blend Tea
252	The London Herb and Spice Co. Orange Dazzler Herb Tea
717	The London Herb and Spice Co. Orange and Mandarin Tea
150	The London Herb and Spice Co. Peppermint Tea
293	The London Herb and Spice Co. Passionfruit tea
151	The London Herb and Spice Co. Raspberry Leaf Tea
152	The London Herb and Spice Co. Rosehip Tea
153	The London Herb and Spice Co. Champneys Camomile Tea
165	The London Herb and Spice Co. Secret Garden Apple Magic Tea
258	The London Herb and Spice Co. Strawberry Fair Tea
716	The London Herb and Spice Co. Strawberry and Kiwi Tea
292	The London Herb and Spice Co. Strawberry and Vanilla Tea
715	The London Herb and Spice Co. Three Berries Tea
260	Lyons Peppermint Tea
166	Michael Matthew Jasmine Tea - jasmine flowers
167	Michael Matthew Flavoured Teas - Almond Tea
168	Michael Matthew Flavoured Teas - Apricot Tea
169	Michael Matthew Flavoured Teas - Blackcurrant Tea
170	Michael Matthew Flavoured Teas - Cinnamon Tea
171	Michael Matthew Flavoured Teas - Green Peppermint Tea
172	Michael Matthew Flavoured Teas - Lemon Tea
173	Michael Matthew Flavoured Teas - Mango Tea
174	Michael Matthew Flavoured Teas - Orange Tea

175	Michael Matthew Flavoured Teas - Passion Fruit Tea
176	Michael Matthew Flavoured Teas - Peach Tea
177	Michael Matthew Flavoured Teas - Strawberry Tea
178	Michael Matthew Flavoured Teas - Vanilla Tea
179	Michael Matthew Flavoured Teas - Wild Cherry Tea
180	Milford Apple Cup Tea
181	Milford Berry Cup Tea
182	Milford Fennel Tea
183	Milford Good Evening Tea
259	Milford Mint Tea
262	Milupa Blackcurrant Herbal Drink
254	Milupa Fennel Drink
255	Milupa Camomile
245	Milupa Herbal Blend
246	Milupa Hibiscus and Rosehip
271	Milupa Hibiscus Apple and Raspberry herbal infant drink
702	Milford Peach and Mango tea
184	Nature's Sunshine Products Herbal Beverage
185	Nature's Sunshine Products Pau D'Arco/Taheebo Tea
186	Nature's Sunshine Products Red Clover Blend
187	Net Foods Ltd After Dinner Mint Tea
188	Net Foods Ltd Hedgerow Rose Flavour Tea
189	Net Foods Ltd Wild and Mild Ginger Drink
190	Potter's Alpine Tea
191	Potter's Constipation Tea
192	Potter's Sciargo Tea
294	Power Health Products Nettle Herb Tea
706	Qi Green Tea

247	Robinsons Orange and Elderflower
248	Robinsons Orange and Camomile
249	Robinsons Apple and Mint
250	Robinsons Apple and Fennel
707	Rutivite Green buckwheat herbal tea
193	Salus-Haus UK Ltd Birch Leaf Tea
194	Salus-Haus UK Ltd Thyme Tea
195	Salus-Haus UK Ltd Apple & Rosehip Tea
196	Salus-Haus UK Ltd Blackberry Leaf Tea
197	Salus-Haus UK Ltd Breakfast Beverage Tea
198	Salus-Haus UK Ltd Camomile Tea
199	Salus-Haus UK Ltd Dandelion Tea
200	Salus-Haus UK Ltd Devil's Claw tea
201	Salus-Haus UK Ltd Fennel Tea
202	Salus-Haus UK Ltd Hawthorn Tea
203	Salus-Haus UK Ltd Horsetail Tea
204	Salus-Haus UK Ltd Lemon Balm Tea
205	Salus-Haus UK Ltd Linden Blossom Tea
206	Salus-Haus UK Ltd Malva Tea
207	Salus-Haus UK Ltd Mate Tea
208	Salus-Haus UK Ltd Mistletoe Tea
209	Salus-Haus UK Ltd Nettlewort Tea
210	Salus-Haus UK Ltd Orange Blossom Tea
211	Salus-Haus UK Ltd Peppermint Tea
212	Salus-Haus UK Ltd Rose Hip Tea
213	Salus-Haus UK Ltd Ruby Red Tea
214	Salus-Haus UK Ltd Sage Tea
215	Salus-Haus UK Ltd St John's Wort Tea

216	Salus-Haus UK Ltd Thyme Tea
217	Salus-Haus UK Ltd Yarrow Tea
218	Salus-Haus UK Ltd Vervain Tea
219	Salus-Haus UK Ltd Paradise Herbal Tea
220	Salus-Haus UK Ltd Twilight Herbal Tea
221	Salus-Haus UK Ltd Sunrise Herbal Tea
222	Salus-Haus UK Ltd Country Apple Herbal Tea
270	Secret Garden Camomile Tea
708	Taylors Green Tea
283	Teekanne Pompadour herbal tea
223	Traditional Herbals Throat Coat
224	Traditional Herbals Smoker's Tea
225	Traditional Herbals Pregnancy Tea
226	Traditional Herbals Lady's Choice
227	Traditional Herbals Mother's Help
228	Traditional Herbals Smooth Move
229	Traditional Herbals Female Harmony
230	Traditional Herbals Easy Now
231	Traditional Herbals Weightless Tea
232	Traditional Herbals Nighty Night
233	Traditional Herbals Breathe Easy
234	Traditional Herbals Cold Season Care
235	Traditional Medicinals Creamy Carob After Dinner Mint Tea
236	Traditional Medicinals Creamy Carob Orange Royale Tea
237	Traditional Medicinals Creamy Carob Original Spice Tea
710	Twinings Blackcurrant Tea
712	Twinings Blackcurrant, Ginseng and Vanilla Tea
266	Twinings Camomile Tea

275	Twinings Camomile and Spearmint Herbal Tea
238	Twinings Country Way
709	Twinings Cranberry, Raspberry and Elderberry Tea
239	Twinings Early Morn
277	Twinings Fennel and Lemon Balm Herbal Tea
267	Twinings Lemon
268	Twinings Lemon and Ginger
714	Twinings Lime and Lemon Tea
278	Twinings Mixed Fruit Herbal Tea
713	Twinings Orange, Mango and Cinnamon Tea
240	Twinings Orchard
289	Twinings Peppermint
711	Twinings Raspberry, Strawberry and Loganberry Tea
241	Twinings Spring Garden
242	Twinings Sunset
286	Twinings Strawberry and Mango Tea
276	Twinings Strawberry and Vanilla Herbal Tea
701	Yogi Mocha Mint Spice Herbal Tea
243	Herbal or fruit teas sold loose not branded

Own Brands

1	Asda
2	Bejam
3	Best Buy
4	Boots
5	Budgen

6	Co-op
7	Family Choice
8	Fine Fare
9	Gateway
10	Hillards
11	Iceland
27	Kwik Save
12	Londis
13	Mace
14	Morrisons
15	My Mums
16	Peacock
17	Presto
18	Safeway
19	Sainsbury's
26	Somerfield
21	Spar
20	St Michael (Marks & Spencer)
25	Superdrug
22	Tesco
23	VG
24	Waitrose
600	Other brand
601	Brand not known

Figure 2.5 Physical Activity Diary Coding Guide for Occupations

Use this as a guide to help you code respondent's job(s) in the pick-up questionnaire.

Note: These codes are a guide to what occupations should be coded under which activity level - if an occupation is not listed or does not seem to fit within the descriptions given, please call HQ for advice.

Code 1 – very light/light occupations

Code 2 – moderate occupations

Code 3 – hard occupations

VERY LIGHT/LIGHT OCCUPATIONS - AVERAGE 1.5 METS – OCCUPATION ACTIVITY CODE 1

Very light occupations involve mainly sitting, including office or clerical work, the use of light tools, light assembly or repair.

Chemistry lab work

Factory work – very light (involving mainly sitting)

Office or clerical work

Printing

Student – including subjects with no aspect of physical activity, mainly attending lectures and reading or studying

Typing – including electrical, manual or computer

Light occupations involve mainly standing or walking, but no heavy lifting or carrying, including operating automated machinery.

Cleaning – light (including mainly dusting, straightening up, emptying rubbish bins, wiping up)

Cooking or food preparation

Factory work – light (involving mainly standing or walking)

Machine tooling, working with sheet metal

Laundry work

Repair work (including electrical)

Shoe repair

Tailoring – including cutting, hand or machine sewing

MODERATE OCCUPATIONS - AVERAGE 4.0 METS
– OCCUPATION ACTIVITY CODE 2

Occupations that involve mainly walking, lifting or carrying light loads

Carpentry

Cleaning work – hard (including mainly scrubbing floors, sweeping, washing windows, mopping)

Delivery work – light (mainly driving and the lifting of light loads)

Electrician

Factory work – moderate (involving mainly lifting, carrying light loads or operating heavy machinery)

Locksmith

Masseuse

Painting and decorating, including hanging wallpaper

Plumbing

Police work

Farming – light (including feeding small animals, shovelling grain)

HARD OCCUPATIONS - AVERAGE 6.0 METS
– OCCUPATION ACTIVITY CODE 3

Occupations that involve mainly hard physical labour

Coal mining

Delivery work – hard (mainly walking, lifting and carrying heavy loads)

Factory work – hard (involving mainly carrying heavy loads, shovelling, rolling steel)

Farming – hard (including baling hay, poultry work, forking straw bales)

Fire fighter

Labourer – any job involving carrying heavy loads, shovelling, digging

Road or house construction (including driving heavy machinery)

Using heavy power tools e.g. pneumatic drill

Any other occupations need to be classified as very light/light, moderate or hard at interviewer's discretion.

Section 3

Database structure and variable specifications

Section 3 Database structure, derived variables, weighting and contents of SPSS files



3.1 The SIR database structure

There are 16 SIR database files, each containing the data for a different *record type*. Data are separated into record types for convenience, for example to separate interview data from diary data, or to create files giving data at different hierarchical levels (see Figure 3.6 for a list of record types). Each SIR data file contains the data for one record type plus the core demographic data, including some variables derived from the dietary interview data.

Dietary data were collected at various levels for this survey, for example at the day level and at the container level. Each level of data is a separate record type, for example the day level data are in record type 2 while the container level data are in record type 3, and contains a number of key variables which link the data on one file with another. The key variable used on this survey was CASEID, which is a unique case identifier. Figure 3.6 lists the SIR record types, giving a description of the data held on each and Figure 3.7 shows which variables and record types are included in each of the SPSS portable/save files (see Section 3.7 below). Figure 3.10 gives the number of cases completing each component and the weighting variables developed for each component.

Specifications for the dietary and interview data variables and for the dietary variables derived in SIR are given in the tables and figures for this chapter, while specifications for the variables derived in SPSS are given in Appendix A. The SIR data files include data collected either by interview, in the dietary or physical activity diaries, recorded in the measurement schedule or the results from the urine and blood sample analysis; each SIR file includes the 'common' socio-demographic variables (see Figure 3.7). The SPSS files include the same variables as the SIR files and in addition all relevant derived variables for the record type (see *Appendix A* for further information)

NA refers to 'no answers'. These were assigned a -8 code. DNA refers to 'does not apply'. Where a question did not apply to a certain group of people, a -9 code was assigned. Where a case did not have data for a complete record type, a -6 code was assigned.

3.2 Quality checks

A number of quality checks were carried out on the data, throughout the data collection process, at the coding stage, the data entry stage and thereafter.

The interview was carried out using Computer Assisted Personal Interviewing (CAPI) for which the routing of the questions is pre-programmed and therefore automatic. It was therefore not possible for routing errors to occur except in cases where the programming was incorrect. This minimised the need for continuity checks on the questionnaire routing.

The interviewers were trained in the data collection methods required, in the coding of the dietary record and the taking of anthropometric and blood pressure measurements. Training exercises in diary coding were completed by the interviewers both prior to the briefing and during the briefing. Once the interviewer had coded their first diary, they were required to send it back to the

nutritionists at ONS immediately for a 100% coding check. Any problems with the coding were fed back to the interviewer.

Nutritionists did 100% coding checks on all dietary records for a number of different food groups. These were:

- milk
- soft drinks
- fat spreads
- yogurts
- liver and liver products
- artificial sweeteners
- vitamin and mineral supplements

100% brand code checks were carried out on:

- herbal and fruit teas
- fruit juices and soft drinks
- bottled waters
- artificial sweeteners

Nutritionists also checked any queries that had been flagged by the interviewers regarding the correct coding of a food item, or the weight of a food item.

The data were then keyed into a database using an intelligent keying programme to reduce keying errors. A number of computer edit checks were run. These fell into two categories:

- continuity checks between interview and diary data; and
- consistency checks which check the 'logic' of answers; for example that data are within expected ranges.

At the office, a number of other quality checks were carried out at the coding stage to check the consistency of answers. For example, if the respondent had been ill over the recording period, and the illness had affected their eating habits, the coders were advised to check that in the dietary record the WELL variable had been coded correctly (see Figure 3.1 for a list of the checks that were carried out between the interview data and diary data).

A number of nutrition edits, in particular on food and nutrient intake ranges were run to check the calculation of the amount of food consumed by the respondent and the respondent's nutrient intake. Errors identified were corrected.

During the editing process some diary derived variables were created which were required in the calculation of weights of food consumed and nutrient intakes at food and day level. For example, the weight of leftovers was calculated and then used to calculate the weight of food consumed by the respondent. If a tick appeared in the diary in the leftover column next to a particular food and this was the only food item to have been left then the weight of food consumed would equal the weight of food served minus the weight of food left. If more than one item of food was left by the respondent then the total weight of leftovers was distributed between the food items in the same proportions as the food items were served. Weight consumed has to be calculated so that, for example, the amount of calcium obtained from cheese consumed by the respondent on a particular diary day can be calculated. These derived variables were checked and cases which were out of range were investigated.

Once the data had been 'cleaned' derived variables were created and added to the database. The specifications for these are reproduced in the figures at the end of this Section (nutrient variables)

and Appendix A (all other derived variables). The programmes for creating these were fully tested, and frequencies were checked to make sure all cases were accounted for, and had been assigned the correct code or value.

3.3 *Anthropometric measurements*

As part of the interviewer training a validation exercise was carried out to assess the level of observer variation when taking anthropometric measurements. Field managers and head quarters staff were used for the exercise, with all interviewers taking the same measurement for the same person. This exercise allowed individual interviewers whose measurements were substantially different from the average to have individual tuition in the measurement protocol before going out into the field. These interviewers also had more frequent visits from field trainers to supervise their work.

For the anthropometric measurements, the interviewers were asked to record any special circumstances encountered while the measurement was being taken, for example if the respondent was uncooperative or could not stand still while the measurement was made. In addition, consistency checks were made within the data for each measurement. Where a measurement lay at either extreme of the distribution, all of the anthropometric measurements for the individual were scrutinised for inconsistency. Measurements that were considered unreliable were excluded from the analysis.

The interviewers were asked to attempt each measurement twice. In the analyses, the mean of the two recorded measurements was taken. Agreement between the two measurements was checked and cases were included where the percentage difference was less than 15%. Not all respondents co-operated with both measurements. In the small number of cases where only one measurement was taken, this measurement was used in the analyses.

Height measurements were achieved for a total of 1800 respondents. The measurements for one respondent were excluded from the analyses as likely to be unreliable, as the respondent was unable to stand upright due to an injured back. For another respondent one measurement was taken in an incorrect standing position and therefore was excluded, in this case the other measurement was used.

Weight measurements were achieved for 1801 respondents. None of the measurements taken were considered unreliable and so no exclusions were made. There were no cases where only one measurement was recorded.

Waist and hip circumference measurements were achieved for 1782 respondents. One respondent admitted to breathing in during the first measurement so this was excluded from the analysis. The second measurement was considered reliable and therefore included. One respondent had both hip measurements excluded as they were estimated values that could not be validated without height and weight data.

Figure 3.5 shows which circumstances recorded at the appropriate question on the questionnaire meant that the measurement was not thought to be reliable and therefore should not be used in analysis.

3.4 *Blood pressure data*

Blood pressure measurements were only made if signed consent had been obtained both to taking the measurements and to passing the readings to the respondent's General Practitioner and/or the

survey doctor. If both these consents were obtained then three measurements of blood pressure were made at pre-set intervals of one minute. Details of the measurement protocol can be found in Appendix J of the Technical Report.

Since the first measurement might have been artificially high, particularly if the respondent was anxious, the first reading from each set of three measurements was excluded and the mean of the subsequent two readings calculated. For two respondents only the first measurement was successfully achieved and these cases have been excluded from the analysis.

Where it was only possible to make two blood pressure measurements for a respondent, the second reading alone has been used in the analysis. Seven cases had just one measurement included in the analysis. None of the measurements was considered unreliable and so no exclusions were made for this reason.

Interviewers were encouraged to report any difficulties they had in making the blood pressure measurements or any unusual circumstances. Difficulty in wrapping the blood pressure cuff, either because the respondent had a conical-shaped upper arm or the circumference of their arm was larger than a cuff of the appropriate width, was reported in about 2% of cases. Where at least two successful measurements were made they have been included in the analyses, even if difficulties were reported.

Of all the respondents who consented to blood pressure measurements, 119 (7%) were taking prescribed anti-hypertensive medication at the time of measurement. Of these, 58 (49%) were men, of whom, one was aged 25 to 34 years, 12 were aged 35 to 49 years and 45 were aged 50 to 64 years. For women, a total of 61 (51%) were taking anti-hypertensive medication, of whom, four were aged 25 to 34 years, 11 were aged 35 to 49 years and 46 were aged 50 to 64 years. Mean values for all respondents were compared to mean values for respondents excluding those taking prescribed anti-hypertensive medication. For both systolic and diastolic blood pressure, there was less than one per cent difference for men and women in all age groups when comparing mean values for all respondents with mean values for respondents excluding those taking prescribed anti-hypertensive medication. Therefore all respondents were included in the analyses, and blood pressure measurements were analysed for 1736 respondents.

3.5 Blood data

A blood sample was taken if signed consent was given by the respondent. A maximum of 30 ml of blood could be taken. Depending on the amount of blood obtained a number of analytes were measured. The analytes were ordered to take account of technical constraints and nutritional interest. Figure 3.17 shows the analytes in order of analytic priority.

If less than the maximum amount of blood was obtained, the sample of blood was exhausted during the assays accorded a high priority and thus less than the full total of analyses was done. For this reason, the number of cases with a value for each analyte varies. If consent was given, residual bloods after all assays had been completed were stored.

Information was recorded at the time of the survey interview on any prescribed medicine being taken by the respondent. For each drug identified, checks were subsequently made to establish whether the drug was likely to have any interaction that would affect the results of any of the full range of blood analytes being carried out. None of the medicines was identified as having any interaction with the blood analytes being measured. Hence it is not necessary to exclude any results.

Some of the posted blood samples reached the laboratory several days after posting due to delays at postal sorting centres. About 60% of these samples were delayed by 24 hours or more and about 30% were delayed by 48 hours or more. Different analytes have different sensitivities to the effects of delay, these effects and subsequent haemolysis of some samples was addressed by applying a correction factor¹. Data are available giving both the original analyte value and an adjusted value for those samples and analytes affected by this delay. Where an adjusted value exists for an analyte for a particular case this should be used in preference to the original value. For example, where a value exists for ADJHB then this should replace the value given at HB, if no value exists for ADJHB then the HB value should be used in analysis.

For further information on the procedures for obtaining blood samples and on methods of blood analysis refer to Appendices N and O of the Technical Report. Appendix O contains details of the assay techniques used and the quality assurance procedures.

3.6 Urine data

Appendix P of the Technical Report describes the procedure for the 24-hour urine collection, the taking of the sub-samples, the processing of the urine samples and quality control procedures. All interviewers were trained in how they 24-hour urine collection should be administered and in taking sub-samples.

The collection of a complete 24-hour urine sample is a demanding task, and previous experience has shown that samples are frequently incomplete. Therefore, an additional procedure, 'PABA-check', has been devised. This is designed to monitor the completeness of the collection by asking respondents to take three 80mg tablets of para-aminobenzoic acid (PABA) at intervals during the 24-hour collection period. Measurement of the PABA concentration and total volume of the collected sample permits the calculation of the percentage recovery of the administered PABA, which in turn is a measure of completeness of the 24-hour urine collection.

The use of this procedure in this survey was approved by the Multi-centre and Local Research Ethics Committees and was successfully piloted in the feasibility study. It was included in part of Wave 1 of the mainstage survey. One respondent in Wave 1 exhibited an acute allergic reaction soon after taking the three PABA doses. Although this occurrence may have been a chance association, the survey doctor decided, after seeking external advice, to recommend the discontinuation of the PABA-check procedure as a precaution². From part-way through Wave 1 until the end of the survey, all subsequent 24-hour urines were collected without PABA-check. Appendix P of the Technical Report provides full details of the procedures for administering the PABA-check.

Analysis was carried out on urine samples for respondents in Wave 1 who completed the PABA-check. There were 29 respondents where PABA was taken and measured and where the result obtained was within the acceptable limits for PABA recovery of 108mg to 198mg³. Mean estimated 24-hour excretion of sodium, potassium and creatinine was calculated for this subset and the remaining respondents who provided a urine sample. The data suggest that the samples invalidated by PABA contained slightly more of these analytes than the PABA-validated samples, suggesting on average a slight, but non-significant, over-collection of urine. Therefore, the mean excretion per 24 hours of sodium and potassium from the survey data seem unlikely to be underestimates.

Following the removal of the PABA-check from the survey procedures, an alternative method of checking the completeness of the 24-hour urine collections was used. Measuring plasma creatinine concentration, which is relatively constant for individuals over time, allows the calculation

of each respondent's theoretical 24-hour creatinine excretion rate and this can be compared with the measured excretion rate from the urine samples⁴. An acceptable range of values for creatinine that would be expected in a complete 24-hour urine sample was calculated for each respondent who completed this component and compared with the observed amounts of creatinine in the urine samples. Half of all respondents for whom this could be done fell within the acceptable limits, 32% gave creatinine recoveries that appeared to be too low, and 18% recoveries that appeared too high.

Mean 24-hour sodium and potassium excretion rates of the 50% who fell within the acceptable range for creatinine excretion were compared with the mean values for all respondents who reported making a 24-hour urine collection and were found to be no more than 2% higher. The errors that are likely to have arisen as a result of the lack of the PABA-check confirmation of completeness of the 24-hour urine collections are considered to have been relatively small and probably resulted in a small downward bias in the results.

Data recorded by HNR who received and processed the urine samples were compared with ONS recorded information for any differences. The HNR data included details recorded by the interviewers on forms M3A and M3B; the ONS data that recorded by the interviewer on the M1 schedule and input into the progress block in Blaise. Comparisons were made between the two datasets on whether a full collection had been made, the date of the collection and the weight of the full collection. Where there were discrepancies, interviewer notes and comments on the paper M1 schedule were checked, and consistency checks made with dates of other measurements and dietary interview date. In a number of cases where there were discrepancies this was due to the interviewer recording information on the M3A and M3B but forgetting to also complete the M1 schedule.

A total of 1,495 respondents made a 24-hour urine collection. From this, 1,460 samples were analysed; 35 samples were either not received or received in an unsuitable condition for analysis and have been excluded from the urine analysis results. A number of respondents, 298 (20%), from whom a urine sample was obtained and analysed, reported failing to collect at least one void during the 24-hour period⁵.

Data from the present survey were converted to mmol/24h based on the weight of the full collection in kg and a conversion factor of 1kg being equal to 1 litre⁶. In a number of cases the complete urine collection was not weighed and excretion per 24 hours cannot be calculated. The full collection was not weighed in eight cases where the respondent reported making a full collection and in a further ten cases where a partial collection was made.

Results are available for urinary sodium and urinary fluoride for 1,440 respondents, and for urinary potassium and urinary urea for 1,441 respondents.

Data on excretion per 24 hours are presented only for complete 24-hour collections. Partial collections, where at least one void was missed, have been excluded.

3.7 Nutrient databank

Intakes of nutrients were calculated from the records of food consumption using the Food Standards Agency nutrient databank, developed for the NDNS: young people aged 4 to 18 years⁷. This was revised for this survey of adults aged 19 to 64 years. Some nutrients were added, some nutrient values were updated and many more new codes were added to accommodate foods and drinks consumed by this age group. The databank now contains information on nearly 7000 foods and drinks, including manufactured products and recipe dishes, many soft drinks and vitamin and mineral supplements.

Each food on the databank has values assigned for 54 nutrients and energy. The nutrient values assigned to the foods on the databank are based on *McCance and Widdowson's The composition of foods*; and its supplements. The Food Standards Agency has an ongoing programme of nutritional analysis of foods. New analytical values for bread, cheese, various ice creams and desserts, ethnic takeaway foods, yogurt, fromage frais and various milks and creams were incorporated for this survey. Data obtained from food manufacturers were also used, as was nutritional information given on labels. All data were carefully evaluated before being incorporated into the databank.

During the survey fieldwork period the range of foods included in the databank was extended as new products with different nutrient contents were consumed by respondents.

For dietary supplements information was collected on the brand name, type (tablets, drops or syrup), strength, and quantity of each supplement taken over the 7-day dietary recording period. Each supplement was coded. Manufacturers' data were applied to each individual supplement taken by the respondent in the survey and the total nutrients provided by the supplements was calculated.

Figure 3.14 gives details of the nutrients measured and units of measurement.

3.8 SIR derived variables

There were two main types of derived variable produced; questionnaire derived variables and diary derived variables.

Questionnaire derived variables

Appendix A lists all of the questionnaire derived variables and provides details on their specifications.

Diary derived variables

Diary derived variables build upon each other into higher levels of aggregation. At the diary editing stage a number of derived variables were produced which calculated nutrient intakes at the food and day level, and quantities of each food consumed. These form the building blocks for other derived variables which express nutrient intakes at the weekly level and quantities of food consumed at the daily and weekly level.

Each food code was allocated by the Food Standards Agency to one of 115 food subgroups; these food subgroups can be collapsed into 57 food groups, which in turn can be grouped into 11 food types. The complete list of food types, groups and subgroups, with examples of the types of foods included in the food groups, is given in Appendix G of the Technical Report.

All data on the SIR database, except the blood data, are held as integers. Thus to obtain the correct level of measurement of a particular nutrient or quantity the user must divide the value by the appropriate factor. Figure 3.13 shows the multipliers that should be used for particular variables.

3.9 SPSS file structure

The content of the SPSS portable and save files was determined by the analysis required for the *National Diet and Nutrition Survey: adults aged 19 to 64 years Report*.

There are 51 SPSS portables files:

- 41 contain dietary diary data and the SIR derived variables relating to those data; see Figures 3.08, 3.09, 3.11, 3.12, 3.14 and 3.15 for the dietary record schema and specifications for dietary variables derived in SIR;
- 10 contain interview data, anthropometry data, physical activity diary data etc. and the SIR derived variables relating to those data; see Appendix A for specifications for the SIR derived variables. These also contain SPSS derived variables relating to the specific data file, where these have been calculated. For a list of these files and the data they contain see Figure 3.7; for further information about SPSS derived variables see Appendix A.

Each file has a number of 'common' variables, which are the main demographic variables by which all analyses were carried out. These are listed in Figure A5.

References and notes

- ¹ For some of the analytes measured in samples that had been sent through the post there was a significant linear correlation between the assay values and the magnitude of the delay time, and in some there was also a small but significant difference in values obtained from the small number of slightly haemolysed samples. In order to correct for these two potential errors, the following mathematical corrections were employed. For each analyte where there was a significant correlation with delay time, each result was corrected (up or down) by the product of number of hours delay and the slope of the overall rate of change per hour. For each analyte where there was a significant effect of haemolysis, the results from the haemolysed samples were multiplied by a correction factor (between 0.969 and 1.023) which represented the ratio of the overall mean values of the haemolysed and non-haemolysed samples.
- ² A challenge test performed in July 2001 concluded that PABA was not the cause of the respondent's allergic symptoms. By this stage fieldwork had been completed.
- ³ Bates CJ, Thurnham DI, Bingham SA, Margetts BM, Nelson M. Biochemical markers of nutrient intake. In: Margetts BM, Nelson M, eds. *Design Concepts in Nutritional Epidemiology*. 2nd Edition. Open University Press (Oxford, 1997): 170-240.
- ⁴ There are no generally accepted values for expected creatinine excretion rates and plasma clearance values in the literature. The following reference was used in calculating expected excretion rates:
Tietz NW, ed. *Clinical Guide to Laboratory Tests*. 2nd Edition. W.B.Saunders (Philadelphia, 1990): pp174-176.
The acceptable range for the amount of creatinine expected to be excreted in the urine in 24 hours can be calculated in terms of the number of millilitres of plasma that is completely cleared of creatinine per minute for a standard 1.73 square metres of body surface area (Tietz, 1990). This is specified as 90-139ml for men aged 15 to 40 years and 80 to 125ml for women aged 15 to 40 years. For each year of age above this the values decrease by 0.65ml. Actual surface area (for adjustment) is calculated from weight and height, and excretion rates are converted to millimoles per 24 hours. Thus the measured plasma creatinine concentration is converted to an acceptable range of urinary excretion of creatinine in a 24-hour period. If the observed urinary creatinine excretion (concentration times volume) is less than the lower limit of this range, the urine collection is likely to have been incomplete. If higher than the upper limit, the collection may have been extended for more than 24 hours.

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- ⁵ The assessment of completeness of collection using plasma creatinine suggested that in 32% of cases the creatinine recoveries appeared to be too low. This contrasts with 20% of cases where the respondent reported missing at least one collection during the 24 hours. These findings are not incompatible. The plasma creatinine assessment relies on published 'normal ranges' and these may not be exactly appropriate for the sample in this survey, for example, because of different assay methods or differences in the characteristics of the population examined.
- ⁶ The interviewer weighed the full 24-hour urine collection twice, prior to taking any sub-samples, and the mean weight is taken.
- ⁷ Gregory JR, Lowe S, Bates CJ, Prentice A, Jackson LV, Smithers G, Wenlock R, Farron M. *National Diet and Nutrition Survey: young people aged 4 to 18 years. Volume 1: Report of the diet and nutrition survey*. TSO (London, 2000).

Figure 3.1 Checks between interview and diary

Dietary supplements, vitamins, minerals, including fluoride.

1-way check:

- if diary = vitamin and questionnaire = no vitamin: recode questionnaire
- if diary = no vitamin and questionnaire = vitamin: accept

Tea, coffee and herbal teas

1-way check:

- if diary = tea/coffee/herbal teas and questionnaire = no tea/coffee/herbal tea: recode questionnaire
- if diary = no tea/coffee/herbal teas and questionnaire = tea/coffee/herbal tea: accept

Artificial sweeteners

1-way check:

- if diary = artificial sweetener and questionnaire = no artificial sweetener in tea/coffee/preparation of food: recode questionnaire
- if diary = no artificial sweetener and questionnaire = artificial sweetener in tea/coffee/preparation of food: accept

Unwell

<i>Diary day</i>	<i>Questionnaire</i>		<i>Recode diary day</i>
	<i>Were you unwell that day? (WhenIl)</i>	<i>Eating affect that day? (WhichDa)</i>	
Unwell	Yes	No	Well
Unwell	No	No answer	Well
Well	Yes	Yes	Unwell
Well	Yes	No	Well
No answer	Yes	No	Well
No answer	Yes	Yes	Unwell

Figure 3.2 The diary edit program

1. The edit program

The editing program is divided into Consistency checks and Nutrient checks:

- The consistency checks include cross checks with the interview data and are corrected mainly when keying the diaries.
- The nutrient checks involve calculations using the Food Standards Agency nutrient database and are the responsibility of the nutritionists.

On entering the edit program, the editor is asked to enter the Wave and serial number to identify the case for which they want to run the edits. After the entry of a valid serial number the program runs through the Consistency Edit to cross check the data input from the diary. The cross checks occur both between the information keyed from the diary (eg, checking if there is a weight of leftovers recorded, that leftovers have been ticked) and against the Blaise data (eg, checking if someone who reported never drinking tea in the interview has recorded tea in their diary). There is also a cumulative weight check to ensure the accuracy of weights of food items.

After the entry of valid CASEID the program begins to run the various sections of the edit. The program only proceeds with an edit section after the errors from the preceding section have been cleared. If the diary fails an edit section, a message to that effect is displayed on the screen. The editor can then view the error file on screen or print out the error file. If no errors are found, the error file is printed off and retained with the diary for future reference.

There are various error checks, some of which are suppressible, where the condition may be unusual but correct. After an edit section has run twice and if there are no other errors, the editor is given the option of overriding any suppressible errors and proceeding to the next section.

2. Consistency checks

The program first checks for the presence of the interview data. If none is found, the following message will be seen in the error file and no further edit checks will be performed.

10, No Blaise data file found for this case

If this is found, it is because the database needs updating with the latest interview data received. Once the update has been carried out by Survey Computing Branch, the edit can be rerun.

2.1 Food item level consistency checks

(i) Winter/summer milk

Checks on whether winter milk has been coded in summertime and vice-versa:

20, *S* dmonth=5-10 and foodcode=603/604/626/8543/8544

20, *S* dmonth=1-4/11-12 and foodcode=602/608/613/623/625

Summer milk runs from May to October and winter milk from November to April.

(ii) Large doses of medicine

Checks on number of spoons \ tablets of medicines:

21, *S* FoodCode=2527(Medicine) but number of spoons\tablets served gt 5

(iii) Leftovers ticked but container weights before and after are equal

If the total weight of leftovers is the same as the weight of the container, then either TOTLEFT (total weight of leftovers) on the Container record is incorrect or LEFTOVER (indicating that there WERE leftovers) on the Food record should not be ticked:

26, TOTLEFT=CNTRWT but item(s) on CNTNR have leftovers

(iv) *Dump codes*

A valid food code must be assigned before the edit can continue:

27, 9999 Dump code - correct code not yet assigned

2.2 Container level consistency checks

(v) *Empty container*

Missing data:

30, No food items on this container

(vi) *Duplicate food codes*

Duplicate food codes may be correct and the check may be overridden:

31, *S* Duplicate food codes on this container

(vii) *Cumulative weights*

The weights may appear to be cumulative (i.e. each item weighs more than the last) but may in fact be correct and the check may be overridden:

33, *S* Cumulative weights on this container

(viii) *Before and after eating container weights different, but leftovers not ticked*

Either TOTLEFT on the Container record is incorrect or LEFTOVER on the Food record(s) should be ticked:

34, TOTLEFT gt total weight served - LEFTOVERS not ticked

2.3 Day level consistency checks

(ix) *Empty day*

Missing data:

40, No containers for this day

3. Correction of diary and interview data

It is possible to correct the various data errors whilst viewing the error file from within the edit program. The editing program can then be rerun. A final copy of the Edit error listing should be printed when clear and retained with the diary for future reference, before filing as 'awaiting Nutrient checks'.

In the case of some errors, it may be necessary to edit the interview data. This is done using an interview data edit program. The editor is asked to enter the serial number and follow the instructions displayed to amend any appropriate fields.

4. Nutrient edit checks

The Nutrient Edit consists initially of a Weight food check and subsequently a nutrient check (this includes both a Daily Nutrient edit and a Daily Nutrient total check).

The following messages result from errors in the nutrient edit section, but the means of amending the diary records are the same as for the consistency edit.

4.1 Food item level Nutrient checks

(i) *Weight of food greater than expected*

83, *S*foodcode + foodname + wteaten + greater than foodmax

(ii) *Unrecognised food group*

81, FOODCODE: fdcd "new food group:"+foodgrp+" encountered

(iii) *Unrecognised food code*

82, FOODCODE: FO->foodcode+ not found in Nutrient database

4.2 Container level Nutrient checks

Where food items are eaten together, e.g. breakfast cereal and milk, leftovers cannot be assigned to one item without being assigned to the other:

90, *S* Bread has leftovers spread does not

91, *S* Cereal has leftovers milk does not

92, *S* Cereal has leftovers sugar does not

4.3 Day level Nutrient checks

These are followed by a list of the nutrients to which they apply. These checks add up the totals for the nutrient intakes for each day, with and without food supplements, and is triggered if the nutrient intakes appear either too high or too low. Nutrients can be out of range due to gluttony or starvation, thus these checks are suppressible.

out of range Nutrients with supplements

out of range Nutrients without supplements

However, all nutrients must be calculated. If any are undefined due to the absence of certain data then this must be resolved before the edit is complete.

undefined Nutrients

Figure 3.3 Edit check-list

General checks

- read through interviewer's electronic notes for each questionnaire/instrument and make any changes required e.g. where interviewer was not sure how to code the answer.
- Run frequency distributions on all variables to check for correct routing, strange values etc.

Admin block

- check appropriate outcome coding of cases by running cross-tabulations of outcome codes by key variables, e.g. dietary. Recode outcome where required.

Consistency checks

- Check to see that a dietary record was completed for each case coded as Dietary = 1.
- Check to see that a physical activity record was completed for each case coded Physical = 1.

Missing information

- list cases where Eating Habits self-completion section completed on paper (SelfInt) and no data keyed.
- list cases where no anthropometry keyed (LaterW = 2; LaterH = 2; LaterWH = 2)
- list cases where no blood pressure keyed (LaterBP = 2)
- list cases where no blood data keyed (LaterBld = 2)
- list cases where no tap water collection keyed (LaterTap = 2)
- list cases where no urine collection keyed (LaterU = 2)
- list cases where no self-tooth count keyed (LaterSel = 2)
- list cases where no physical activity data keyed (LaterPhy = 2)
- list cases where no bowel movement data keyed (LaterBW = 2)

Where interviewers had failed to key the self-completion or the measurements, this was completed at HQ.

- list cases where Chooz1 = 2; code herbal teas
- list cases where Chooz1a = 2; code artificial sweeteners
- list cases where Chooz3 = 2; code occupation activity

Where interviewers had failed to complete home coding tasks (coding brand codes for herbal teas, artificial sweeteners or occupation activity coding) this was done at HQ.

Other specifics

- All questions that allowed an 'other specify' response were checked to see if they could be back-coded into the pre-set list of codes. For example, at Vegifood if the interviewer recorded 'Chicken' this would be recoded to '2 white meat' at VegiA.

- Other measures used at drinking questions. Where possible other measures were recalculated in terms of precoded measures. For example, if the interviewer recorded 'five pints' at XBeerQ then this was recoded to 'half pints' at BeerM and '10' at BeerQ.

Range checks

- look for - very high number cups of tea and coffee drunk per day.
- look for - very high response to drinking questions.
- run frequency distributions for anthropometry measurements to spot outliers or miscoded values.

Common mistakes included interviewers transposing digits when keying data and interviewers reading off measurements in inches rather than cm when taking the measurements. For suspected transposed digits, the paper record was checked and the relevant change made. Where inches were recorded rather than cm, the calculation to transform to cm was carried out in SPSS (see Section A for derived variable specifications).

Date checks

- Check differences between dates for different components, e.g. between interview and blood taking or urine collection. Identify where there are large differences in the dates on which different components were completed. Identify where dates suggest components undertaken in an invalid order, e.g. blood taking carried out before initial dietary interview.

Common mistakes included interviewers miskeying dates, transposing day with month, or keying the wrong year. All cases where differences in dates were identified were checked, including the calls record and information recorded on the measurement schedule or other documents. Dates were edited accordingly.

Figure 3.4 Checks and edits for physical activity diary data

Interviewers keyed the physical activity diary data into their laptop computer and internal consistency checks were applied to avoid keying mistakes, for example to check that the time spent in all activities did not add up to more than 24 hours. Data were subsequently assessed at HQ on a number of criteria.

The following checks were carried out on all physical activity diaries:

- Coding of occupation activity level.
- Time went to bed and got up on any diary day.
- Correct use of 24-hour clock, particularly in recording time went to bed/got up on any diary day.
- If less than one hour or more than 12 hours of sleep were recorded on any diary day.
- If less than 60 minutes of very light/light activity was calculated on any diary day.
- If the time spent in any 'other' activity was greater than 3 hours.
- Any recorded activities less than 10 minutes.

Respondents were asked during the post-dietary recording period interview whether they had done any paid or voluntary work during the recording period and, if so, what tasks were involved in this work. The activity level was then coded according to whether it involved very light/light work, e.g. mainly sitting, standing or walking, the use of light tools, light assembly or repair, but no heavy lifting or carrying; moderate work, e.g. mainly walking, lifting or carrying light loads; or hard/very hard work, e.g. mainly hard physical labour. All occupations that were coded as moderate or hard/very hard were checked for accuracy of coding against the Physical Activity Diary Coding Guide for Occupations (see Section 2 and Appendix I of the Technical Report). This led to a downward revision of the activity code for main occupation in 184 of 812 cases (23%) and for the second occupation in 15 of 54 cases (28%). If the respondent did not complete the post-dietary interview or did not answer the questions on occupation activity level, their occupation activity level was coded at HQ using information on industry and occupation collected during the dietary interview and the Physical Activity Diary Coding Guide for Occupations.

The time the respondent went to bed and got up each day is required in order to calculate time spent sleeping. All cases were checked for completeness of this information. If time went to bed and/or time got up was missing an estimate was made based on the time recorded for other days in the diary. In total, 12 cases were missing this information on at least one day. Where information about sleep was missing for more than two days of the seven-day recording period, this case was checked for completeness of other information, for example, whether the respondent went to work, how long they spent at work, participation in activities. In two cases, there appeared to be no data recorded and the case was removed from analysis of physical activity data. In seven cases, the time went to bed on one of the diary days was equal to the time recorded for getting up. In five of the seven cases, this was due to a data keying error. In the other two cases the respondent was working shifts and as they had slept during the day had recorded their time sleeping under the question 'spent any other time asleep today' and then recorded the same time for going to bed and getting up. In 495 cases the time the respondent went to bed on the last day of the recording period was not recorded on the diary. Values were imputed based on the time the respondent recorded going to bed over the preceding seven days.

All cases were checked for appropriate use of the 24-hour clock. In 30 cases, the data entered for the time the respondent went to bed and got up, along with other information on activity, suggested that the 24-hour clock had not been used. For example, where the time went to bed last night was entered as 11:30, but the time he/she got up was entered as 7:00. In such cases the time went to bed was changed to reflect the 24-hour clock.

If the time recorded participating in any activity on any day of the diary was less than 10 minutes then this was checked for accuracy of keyingⁱ. If the figure had been keyed correctly then this entry was deleted.

The time spent in very light/light activities is calculated as the time leftover from 24 hours after time spent sleeping and time spent in moderate and vigorous/very vigorous activities is deducted. In 25 cases the derived time spent in very light/light activities was less than 60 minutes. In the majority of these cases, this was due to errors in data keying - for example, 600 minutes brisk walking entered instead of 60 minutes - or to duplication in recorded activities - for example, someone who worked as a childminder recording eight hours at work and also eight hours active childcare for the same day. Duplication errors were most frequent where time spent at work was entered both for work and either a prompted activity or an 'other' activity, or where time spent in an activity was recorded both for a prompted activity and an 'other' activity. Entries were only edited where duplication was clear and in deciding which entry to delete priority was given firstly to time at work and then to activities which were on the prompted list.

All 'other' household and sports activities were checked. Where possible, 'other' activities were recoded into the prompted list of activities. 'Other' activities that were coded to the wrong intensity level were recoded to the correct level and activities that were not of at least moderate intensity were deleted. Most wrongly categorised activities over-estimated the intensity level, for example, including time spent shopping as a moderate or vigorous activity when it should have been coded as a light activity.

After editing, 'other' activities that remained, included:

- less common sports activities, for example, canoeing, horse riding;
- playing with or exercising pets, in particular dogs;
- active hobbies, for example, woodwork, bell ringing.

ⁱ Respondents were asked to record only activities they had done for at least 10 minutes. Time was recorded to the nearest 10 minutes.

Figure 3.5 Data edits for anthropometric measurements and blood pressure: SPSS

For each of : HEIGHT and WEIGHT:

- run frequency distribution of measurement - note outliers and investigate; edit data (e.g. where can see from paper record that numbers have been transposed) or exclude data from the analysis where necessary
- subtract measurement 1 from measurement 2 and look at frequency of differences; look for transposed digits; after editing, exclude remaining cases where difference between measurements is greater than 15%.

For WAIST and HIP:

- run frequency distribution of measurement - note outliers and investigate; edit data (e.g. where can see from paper record that numbers have been transposed) or exclude data from the analysis where necessary
- subtract measurement 1 from measurement 2 and look at frequency of differences; look for transposed digits or whether measurements have become transposed (that is, with one hip measurement keyed instead of a waist or vice versa). After editing, exclude remaining cases where difference between measurements is greater than 15%.
- calculate waist to hip ration and look at frequency of differences; look for transposed digits or whether measurements have become transposed (that is, with one hip measurement keyed instead of a waist or vice versa).

For BLOOD PRESSURE:

- Where systolic or diastolic pressures varied between readings by more than 20%, potential data entry errors were checked by comparing the recorded Mean Arterial Pressure (MAP) reading with a derived value for MAP which was calculated by adding the level of the diastolic pressure to one third of the difference between the systolic and diastolic pressures.

Figure 3.6 SIR database record types

<u>Record type</u>	<u>Content</u>
2	Dietary diary data (day)
3	Dietary diary data (container)
4	Dietary diary data (food item)
11	Initial interview (see below)
12	Initial interview (see below)
13	Initial interview (see below)
14	Initial interview and pick-up interview (see below)
15	Measurements schedule
18	Blood and urine analytes
21	Dietary diary SIR derived variables
27	Age and questionnaire derived variables
28	Weighting data
29	Questionnaire and dietary derived variables
38	Physical activity diary summary
39	Physical activity diary (days 1 to 7)
40	Nutrient ADI per food subgroup

Dietary interview (initial and pick-up)

<u>Variables</u>	<u>Record type</u>
DVHSIZE to TERM	11
WORK to FREQOF31	12
VEGI to GINCOME	13
WRKING to PLACEX	14
NOWPU to PMEDREC	14
SOCNOW to SC3	11

Figure 3.7 Record types included in the SPSS files: non diary data

N.B. All SPSS .sav files include caseid and are merged with COMMON.SAV

File name	Variables	Summary
COMMON.SAV	Record type 27: all, excl region, gor, waveorig Record type 11: startdat, dvhsiz Record type 13: Vegi, Ownhome, Fcredit, Isupp, Iseek, Gincome, Ethnic Record type 14: Dviloires, Dvilohoh, Dvilohih Record type 28: Intwgt Record type 29: Scresp, Schoh, Schrp, Resphoh, Resphrp, Rspdvmar + SPSS derived variables (Dvincgp, Dvrecben, Dveducgp, Dvhrpsc3, Ragegp)	Main classificatory variables from interview data - <i>as defined left</i>
HOUSEHOLD GRID.SAV	Record type 11 (Sex ..R100) + COMMON.SAV	Household grid and composition variables from interview data.
INTERVIEW.SAV	Record type 11 (Preg, Cont, lempstat..SEG3); 12 (Work .. FtPtWkHi) + COMMON.SAV + SPSS derived variables	Initial interview variables
PICK-UP INTERVIEW.SAV	Record type 14 (NowPU..PmedRec) + COMMON.SAV	Pick-up interview variables, including oral health and eating habits questionnaire.
MEASURES.SAV	Record type 15 (GP ..NHSNo; DidCount..Bmove7) + COMMON.SAV	All other measurements recorded in M1, tap water, self-tooth count, bowel movements.
ANTHROPOMETRY.SAV	Record type 15 (Weight .. RexpHip) + COMMON.SAV + SPSS derived variables	Anthropometric measurements, height, weight, BMI, waist and hip circumferences and waist to hip ratio.
BLOOD PRESSURE.SAV	Record type 15 (MAP ..WhyNoBP) + COMMON.SAV + SPSS derived variables	Blood pressure measurements.
BLOOD ANALYTES.SAV	Record type 15 (DidBld ..Elsewhat) + 18 (Visdate..bgpx) + COMMON.SAV + SPSS derived variables	Blood collection information (M1) and analytes.
URINARY ANALYTES.SAV	Record type 15 (UrinBcon ..WhyNPaba) + 18 (Ustart ..distrib) + COMMON.SAV + SPSS derived variables	Urinary collection information (M1) and analytes.
PHYSICAL ACTIVITY.SAV	Record type 39 (OactCode ..AvDaySc) + COMMON.SAV + SPSS derived variables	Physical activity diary.

Figure 3.08 Dietary record schema definition

Rec type	Level	Variables							
	2 day	Nutrients	TDNUTS01-55 TDINTS03	TDNUT01-55	TDEFSC	TDEFSJ	TDEFC	TDEFJ	TDINTS01
		Foods	TDFD001-117						
3	container		MEALTIME	WHEREEAT	WEIGHBY	CNTNRWT	TOTLEFT	FOODSRCE	WTLEFT
4	food item	Nutrients	NUTF01-55* WTEATEN	FOODGRPC SPILLAGE	DILUTE BRAND	HOMEGROW	WTSERVED	LEFTIND	ESTIMATE
21	respondent	Nutrients	ADNUTS01-55 PSRAT	ADNUT01-55 IRONRATS	ADEFSC IRONRAT	ADEFSJ ADINTS01- 04****	ADEFC	ADEFJ	REQUIV
			EFAT EMONUNS FEFAT FEMONO	EPROTEIN ESATFAT FEPROT FESAT	ECARBOHY ENMES FECARB FENMES	ESTARCH EIMSS FESTAR FEIMSS	ESUGARS ETRANSFA FESUG FETRANS	EN3PUFA EALCOHOL FEN3 FESATRAN	EN6PUFA ESATRAN FEN6P
		Foods	WKFD001-117	ADFSG011-112	ADSUG011-112				
40	nutrient	Nutrients from sub-gp	NUTOT001-117**	NUTOTAL(1-55)					
41	foodsource	Nutrients x source x sub-group	NUSRC001-115***	NUSRCAL(1-55) & (1-6)					

* NUTF01-55 = nutrient values per food item eg NUTF03 = starch per item; NUTF05 = energy per item

**NUTOT001-115 is iterated 55 times for each nutrient on separate sequences.

***NUSRC001-115 is iterated on separate sequences for each nutrient (55 times) by food source (7 times) .

**** ADINT01-04, TDINT04 and TDINTS04 do not exist.

Figure 3.09 Dietary variables by SPSS file

N.B. All diary .exp files to include CASEID and interview file COMMON.EXP

File name .exp	COMMON.EXP + rec types	Variables
QUANT.	21	WKFD001-115
DIARY.	21	ADNUT(S)** where ** = 01-55; ADEF(S)C, ADEF(S)J, IRONRAT(S), REQUIV(S), ADINTS01 to 04, PSRAT
FRUIT&VEGETABLES.	21	FRADIG**, FRADIP**, VGADIG**, VGADIP**, FVADIG**, FVADIP** where ** = 1-6; DV8a45; DV37g40
ENERGY.	21,40	ADNUT(S)**; N**T001-115: where ** = 05; 06; ADEF(S)C; ADEF(S)J
CARBOHYDRATES.	21,40	ADNUT(S)**; N**T001-115,: where ** = 03, 04, 09, 46; ECARBOHY;ESTARCH; FECARB; FESTAR
PROTEIN.	21,40	ADNUT(S)**; N**T001-115: where ** = 07; EPROTEIN; FEPROT
ALCOHOL.	21	ADNUT(S)**: where ** = 10; EALCOHOL + SPSS Derived variables
FATS.	21,40	ADNUT(S)**; N**T001-115: where ** = 08, 34-39; ADINTS02, ADINTS03, ADINTS04, PSRAT, EMONO, EN3PUFA, EN6PUFA, EMONUNS, ESATFAT, EFAT, EPOLYUNS, ETRANSFA, ESATRAN, FEMONO, FEN3, FEN6P, FEMONO, FESAT, FEFAT, FEPUFA, FETRANS, FESATRAN
File name .exp	COMMON.EXP + rec types	Variables

MIN11_Sodium	21,40	ADNUT(S)**; N**T001-115: where ** = 11;
MIN12_Potassium	21,40	ADNUT(S)**; N**T001-115: where ** = 12
MIN13_Calcium	21,40	ADNUT(S)**; N**T001-115: where ** = 13
MIN14_Magnesium	21,40	ADNUT(S)**; N**T001-115: where ** = 14
MIN15_Phosphorous	21,40	ADNUT(S)**; N**T001-115: where ** = 15
MIN16_Iron	21,40	ADNUT(S)**; N**T001-115: where ** = 16
MIN17_Copper	21,40	ADNUT(S)**; N**T001-115: where ** = 17
MIN18_Zinc	21,40	ADNUT(S)**; N**T001-115: where ** = 18
MIN19_Chloride	21,40	ADNUT(S)**; N**T001-115: where ** = 19
MIN20_Iodine	21,40	ADNUT(S)**; N**T001-115: where ** = 20
MIN47_Manganese	21,40	ADNUT(S)**; N**T001-115: where ** = 47
MIN51_Haemiron	21,40	ADNUT(S)**; N**T001-115: where ** = 51
MIN52_nonhaemiron	21,40	ADNUT(S)**; N**T001-115: where ** = 52; IRONRAT(S)
File name .exp	COMMON .EXP + rec types	Variables
VIT21_Retinol	21,40	ADNUT(S)**; N**T001-115: where ** = 21
VIT22_Carotene	21,40	ADNUT(S)**; N**T001-115: where ** = 22

VIT23_VitaminD	21,40	ADNUT(S)**; N**T001-115: where ** = 23
VIT24_Thiamin	21,40	ADNUT(S)**; N**T001-115: where ** = 24
VIT25_Riboflavin	21,40	ADNUT(S)**; N**T001-115: where ** = 25
VIT26_Niacinequ	21,40	ADNUT(S)**; N**T001-115: where ** = 26
VIT27_VitaminC	21,40	ADNUT(S)**; N**T001-115: where ** = 27
VIT28_VitaminE	21,40	ADNUT(S)**; N**T001-115: where ** = 28
VIT29_VitaminB6	21,40	ADNUT(S)**; N**T001-115: where ** = 29
VIT30_VitaminB12	21,40	ADNUT(S)**; N**T001-115: where ** = 30
VIT31_Folate	21,40	ADNUT(S)**; N**T001-115: where ** = 31
VIT32_Pantothenicacid	21,40	ADNUT(S)**; N**T001-115: where ** = 32
VIT33_Biotin	21,40	ADNUT(S)**; N**T001-115: where ** = 33
VIT48_Bcarotene	21,40	ADNUT(S)**; N**T001-115: where ** = 48
VIT49_acarotene	21,40	ADNUT(S)**; N**T001-115: where ** = 49
VIT50_Bcryptoxanthin	21,40	ADNUT(S)**; N**T001-115: where ** = 50
VIT_Vitamin A	21,40	REQUIV(S)I N**T001-115: where ** = REQ

Figure 3.10 Specifications for sample weights

Data were weighted using a combined weight based on differential sampling probabilities and differential non-response.

1 Differential probability of selection

Derivation:

Weights for differential probability of selection were calculated based upon the number of eligible adults in the household, numelad, and the number of households at the selected address, nummhd.

COUNT

Numelad = dvage dvage2 dvage3 dvage4 dvage5 dvage6 dvage7 dvage8 dvage9 dvage10
(19 thru 64) .

EXECUTE .

COMPUTE sampwgt = nummhd * numelad .

EXECUTE .

Missing values: none

2 Differential non-response

Weights for differential non-response were calculated based on the proportion of respondents, aged 19 to 64 years, in the population by sex, age and region. The proportions used are shown in the table below and were based on the Labour Force Survey for the mid-point of the NDNS survey year.

	Scotland & Northern region	Rest of GB	All
Men 19 to 24			6.033001*
25 to 34	4.020098726	8.2036665	
35 to 49	6.088663356	11.922432	
50 to 64	4.790830233	9.3029688	
Women 19 to 24			5.805039*
25 to 34	3.863956452	7.8686456	
35 to 49	6.029474046	11.660656	
50 to 64	4.934434445	9.4761332	

Due to the small number of cases within these age groups it was decided to group these across the two-way region split.

Data were first weighted by sampwgt and respwgt calculated for each of the 14 groups shown in the table above according to the following formula:

RESPWGT = Proportion LFS/ Proportion NDNS.

CASEWGT = Respwgt * sampwgt.

The weighted data were then scaled back to the actual number of respondents completing that component, as follows:

CASEWGT1 = CASEWGT* (number of respondents)/ SUM(CASEWGT).

The weights were produced separately for each component of the survey according to the procedure outlined above, and are shown in the table below.

Component	No. respondents completing component	Weighting factor*
Dietary interview	2251	INTWGT
Seven-day dietary record ^a	1724	DIARYWGT
Seven-day physical activity diary	1658	PHYSWGT
Anthropometry: Weight Height Hip & waist circumferences	1801 1799 1782	ANTHWGT ANTHWGT ANTHWGT
Blood pressure	1736	BPWGT
Urine sample	1459	URINWGT
Blood sample ^b : Haematology group ^c Biochemistry group A ^d Biochemistry group B ^e	1318 1295 1192	BLOODWT2 BLOODWT3 BLOODWGT

* This is the combined weighting factor, differential selection and differential non-response.

^a To select consumers only, use nutrient variable > 0.

^b Blood analytes shown are those used to derive weighting factors for groups of analytes with similar numbers of reported results.

^c Haematology group: Haemoglobin, mean corpuscular volume (MCV), haematocrit, serum ferritin, plasma vitamin C, red cell folate, serum folate, serum vitamin B₁₂, Erythrocyte Transketolase Activation Coefficient (ETKAC), Erythrocyte Transketolase Basal Activity (ETK-B), Erythrocyte Glutathione Reductase Activation Coefficient (EGRAC), Erythrocyte Aspartate Aminotransferase Activation Coefficient (EAATAC), plasma selenium, red cell selenium, erythrocyte glutathione peroxidase, blood mercury.

^d Biochemistry group A: plasma iron, plasma total iron-binding capacity (TIBC), plasma iron % saturation, plasma total homocysteine, plasma 25-hydroxyvitamin D (25-OHD), plasma α -tocopherol to total cholesterol ratio, plasma total cholesterol, HDL cholesterol, LDL cholesterol, plasma α_1 -antichymotrypsin.

^e Biochemistry group B: plasma retinol, plasma α -carotene, plasma β -carotene, plasma α -cryptoxanthin, plasma β -cryptoxanthin, plasma lycopene, plasma lutein and zeaxanthin, plasma α -tocopherol, plasma γ -tocopherol.

Figure 3.11 Dietary derived variable types

Variable type	Description
TDNUT(S)**	Total daily intake of nutrient (01-55) - with/out supps
TDEF(S)C TDEF(S)J	Total daily intake energy - with/out supps kcals/kjoules
TDINTS01-03	Total daily intake derived nutrients - with supps: imss, n3+n6 pufa, total fatty acids
TDFD***	Total daily intake food sub-group 001-117
WKFD***	Total weekly intake food sub-group 001-117
ADFSG***	Average daily frequency of consumption of sugary foods 011-112
ADSUG***	Average daily intake sugary foods 011-112
ADNUT(S)**	Average daily intake nutrients - with/out supps 01-55
ADINTS01-04	Average daily intake derived nutrients - with supps: imss, n3+n6 pufas, total fatty acids, saturated + trans fats
ADEF(S)C ADEF(S)J	Average daily intake food energy - with/out supps kcals/kjoules
E(nut)	Energy from (macronutrients): fat, protein, carbohydrates, starch, sugars, n-3pufa, n-6pufa, polyunsats, monounsats, sats, nmes, imss, trans, alcohol, sats+trans
FE(nut)	Food energy from (macronutrients): fat, protein, carbohydrates, starch, sugars, n-3pufa, n-6pufa, polyunsats, monounsats, sats, nmes, imss, trans, sats+trans
REQUIV(S)	Retinol equivalents - with/out supps
**RAT(S)	Ratios - pufa:sats (incl supps only) haem:non-haem iron (incl/excl supps)
NUTOT*** (SIR) N**T*** (SPSS)	Average daily intake nutrient (01-55) from sub-group (001-117)
NUTOTAL (SIR) N**TOTAL (SPSS)	Average daily nutrient total (01-55)
NUSRC*** (SIR)	Average daily intake nutrient (01-55) by food source (1-6) by sub-group (001-117)
NUSCRAL	Average daily intake nutrient (01-55) by food source (1-6)

Figure 3.12 Nutrient types by variable name

Nutrient type	Derived variable name
Foods	WKFD001 - WKFD117
Energy	ADNUT(S)**; N**T001-117: where ** = 05, 06; ADEF(S)C, ADEF(S)J
Minerals	ADNUT(S)**; N**T001-117: where ** =11-20; 47, 51, 52; IRONRAT(S)
Vitamins	ADNUT(S)**; N**T001-117: where ** =21-33; 48, 49, 50; REQUIV(S)
Carbohydrates (sugars, starch, fibre) protein, alcohol + water and nitrogen	ADNUT(S)**; N**T001-117: where ** =02 - 04, 07, 09, 10, 40 - 45, 46, 53, 54, 55, 01; ADINTS01, EPROTEIN, ECARBOHY, ESTARCH, ESUGARS, ENMES, EIMSS, EALCOHOL, FEPROT, FECARB, FESTAR, FESUG, FENMES, FEIMSS
Fats and fatty acids	ADNUT(S)**; N**T001-117: where ** =08, 34 - 39; ADINTS02, ADINTS03, ADINTS04, EMONO, PSRAT, EN3PUFA, EN6PUFA, EMONUNS, ESATFAT, EFAT, EPOLYUNS, ETRANSFA, ESATRAN, FEMONO, FEN3, FEN6P, FEMONO, FESAT, FEFAT, FEPUFA, FETRANS
Sugary foods	ADFSG011-112; ADSUG011-112

Figure 3.13 Multipliers used to carry data into SPSS from SIR as integers

Multipliers for dietary record data

Variable type	Multiplier used
Nutrients	x 10,000
Foods*	x 10

* This excludes the derived fruit and vegetable variables, where no multiplier was applied.

No multipliers were used for physical measurements or urinary or blood analyte data. These were carried into SPSS from SIR as required for analysis, and not multiplied to become integers.

Figure 3.14 Details of nutrients measured and units

Variable number	Nutrient	Units
01	water	(g)
02	Sugars	(g) total sugars, expressed as monosaccharide
03	Starch	(g) expressed as monosaccharide
04	Dietary fibre	(g) expressed as modified Southgate method ¹
46	non-starch polysaccharides	(g) expressed as Englyst method ²
06	Energy (kJ)	(17 x protein) + (37 x fat) + (16 x carbohydrate) + (29 x alcohol)
05	Energy (kcal)	(4 x protein) + (9 x fat) + (3.75 x carbohydrate) + (7 x alcohol)
07	Protein	(g)
55	Nitrogen	(g)
08	Fat	(g)
09	Carbohydrate	(g) sum of sugars plus starch, expressed as monosaccharide equivalent
10	Alcohol	(g)
11	Sodium	(mg)
12	Potassium	(mg)
13	Calcium	(mg)
14	Magnesium	(mg)
15	Phosphorus	(mg)
16	Iron	(mg)
51	haem iron	(mg)
52	non-haem iron	(mg)
17	Copper	(mg)
18	Zinc	(mg)
19	Chloride	(mg)
20	Iodine	(µg)
47	Manganese	(mg)
21	Retinol	(µg) all trans retinol equivalents
22	total carotene	(µg) β-carotene equivalents
49	α-carotene	(µg)
48	β-carotene	(µg)
50	β-cryptoxanthin	(µg)
24	Thiamin	(mg)
25	Riboflavin	(mg)
26	niacin equivalent	(mg) niacin + (tryptophan / 60)
29	vitamin B ₆	(mg)
30	vitamin B ₁₂	(µg)
31	Folate	(µg)
32	Pantothenic acid	(mg)
33	Biotin	(µg)
27	Vitamin C	(mg)
23	Vitamin D	(µg)
28	Vitamin E	(mg) α-tocopherol equivalents
	<i>fatty acids</i>	
34	Saturated	(g)
35	cis monounsaturated	(g)
36	cis n-3 polyunsaturated	(g)
37	cis n-6 polyunsaturated	(g)
38	trans fatty acids	(g)

Variable number	Nutrient	Units
39	Cholesterol	(mg)
	<i>Sugars</i>	
40	Glucose	(g)
41	Sucrose	(g)
42	Fructose	(g)
43	Lactose	(g)
44	Maltose	(g)
45	other sugars	(g) includes oligosaccharides
53	non-milk extrinsic sugars	(g) includes all sugars in fruit juices, table sugar, honey, sucrose, glucose and glucose syrups added to food + 50% of the sugars in canned, stewed, dried or preserved fruits ³ .
54	Intrinsic and milk sugars	(g) includes all sugars in fresh fruit and vegetables + 50% of the sugars in canned, stewed, dried or preserved fruits + lactose in milk.

References

- 1 Southgate DAT. Dietary fibre analysis and food sources. Am J Clin Nutr 1978; 31: Suppl S107-110.
- 2 Englyst HN and Cummings JH. An improved method for the measurement of dietary fibre as the non-starch polysaccharides in plant foods. J Assoc Off Anal Chem 1988; 71: 808-814.
- 3 Buss DH, Lewis J and Smithers G. Non-milk extrinsic sugars. J Hum Nutr Diet 1994; 7: 87.

Figure 3.15 Specification for variables based on food energy (i.e. excluding energy from alcohol)

1. Derive total daily food energy:

- TDEFSC: incl. supplements, kcals
- TDEFC: excl. supplements, kcals
- TDEFSJ: incl. supplements, kJ
- TDEFJ: excl. supplements, kJ

TDEFSC: = energy in kcals from all food items on day in all food groups except 47 - 49

TDEFSJ: = energy in kJ from all food items on day in all food groups except 47 - 49

TDEFC: = energy in kcals from all food items on day in all food groups except 47 - 49 and 54

TDEFJ: = energy in kJ from all food items on day in all food groups except 47 - 49 and 54

2. Sum daily intakes for 7 days to give weekly intakes for all 4 variables (in flight).

3. Derive average daily intake variables:

- ADEFSC, ADEFC, ADEFSJ, ADEFJ

4. Compute variables for % food energy from selected nutrients using ADEFSC:

total fat	FEFAT
protein	FEPROT
carbohydrate	FECARB
starch	FESTAR
total sugars	FESUG
n-3 PUFA	FEN3
n-6 PUFA	FEN6
n-3 + n-6 PUFA	FEPUFA
mono-unsaturated fats	FEMONO
saturated fats	FESAT
non milk extrinsic sugars	FENMES
intrinsic milk sugars, and starch	FEIMSS
trans fatty acids	FETRANS

Figure 3.16 Blood and urinary analyte variable names and number of results

Analyte	SIR/SPSS variable name (alphabetical order)	No. of results*
Basophil count	BASO	1091
Blood glutathione peroxidase	BGPX	1271
Blood mercury	BHG	1317
Blood selenium	BLDSE	1316
Eosinophil count	EOSIN	1279
Adjusted eosinophil count	ADJEOSIN	1269
Erythrocyte aspartate transaminase activation coefficient	EAATAC	1301
Erythrocyte glutathione reductase activation coefficient	EGRAC	1301
Erythrocyte transketalose basal activity	ETKB	1301
Erythrocyte transketalose activation coefficient	ETKAC	1297
Haematocrit	HCT	1317
Adjusted haematocrit**	ADJHCT	1307
HB haemoglobin	HB	1317
Adjusted HB haemoglobin**	ADJHB	57
Iron % saturation	PSAT	1289
Lymphocyte count	LYMPH	1280
Mean cell haemoglobin	MCH	1317
Adjusted mean cell haemoglobin**	ADMCH	57
Mean cell haemoglobin concentration	MCHC	1316
Adjusted mean cell haemoglobin concentration**	ADMCHC	1306
Mean cell volume	MCV	1317
Adjusted mean cell volume**	ADJMCV	1307
Monocyte count	MONO	1280
Neutrophil count	NEUT	1280
Plasma α -antichymotrypsin	PACT	1248
Plasma α -carotene	PACAR	1191
Plasma α -cryptoxanthin	ACRYPT	1191
Plasma α -tocopherol	PATOC	1191
Plasma β -carotene	PBCAR	1191
Plasma β -cryptoxanthin	PBCRY	1191
Plasma γ -tocopherol	PGTOC	1191
Adjusted plasma γ -tocopherol**	ADJPGTOC	21
Plasma 25-hydroxy vitamin D	POHD	1296
Plasma creatinine	PCREAT	1248
Plasma HDL cholesterol	PHDL	1272
Plasma iron	PFE	1294
Plasma lutein + zeaxanthin	PXANTH	1191
Plasma lycopene	PLYCO	1191
Plasma non-HDL cholesterol	PNONHDL	1273
Plasma retinol	PRET	1191
Plasma retinyl palmitate	PRETP	1191
Adjusted plasma retinyl palmitate**	ADJPRETP	21
Plasma selenium	PSE	1306
Plasma total cholesterol	PTC	1273
Plasma total homocysteine	PTHCY	1248
Plasma total iron binding capacity	PTIBC	1290
Plasma vitamin C	PVITC	1234
Platelet count	PLAT	1314
Adjusted platelet count**	ADJPLAT	1304
Mean platelet volume	MPV	1267
Adjusted mean platelet volume**	ADJMPV	1258
Red blood cell count	RBC	1317
Red cell distribution width	RDW	1317

Adjusted red cell distribution width**	ADJRDW	1307
Red cell folate	RCFOL	1315
Adjusted red cell folate**	ADJRCFOL	1305
Red cell selenium	RCSE	1316
Serum B ₁₂	SB12	1297
Serum ferritin	SFERR	1299
Adjusted serum ferritin**	ADJSFERR	1289
Serum folate	SFOL	1312
Adjusted serum folate**	ADJSFOL	1302
Total cholesterol to HDL cholesterol ratio	PTC_PHDL	1271
White cell count	WBC	1316
<i>Urinary analytes</i>		
Urine creatinine	UCREAT	1458
Urinary fluoride	UFL	1457
Urinary PABA	UPABA	71
Urine potassium	UK	1458
Urine potassium : creatinine ratio	UK_CREAT	1458
Urine sodium	UNA	1457
Urine sodium : creatinine ratio	UNA_CREA	1457
Urinary urea	UUREA	1458

* The number of results given reflect the number of cases where a value for this analyte was achieved. This may not reflect the number of results depicted in analytical tables due to post-hoc validation of the data.

** Adjusted values are values that take into account delays in the receipt of samples and where these exist for a particular case should be used instead of the original values (that is, if a value is available for ADJHB then in analysis this should replace the value for that case at HB). Variables applying the adjustment values are given in the dataset, BLOOD ANALYSES.SAV.

Figure 3.17 Blood analytes in priority order for analysis, and urine analytes

Analyte	Unit of measurement	Conversion from SI units (factor)	Resulting metric units
<u>Haematology</u>			
Haemoglobin concentration	g/dl	*	
Red blood cell count	$\times 10^{12}/l$	*	
Haematocrit	l/l	*	
Mean cell volume	fl	*	
Mean cell haemoglobin	pg	*	
Mean cell haemoglobin concentration	g/dl	*	
Red cell distribution width	%	n/a	
Platelet count	$\times 10^9/l$	*	
White cell count	$\times 10^9/l$	*	
Neutrophil count	$\times 10^9/l$	*	
Lymphocyte count	$\times 10^9/l$	*	
Monocyte count	$\times 10^9/l$	*	
Eosinophil count	$\times 10^9/l$	*	
Basophil count	$\times 10^9/l$	*	
Serum folate	nmol/l	$\times 0.441$	$\mu\text{g/l}$
Red cell folate	nmol/l	$\times 0.441$	$\mu\text{g/l}$
Serum vitamin B ₁₂	pmol/l	$\times 1.357$	ng/l
Serum ferritin	$\mu\text{g/l}$	*	
Blood mercury	nmol/l	$\times 0.201$	$\mu\text{g/l}$
Plasma selenium	$\mu\text{mol/l}$	$\times 0.079$	mg/l
Red cell selenium	$\mu\text{mol/l}$	$\times 0.079$	mg/l
Plasma 25-hydroxyvitamin D	nmol/l	$\times 0.400$	$\mu\text{g/l}$
<u>Blood lipids</u>			
Plasma total cholesterol	mmol/l	$\times 0.387$	g/l
Plasma high density lipoprotein cholesterol	mmol/l	$\times 0.387$	g/l
Non-HDL cholesterol	mmol/l	$\times 0.387$	g/l
Plasma iron	$\mu\text{mol/l}$	$\times 55.8$	$\mu\text{g/l}$
Plasma total iron binding capacity	$\mu\text{mol/l}$	$\times 55.8$	$\mu\text{g/l}$
Plasma iron % saturation	$\mu\text{mol/l}$	n/a	
Plasma retinol	$\mu\text{mol/l}$	$\times 0.286$	mg/l
Plasma retinyl palmitate	$\mu\text{mol/l}$	$\times 0.525$	mg/l
Plasma α -tocopherol	$\mu\text{mol/l}$	$\times 0.552$	mg/l
Plasma γ -tocopherol	$\mu\text{mol/l}$	$\times 0.417$	mg/l
Plasma α -cryptoxanthin	$\mu\text{mol/l}$	$\times 0.552$	mg/l
Plasma β -cryptoxanthin	$\mu\text{mol/l}$	$\times 0.552$	mg/l
Plasma lycopene	$\mu\text{mol/l}$	$\times 0.537$	mg/l
Plasma lutein + zeaxanthin	$\mu\text{mol/l}$	$\times 0.569$	mg/l

Analyte	Unit of measurement	Conversion from SI units (factor)	Resulting metric units
Plasma α -carotene	$\mu\text{mol/l}$	x 0.537	mg/l
Plasma β -carotene	$\mu\text{mol/l}$	x 0.537	mg/l
Plasma vitamin C	$\mu\text{mol/l}$	x 0.176	mg/l
Plasma creatinine	$\mu\text{mol/l}$	x 0.113	mg/l
Erythrocyte transketolase: basal activity	$\mu\text{mol/g Hb/min}$	*	
activation coefficient	ratio	n/a	
Erythrocyte glutathione reductase activation coefficient	ratio	n/a	
Erythrocyte aspartate aminotransferase activation coefficient	ratio	n/a	
Plasma α_1 -antichymotrypsin	g/l	*	
Whole blood glutathione peroxidase	nmol/mg Hb/min*		
<i>Urinary analytes</i>			
Urine sodium	mmol/l	x 23.0	mg/l
Urine potassium	mmol/l	x 39.1	mg/l
Urine creatinine	mmol/l	x 113	mg/l
Urine sodium:creatinine ratio	ratio	n/a	
Urine potassium:creatinine ratio	ratio	n/a	
Urine urea	mmol/l	x 60.1	mg/l
Urine fluoride	$\mu\text{mol/l}$	x 19.0	$\mu\text{g/l}$

* Conversion not possible or not appropriate.

n/a : not applicable.

Figure 3.18 Variable names for the physical measurements

Measurements Record - completed by interviewers

This section gives the variable names for the measurements record; see Appendix A of the Technical Report for the measurements schedule M1.

	WEIGHT	
1. Weight	All	
	RECORD	
	Did you take a weight measurement for this respondent?	
	Yes	1
	No	2
a. WhyNWe	If code 2 at Weight	
	IF MEASUREMENT NOT MADE PLEASE GIVE REASONS CODE ALL THAT APPLY	
	Attempted, unsuccessful	1
	Not attempted, refused	2
	Not attempted, chairfast/bedfast.....	3
	Equipment failure/unavailable	4
2. DateWe	If code 1 at Weight	
	ENTER DATE WEIGHT MEASURED	
	__ . __ . ____ (date format variable)	
a. AgeWt	If code 1 at Weight	
	[Hidden variable calculated within program]	
	Age of respondent on date weight measured	
	19..64	
3. ResultW1 - ResultW2	If code 1 at Weight	
	WEIGHT - 2 MEASUREMENT (KILOGRAMS)	
	000.1..999.7	

a. DvWeight

If code 1 at Weight

[Hidden variable calculated within program]

Average result of ResultW1 and ResultW2

000.1..999.7

**4. Scales1-
Scales2**

If code 1 at Weight

CODE ALL THAT APPLY

Scales placed on:

Uneven floor	1
Carpet	2
Neither	3

5. Clothes

If code 1 at Weight

CODE

Clothing record completed by respondent	1
Clothing record refused - interviewer completed	2
No clothing record	3

**a. MWear1-
Mwear10**

**If code 1 at Weight and code 1 at Sex for respondent and
code 1 or 2 at Clothes**

RECORD ITEMS TICKED ON THE CLOTHING RECORD
CODE ALL THAT APPLY

Vest	1
Pair of socks	2
Pants or briefs	3
T-shirt	4
Shirt	5
Tie	6
Trousers or jeans	7
Shorts	8
Belt	9
Jumper or sweatshirt	10
Something else not on the list (Specify at next question) ..	11

ai. Moth

If code 11 at MWear1-Mwear10

SPECIFY OTHER ITEM(S) ENTERED ON CLOTHING RECORD

**b. Wwear1-
Wwear18**

**If code 1 at Weight and code 2 at Sex for respondent and
code 1 or 2 at Clothes**

RECORD ITEMS TICKED ON THE CLOTHING RECORD
CODE ALL THAT APPLY

Vest	1
Pair of socks	2
Stockings or tights	3
Pants or knickers or briefs	4
Bra	5
Suspender belt	6
Petticoat or slip	7
Blouse	8
T-shirt	9
Skirt	10
Trousers or jeans	11
Leggings	12
Shorts	13
Belt	14
Dress	15
Jumper	16
Cardigan	17
Something else not on the list (Specify at next question) ..	18

bi. W0th

If code 18 at Wwear1-Wwear18

SPECIFY OTHER ITEM(S) ENTERED ON CLOTHING RECORD

6. UnusualW

If code 1 at Weight

RECORD

Were there any unusual circumstances?

Yes	1
No	2

**a. Whyunus1-
Whyunus3**

If code 1 at UnusualW

CODE UNUSUAL CIRCUMSTANCES
CODE ALL THAT APPLY

Wearing heavy clothes or shoes	1
Other person did weighing	2
Other (Specify at next question)	3

b. OthunusW

If code 3 at Whyunus1-Whyunus3

SPECIFY OTHER UNUSUAL CIRCUMSTANCE(S)

7. Rely

If code 1 at Weight

RECORD

Do you consider this weight measurement to be reliable?

Yes 1

No 2

a. Relyexp

If code 2 at Rely

EXPLAIN WHY WEIGHT MEASUREMENT IS NOT RELIABLE

HEIGHT

1. Height

All

RECORD

Was respondent's height measured?

Yes 1
No 2

a. WhynHe

If code 2 at Height

IF MEASUREMENT NOT MADE PLEASE GIVE REASON
CODE ALL THAT APPLY

Attempted, but unsuccessful 1
Not attempted, refused 2
Not attempted, chairfast/bedfast..... 3
Equipment failure/unavailable 4

2. DateHe

If code 1 at Height

ENTER DATE HEIGHT MEASURED

__ . __ . ____ (date format variable)

a. AgeHt

If code 1 at Height

[Hidden variable calculated within program]

Age of respondent on date height measured (years)

19..64

3. ResultH1 - ResultH2

If code 1 at Height

HEIGHT - 2 MEASUREMENTS (cm)

000.1..999.7

a. DvHeight

If code 1 at Height

[Hidden variable calculated within program]

Average result of ResultH1 and ResultH2

000.1..999.7

b. DvMetres**If code 1 at Height****[Hidden variable calculated within program]**

Height calculated in metres

000.01..999.97

4. UnusualH**If code 1 at Height**

RECORD

Were there any unusual circumstances?

Yes 1
No 2

**a. Whyunus4-
Whyunus10****If code 1 at UnusualH**CODE UNUSUAL CIRCUMSTANCES
CODE ALL THAT APPLY

Affected by hairstyle 1
Wearing turban 2
Posture: back not straight 3
Posture: legs not straight 4
Unable to stand still/uncooperative 5
Other person made measurement 6
Other (Specify at next question) 7

b. OthunusH**If code 7 at Whyunus4-Whyunus10**

SPECIFY OTHER CIRCUMSTANCE(S)

5. RelyH**If code 1 at Height**

RECORD

Do you consider this height measurement to be reliable?

Yes 1
No 2

a. RelyexpH**If code 2 at RelyH**

EXPLAIN WHY HEIGHT MEASUREMENT IS NOT RELIABLE

WAIST AND HIP CIRCUMFERENCE

1. Waist

ALL

RECORD

Were respondent's waist and hip circumferences measured?

Yes 1
No 2

a. WhynHip

If code 2 at Waist

IF MEASUREMENT(S) NOT MADE PLEASE GIVE REASON
CODE ALL THAT APPLY

Attempted, unsuccessful 1
Not attempted, refused 2
Not attempted, chairfast/bedfast 3

2. DateHip

If code 1 at Waist

ENTER DATE WAIST AND HIP MEASURED

__ . __ . ____ (date format variable)

a. AgeHip

If code 1 at Waist

[Hidden variable calculated within program]

Age of respondent on date waist and hips measured (years)

19..64

3. ResWais1 - ResWais2

If code 1 at Waist

WAIST CIRCUMFERENCE - 2 MEASUREMENTS (CM)

20.00..300.00

a. DvResWai

If code 1 at Waist

[Hidden variable calculated within program]

Average result of ResWais1 and ResWais2

20.00..300.00

4. ResHip1 - ResHip2

If code 1 at Waist

HIP CIRCUMFERENCE - 2 MEASUREMENTS (CM)

20.00..300.00

a. DvResHip

If code 1 at Waist

[Hidden variable calculated within program]

Average result of ResHip1 and ResHip2

20.00..300.00

5. Unusalwh

If code 1 at Waist

RECORD

Were there any unusual circumstances?

Yes 1
No 2

**a. Whyunwh1 -
Whyunwh5**

If code 1 at Unusalwh

CODE UNUSUAL CIRCUMSTANCES
CODE ALL THAT APPLY

Clothing thickness different at waist and hips 1
Posture difficulty 2
Uncooperative/would not keep still 3
Other person made measurement 4
Other (Specify at next question) 5

b. Othunuwh

If code 5 at Whyunwh1-Whyunwh5

SPECIFY OTHER UNUSUAL CIRCUMSTANCE(S)

6. Relywai

If code 1 at Waist

RECORD

Do you consider this waist measurement to be reliable?

Yes 1
No 2

a. Rexpwai

If code 2 at Relywai

EXPLAIN WHY WAIST MEASUREMENT IS NOT RELIABLE

7. Relyhip

If code 1 at Waist

RECORD

Do you consider this hip measurement to be reliable?

Yes 1
No 2

a. Rexpship

If code 2 at Relyhip

EXPLAIN WHY HIP MEASUREMENT IS NOT RELIABLE

BLOOD PRESSURE

1. BPCON

BLOOD PRESSURE CAN ONLY BE MEASURED IF THE FOLLOWING = YES

Consent to take measurement given (Z3) 1

No to all the above 2

2. BP

If code 1 at BPCON

RECORD

Was a blood pressure measurement achieved?

Yes 1

No 2

a. WhynoBP

If code 2 at BP

IF MEASUREMENT NOT MADE PLEASE GIVE REASON
CODE ALL THAT APPLY

Attempted, unsuccessful 1

Not attempted, consent withdrawn 2

Equipment failure or unavailable 3

3. Eatdrun1 - Eatdrun4

If code 1 at BP

ASK

Can I just check, have (you) eaten or drunk anything or had a cigarette
in the last 30 minutes?

Yes, eaten..... 1

Yes, drunk something..... 2

Yes, had a cigarette..... 3

No, none of the above 4

4. DateBP

If code 1 at BP

ENTER DATE BP MEASURED

__ . __ . ____ (date format variable)

a. AgeBP

If code 1 at BP

[Hidden variable calculated within program]

Age of respondent on date BP measured (years)

19..64

- 5. StaTimBP** **If code 1 at BP**
- ENTER TIME FIRST BP MEASUREMENT MADE (24 HOUR CLOCK)
- 0000..2359
- 6. Map - Map3** **If code 1 at BP**
- MEAN ARTERIAL PRESSURE - 3 READINGS (mmHg)
- 001..997
- 7. Systol - Systol3** **If code 1 at BP**
- SYSTOLIC PRESSURE - 3 READINGS (mmHg)
- 001..997
- 8. Pulse - Pulse3** **If code 1 at BP**
- PULSE RATE - 3 READINGS (BPM)
- 001..997
- 9. Diastol - Diastol3** **If code 1 at BP**
- DIASTOLIC PRESSURE - 3 READINGS (mmHg)
- 001..997
- 10. D6Chka** **If code 1 at BP**
- RECORD
- Are all three systolic readings equal to or above 160 mmHg?
- Yes 1
- No 2
- a. Report1** **If code 1 at D6Chka**
- All three systolic readings were above 160 mmHg.
- RECORD
- Have you reported this result to GP & (survey doctor)?
- Yes 1
- No 2

11. D6Chkb**If code 1 at BP**

RECORD

Are ALL THREE DIASTOLIC readings equal to or above 95mmHg?

Yes 1

No 2

a. Report2**If code 1 at D6Chkb**

All three diastolic readings were above 95mmHg.

RECORD

Have you reported this result to GP & (survey doctor)?

Yes 1

No 2

12. Cuff**If code 1 at BP**

CODE CUFF SIZE USED

Large adult size 1

Adult size 2

Small adult size 3

13. DifCuff**If code 1 at BP**

RECORD

Were there any difficulties in fitting or wrapping cuff?

Yes 1

No 2

**a. Cuffdif1 -
Cuffdiff3****If code 1 at DifCuff**

CODE DIFFICULTIES

CODE ALL THAT APPLY

Conical shaped arm 1

Obese arm: correct circumference cuff too deep 2

Other difficulties with the cuff (Specify at next question) ... 3

b. Cuffspec**If code 3 at Cuffdif1 -Cuffdiff3**

SPECIFY OTHER DIFFICULTY

14. UnCirc**If code 1 at BP**

RECORD

Were there any unusual circumstances?

Yes	1
No	2

**a. Circ1 -
Circ3****If code 1 at Uncirc**CODE UNUSUAL CIRCUMSTANCES
CODE ALL THAT APPLY

Person was upset or anxious or nervous	1
Dinamap system error no. 844 - excessive movement	2
Right arm unavailable, taken from left arm	3
Other (Specify at next question)	4

b. Othcirc**If code 4 at Circ1 - Circ3**

SPECIFY OTHER SPECIAL CIRCUMSTANCES

15. RelyBp**If code 1 at BP**

RECORD

Do you consider this blood pressure measurement to be reliable?

Yes	1
No	2

a. Rexpbp**If code 2 at Relybp**EXPLAIN WHY BLOOD PRESSURE MEASUREMENT IS NOT
RELIABLE

BLOOD SAMPLE

1. Didbld

All

Did respondent agree to have a blood sample taken?

Yes 1
No 2

a. Whynobld

If code 2 at DidBld

SPECIFY REASONS FOR REFUSAL TO BLOOD SAMPLE

2. Datebld

If code 1 at DidBld

ENTER DATE BLOOD VISIT

__ . __ . ____ (date format variable)

a. AgeBld

If code 1 at DidBld

[Hidden variable calculated within program]

Age of respondent on date of blood visit

19..64

3. StartTime

If code 1 at DidBld

ENTER TIME AT START OF BLOOD VISIT (24HR CLOCK)

0000..2359

4. Bleed

If code 1 at DidBld

PHLEBOTOMIST TO ASK

Has respondent ever been told he/she has a clotting or bleeding disorder?

Yes 1
No 2

5. Blddrug

If code 1 at DidBld

PHLEBOTOMIST TO ASK

Is the respondent taking anti-coagulant drugs?

Yes 1
No 2

6. BIProb	If code 2 at Bleed AND code 2 at BldDrug PHLEBOTOMIST TO RECORD Was there a problem with taking the blood sample? Yes 1 No 2
a. Whatpr	If code 1 at BIProb SPECIFY PROBLEM
7. Bldcon	If Code 2 at Bleed and Code 2 at Blddrug CODE Consent to give blood sample was given 1 Consent to give blood was refused 2 Consent to give blood does not apply to respondent 3
a. Whyconrf	If code 2 at BldCon SPECIFY REASONS FOR REFUSAL TO CONSENT TO BLOOD SAMPLE
8. BldTake	If Code 1 at BldCon Was blood taken from this respondent? Blood was taken from this respondent 1 Blood refused even though consent given 2 Blood sample attempted but unable to take/complete 3
9. BITry	If codes 2 or 3 at Bldtake RECORD Number of attempts made to obtain sample: None 1 One 2 Two 3

a. Whynoatt

If code 1 at BITry

RECORD

Reason did not attempt to obtain sample:

No suitable vein	1
Respondent refused	2
Respondent too upset or nervous	3
Other (please specify at next question).....	4

b. WhyNOth

If code 4 at WhyNAtt

SPECIFY REASONS WHY NO ATTEMPT MADE TO TAKE BLOOD

c. WhyAtt

If code 3 at BldTake AND codes 2 or 3 at BITry

RECORD

Reason why attempt made but unsuccessful.

Respondent in discomfort/distress.....	1
Vein collapsed	2
Other (please specify at next question).....	3

d. WhyAttO

If code 3 at WhyAtt

SPECIFY WHY ATTEMPT TO TAKE BLOOD UNSUCCESSFUL

10. Volume

If codes 2 or 3 at BITry

RECORD

Volume of blood obtained (ml) - maximum 30 ml

01..30

11. WhenBI

If codes 2 or 3 at BITry

Was blood taken/attempted from this respondent during the diary keeping period?

During diary keeping.....	1
After diary keeping completed.....	2
Diary not kept	3

12 Phleprob

If codes 1 or 3 at BldTake

RECORD

Any other problems reported by the phlebotomist?

Yes	1
No	2

a. Whatprob

If code 1 at Phleprob

RECORD PROBLEMS REPORTED BY PHLEBOTOMIST¹

13. Anyelse

If code 1 at BldCon

RECORD

Any problems or unusual circumstances you (the interviewer) wish to note?

Yes 1
No 2

a. Elsewhat

If code 1 at Anyelse

RECORD PROBLEMS AND UNUSUAL CIRCUMSTANCES²

14. EndTime

If code 1 at BldCon

ENTER TIME AT END OF BLOOD VISIT (24HR CLOCK)

0000..2359

¹ Problems reported by the phlebotomist were recorded on the paper measurement schedule (M1) but not coded.

² Problems and unusual circumstances reported by the interviewer were recorded on the paper measurement schedule (M1) but not coded.

TAP WATER SAMPLE

1. DidTap

ALL

Did you take a tap water sample from this address?

Yes 1

No 2

a. WhynoTap

If code 2 at DidTap

REASONS FOR NOT TAKING TAP WATER SAMPLE

2. Tapprob

If code 1 at DidTap

Were there any problems taking the tap water sample?

Yes 1

No 2

a. TapTak

If code 2 at TapProb

WHAT WERE THE PROBLEMS IN TAKING THE TAP WATER
SAMPLE?

3. TapPak

If code 1 at DidTap

Were there any problems in posting or packing the tap water sample?

Yes 1

No 2

a. PakProb

If code 2 at TapPak

WHAT WERE THE PROBLEMS IN POSTING AND PACKING THE
TAP WATER SAMPLE?

URINE SAMPLE

1. UrinBCon

All

RECORD

Agreed to make 24-hour urine collection and full collection made.....	1
Agreed to make 24-hour urine collection but full collection not made.....	2
Refused to make 24-hour urine collection.....	3

a. Whyno201-Whyno211

If codes 2 or 3 at UrinBCon

Respondent pregnant (INELIGIBLE)	1
Respondent menstruating - alternative collection could not be made	2
Not attempted, chairfast/bedfast.....	3
Respondent too unwell to provide sample	4
Respondent too embarrassed at idea of providing sample..	5
Respondent not like idea of having bottle of urine in house	6
Urine sample lost for some reason e.g. spillage	7
Urine sample incomplete (PLEASE SPECIFY)	8
Not attempted, refusal	9
Equipment failure	10
Other reason (PLEASE SPECIFY)	11

b. Othurinb

If code 8 or 11 at Whyno201 - Whyno211

SPECIFY WHY NO URINE COLLECTION OR COLLECTION INCOMPLETE

2. UStart

If code 1 at UrinBCon

ENTER DATE 24-HOUR URINE COLLECTION STARTED

__ . __ . __ (date format variable)

a. Ageurin

If code 1 at UrinBCon

[Hidden variable calculated within program]

Age of respondent when urine collection started

19..64

3. Timfirst	<p>If code 1 at UrinBCon</p> <p>ENTER TIME OF FIRST URINE COLLECTION IN HOURS AND MINUTES USE 24 HOUR CLOCK</p> <p>0000..2359</p>
4. TimLastB	<p>If code 1 at UrinBCon</p> <p>ENTER TIME OF LAST URINE COLLECTION IN HOURS AND MINUTES USE 24 HOUR CLOCK</p> <p>0000..2359</p>
5. Uend	<p>If code 1 at UrinBCon</p> <p>ENTER DATE 24-HOUR URINE COLLECTION ENDED</p> <p>__ . __ . ____ (date format variable)</p>
6. Udurat	<p>If code 1 at UrinBCon</p> <p>[Hidden variable calculated within program]</p> <p>Duration of urine collection (Hours)</p>
7. Wt1- Wt2	<p>If code 1 at UrinBCon</p> <p>WEIGHT OF 24-HOUR COLLECTION - 2 MEASUREMENTS (KILOGRAMS)</p> <p>000.01..999.97</p>
a. DVUrin	<p>If code 1 at UrinBCon</p> <p>[Hidden variable calculated within program]</p> <p>Average result of Wt1 and Wt2</p> <p>000.01..999.97</p>
7. UrinWhe	<p>If code 1 at UrinBCon</p> <p>Was the 24-hour urine collection made during the 7-day diary keeping period or after diary keeping completed?</p> <p>During diary keeping..... 1 After diary keeping completed..... 2 Diary not kept .....3</p>

8. PrbUrinB **If code 1 at UrinBCon**

Were there any problems in making the collection?

Yes 1
No 2

a. UrinPrbB **If code 1 at PrbUrinB**

SPECIFY PROBLEMS IN MAKING COLLECTION

9. WeiPrb **If code 1 at UrinBCon**

Were there any problems in weighing the collection?

Yes 1
No 2

a. PrbWei **If code 1 at WeiPrb**

SPECIFY PROBLEMS IN WEIGHING COLLECTION

10. Whosamp **If code 1 at UrinBCon**

Who took the sub-samples from the urine collection?

Respondent (supervised) 1
Respondent (not supervised)2
Interviewer..... 3

11. SampPrb **If code 1 at UrinBCon**

Were there any problems in taking sample from the collection?

Yes 1
No 2

a. PrbSamp **If code 1 at SampPrb**

SPECIFY PROBLEMS IN TAKING SAMPLE

12. PrbPostB **If code 1 at UrinBcon**

Were there any problems in packing and posting the sample?

Yes 1
No 2

a. PostPrbB **If code 1 at PrbPostB**

SPECIFY PROBLEMS PACKING OR POSTING SAMPLE

BOWEL MOVEMENT RECORD

1. Bowel

All

Interviewer: was a bowel movement record kept?

Full 7-day bowel movement record..... 1
Some but not all days recorded..... 2
No bowel movement diary kept 3

2. DayB - DayB7

If codes 1 or 2 at Bowel

RECORD DAY OF THE WEEK

3. Bmove - Bmove7

If codes 1 or 2 at Bowel

ENTER NUMBER OF BOWEL MOVEMENTS RECORDED FOR
EACH DAY

0..8

NHS NUMBER

1. NHSCon

All

Did respondent consent to being flagged on NHSCR (Z5)?

Yes 1

No 2

2. ProvNHS

If code 1 at NHSCon

Did this respondent provide NHS number?

Yes 1

No 2

a. NhsNo

If code 1 at ProvNHS

NOW ENTER THE NHS NUMBER FROM NHSCR CONSENT FORM
(Z5)

Appendix A

Specifications for SIR and SPSS derived variables

Appendix A List of figures



Derived variables – interview data

- Figure A.1 SIR derived variable: specification for age variables
- Figure A.2 SIR derived variable: specification for region variables
- Figure A.3 SIR derived variable: specification for household type variables
- Figure A.4 SPSS common derived variables listed
- Figure A.5 SPSS derived variable: specifications for derived variables for initial interview
- Figure A.6 SPSS derived variable: main interview respondent

Derived variables – physical measurements

- Figure A.7 SPSS derived variable specifications: physical measurements and body size indicators

Derived variables – physical activity diary data

- Figure A.8 SPSS physical activity derived variables listed
- Figure A.9 SPSS syntax for Calculated Activity Score (CAS)

Derived variables - Blood and urine analytes

- Figure A.10 SPSS derived variables: specifications for blood and urine analytes

Figure A1 Derived variable specification for age variables

The following age variables need to be derived for each case and added to the SIR database.

1 Method:

- subtract date of event (in days) from date of birth (in days)
- for each age derived variable take date of birth from variable **Birth**
- divide by 365.25
- store as decimal number of years

2 Derived variables

<u>Variable label</u>	<u>Variable name</u>	<u>Date of event variable</u>
AGEINTD	Age at dietary interview	StartDat
AGEDIET	Age at diary	IntDate
AGEBP	Age at BP	DateBP
AGEHT	Age at height	DateHe
AGEWT	Age at weight	DateWe
AGEHIP	Age at waist hip	DateHip
AGEBLD	Age at blood	DateBld
AGEUR	Age at urine	DateUrin

3 Missing values

set value dv = -9
if non-response to whole event (e.g. blood not taken)

set value dv = -8
if date of event = NA

set value dv = -6
if rec type does not exist

Figure A.2 Derived variable specification for region variables

1 Method:

- SIU area number identifies region; area number (AREA) forms first 3-digits of case number (CASEID)

2 Derived variables:

Variable name: Region

Variable label: REGION

If AREA = 101, 102, 103, 104, 105, 106, 107 or 108 then	REGION = 01
If AREA = 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138 or 139 then	REGION = 02
If AREA = 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125 or 126 then	REGION = 03
If AREA = 140, 141, 142, 143, 144, 145, 146, 147, 148, 149 or 150 then	REGION = 04
If AREA = 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163 or 164 then	REGION = 05
If AREA = 165, 166, 167, 171, 174, 175, 177 or 178 then	REGION = 06
If AREA = 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195 or 196 then	REGION = 07
If AREA = 168, 169, 170, 172, 173, 176, 197, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217 or 299 then	REGION = 08
If AREA = 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229 or 230 then	REGION = 09
If AREA = 231, 232, 233, 234, 235, 236, 237 or 238 then	REGION = 10
If AREA = 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251 or 252 then	REGION = 11

Value label

REGION	= 1	North
REGION	= 2	Yorks & Humberside
REGION	= 3	North West
REGION	= 4	East Midlands
REGION	= 5	West Midlands

REGION	= 6	East Anglia
REGION	= 7	London
REGION	= 8	South East
REGION	= 9	South West
REGION	= 10	Wales
REGION	= 11	Scotland

Missing values: none

Variable name: Regsumm

Variable label: Region grouped

If REGION	= 1	then	Regsumm = 2
If REGION	= 2	then	Regsumm = 2
If REGION	= 3	then	Regsumm = 2
If REGION	= 4	then	Regsumm = 3
If REGION	= 5	then	Regsumm = 3
If REGION	= 6	then	Regsumm = 3
If REGION	= 7	then	Regsumm = 4
If REGION	= 8	then	Regsumm = 4
If REGION	= 9	then	Regsumm = 3
If REGION	= 10	then	Regsumm = 3
If REGION	= 11	then	Regsumm = 1

Value label

Regsumm	= 1	Scotland
Regsumm	= 2	Northern
Regsumm	= 3	Central, South-West & Wales
Regsumm	= 4	London & South-East

Missing values: none

Figure A.3 Household type classification for analysis in SPSS

1 Method

- identify whether respondent is living alone or with others
- identify whether dependent children in household

2 Derivation

HHTYPE1: Household composition 1

1 Living alone

IF DMHSize = 1

THEN HHTYPE1 = 1

2. Living with spouse/ partner no dependent children

IF (QTHCOMP.QHCOMP[Qhoh.Respdnt].Marstat = Marlive) OR
(QTHCOMP.QHCOMP[Qhoh.Respdnt].Livewith = Yes) OR
(QTHCOMP.QHCOMP[Qhoh.Respdnt].Livewith = Samesex)

AND (Numchild = 0)

THEN HHTYPE1 = 2

IF (QTHCOMP.QHCOMP[Qhoh.Respdnt].Marstat = Marlive) OR
(QTHCOMP.QHCOMP[Qhoh.Respdnt].Livewith = Yes) OR
(QTHCOMP.QHCOMP[Qhoh.Respdnt].Livewith = Samesex)

AND (NumChild > 0)

AND {**any child in house does not belong to respondent**
i.e is no-one in house aged < 16 who is related as

(QTHRels.QHRels[1..10].R = Child) OR
(QTHRels.QHRels[1..10].R = StChild) OR
(QTHRels.QHRels[1..10].R = FChild)

to Qhoh.Respdnt

THEN HHTYPE1 = 2

3. Living with other adults but no spouse and no dependent children

IF DMHSize > 1 AND DMHSize = NumAdult

AND (QTHCOMP.QHCOMP[Qhoh.Respdnt].Marstat <> Marlive) OR
(QTHCOMP.QHCOMP[Qhoh.Respdnt].Livewith = No)

THEN HHTYPE1 = 3

IF NUMCHILD > 0

AND (QTHCOMP.QHCOMP[Qhoh.Respdnt].Marstat <> Marlive) OR
(QTHCOMP.QHCOMP[Qhoh.Respdnt].Livewith = No)

AND {any child in house does not belong to respondent}
i.e is no-one in house aged < 16 who is related as
(QTHRels.QHRels[1..10].R = Child) OR
(QTHRels.QHRels[1..10].R = StChild) OR
(QTHRels.QHRels[1..10].R = FChild)
to Qhoh.Respdnt

4. Living with dependent children with or without spouse

IF NumChild > 0

AND {a child in house DOES belong to respondent}
i.e is someone in house aged < 16 who is related as
(QTHRels.QHRels[1..10].R = Child) OR
(QTHRels.QHRels[1..10].R = StChild) OR
(QTHRels.QHRels[1..10].R = FChild)
to Qhoh.Respdnt

THEN HHTYPE1 = 4

HHTYPE2: Household composition 2

1. Living alone

IF HHTYPE1 = 1 THEN HHTYPE2 = 1

2. Living with spouse/ partner no dependent children

IF HHTYPE1 = 2 THEN HHTYPE2 = 2

3. Living with other adults but no spouse and no dependent children

IF HHTYPE1 = 3 THEN HHTYPE2 = 3

4. Living with dependent children with spouse/partner

IF (HHTYPE1 = 4) AND

(QTHCOMP.QHCOMP[Qhoh.Respdnt].Marstat = Marlive) OR
(QTHCOMP.QHCOMP[Qhoh.Respdnt].Livewith = Yes) OR
(QTHCOMP.QHCOMP[Qhoh.Respdnt].Livewith = Samesex)
HHTYPE2 = 4

5. Living with dependent children no spouse/ partner

IF (HHTYPE1 = 4) AND

((QTHComp.QHComp[Qhoh.Respdnt].Marstat <> Marrlive) OR
(QTHComp.QHComp[Qhoh.Respdnt].Livewith = No) THEN

HHTYPE2 = 5

Figure A.4 Respondent variables for analysis in SPSS

1 Method

- identify person number of respondent in household
- impute demographic information for that person number to respondent variables

2 Derivation

Respndt: Person number of respondent

This is entered at the time of interview by the interviewer. Checks exist in the CAPI program to ensure that the correct person number is keyed and that this person meets eligibility criteria.

1 Respsex: Sex of respondent

RESPSEX := QTHCOMP.QHCOMP[QHoH.RESPDNT].SEX

2 Respage: Age of respondent (years)

RESPAGE := QTHCOMP.QHCOMP[QHoH.RESPDNT].DVAGE

3 Respmar: Legal marital status of respondent

RESPMAR := QTHCOMP.QHCOMP[QHoH.RESPDNT].MARSTAT

4 Respwith: Whether respondent co-habiting

RESPWITH:= QTHCOMP.QHCOMP[QHoH.RESPDNT].LIVewith

5 Resphldr: Whether respondent owns or rents

RESPHLDR:= QTHCOMP.QHCOMP[QHoH.RESPDNT].HHLDR

Figure A.5 SPSS derived variables: specifications for common demographic derived variables for initial interview

This figure gives specifications for the following derived variables; these are the key analytical variables and are included on all .sav files:

RAgegp	Age group for respondent
DVRecBen	Whether household receiving benefits
DVHrpsc3	Social class of household reference person

1 RAgegp Age group of respondent

```
RECODE
  respage
  (Lowest thru 24=1) (25 thru 34=2) (35 thru 49=3) (50 thru Highest=4)
  INTO ragegp .
EXECUTE .
```

2 DVRecBen Household receipt of benefits

```
COUNT
  Countben = fcredit isupp isseek (1).
EXECUTE .
```

```
DO IF COUNTBEN >= 1.
  COMPUTE DVRECBEN = 1.
ELSE IF COUNTBEN < 1.
  COMPUTE DVRECBEN = 2.
END IF.
EXECUTE .
```

Var labels Dvrecben 'DV - receipt of any benefit'.

Value labels Dvrecben
1 'Receiving benefits'
2 'Not in receipt of benefits'.

3 DVHrpsc3 Social class of household reference person

```
RECODE
  sc3
  (0.0=7) (1.0=Copy) (2.0=Copy) (3.1=Copy) (3.2=Copy) (4.0=Copy)
  (5.0=Copy) (6.0=7) (SYSMIS=7) INTO hrpsc .
EXECUTE .
```

```
RECODE
  hrpsc
  (1.0=1) (2.0=1) (3.1=1) (3.2=2) (4.0=2) (5.0=2) (7=-9) INTO dvhrpsc3.
```

EXECUTE .

Value labels DVhrpsc3

1.0 'Non-manual'

2.0 'Manual'

-9 'DNA'

Figure A.6 SPSS derived variable specifications: derived variables calculated from interview data

Specifications are given for the following variables derived in SPSS:

- 1 Drinks tea
- 2 Drinks coffee
- 3 Taking dietary supplements
- 4 Use of salt
- 5 Smoking behaviour
- 6 Eating affected by being unwell during diary recording period
- 7 Main diary keeper
- 8 Drinking behaviour
- 9 Household income - grouped
- 10 Social class of head of household/ household reference person

1 Dvtea Drinks tea

```
DO IF (Tea = 1) .
RECODE
  teaswee
  (1=1) (2=2) (3=3) INTO Dvtea .
ELSE IF (Tea = 2) .
RECODE
  Tea
  (2=4) INTO Dvtea .
END IF.
EXECUTE .
```

Var labels DVTea 'DV - drinks tea'.

Value labels DVTea

- 9 'DNA'
- 1 'Drinks tea with sugar'
- 2 'Drinks tea with artificial sweetener'
- 3 'Drinks tea unsweetened'
- 4 'Does not drink tea'.

2 Dvcoffee Drinks coffee

```
DO IF (Coffee = 1) .
RECODE
  Cofswhee
  (1=1) (2=2) (3=3) INTO DvCoffee .
ELSE IF (Coffee = 2) .
RECODE
  Coffee
  (2=4) INTO Dvcoffee .
END IF.
EXECUTE .
```

Var labels DVCoffee 'DV - drinks coffee'.

Value labels DVCoffee

- 9 'DNA'
- 1 'Drinks coffee with sugar'
- 2 'Drinks coffee with artificial sweetener'
- 3 'Drinks coffee unsweetened'
- 4 'Does not drink coffee'.

3 **Dvssuppl** **Taking dietary supplements**

** uses variable vitamin for men & variables vitamin + folicA for women - calculate Dvssuppl
** check cases where FolicA = 4 taking non-prescribed folic acid and then also mentioned at vitamins
etc
* (only applies to one case 130 01 - edited folicA to reflect this, i.e. to 2)

```
RECODE
  vitamin
  (ELSE=Copy) INTO dvssuppl .
EXECUTE .
```

```
IF (FolicA = 1) dvssuppl = 1.
IF (FolicA = 4) dvssuppl = 1.
EXECUTE .
```

Var labels DVssuppl 'DV - taking supplements'.

Value labels DVssuppl
-9 'DNA'
1 'Yes'
2 'No'.

4 **DvSalck** **Salt used in cooking**

(Derived variable appears in XXXX.Sav)

```
DO IF (saltcoo1 < 4) .
RECODE
  saltcoo1
  (1=1) (2=1) (3=2) INTO dvshaluse .
END IF .
EXECUTE .
```

```
DO IF (saltcoo2 < 4) .
RECODE
  saltcoo2
  (1=1) (2=1) (3=2) INTO dvshaluse .
END IF .
EXECUTE .
```

```
DO IF (saltcoo3 < 4) .
RECODE
  saltcoo3
  (1=1) (2=1) (3=2) INTO dvshaluse .
END IF .
EXECUTE .
```

```
DO IF (saltcoo4 < 4) .
RECODE
  saltcoo4
  (1=1) (2=1) (3=2) INTO dvshaluse .
END IF .
EXECUTE .
```

variable label dvshaluse 'Uses salt in cooking'.
add value labels dvshaluse 1 'Salt added' 2 'No salt added'.

5 Smoking behaviour

a **TOTCIGY** **Number of cigarettes smoked in a week.**

```
COMPUTE TOTCIGY=-9.  
DO IF DLYSMOKE GE 0 AND WENDSMOK GE 0.  
    COMPUTE TOTCIGY=(DLYSMOKE*5) + (WENDSMOK*2).  
ELSE IF (DLYSMOKE = 99 or WENDSMOK = 99).  
    COMPUTE TOTCIGY= -8.  
END IF.  
EXECUTE .
```

var labels TOTCIGY 'Number of cigarettes smoked in a week'.

value labels TOTCIGY
(-9) 'DNA'
(-8) 'DK/Refusal'.

b **CIGSADAY** **Number of cigarettes smoked per day.**

```
COMPUTE CIGSADAY = -9.  
RECODE TOTCIGY (-8=-8) INTO CIGSADAY.  
DO IF TOTCIGY GE 0.  
    COMPUTE CIGSADAY = TOTCIGY/7.  
END IF.  
EXECUTE .
```

VAR LABELS CIGSADAY 'Cigarettes smoked per day'.

c **CIGSMKNG** **Number of cigarettes smoked per day.**

```
COMPUTE CIGSMKNG=-9.  
DO IF SMOKEVER =2.  
    COMPUTE CIGSMKNG = 6.  
ELSE IF SMOKEVER =1.  
    DO IF SMOKENOW=2.  
        DO IF CIGEVER=1.  
            COMPUTE CIGSMKNG =5.  
        ELSE IF CIGEVER =2.  
            COMPUTE CIGSMKNG =6.  
        END IF.  
    ELSE IF SMOKENOW =1.  
        DO IF CIGSADAY =-8.  
            COMPUTE CIGSMKNG =4.  
        ELSE IF RANGE (CIGSADAY, 20,97.99999).  
            COMPUTE CIGSMKNG =1.  
        ELSE IF RANGE (CIGSADAY, 10,19.999999).  
            COMPUTE CIGSMKNG =2.  
        ELSE IF RANGE (CIGSADAY, 0,9.999999).  
            COMPUTE CIGSMKNG =3.  
        END IF.  
    END IF.  
ELSE.  
    COMPUTE CIGSMKNG=-8.  
END IF.  
EXECUTE .
```

Var labels CIGSMKNG 'Number of cigarettes smoked per day'.

Value labels CIGSMKNG

-9 'DNA'

-8 'DK/Refusal'

1 '20+ CIGS A DAY'

2 '10-19 CIGS A DAY'

3 '0-9 CIGS A DAY'

4 'NA TO CIGS A DAY'

5 'EX-CIG SMOKER'

6 'NEVER SMOKED'.

6 Dveataff Eating affected by being unwell

DO IF DIETARY=1.

 RECODE unwell (2=3) INTO DVEataff .

END IF .

EXECUTE .

DO IF (dietary = 1) .

COUNT

 Counteat = whichda1 whichda2 whichda3 whichda4 whichda5 whichda6 whichda7
 whichda8 whichda9 whichd10 whichd11 whichd12 whichd13 whichd14 whichd15
 whichd16 whichd17 whichd18 whichd19 whichd20 whichd21 whichd22 whichd23
 whichd24 whichd25 whichd26 whichd27 whichd28 whichd29 whichd30 whichd31
 whichd32 whichd33 whichd34 whichd35 whichd36 whichd37 whichd38 whichd39
 whichd40 (1 thru 7) .

END IF .

EXECUTE .

DO IF DIETARY=1 AND UNWELL=1.

 DO IF COUNTTEAT >= 1.

 COMPUTE DVEATAFF = 1.

 ELSE IF COUNTTEAT < 1.

 COMPUTE DVEATAFF = 2.

 END IF.

END IF.

EXECUTE .

Var labels Dveataff 'DV - eating affected by being unwell'.

Value labels Dveataff

1 'Unwell and eating affected'

2 'Unwell - eating not affected'

3 'Not unwell during diary period'.

7 DVDikeep Main diary keeper

** setting up DV for main diary keeper from Wmain and WhoW

* if only one person kept the diary then response is in Whow1, if more than one then use WMain

DO IF (dietary = 1) .

RECODE

 whow1

 (1=1) (2=2) (3=3) (4=4) INTO DVdikeep .

END IF .

EXECUTE .

DO IF (dietary = 1) .

```

RECODE
  wmain
  (1=1) (2=2) (3=3) (4=4) INTO DVdikeep .
END IF .
EXECUTE .

```

Var labels Dvdikeep 'DV - main diary keeper'.

Value labels Dvdikeep
 1 'Respondent'
 2 'Respondents spouse/ partner'
 3 'Other relative in household'
 4 'Other'.

8 Drinking behaviour

*****variables created in this program are BUNITS QBEER QSHANDY QSPIRIT
 QSHERRY QWINE QPOPS DRKMOST DRKMOSTQ DRKMOSTT DRATING D100
 AC1 AC2 AC3 AC4 QFRATING.

*****DRATNDNS is the overall weekly units.

a Bunits Number of units of beer

*** convert BeerQ1 to BeerQ4 to NBeerQ1 to NBeerQ4 relate specifically to half pints, small cans, large cans and bottles as opposed to referring to the first type of measure specified.

```

DO IF (Beerm1 = 1).
  COMPUTE nbeerq1 = BeerQ1.
ELSE IF (Beerm1 = 2).
  COMPUTE nbeerq2 = BeerQ1.
ELSE IF (Beerm1 = 3).
  COMPUTE nbeerq3 = BeerQ1.
ELSE IF (Beerm1 = 4).
  COMPUTE nbeerq4 = BeerQ1.
END IF.
EXECUTE.

```

```

DO IF (Beerm2 = 1).
  COMPUTE nbeerq1 = BeerQ2.
ELSE IF (Beerm2 = 2).
  COMPUTE nbeerq2 = BeerQ2.
ELSE IF (Beerm2 = 3).
  COMPUTE nbeerq3 = BeerQ2.
ELSE IF (Beerm2 = 4).
  COMPUTE nbeerq4 = BeerQ2.
END IF.
EXECUTE.

```

```

DO IF (Beerm3 = 1).
  COMPUTE nbeerq1 = BeerQ3.
ELSE IF (Beerm3 = 2).
  COMPUTE nbeerq2 = BeerQ3.
ELSE IF (Beerm3 = 3).
  COMPUTE nbeerq3 = BeerQ3.
ELSE IF (Beerm3 = 4).
  COMPUTE nbeerq4 = BeerQ3.

```

```
END IF.  
EXECUTE.
```

```
DO IF (Beerm4 = 1).  
  COMPUTE nbeerq1 = BeerQ4.  
ELSE IF (Beerm4 = 2).  
  COMPUTE nbeerq2 = BeerQ4.  
ELSE IF (Beerm4 = 3).  
  COMPUTE nbeerq3 = BeerQ4.  
ELSE IF (Beerm4 = 4).  
  COMPUTE nbeerq4 = BeerQ4.  
END IF.  
EXECUTE.
```

** recoded other specified amounts as 3 litres = 10 half pints; 2 litres as 7 half pints; 1/4 litre as one half pint

** made assumption based on coding table from GHS that bottles are 250-330ml and thus about half a pint, so units allocated as for half pints/small cans.

```
compute bunits=0.  
do if (drinks=-8 or nbeerq1=-8 or nbeerq2=-8 or nbeerq3=-8 or nbeerq4=-8 or beer=-8).  
  compute bunits =-8.  
end if.  
do if nbeerq1 > 0.  
  compute bunits = bunits + nbeerq1.  
end if.  
do if nbeerq2 > 0.  
  compute bunits = bunits + nbeerq2.  
end if.  
do if nbeerq3 > 0.  
  compute bunits = bunits + (nbeerq3*1.5).  
end if.  
do if nbeerq4 > 0.  
  compute bunits = bunits + nbeerq4.  
end if.  
EXECUTE .
```

Variable label bunits 'Total no.units: beer on usual day'.

Value Labels bunits

-8	'NA'
0	'Abst/None last year'.

b Qbeer Estimated weekly units of beer

```
compute qbeer=0.  
do if (drinks=-8 or beer =-8 or bunits =-8).  
  compute qbeer=-8.  
else if (beer =-9 or bunits =-9).  
  compute qbeer=0.  
else.  
  if (BEER eq 1)QBEER = BUNITS*7.  
  if (BEER eq 2)QBEER = BUNITS*5.5.  
  if (BEER eq 3)QBEER = BUNITS*3.5.  
  if (BEER eq 4)QBEER = BUNITS*1.5.  
  if (BEER eq 5)QBEER = BUNITS*0.375.  
  if (BEER eq 6)QBEER = BUNITS*0.115.  
  if (BEER eq 7)QBEER = BUNITS*0.029.
```



```

        if (BEER eq 8)QBEER = 0.
    end if.
EXECUTE .

```

Variable label qbeer 'Estimated weekly units: beer'.

Value labels qbeer
 -8 'NA'
 0 'Abst/None last year'.

c Qshandy Estimated weekly units shandy

```

compute qshandy=0.
do if (drinks=-8 or shandyq=-8 or shandyq=-8).
    compute qshandy=-8.
else if (shandy=-9 or shandyq=-9).
    compute qshandy=0.
else.
    if (shandy eq 1)qshandy = shandyq*7.
    if (shandy eq 2)qshandy = shandyq*5.5.
    if (shandy eq 3)qshandy = shandyq*3.5.
    if (shandy eq 4)qshandy = shandyq*1.5.
    if (shandy eq 5)qshandy = shandyq*0.375.
    if (shandy eq 6)qshandy = shandyq*0.115.
    if (shandy eq 7)qshandy = shandyq*0.029.
    if (shandy eq 8)qshandy = 0.
end if.
execute.

```

Variable label qshandy 'Estimated weekly units: shandy'.

Value labels qshandy
 -8 'DK/Refusal'
 0 'Abst/None last year'.

d Qspirit Estimated weekly units spirits

```

compute qspirit=0.
do if (drinks=-8 or spirits=-8 or spiritsq=-8).
    compute qspirit=-8.
else if (spirits=-9 or spiritsq=-9).
    compute qspirit=0.
else.
    if (spirits eq 1)qspirit = spiritsq*7.
    if (spirits eq 2)qspirit = spiritsq*5.5.
    if (spirits eq 3)qspirit = spiritsq*3.5.
    if (spirits eq 4)qspirit = spiritsq*1.5.
    if (spirits eq 5)qspirit = spiritsq*0.375.
    if (spirits eq 6)qspirit = spiritsq*0.115.
    if (spirits eq 7)qspirit = spiritsq*0.029.
    if (spirits eq 8)qspirit = 0.
end if.
execute.

```

Variable label qspirit 'Estimated weekly units: spirits'.

Value labels qspirit
 -8 'DK/Refusal'
 0 'Abst/None last year'.

e Qsherry Estimated weekly units sherry

```
compute qsherry=0.
do if (drinks=-8 or sherry=-8 or sherryq=-8).
    compute qsherry=-8.
else if (sherry=-9 or sherryq=-9).
    compute qsherry=-0.
else.
    if (sherry eq 1)qsherry = sherryq*7.
    if (sherry eq 2)qsherry = sherryq*5.5.
    if (sherry eq 3)qsherry = sherryq*3.5.
    if (sherry eq 4)qsherry = sherryq*1.5.
    if (sherry eq 5)qsherry = sherryq*0.375.
    if (sherry eq 6)qsherry = sherryq*0.115.
    if (sherry eq 7)qsherry = sherryq*0.029.
    if (sherry eq 8)qsherry = 0.
end if.
execute.
```

Variable label qsherry 'Estimated weekly units: sherry'.

Value labels qsherry
-8 'NA'
0 'Abs/none last year'.

f Qwine Estimated weekly units wine

```
compute qwine=0.
do if (drinks=-8 or wine=-8 or wineq=-8).
    compute qwine=-8.
else if (wine=-9 or wineq=-9).
    compute qwine=-0.
else.
    if (wine eq 1)qwine = wineq*7.
    if (wine eq 2)qwine = wineq*5.5.
    if (wine eq 3)qwine = wineq*3.5.
    if (wine eq 4)qwine = wineq*1.5.
    if (wine eq 5)qwine = wineq*0.375.
    if (wine eq 6)qwine = wineq*0.115.
    if (wine eq 7)qwine = wineq*0.029.
    if (wine eq 8)qwine = 0.
end if.
execute.
```

Variable label qwine 'Estimated weekly units: wine'.

Value labels qwine
-8 'NA'
0 'Abst/none last year'.

g Qpops Estimated weekly units alcopops

```
compute qpops=0.
do if (drinks=-8 or alcpop=-8 or alcpopq=-8).
    compute qpops=-8.
else if (alcpop=-9 or alcpopq=-9).
    compute qpops=-0.
else.
    if (alcpop eq 1)qpops = alcpopq*1.5*7.
```

```

        if (alcpop eq 2)qpops = alcpopq*1.5*5.5.
        if (alcpop eq 3)qpops = alcpopq*1.5*3.5.
        if (alcpop eq 4)qpops = alcpopq*1.5*1.5.
        if (alcpop eq 5)qpops = alcpopq*1.5*0.375.
        if (alcpop eq 6)qpops = alcpopq*1.5*0.115.
        if (alcpop eq 7)qpops = alcpopq*1.5*0.029.
        if (alcpop eq 8)qpops = 0.
    end if.
execute.

```

Variable label qpops 'Estimated weekly units: alcopops'.

```

value labels QPOPS
-8 'NA'
0 'Abst/none last year'.

```

h DratNDNS Estimated weekly units all drinks

```

Do if (qbeer=-8 and qshandy=-8 and qspirit=-8 and qsherry=-8 and qwine=-8 and qpops=-8).
    compute DRATNDNS =-8.
else if (qbeer=-9 and qshandy=-9 and qspirit=-9 and qsherry=-9 and qwine=-9 and qpops=-9).
    compute DRATNDNS =0.
else.
    compute DRATNDNS=0.
    Do repeat Q = qbeer qshandy qspirit qsherry qwine qpops.
        Do if Q ge 0.
            compute DRATNDNS = DRATNDNS + Q.
        end if.
    end repeat.
end if.
execute.

```

Variable label DRATNDNS 'Estimated weekly units: all drinks'.

```

Value labels DRATNDNS
-8 'NA'
0 'Abst/none last year'.

```

i AC1 Alcohol consumption grouped (1)

```

Do if respsex = 1.
    RECODE DRATNDNS (0=1)
        (0.00000001 THRU 0.4999999999 =2)
        (0.5000000000 THRU 10.4999999999=3)
        (10.5000000000 THRU 21.499999999999=4)
        (21.5000000000 THRU 35.499999999999=5)
        (35.5000000000 THRU 50.499999999999=6)
        (50.5000000000 THRU 999999.999999=7)
        (-6=-6) (-8=-8) INTO ac1.
ELSE IF respsex =2.
    RECODE DRATNDNS (0=8)
        (0.00000001 THRU 0.4999999999 =9)
        (0.5000000000 THRU 7.4999999999=10)
        (7.5000000000 THRU 14.499999999999=11)
        (14.5000000000 THRU 25.499999999999=12)
        (25.5000000000 THRU 35.499999999999=13)
        (35.5000000000 THRU 999999.999999=14)
        (-6=-6) (-8=-8) INTO ac1.
END IF.
EXECUTE.

```

VAR LABEL AC1 'ALCOHOL CONSUMPTION RATING GROUPED'.

VALUE LABELS AC1

-8 'NA'
1 'MEN ABS/NONLSTYR'
2 'MEN<1 OCCASIONAL'
3 'MEN 1-10'
4 'MEN 11-21'
5 'MEN 22-35'
6 'MEN 36-50'
7 'MEN 51 OR MORE'
8 'WOM ABS/NONLSTYR'
9 'WOM<1 OCCASIONAL'
10 'WOM 1-7'
11 'WOM 8-14'
12 'WOM 15-25'
13 'WOM 26-35'
14 'WOM 36 OR MORE'.

missing values ac1 (-6, -8).

j AC2 Alcohol consumption grouped (2)

RECODE DRATNDNS (-8=-8)(-6=-6)(0=1)(0.001 THRU 0.504=2)(0.505 THRU 5.004=3)(5.005 THRU 10.004=4)
(10.005 THRU 15.004=5)(15.005 THRU 20.004=6)(20.005 THRU 25.004=7)(25.005 THRU 30.004=8)(30.005 THRU 35.004=9)
(35.005 THRU 40.004=10)(40.005 THRU 45.004=11)(45.005 THRU 50.004=12)(50.005 THRU 9999=13) INTO AC2.
EXECUTE.

var label ac2 ' ALCOHOL CONSUMPTION RATING GROUPED'.

VALUE LABELS AC2

-8 'NA'
1 'ABST/NON LAST YR'
2 '<1 OCCASIONAL'
3 '1-5 UNITS A WEEK'
4 '6-10'
5 '11-15'
6 '16-20'
7 '21-25'
8 '26-30'
9 '31-35'
10 '36-40'
11 '41-45'
12 '46-50'
13 '51 OR MORE'.

k AC3 Alcohol consumption grouped (3)

RECODE AC1 (-6 = -6)(-8 = -8)(1 = 1)(2 = 2)(3,4 = 3)(5,6 = 4)(7 = 5)(8 = 6)(9 = 7)(10,11 = 8)(12,13 = 9)(14 = 10) INTO AC3.
EXECUTE.

var label AC3 ' ALCOHOL CONSUMPTION RATING GROUPED'.

VALUE LABELS AC3

-8 'NA'

- 1 'MEN ABS/NONLSTYR'
- 2 'MEN< 1 OCCASIONAL'
- 3 'MEN 1-21'
- 4 'MEN 22-50'
- 5 'MEN 51 OR MORE'
- 6 'WOM ABS/NONLSTYR'
- 7 'WOM< 1 OCCASIONAL'
- 8 'WOM 1-14'
- 9 '15-35'
- 10 'WOM 36 OR MORE'.

I AC4 Alcohol consumption grouped (4)

RECODE AC3 (-6 = -6)(-8 = -8)(1,2,6,7 = 1)(3,8 = 2)(4,9 = 3)(5,10 = 4) INTO AC4.
EXECUTE.

var label AC4 ' ALCOHOL CONSUMPTION RATING GROUPED'.

VALUE LABELS AC4

- 9 'DNA'
- 8 'NA'
- 1 'ABS/NONLSTYR/<1'
- 2 'M 1-21 W 1-14'
- 3 'M 22-50 W 15-35'
- 4 'MEN>50 / WOM>35'.

9 Dvincgp Household income grouped

RECODE
gincome
(12=5) (1 thru 4=1) (5 thru 7=2) (8 thru 9=3) (10 thru 11=4) (-8= 6) INTO
Dvincgp .
EXECUTE .

Var labels Dvincgp 'DV - grouped household income'.

Value labels Dvincgp

- 1 'Less than £160'
- 2 '£160 to less than £280'
- 3 '£280 to less than £400'
- 4 '£480 to less than £600'
- 5 '£600 or more'
- 6 'Not answered'.

10 Social class of head of household/ household reference person

** calculating different manual/ non-manual summary DVs HoHsc, Dvhohsc1, DVhohsc2, hrpsc,
dvhrpsc1, dvhrpsc2

a Head of household social class

RECODE
sc2
(0.0=7) (1.0=Copy) (2.0=Copy) (3.1=Copy) (3.2=Copy) (4.0=Copy)
(5.0=Copy) (6.0=7) (SYSMIS=7) INTO hohsc .
EXECUTE .

RECODE

```
hohsc  
(1.0=1) (2.0=1) (3.1=2) (3.2=3) (4.0=4) (5.0=4) (7=5) INTO dvhohsc1.  
EXECUTE .
```

```
RECODE  
dvhohsc1  
(1=1) (2=1) (3=2) (4=2) (5=3) INTO dvhohsc2 .  
EXECUTE .
```

b Household reference person social class

```
RECODE  
sc3  
(0.0=7) (1.0=Copy) (2.0=Copy) (3.1=Copy) (3.2=Copy) (4.0=Copy)  
(5.0=Copy) (6.0=7) (SYSMIS=7) INTO hrpsc .  
EXECUTE .
```

```
RECODE  
hrpsc  
(1.0=1) (2.0=1) (3.1=2) (3.2=3) (4.0=4) (5.0=4) (7=5) INTO dvhrpsc1.  
EXECUTE .
```

```
RECODE  
dvhrpsc1  
(1=1) (2=1) (3=2) (4=2) (5=3) INTO dvhrpsc2 .  
EXECUTE .
```

* dvhrpsc4 includes sysmis as unclassified

```
RECODE  
dvhrpsc2  
(1=1) (2=2) (3=3) (-9=3) INTO dvhrpsc4 .  
EXECUTE .
```

Value labels hohsc hrpsc

```
1.0 'I'  
2.0 'II'  
3.1 'III non-manual'  
3.2 'III manual'  
4.0 'IV'  
5.0 'V'  
7.0 'Unclassified' .
```

Value labels Dvhohsc1 DVhrpsc1

```
1.0 'I and II'  
2.0 'III non-manual'  
3.0 'III manual'  
4.0 'IV and V'  
5.0 'Unclassified' .
```

Value labels DVhohsc2 DVhrpsc2 DVhrpsc4

```
1.0 'Non-manual'  
2.0 'Manual'  
3.0 'Unclassified' .
```

Figure A.07 SPSS derived variable specifications: dietary record data

Additional variables were calculated from information collected in the dietary record for fruit and vegetable intake and alcohol consumption in units.

1 Fruit and vegetable consumption

The following 36 variables were calculated:

Fruit excluding composite dishes:

- fruit consumed (grams)
- fruit consumed (number of portions)
- fruit including one portion fruit juice (grams)
- fruit including one portion fruit juice (number of portions)
- fruit including all fruit juice (grams)
- fruit including all fruit juice (number of portions)

Vegetables excluding composite dishes:

- vegetables consumed (grams)
- vegetables consumed (number of portions)
- vegetables including one portion baked beans/pulses (grams)
- vegetables including one portion baked beans/pulses (number of portions)
- vegetables including all baked beans/pulses (grams)
- vegetables including all baked beans/pulses (number of portions)

Fruit and vegetables excluding composite dishes:

- fruit and vegetables consumed (grams)
- fruit and vegetables consumed (number of portions)
- fruit and vegetables including one portion fruit juice and one portion baked beans/pulses (grams)
- fruit and vegetables including one portion fruit juice and one portion baked beans/pulses (number of portions)
- fruit and vegetables including all fruit juice and all baked beans/pulses (grams)
- fruit and vegetables including all fruit juice and all baked beans/pulses (number of portions)

Fruit including composite dishes:

- fruit consumed, including composite dishes (grams)
- fruit consumed, including composite dishes (number of portions)
- fruit including composite dishes and one portion fruit juice (grams)
- fruit including composite dishes and one portion fruit juice (number of portions)
- fruit including composite dishes and all fruit juice (grams)
- fruit including composite dishes and all fruit juice (number of portions)

Vegetables including composite dishes:

- vegetables consumed, including composite dishes (grams)

- vegetables consumed, including composite dishes (number of portions)
- vegetables including composite dishes and one portion baked beans/pulses (grams)
- vegetables including composite dishes and one portion baked beans/pulses (number of portions)
- vegetables including composite dishes and all baked beans/pulses (grams)
- vegetables including composite dishes and all baked beans/pulses (number of portions)

Fruit and vegetables including composite dishes:

- fruit and vegetables including composite dishes consumed (grams)
- fruit and vegetables including composite dishes consumed (number of portions)
- fruit and vegetables including composite dishes and one portion fruit juice and one portion baked beans/pulses (grams)
- fruit and vegetables including composite dishes and one portion fruit juice and one portion baked beans/pulses (number of portions)
- fruit and vegetables including composite dishes and all fruit juice and all baked beans/pulses (grams)
- fruit and vegetables including composite dishes and all fruit juice and all baked beans/pulses (number of portions)

Fruit consumed

a Total amount of fruit consumed (excluding composite dishes)

** excluding fruit juice

```
COMPUTE dvfrtwk1 = wkfd070 + wkfd071 + wkfd072 + wkfd073 + wkfd074 + wkfd075 .
VARIABLE LABELS dvfrtwk1 'DV - TOT AMT - fruit' .
EXECUTE .
```

** including all fruit juice

```
COMPUTE dvfrtwk2 = dvfrtwk1 + wkfd082 .
VARIABLE LABELS dvfrtwk2 'DV - TOT AMT - fruit incl fruit juice' .
EXECUTE .
```

b Average daily intake of fruit (excluding composite dishes) and excluding fruit juice

** average daily intake in grams

```
COMPUTE Fradig1 = (dvfrtwk1/7) .
VARIABLE LABELS Fradig1 'DV - ADI grams - fruit' .
EXECUTE .
```

** average daily intake as portions


```
COMPUTE Fradip1 = (Fradig1/80) .  
VARIABLE LABELS Fradip1 'DV - ADI portions - fruit' .  
EXECUTE .
```

c Average daily intake of fruit (excluding composite dishes) and including fruit juice but only once

**** average daily intake in grams**

```
IF (wkfd082/7 >= 80) Fradig2 = (Fradig1 + 80) .  
IF (wkfd082/7 < 80) Fradig2 = Fradig1.  
VARIABLE LABELS Fradig2 'DV - ADI grams - fruit incl fruit juice once' .  
EXECUTE .
```

**** average daily intake as portions**

```
IF (wkfd082/7 >= 80) Fradip2 = (Fradip1 + 1) .  
IF (wkfd082/7 < 80) Fradip2 = Fradip1.  
VARIABLE LABELS Fradip2 'DV - ADI portions - fruit incl fruit juice once' .  
EXECUTE .
```

d Average daily intake of fruit (excluding composite dishes) and including all fruit juice

**** average daily intake in grams**

```
COMPUTE Fradig3 = (dvfrtwk2/7) .  
VARIABLE LABELS Fradig3 'DV - ADI grams - fruit incl fruit juice' .  
EXECUTE .
```

**** average daily intake as portions**

```
COMPUTE Fradip3 = (Fradig3/80) .  
VARIABLE LABELS Fradip3 'DV - ADI portions - fruit incl fruit juice' .  
EXECUTE .
```

Vegetable consumption

a Redefining vegetable food groups

* uses rec4 food item level data to recalculate food groups 37A & 37R
* to set up new food groups 37a and 37r, variables wkfd058r and wkfd065r, delete all other food groups

temporary.
Select if ((foodgrpc = 58) OR (foodgrpc = 65)).

EXECUTE .

* delete food item codes in groups 37a & 37r that are excluded from all vegetable analyses (e.g. soya based)

* food item codes deleted :

1748, 1749, 1750, 1751, 1948, 8479, 9468, 9469, 9470, 9471, 1370, 1371, 1376, 1686, 1687, 2828, 5654, 6150, 6446, 7189, 8285, 8369

b setting identifier to indicate if food code is pulse etc

COMPUTE idpulse = 1 .

EXECUTE .

IF ((foodcode = 1664) OR (foodcode = 1665) OR (foodcode = 1669) OR (foodcode = 1670)

OR (foodcode = 1673) OR (foodcode = 1674) OR (foodcode = 1675) OR (foodcode = 1676)

OR (foodcode = 1677) OR (foodcode = 1678) OR (foodcode = 1684) OR (foodcode = 1685)

OR (foodcode = 1757) OR (foodcode = 1758) OR (foodcode = 1813) OR (foodcode = 1814)

OR (foodcode = 1815) OR (foodcode = 1816) OR (foodcode = 1820) OR (foodcode = 5439)

OR (foodcode = 6058) OR (foodcode = 6638) OR (foodcode = 6898) OR (foodcode = 8280)

OR (foodcode = 8281) OR (foodcode = 8809) OR (foodcode = 8826) OR (foodcode = 9201)) idpulse = 2 .

VARIABLE LABELS idpulse 'is item pulse' .

VALUE LABELS idpulse 1'No, not pulse' 2'Yes, pulse' .

EXECUTE .

c aggregating weight eaten (wteaten1) across food group 37a

*Minus pulses

IF ((foodgrpc = 58) AND (idpulse=1)) wt37a_1 = wteaten1 .

EXECUTE .

*With pulses once

IF ((foodgrpc = 58) AND (idpulse=2)) wt37a_2 = wteaten1 .

EXECUTE .

*With all pulses

IF (foodgrpc = 58) wt37a_3 = wteaten1 .

EXECUTE .

* aggregate

wteate_1 'TOT AMT - 37a minus pulses' = SUM(wt37a_1).

wteate_2 'TOT AMT - 37a with pulses once' = SUM(wt37a_2).

```
wteate_3 'TOT AMT - 37a with pulses' = SUM(wt37a_3).  
EXECUTE .
```

d aggregating weight eaten (wteaten1) across food group 37r

*Minus pulses

```
IF ((foodgrpc = 65) AND (idpulse=1)) wt37r_1 = wteaten1 .  
EXECUTE .
```

* With pulses once

```
IF ((foodgrpc = 65) AND (idpulse=2)) wt37r_2 = wteaten1.  
EXECUTE .
```

* With pulses

```
IF (foodgrpc = 65) wt37r_3 = wteaten1 .  
EXECUTE .
```

* aggregate

```
wteate_1 'TOT AMT - 37r minus pulses' = SUM(wt37r_1).  
wteate_2 'TOT AMT - 37r with pulses once' = SUM(wt37r_2).  
wteate_3 'TOT AMT - 37r with pulses' = SUM(wt37r_3).  
EXECUTE .
```

e merging with main datafile

* merge aggregated datafiles with main diary datafile

```
* rename wt37a_1 as wkfd058a  
* rename wt37a_2 as wkfd058b  
* rename wt37a_3 as wkfd058c  
* rename wt37r_1 as wkfd065a  
* rename wt37r_2 as wkfd065b  
* rename wt37r_3 as wkfd065c
```

* all those with missing values in wkfd058r, wkfd065r - giving value of 0, or -9 if no diary

```
DO IF (dietary > 1) .
```

```
RECODE
```

```
    wkfd058a wkfd058b wkfd058c wkfd065a wkfd065b wkfd065c (MISSING=-9) .
```

```
END IF .
```

```
EXECUTE .
```

```
RECODE
```

```
    wkfd058a wkfd058b wkfd058c wkfd065a wkfd065b wkfd065c (SYSMIS=0) .
```

```
EXECUTE .
```

f Total amount of vegetables consumed (excluding composite dishes)

* TOT AMT vegetables excluding pulses/ baked beans

```
COMPUTE dvvgtwk1 = wkfd055 + wkfd056 + wkfd057 + wkfd058a + wkfd059 + wkfd061
+ wkfd062 + wkfd063 + wkfd065a .
VARIABLE LABELS dvvgtwk1 'DV - TOT AMT - vegetables (excl pulses/baked beans)' .
EXECUTE .
```

* TOT AMT vegetables including pulses/baked beans once

```
COMPUTE wkfdpul1 = wkfd060 + wkfd058b + wkfd065b .
VARIABLE LABELS wkfdpul1 'DV - TOT AMT - pulses' .
EXECUTE .
```

* TOT AMT vegetables including all pulses/ baked beans

```
COMPUTE dvvgtwk2 = wkfd055 + wkfd056 + wkfd057 + wkfd058c + wkfd059 + wkfd060
+ wkfd061
+ wkfd062 + wkfd063 + wkfd065c .
VARIABLE LABELS dvvgtwk2 'DV - TOT AMT - vegetables (incl pulses/baked beans)' .
EXECUTE .
```

**g Average daily intake of vegetables (excluding composite dishes) and
excluding baked beans/pulses**

* computes ADI in grams for vegetables

```
COMPUTE Vgadig1 = (dvvgtwk1/7) .
VARIABLE LABELS Vgadig1 'DV - ADI grams - vegetables' .
EXECUTE .
```

* computes ADI in portions for vegetables

```
COMPUTE Vgadip1 = (Vgadig1/80) .
VARIABLE LABELS Vgadip1 'DV - ADI portions - vegetables' .
EXECUTE .
```

**h Average daily intake of vegetables (excluding composite dishes) and
including one portion baked beans/pulses**

* computes ADI in grams for vegetables incl baked beans/pulses once

```
COMPUTE puladi1 = wkfdpul1/7 .
VARIABLE LABELS puladi1 'DV - ADI grams - pulses' .
EXECUTE .
```

```

IF (puladi1 >= 80)
  vgidig2 = vgidig1 + 80 .
ELSE
  vgidig2 = vgidig1 .
VARIABLE LABELS vgidig2 'DV - ADI grams - veg (pulses/baked beans once)' .
EXECUTE .

```

* computes ADI in portions for vegetables + baked beans/ pulses once

```

IF (puladi1 >= 80)
  Vgidip2 = (Vgidip1 + 1) .
ELSE
  Vgidip2 = Vgidip1 .
VARIABLE LABELS Vgidip2 'DV - ADI portions - veg (baked beans/ pulses once)' .
EXECUTE .

```

i Average daily intake of vegetables (excluding composite dishes) and including all baked beans/pulses

* computes ADI in grams for vegetables incl baked beans/pulses

```

COMPUTE Vgidig3 = (dvvgtwk2/7) .
VARIABLE LABELS Vgidig3 'DV - ADI grams - vegetables (incl baked beans/pulses)' .
EXECUTE .

```

* computes ADI in portions for vegetables incl baked beans/pulses

```

COMPUTE Vgidip3 = (Vgidig3/80) .
VARIABLE LABELS Vgidip3 'DV - ADI portions - vegetables (incl baked beans and pulses)' .
EXECUTE .

```

Fruit and vegetable consumption

a Average daily fruit and vegetable intake (excluding composite dishes) excluding fruit juice and pulses/baked beans

```

COMPUTE dvfvtkw1 = (dvfrtkw1 + dvvgtwk1) .
VARIABLE LABELS Dvfvtkw1 'DV - TOT AMT fruit & veg' .
EXECUTE .

```

* computes ADI in grams for fruit & vegetables

```

COMPUTE fvadig1 = dvfvtkw1/7 .
VARIABLE LABELS fvadig1 'DV - ADI grams - fruit & vegetables' .

```

EXECUTE .

* computes ADI in portions for fruit & vegetables

```
COMPUTE fvadip1 = fvadig1 / 80 .  
VARIABLE LABELS fvadip1 'DV - ADI portions - fruit & vegetables' .  
EXECUTE .
```

**b Average daily fruit and vegetable intake (excluding composite dishes)
including one portion of fruit juice and one portion of pulses/baked beans**

```
COMPUTE wkfdpfj1 = wkfd060 + wkfd058b + wkfd065b + wkfd082 .  
VARIABLE LABELS wkfdpfj1 'DV - TOT AMT - pulses/baked beans & FJ' .  
EXECUTE .
```

* computes ADI in grams for fruit & vegetables

```
COMPUTE pfjadi1 = Wkfdpfj1/7 .  
VARIABLE LABELS pfjadi1 'DV - ADI grams - pulses/baked beans & FJ' .  
EXECUTE .
```

```
IF (pfjadi1 >= 80) fvadig2 = fvadig1 + 80 .  
IF (pfjadi1 < 80) Fvadig2 = fvadig1 .  
VARIABLE LABELS fvadig2 'DV - ADI grams - fruit & veg (pulses/baked beans & FJ  
once)' .  
EXECUTE .
```

* computes ADI in portions for fruit & vegetables

```
IF (pfjadi1 >= 80) Fvadip2 = (Fvadip1 + 1) .  
IF (pfjadi1 < 80) Fvadip2 = fvadip1 .  
VARIABLE LABELS Fvadip2 'DV - ADI portions - fruit & veg (pulses/baked beans & FJ  
once)' .  
EXECUTE .
```

**c Average daily fruit and vegetable intake (excluding composite dishes)
including all fruit juice and all pulses/baked beans**

```
COMPUTE dvfvtwk2 = (dvfrtwk2 + dvvgtwk2) .  
VARIABLE LABELS Dvfvtwk2 'DV - TOT AMT fruit & veg (pulses/baked beans & FJ)' .  
EXECUTE .
```

* computes ADI in grams for fruit & vegetables

```
COMPUTE fvadig3 = dvfvtwk2/7 .  
VARIABLE LABELS fvadig3 'DV - ADI grams - fruit & veg (pulses/baked beans & FJ)' .
```

EXECUTE .

* computes ADI in portions for fruit & vegetables

```
COMPUTE fvadip3 = fvadig3 / 80 .  
VARIABLE LABELS fvadip3 'DV - ADI portions - fruit & veg (pulses/baked beans & FJ)' .  
EXECUTE .
```

Fruit consumption including composite dishes

* uses dv8a45 which is 45% of wkfd012 - fruit pies

* uses dv37g40 which is 40% of wkfd064 - vegetable dishes

a setting up summary DVS for fruit intake including composite dishes

```
COMPUTE dvfrtwk3 = dvfrtwk1 + dv8a45.  
VARIABLE LABELS dvfrtwk3 'DV - TOT AMT - fruit (incl composite dishes)' .  
EXECUTE .
```

```
COMPUTE dvfrtwk4 = dvfrtwk3 + wkfd082 .  
VARIABLE LABELS dvfrtwk4 'DV - TOT AMT - fruit (incl composite dishes) & fruit juice' .  
EXECUTE .
```

b Average fruit intake (including composite dishes) & excluding fruit juices

* computes ADI in grams for fruit

```
COMPUTE Fradig4 = (dvfrtwk3/7) .  
VARIABLE LABELS Fradig4 'DV - ADI grams - fruit (incl composite dishes)' .  
EXECUTE .
```

* computes ADI in portions for fruit

```
COMPUTE Fradip4 = (Fradig4/80) .  
VARIABLE LABELS Fradip4 'DV - ADI portions - fruit (incl composite dishes)' .  
EXECUTE .
```

c Average fruit intake (including composite dishes) & including one portion fruit juice

* computes ADI in grams for fruit + fruit juice once including composite dishes

```
COMPUTE Fradig5 = Fradig4 .  
EXECUTE .
```

IF (wkfd082/7 >= 80) Fradig5 = (Fradig4 + 80) .
VARIABLE LABELS Fradig5 'DV - ADI grams - fruit (incl composite dishes & FJ once)' .
EXECUTE .

* computes ADI in portions for fruit + fruit juice once including composite dishes

COMPUTE Fradip5 = Fradip4 .
EXECUTE .

IF (wkfd082/7 >= 80) Fradip5 = (Fradip4 + 1) .
VARIABLE LABELS Fradip5 'DV - ADI portions - fruit (incl composite dishes & FJ once)' .
EXECUTE .

d Average fruit intake (including composite dishes) & including all fruit juice

* computes ADI in grams for fruit including all fruit juice including composite dishes

COMPUTE Fradig6 = (dvfrtwk4/7) .
VARIABLE LABELS Fradig6 'DV - ADI grams - fruit (incl composite dishes & FJ)' .
EXECUTE .

* computes ADI in portions for fruit including fruit juice including composite dishes

COMPUTE Fradip6 = (Fradig6/80) .
VARIABLE LABELS Fradip6 'DV - ADI portions - fruit (incl composite dishes & FJ)' .
EXECUTE .

Vegetable consumption including composite dishes

a setting up summary DVS for vegetable intake

* TOT AMT vegetables excluding pulses/ baked beans including composite dishes

COMPUTE dvvgtwk3 = wkfd055 + wkfd056 + wkfd057 + wkfd058a + wkfd059 + wkfd061
+ wkfd062 + wkfd063 + wkfd065a + dv37g40 .
VARIABLE LABELS dvvgtwk3 'DV - TOT AMT - vegetables (incl composite dishes; excl
pulses/baked beans)' .
EXECUTE .

* TOT AMT vegetables including pulses/ baked beans

COMPUTE dvvgtwk4 = wkfd055 + wkfd056 + wkfd057 + wkfd058c + wkfd059 + wkfd060
+ wkfd061
+ wkfd062 + wkfd063 + wkfd065c + dv37g40.
VARIABLE LABELS dvvgtwk4 'DV - TOT AMT - vegetables (incl composite dishes &
pulses/baked beans)' .

EXECUTE .

b Average vegetable intake (including composite dishes) & excluding baked beans/pulses

* computes ADI in grams for vegetables including composite dishes

```
COMPUTE Vgadig4 = (dvvgtwk3/7) .  
VARIABLE LABELS Vgadig4 'DV - ADI grams - vegetables (incl composite dishes)' .  
EXECUTE .
```

* computes ADI in portions for vegetables including composite dishes

```
COMPUTE Vgadip4 = (Vgadig4/80) .  
VARIABLE LABELS Vgadip4 'DV - ADI portions - vegetables (incl composite dishes)' .  
EXECUTE .
```

c Average vegetable intake (including composite dishes) & including one portion baked beans/pulses

```
COMPUTE vgadig5=vgadig4 .  
EXECUTE .
```

```
IF (puladi1 >= 80)  
  vgadig5 = vgadig4 + 80 .  
VARIABLE LABELS vgadig5 'DV - ADI grams - veg (incl composite dishes & baked  
beans/ pulses once)' .  
EXECUTE .
```

* computes ADI in portions for vegetables + baked beans/ pulses once

```
COMPUTE vgadip5 = vgadip4 .  
EXECUTE .
```

```
IF (puladi1 >= 80)  
  Vgadip5 = (Vgadip4 + 1) .  
VARIABLE LABELS Vgadip5 'DV - ADI portions - veg (incl composite dishes & baked  
beans/ pulses once)' .  
EXECUTE .
```

d Average vegetable intake (including composite dishes) & including all baked beans/pulses

* computes ADI in grams for vegetables including baked beans/pulses (Including composite dishes)

```
COMPUTE Vgadig6 = (dvvgtwk4/7) .  
VARIABLE LABELS Vgadig6 'DV - ADI grams - vegetables (incl composite dishes &  
baked beans/pulses)' .  
EXECUTE .
```

* computes ADI in portions for vegetables including baked beans/pulses

```
COMPUTE Vgadip6 = (Vgadig6/80) .  
VARIABLE LABELS Vgadip6 'DV - ADI portions - vegetables (incl composite dishes &  
baked beans and pulses)' .  
EXECUTE .
```

Fruit and vegetable consumption (including composite dishes)

a Average daily fruit and vegetable intake (including composite dishes) excluding fruit juice and pulses/baked beans

```
COMPUTE dvfvtwk3 = (dvfrtwk3 + dvvgtwk3) .  
VARIABLE LABELS Dvfvtwk3 'DV - TOT AMT fruit & veg (incl composite dishes)' .  
EXECUTE .
```

* computes ADI in grams for fruit & vegetables

```
COMPUTE fvadig4 = dvfvtwk3/7 .  
VARIABLE LABELS fvadig4 'DV - ADI grams - fruit & veg (incl composite dishes)' .  
EXECUTE .
```

* computes ADI in portions for fruit & vegetables

```
COMPUTE fvadip4 = fvadig4 / 80 .  
VARIABLE LABELS fvadip4 'DV - ADI portions - fruit & veg (incl composite dishes)' .  
EXECUTE .
```

**b Average daily fruit and vegetable intake (including composite dishes)
including one portion fruit juice and one portion pulses/baked beans**

* computes ADI in grams for fruit & vegetables

```
COMPUTE pfjadi1 = Wkfdpfj1/7 .  
VARIABLE LABELS pfjadi1 'DV - ADI grams - pulses/baked beans & FJ' .  
EXECUTE .
```

```
COMPUTE fvadig5 = fvadig4 .  
EXECUTE .
```

```
IF (pfjadi1 >= 80)  
  fvadig5 = fvadig4 + 80 .  
VARIABLE LABELS fvadig5 'DV - ADI grams - fruit & veg (incl composite dishes & FJ,  
baked beans, pulses once)' .  
EXECUTE .
```

* computes ADI in portions for fruit & vegetables

```
COMPUTE Fvadip5 = Fvadip4 .  
EXECUTE .
```

```
IF (pfjadi1 >= 80)  
  Fvadip5 = (Fvadip4 + 1) .  
VARIABLE LABELS Fvadip5 'DV - ADI portions - fruit & veg (incl composite dishes & FJ,  
baked beans, pulses once)' .  
EXECUTE .
```

**c Average daily fruit and vegetable intake (including composite dishes)
including all fruit juice and all pulses/baked beans**

```
COMPUTE dvfvtk4 = (dvfrtk4 + dvvgtk4) .  
VARIABLE LABELS Dvfvtk4 'DV - TOT AMT fruit & veg (incl composite dishes & FJ,  
baked beans, pulses)' .  
EXECUTE .
```

* computes ADI in grams for fruit & vegetables

```
COMPUTE fvadig6 = dvfvtk4/7 .  
VARIABLE LABELS fvadig6 'DV - ADI grams - fruit & veg (Incl composite dishes & FJ,  
baked beans, pulses)' .  
EXECUTE .
```

* computes ADI in portions for fruit & vegetables

```

COMPUTE fvadip6 = fvadig6 / 80 .
VARIABLE LABELS fvadip6 'DV - ADI portions - fruit & veg (incl composite dishes & FJ,
baked beans, pulses)' .
EXECUTE .

```

2 Alcohol consumption in units including alcohol from food

a computing daily units consumed from diary data

**** uses rec2.sav - nutrient intakes for each day of the diary week
 ****8g = 1 unit alcohol

```

COMPUTE alcunits = tdnuts10/8.
EXECUTE.

```

```

IF (dayofwk = 1) alcunit1 = alcunits .
IF (dayofwk = 2) alcunit2 = alcunits .
IF (dayofwk = 3) alcunit3 = alcunits .
IF (dayofwk = 4) alcunit4 = alcunits .
IF (dayofwk = 5) alcunit5 = alcunits .
IF (dayofwk = 6) alcunit6 = alcunits .
IF (dayofwk = 7) alcunit7 = alcunits .
EXECUTE .

```

```

AGGREGATE
alcuni_1 = SUM(alcunit1)
alcuni_2 = SUM(alcunit2)
alcuni_3 = SUM(alcunit3)
alcuni_4 = SUM(alcunit4)
alcuni_5 = SUM(alcunit5)
alcuni_6 = SUM(alcunit6)
alcuni_7 = SUM(alcunit7).

```

b Calculating maximum number of units consumed on any one day

```

COMPUTE maxunits = alcuni_1 .
EXECUTE .

```

```

IF (alcuni_2 > maxunits) maxunits = alcuni_2.
EXECUTE .

```

```

IF (alcuni_3 > maxunits) maxunits = alcuni_3.
EXECUTE .

```

```

IF (alcuni_4 > maxunits) maxunits = alcuni_4.
EXECUTE .

```

```

IF (alcuni_5 > maxunits) maxunits = alcuni_5.

```

EXECUTE .

IF (alcuni_6 > maxunits) maxunits = alcuni_6.
EXECUTE .

IF (alcuni_7 > maxunits) maxunits = alcuni_7.
EXECUTE.

c Calculating alcohol consumption against benchmarks

DO IF (respsex = 1) .
RECODE
 maxunits
 (0=1) (0.000000001 thru 4.0000000000=2) (4.0000000001 thru 8.000000000=3)
 (8.000000001 thru Highest=4) INTO maxunitg .
END IF .
EXECUTE .

DO IF (respsex = 2) .
RECODE
 maxunits
 (0=1) (0.000000001 thru 3.0000000000=2) (3.0000000001 thru 6.000000000=3)
 (6.000000001 thru Highest=4) INTO maxunitg .
END IF .
EXECUTE .

add value labels maxunitg
1'Drank nothing last week' 2'Drank upto 4/3 units' 3'Drank more than 4/3, upto 8/6 units'
4'Drank more than 8/6 units'.

3 Alcohol consumption excluding alcohol from food

a computing daily units consumed from diary data

COMPUTE alcunfd = nut10fd/8.
COMPUTE alcundr = nut10dr/8.
EXECUTE.

COMPUTE nutf10_1 = nutf10_1/10000.
EXECUTE.

COMPUTE alcunits = nutf10_1/8.
EXECUTE.

IF (dayno = 1) alcunit1 = alcunits .
IF (dayno = 2) alcunit2 = alcunits .
IF (dayno = 3) alcunit3 = alcunits .
IF (dayno = 4) alcunit4 = alcunits .

```

IF (dayno = 5) alcunit5 = alcunits .
IF (dayno = 6) alcunit6 = alcunits .
IF (dayno = 7) alcunit7 = alcunits .
EXECUTE .

```

```

alcuni1 = SUM(alcunit1)
alcuni2 = SUM(alcunit2)
alcuni3 = SUM(alcunit3)
alcuni4 = SUM(alcunit4)
alcuni5 = SUM(alcunit5)
alcuni6 = SUM(alcunit6)
alcuni7 = SUM(alcunit7).

```

b Calculating maximum number of units consumed on any one day

```

COMPUTE maxundr = alcuni1 .
EXECUTE .

```

```

IF (alcuni2 > maxundr) maxundr = alcuni2.
IF (alcuni3 > maxundr) maxundr = alcuni3.
IF (alcuni4 > maxundr) maxundr = alcuni4.
IF (alcuni5 > maxundr) maxundr = alcuni5.
IF (alcuni6 > maxundr) maxundr = alcuni6.
IF (alcuni7 > maxundr) maxundr = alcuni7.
EXECUTE.

```

c Calculating alcohol consumption against benchmarks

```

DO IF (respsex = 1) .
RECODE
  maxundr
  (0=1) (0.000000001 thru 4.000000000=2) (4.000000001 thru 8.000000000=3)
  (8.000000001 thru Highest=4) INTO maxundrg.
END IF .
EXECUTE .

```

```

DO IF (respsex = 2) .
RECODE
  maxundr
  (0=1) (0.000000001 thru 3.000000000=2) (3.000000001 thru 6.000000000=3)
  (6.000000001 thru Highest=4) INTO maxundrg .
END IF .
EXECUTE .

```

```

add value labels maxundrg
1'Drank nothing last week' 2'Drank upto 4/3 units' 3'Drank more than 4/3, upto 8/6 units'
4'Drank more than 8/6 units'.

```

```
DO IF (respsex = 2) .  
COUNT  
    nodmaxun = alcuni1 alcuni2 alcuni3 alcuni4 alcuni5 alcuni6 alcuni7  
    (3.0000000001 thru Highest) .  
VARIABLE LABELS nodmaxun 'Number days consumed over 3/4 units' .  
END IF .  
EXECUTE .
```

```
DO IF (respsex = 1) .  
COUNT  
    nodmaxun = alcuni1 alcuni2 alcuni3 alcuni4 alcuni5 alcuni6 alcuni7  
    (4.0000000001 thru Highest) .  
VARIABLE LABELS nodmaxun 'Number days consumed over 3/4 units' .  
END IF .  
EXECUTE .
```

Figure A.08 SPSS derived variable specifications: physical measurements and body size indicators

For cases where two measurements were taken, the mean of these measurements was used in the analysis. Where it was possible to take only one measurement, this measurement was included in the analysis.

The following variables were derived:

DVHeight*	Mean of two height measurements
DVMetres*	Mean height measurement in metres
DvWeight*	Mean of two body weight measurements
DVResHip*	Mean of two hip measurements
DVResWat*	Mean of two waist measurements
WHRatio	Waist to hip ratio (waist[cm]/hip[cm])
BMI*	Body Mass Index (body weight[kg]/height[m] ²)
Meansys	Mean of two systolic blood pressure measurements
Meandias	Mean of two diastolic blood pressure measurements

*These derived variables were calculated within the CAPI program when the interviewer keyed the measurements data, but recalculated in SPSS once any editing of variables was completed.

Variable name: DVHeight, DvWeight, DVMetres, DVBMI, DVResHip, DVResWai

```
COMPUTE dvweight = MEAN(resultw1,resultw2) .  
EXECUTE .
```

```
COMPUTE dvheight = MEAN(resulth1,resulth2) .  
EXECUTE .
```

```
COMPUTE DVMetres = (DVHeight / 100).  
EXECUTE .
```

```
COMPUTE BMI = DVWeight / (DVMetres * DVMetres).  
EXECUTE .
```

```
COMPUTE dvreship = MEAN(reship1,reship2) .  
EXECUTE .
```

```
COMPUTE dvreswai = MEAN(reswais1,reswais2) .  
EXECUTE .
```

Variable name: WHRatio

```
COMPUTE WHRatio = (dvreswai/dvreship) .  
EXECUTE .
```

Variable name: Meansys, Meandias

```
COMPUTE Meansys = MEAN(systol2,systol3) .  
EXECUTE .
```



```
COMPUTE Meandias = MEAN(diastol2,diastol3) .  
EXECUTE .
```

Figure A.09 Physical activity derived variables

Variable label	Description
<u>Blaise variables from SIR</u>	
Day1 to Day7	Code 1 = Monday..code 7 = Sunday
<u>SPSS derived variables</u>	
Physwgt	Weighting factor for differential sampling probability plus differential non-response. See Figure 3.10.
Physical	Indicator of whether there is data for a full 7-day physical activity diary; 1=diary, 0=diary. Select on Physical = 1 to do analysis on valid physical activity diary cases only (N=1658).
Slpcal[1..7]	Total minutes asleep for the day, for days 1 to 7. Includes sleep between midnight last night until get up today plus from go to bed tonight until midnight tonight and any naps during the day.
Tmmod[1..7]	Total minutes spent in moderate intensity activities for the day, for days 1 to 7.
Tmhard[1..7]	Total minutes spend in vigorous/very vigorous activities for the day, for days 1 to 7.
Tmlgt[1..7]	Total minutes spent in light/very light activities for the day, for days 1 to 7. This is calculated by subtracting Tmmod[1..7] + Tmhard[1..7] + Slpcal[1..7] from 1440 minutes.
Slpsc[1..7]	Sleep score for the day. Calculated as $Slpcal[1..7]/60 * 1$ (MET value for sleep is 1 per hour*).
Modsc[1..7]	Moderate activity score for the day. Calculated as $Tmmod[1..7]/60 * 4$ (MET value for moderate activity is 4 per hour*).
Hardsc[1..7]	Vigorous/very vigorous activity score for the day. Calculated as $Tmhard[1..7]/60 * 7.5$ (MET value for vigorous/very vigorous activity is 7.5 per hour*).
Lgtsc[1..7]	Light/very light activity score for the day. Calculated as $Tmlgt[1..7]/60 * 2$ (MET value for light/very light activity is 2 per hour*).
Totsc[1..7]	Total activity score per day, for days 1 to 7.
Wkscore	Total weekly activity score (Totsc1 + Totsc2 ++ Totsc7)
Avdaysc	Average daily activity score (Wkscore/7).
Numact[1..7]	Number of activities of at least moderate intensity per day, for days 1 to 7.
	Cont'd

Variable label	Description
Numact[su..sa] nodays	Number of activities of at least moderate intensity per day of the week, Sunday to Saturday) Number of days participated in at least 30 minutes of activity of at least moderate intensity.

* These calculations are based on a variation of the Blair scoring system for physical activity. For details of this and of the MET scores and how these were set for the different levels of intensity, see Appendix I of the Technical Report.

Figure A.10 SPSS syntax for calculated activity score (CAS)

See Figure 4.24 for an annotated copy of a physical activity diary page giving variable and value labels. See Figure J.09 for a detailed list of the derived variables relating to physical activity. This section gives the SPSS syntax to calculate the intermediate variables necessary to create the calculated activity score for one example day, followed by the syntax for the overall calculation of the score using the data for the full 7 days.

Example day - Day One: intermediate derived variables for the calculated activity score

a Time spent sleeping

```
*1    if went to bed before midnight then time slept = time they got up
*2    if went to bed after midnight then time slept = time got up - time went to bed
*3    add in any time slept that day using bedlast variable from next day

** calculating time slept : day1

IF (getup1 > bedlast1) slpcal1 = getup1 - bedlast1 .
EXECUTE.

IF (getup1 < bedlast1) slpcal1 = getup1 .
EXECUTE .

** adding in additional time slept - naps and if went to bed before midnight on that day.
*** day 2 bedlast 65700 = 18:15; 86400 = midnight.

IF (timsp1 > 0) slpcal1 = slpcal1 + timsp1.
EXECUTE .

IF (bedlast2 >= 65700) slpcal1 = slpcal1 + (86400 - bedlast2) .
EXECUTE .

*** divide slpcal by 60 to give time slept in minutes

COMPUTE slpcal1 = slpcal1/60.
EXECUTE.
```

b Time spent at work

* calculating minutes at work each day for each of upto two different jobs

```
COMPUTE wk1t1 = CTIME.MINUTES(howlg1w1) .
COMPUTE wk2t1 = CTIME.MINUTES(howlg1w2) .
EXECUTE .

RECODE wk1t1 (SYSMIS = 0).
RECODE wk2t1 (SYSMIS = 0).
EXECUTE .
```

c Time spent in activities of moderate intensity

** This adds up total time spent in all activities (pre-coded and other activities and work) categorised as of moderate intensity.

COMPUTE Tmmod1 = Tmmod1 + walkbrt1 + hvyhwkt1 + hvygdnt1 + hvydiyt1 + actcht1 + yogat1 .
EXECUTE .

IF (oth1cot1 = 2) Tmmod1 = Tmmod1 + woth1t1 .
EXECUTE .

IF (oth2cot1 = 2) Tmmod1 = Tmmod1 + woth2t1 .
EXECUTE .

IF (oth3cot1 = 2) Tmmod1 = Tmmod1 + woth3t1 .
EXECUTE .

IF (oth4cot1 = 2) Tmmod1 = Tmmod1 + woth4t1 .
EXECUTE .

IF (oth5cot1 = 2) Tmmod1 = Tmmod1 + woth5t1 .
EXECUTE .

IF (swimswt1=2) Tmmod1 = Tmmod1 + swimt1 .
EXECUTE .

IF (cyclswt1=2) Tmmod1 = Tmmod1 + cyclt1 .
EXECUTE .

IF (dancswt1=2) Tmmod1 = Tmmod1 + danct1 .
EXECUTE .

IF (aeroswt1=2) Tmmod1 = Tmmod1 + aerot1 .
EXECUTE .

IF (badswt1=2) Tmmod1 = Tmmod1 + badt1 .
EXECUTE .

IF (rndswt1=2) Tmmod1 = Tmmod1 + rndt1 .
EXECUTE .

IF (golfswt1=1) Tmmod1 = Tmmod1 + golft1 .
EXECUTE .

IF (crktswt1=1) Tmmod1 = Tmmod1 + crktt1 .
EXECUTE .

IF (oth1cot1 = 2) Tmmod1 = Tmmod1 + oth1tt1 .
EXECUTE .

IF (oth2cot1 = 2) Tmmod1 = Tmmod1 + oth2tt1 .
EXECUTE .

IF (oth3cot1 = 2) Tmmod1 = Tmmod1 + oth3tt1 .

EXECUTE.

IF ((oactcode = 2) and (worktod1 = 1)) Tmmod1 = Tmmod1 + wk1t1.
EXECUTE .

IF ((oactcod2 = 2) and (worktod1 = 1)) Tmmod1 = Tmmod1 + wk2t1.
EXECUTE .

d Time spent in activities of vigorous/very vigorous intensity

** This adds up total time spent in all activities (pre-coded and other activities and work) categorised as of vigorous/very vigorous intensity.

COMPUTE Tmhard1 = Tmhard1 + jogt1 + wgtrt1 + crtrt1 + tennt1 + squat1 + foott1 + hockt1 + rugt1 + judot1.
EXECUTE.

IF (swimswt1=1) Tmhard1 = Tmhard1 + swimt1 .
EXECUTE .

IF (cyclswt1=1) Tmhard1 = Tmhard1 + cyc1t1 .
EXECUTE .

IF (dancswt1=1) Tmhard1 = Tmhard1 + danct1 .
EXECUTE .

IF (aeroswt1=1) Tmhard1 = Tmhard1 + aerot1 .
EXECUTE .

IF (badswt1=1) Tmhard1 = Tmhard1 + badt1 .
EXECUTE .

IF (rndswt1=1) Tmhard1 = Tmhard1 + rndt1 .
EXECUTE .

IF (oth1cot1 = 3) Tmhard1 = Tmhard1 + oth1tt1.
EXECUTE .

IF (oth2cot1 = 3) Tmhard1 = Tmhard1 + oth2tt1.
EXECUTE .

IF (oth3cot1 = 3) Tmhard1 = Tmhard1 + oth3tt1.
EXECUTE.

IF ((oactcode = 3) and (worktod1 = 1)) Tmhard1 = Tmhard1 + wk1t1.
EXECUTE .

IF ((oactcod2 = 3) and (worktod1 = 1)) Tmhard1 = Tmhard1 + wk2t1.
EXECUTE .

e Time spent in activities of light/very light intensity

** Time spent in activities of light/very light intensity calculated as time left over, from 24 hours, after time spent in sleep, moderate and vigorous/very vigorous intensity activities.

```
COMPUTE timlgt1 = 1440 - slpcal1 - Tmmod1 - Tmhard1 .  
EXECUTE .
```

f Total calculated activity score

```
COMPUTE slpsc1 = (slpcal1/60) * 1.  
COMPUTE modsc1 = (Tmmod1/60) * 4.  
COMPUTE hardsc1 = (Tmhard1/60) * 7.5.  
COMPUTE lgtsc1 = timlgt1/60 * 2.  
EXECUTE .
```

```
COMPUTE totsc1 = hardsc1 + modsc1 + lgtsc1 + slpsc1 .  
EXECUTE.
```

g calculating total weekly activity score and average daily activity score

```
COMPUTE wkscore = totsc1 + totsc2 + totsc3 + totsc4 + totsc5 + totsc6 + totsc7.  
EXECUTE.
```

```
COMPUTE avdayasc = wkscore / 7.  
EXECUTE.
```

Figure A.11 SPSS derived variables: specifications for blood and urine analytes

See Figure 3.16 for specifications for blood and urine variables. This section gives details of SPSS variables.

See Figure 3.10 for specifications for the weighting variables relating to the blood and urine data.

1 Urine data: converting concentration data into 24/hr data

****1** Convert data in mmol/l into mmol/24h equivalents

****1** litre = 1 kg

a urinary sodium

COMPUTE una24mm = una * meanwt .
EXECUTE .

VARIABLE LABELS una24mm 'Urinary sodium as mmol/24h'.

b urinary potassium

COMPUTE uk24mm = uk * meanwt .
EXECUTE .

VARIABLE LABELS uk24mm 'Urinary potassium as mmol/24h'.

c urinary fluoride

COMPUTE ufl24mm = ufl * meanwt .
EXECUTE .

VARIABLE LABELS ufl24mm 'Urinary fluoride as umol/24h'.

d urinary urea

COMPUTE uur24mm = urea * meanwt .
EXECUTE .

VARIABLE LABELS uur24mm 'Urinary urea as mmol/24h'.

2 Urine data: safe intakes fluoride

****** safe intakes fluoride for adults are 0.05mg/kg body weight/day. This equates to 3umol/kg/day.

****** use dvweight data to calculate safe intake for each respondent.

COMPUTE flxwgt = dvweight * 3 .

EXECUTE .

** calculate safe intake compared with actual urinary fluoride level

IF (ufl24um <= flxwgt) flsafein = 1.

EXECUTE .

IF (ufl24um > flxwgt) flsafein = 2 .

EXECUTE .

variable labels flsafein 'Urinary fluoride compared to safe intake levels'.

add value labels flsafein 1'Urinary fluoride at or below safe level' 2'Urinary fluoride above safe level'.

3 Urine data: Calculation of salt intakes from 24-hour sodium excretion

*** salt intakes can be estimated from 24-hour sodium excretion on basis that 1g salt = 17.1mmol Na

COMPUTE Nasalt = una24mm/17.1 .

EXECUTE .

variable label Nasalt 'Salt intake estimated from sodium excretion'.

4 Blood data: tocopherol: cholesterol ratio

compute tocchol = patoc/ptc .

execute .

variable label tocchol 'Alpha-tocopherol/total cholesterol ratio (μ M/l / mM/l)' .

Appendix B Physical activity editing

1 Introduction

This appendix describes the editing of the physical activity data, data quality and provides additional information on the derived measures of physical activity. Details of the methodology for collecting information on physical activity are given in Appendix I of the Technical Report¹.

2 Editing the data on physical activities

Interviewers entered the physical activity diary data into their laptop computer and internal consistency checks were applied to avoid mis-keying, for example to check that the time spent in all activities did not add up to more than 24 hours. Data were subsequently assessed at HQ on a number of criteria.

The following checks were carried out on all physical activity diaries.

- Coding of occupation activity level.
- Time went to bed and got up on any diary day.
- Correct use of 24-hour clock, particularly in recording time went to bed/got up on any diary day.
- If less than one hour or more than 12 hours of sleep were recorded on any diary day.
- If less than 60 minutes of very light/light activity was calculated on any diary day.
- If the time spent in any 'other' activity was greater than 3 hours.
- Any recorded activities less than 10 minutes.

Respondents were asked during the post-dietary recording period interview whether they had done any paid or voluntary work during the recording period and, if so, what tasks were involved in this work. The activity level was then coded according to whether it involved very light/light work, e.g. mainly sitting, standing or walking, the use of light tools, light assembly or repair, but no heavy lifting or carrying; moderate work, e.g. mainly walking, lifting or carrying light loads; or hard/very hard work, e.g. mainly hard physical labour. All occupations that were coded as moderate or hard/very hard were checked for accuracy of coding against the Physical Activity Diary Coding Guide for Occupations (see Appendix I of the Technical Report¹). This led to a downward revision of the activity code for main occupation in 184 of 812 cases (23%) and for the second occupation in 15 of 54 cases (28%). If the respondent did not complete the post-dietary interview or did not answer the questions on occupation

activity level, their occupation activity level was coded at HQ using information on industry and occupation collected during the dietary interview and the Physical Activity Diary Coding Guide for Occupations.

The time the respondent went to bed and got up each day is required in order to calculate time spent sleeping. All cases were checked for completeness of this information. If time went to bed and/or time got up was missing an estimate was made based on the time recorded for other days in the diary. In total, 12 cases were missing this information on at least one day. Where information about sleep was missing for more than two days of the seven-day recording period, this case was checked for completeness of other information, for example, whether the respondent went to work, how long they spent at work, participation in activities. In two cases, there appeared to be no data recorded and the case was removed from analysis of physical activity data. In seven cases, the time went to bed on one of the diary days was equal to the time recorded for getting up. In five of the seven cases, this was due to a data keying error. In the other two cases the respondent was working shifts and as they had slept during the day had recorded their time sleeping under the question 'spent any other time asleep today' and then recorded the same time for going to bed and getting up. In 495 cases the time the respondent went to bed on the last day of the recording period was not recorded on the diary. Values were imputed based on the time the respondent recorded going to bed over the preceding seven days.

All cases were checked for appropriate use of the 24-hour clock. In 30 cases, the data entered for the time the respondent went to bed and got up, along with other information on activity, suggested that the 24-hour clock had not been used. For example, where the time went to bed last night was entered as 11:30, but the time he/she got up was entered as 7:00. In such cases the time went to bed was changed to reflect the 24-hour clock.

If the time recorded participating in any activity on any day of the diary was less than 10 minutes then this was checked for accuracy of keying². If the figure had been keyed correctly then this entry was deleted.

The time spent in very light/light activities is calculated as the time leftover from 24 hours after time spent sleeping and time spent in moderate and vigorous/very vigorous activities is deducted. In 25 cases the derived time spent in very light/light activities was less than 60 minutes. In the majority of these cases, this was due to errors in data keying - for example, 600 minutes brisk walking entered instead of 60 minutes - or to duplication in recorded activities - for example, someone who worked as a childminder recording eight hours at work

and also eight hours active childcare for the same day. Duplication errors were most frequent where time spent at work was entered both for work and either a prompted activity or an 'other' activity, or where time spent in an activity was recorded both for a prompted activity and an 'other' activity. Entries were only edited where duplication was clear and in deciding which entry to delete priority was given firstly to time at work and then to activities which were on the prompted list.

All 'other' household and sports activities were checked. Where possible, 'other' activities were recoded into the prompted list of activities. 'Other' activities that were coded to the wrong intensity level were recoded to the correct level and activities that were not of at least moderate intensity were deleted. Most wrongly categorised activities over-estimated the intensity level, for example, including time spent shopping as a moderate or vigorous activity when it should have been coded as a light activity.

After editing, 'other' activities that remained, included:

- less common sports activities, for example, canoeing, horse riding;
- playing with or exercising pets, in particular dogs;
- active hobbies, for example, woodwork, bell ringing.

3 Data quality

After editing, some preliminary analysis was carried out to investigate the quality of the final information on activities. Figures B1 and B2 show the mean number of different activities of at least moderate intensity participated in by diary day and day of the week respectively. Figure B1 shows that the mean number of activities recorded decreased over the seven days of record keeping, with the greatest mean number of activities recorded on Day 1 and the fewest recorded on Day 5. This suggests possible over-reporting of physical activity in the first few days of recording. Figure B2 shows that on average more activities of at least moderate intensity were recorded on Tuesdays, Wednesdays and Fridays than were recorded on other days of the week. The lowest mean number of activities was recorded on Sundays.

Although there was no strict protocol for which days the diaries were started, practical fieldwork reasons meant that diaries were less likely to be started on weekend days than on weekdays. Analysis showed that Day 1 of record keeping was most frequently a Tuesday (22%), Wednesday (21%) or Thursday (20%) and least frequently a Monday (7%) or Sunday

(3%) (table not shown). Figures 1 and 2 therefore suggest either that respondents were more active mid-week compared with the weekend or that as the seven-day recording period progressed they tended to omit to record all their activities.

(Figures B1 and B2)

4 Derived measures of physical activity

Two measures of level of physical activity were derived from the available data; the mean hours spent in activities of at least moderate intensity per day and the calculated activity score. These measures are derived in part from information on duration of activity. Any upward rounding of activity time will therefore result in an overestimate of energy expenditure as represented by the calculated activity score. However, this may in part be offset by any under-recording of the number of activities participated in.

4.1 Calculating time spent in activities of moderate and vigorous/very vigorous intensity

In order to collect data on activities of moderate and vigorous/very vigorous intensity, the diary page provided a list of common activities against which the respondent could record any time spent that day. Activities were grouped according to whether they were household activities (including walking) or sports activities. Respondents were able to record activities participated in that were not already listed, prompts were provided to establish the intensity level involved.

On each diary day the respondents was asked if they had gone to work and the hours worked per day were recorded. The activity level of the respondent's occupation was recorded during the post-dietary recording period interview.

To allow comparisons between the activity of respondents in the present NDNS, the Department of Health recommendations and data from the Health Survey for England, the time spent in all activities of moderate, vigorous and very vigorous intensity was combined to give the category 'at least moderate intensity'.

4.2 Calculating the activity score

For all respondents for whom physical activity data were available, a physical activity score was calculated using data on intensity and duration of activity following the procedure proposed by Blair (1984) for the 7-Day Recall Physical Activity Questionnaire³. These data were added to the database but the results are not presented in Chapter 5. This is because

Figure B1 The mean number of activities of at least moderate intensity in which respondents participated by diary day

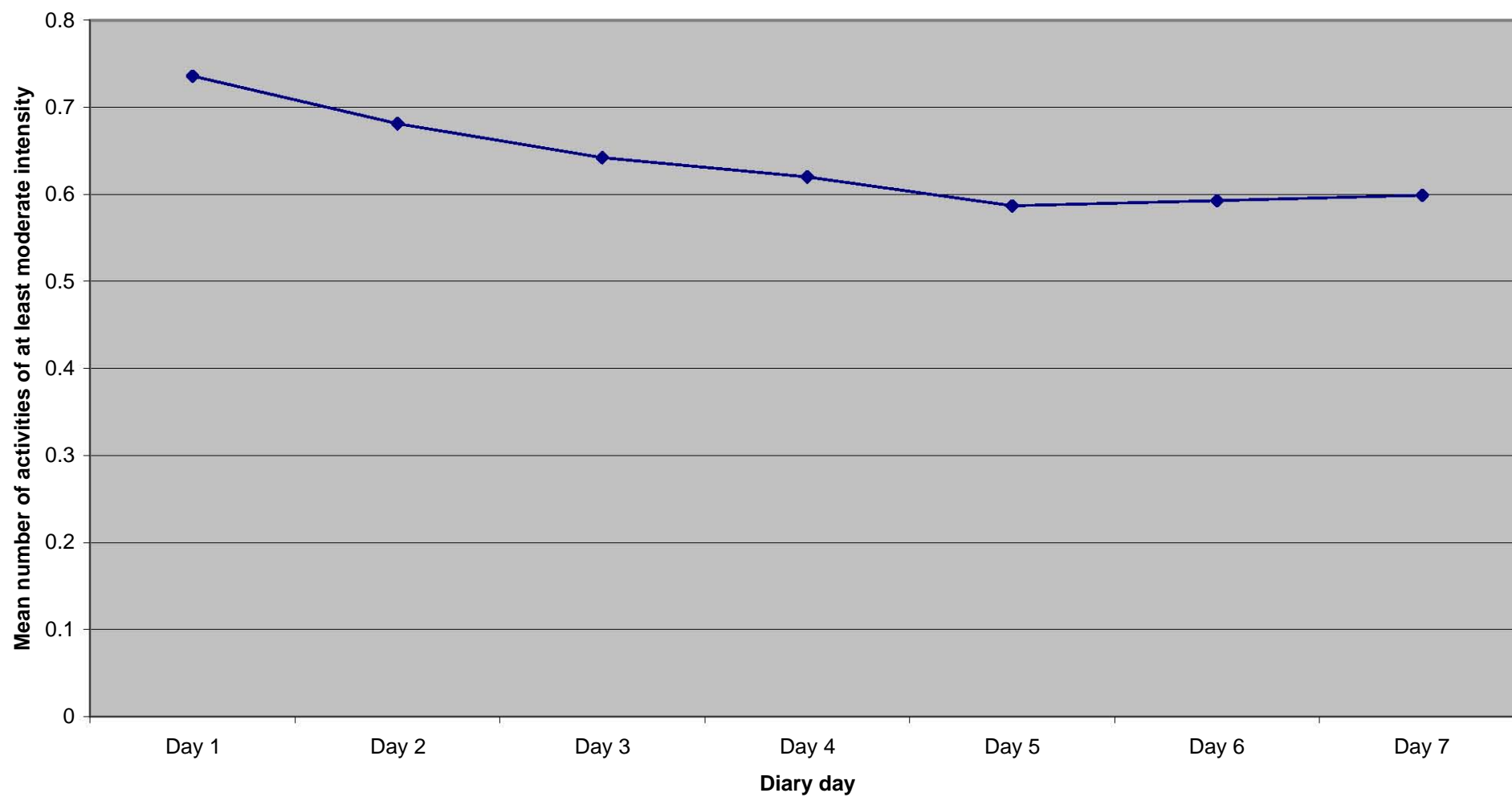
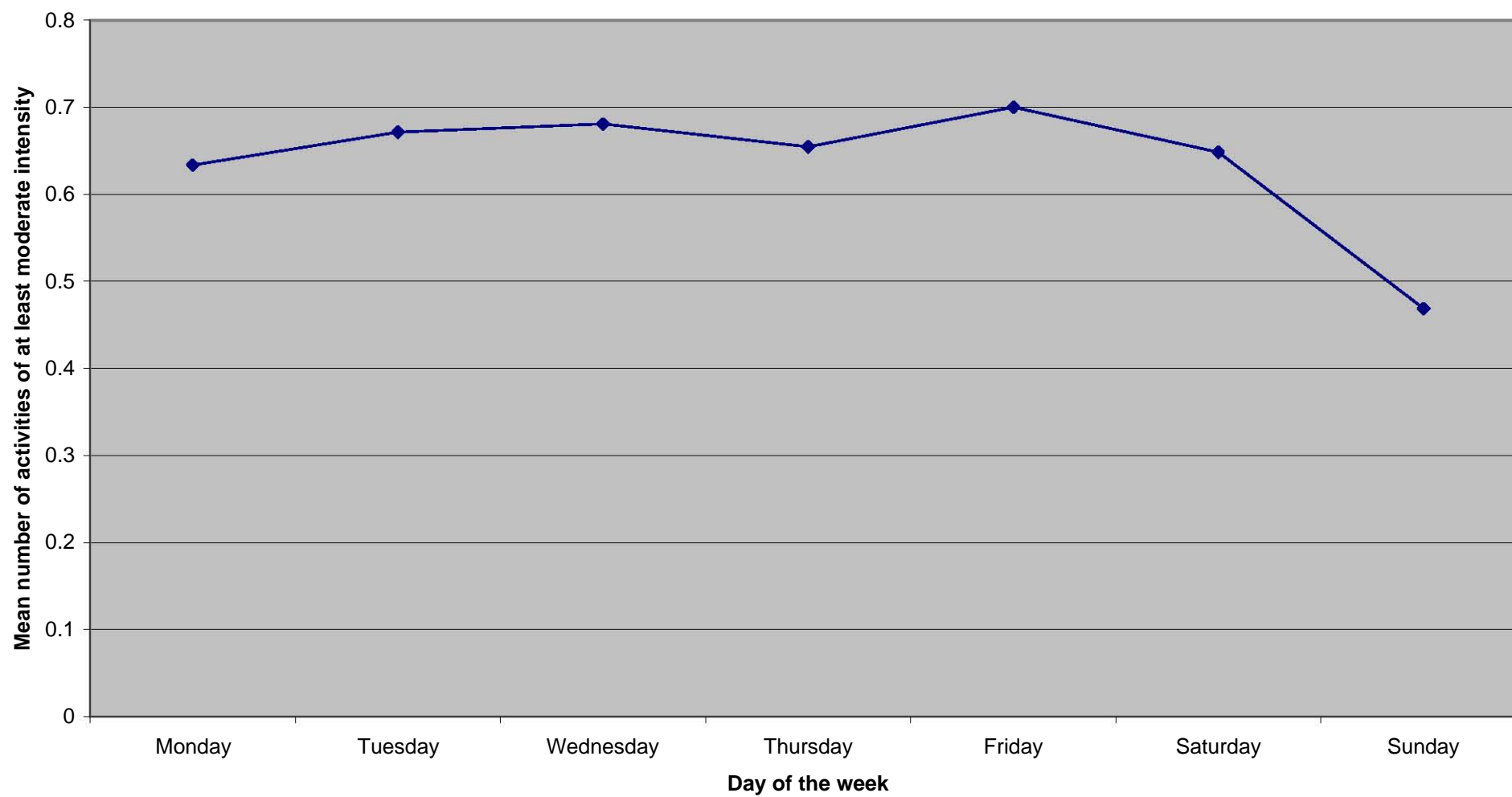


Figure B2 The mean number of activities of at least moderate intensity in which respondents participated by the day of the week



the results suggest that when compared to the physical activity data derived from the mean hours spent in activities of at least moderate intensity per day, the activity score overestimates the level of physical activity for this dataset.

The advantage of the calculated activity score method is that since very light/light activity is obtained by subtraction from 24 hours, most individuals have to account only for time spent asleep and for relatively brief periods of time engaged in moderate and vigorous/very vigorous activities. The assumption underlying the calculation of the activity score is that most adults spend most of their waking hours in light activity.

Activities can be classified by their 'energy cost' measured in metabolic equivalents (METs⁴) into the following intensity levels:

Sleep	=	average 1.0 MET
Very light/ light activity	=	average 2.0 METs (e.g. sitting watching television, light household chores)
Moderate activity	=	average 4.0 METs (e.g. heavy household chores, badminton, swimming)
Vigorous/very vigorous activity	=	average 7.5 METs (e.g. basketball, athletics)

Resting metabolism, defined as 1 MET, is approximately equal to an energy expenditure of one kilocalorie (kcal) per kilogram per hour (kcal/kg/hour). For adults an average body weight of 60kg is assumed and therefore for an average adult 1 MET is equal to 60kcal/hour or 1kcal/min. For adults METs are therefore taken as numerically equivalent to energy expenditure. An example of how the calculated activity score is derived for one day is given below.

Example of calculated activity score for one day:

Type of activity	Total time spent (hours)	MET value for the type of activity	Activity score
Sleep	9.0	1.0	9.00
Very light/light activities	13.5	2.0	27.00
Moderate activities	1.0	4.0	4.00
Vigorous/very vigorous activities	0.5	7.5	3.75
Total	24.0		43.75

The score is derived by multiplying the duration of each activity (hours) by the average MET score for the intensity of the activity. The total for each day is taken and the average daily total energy expenditure calculated.

As with the previous NDNS survey of younger people⁵, the categories 'very light' and 'light' have been combined into a single 'very light/light' category. In the current survey, the categories vigorous and very vigorous have also been combined into a 'vigorous/very vigorous' category. This approach is suggested by Blair (1984) for simplified self-administered physical activity instruments³. The MET values for the categories are calculated as an average for the activities corresponding to that category. For example, vigorous/very vigorous activities have MET values ranging from 6.0 to 10.0. An average of 7.5 was taken based on the type of activities that could be coded as vigorous/very vigorous.

For adults, calculated activity scores of 40 or above indicate a relatively active lifestyle, scores in the mid to high 30s indicate an inactive lifestyle and those in the low 30s indicate a very inactive lifestyle³. Overall, 84% of men and 74% of women in this NDNS had a calculated activity score indicative of a relatively active lifestyle, and no men and less than 0.5% of women an inactive lifestyle (data not shown).

References and endnotes

¹ The Technical Report is available online at <http://www.food.gov.uk/science>.

² Respondents were asked to record only activities they had done for at least 10 minutes. Time was recorded to the nearest 10 minutes.

³ Blair SN. How to assess exercise habits and physical fitness. In: Matarazzo JD et al. Eds. *Behavioural Health: A Handbook of Health Enhancement and Disease Prevention*. Wiley & Sons (New York, 1984).

⁴ A MET is a multiple of the resting rate of oxygen consumption, or the ratio of working

metabolic rate to resting metabolic rate (WMR/RMR). One MET represents the resting metabolic rate, so that an individual participating in physical activity at 2 METs is consuming oxygen as twice the resting rate.

⁵ Gregory J, Lowe S, Bates CJ, Prentice A, Jackson LV, Smithers G, Wenlock R, Farron M. *National Diet and Nutrition Survey: young people aged 4 to 18 years. Volume 1: Report of the diet and nutrition survey*. TSO (London, 2000).

Appendix C Fruit and vegetables

1 Definitions

Fruit and vegetable intake was defined in a number of different ways. In total 18 variables were derived. For each variable the average daily intake in grams, and the average daily number of portions consumed was calculated. The following sections explain the derivation of these variables and Table C1 provides a summary of each variable.

1.1 Fruit and fruit juice

Fruit included food groups apples and pears, citrus fruits, bananas, canned fruit in juice, canned fruit in syrup and 'other fruit', for example plums, grapes and soft fruits, together with fruit juice. Fruit juice includes vegetable juices. Quantities consumed in each of these food groups over the seven-day dietary recording period were added and divided by seven to give an average daily intake of fruit in grams. This was then divided by 80 to give an average daily number of portions consumed.

Fruit juice was not included in the first variable calculated for fruit. In the second variable only one portion of fruit juice a day was included, however much was consumed. Thus, if the respondent consumed a daily average of at least 80g of fruit juice this counted as one portion and a value of 80g was added to the average daily amount of fruit consumed. The third definition includes all fruit juice, irrespective of the amount consumed.

These three variables were calculated excluding and then including composite dishes, in this instance, fruit pies. As fruit is not the only component of fruit pies the fruit contribution from fruit pies was estimated as 45% of the total weight, including the pastry. Fruit contained in other products such as yogurts, jams, fruit smoothies, sponge puddings, cakes, breakfast cereals and crumbles was not included in the derivation of fruit intake.

1.2 Vegetables and pulses

Vegetables included food groups raw carrots, raw tomatoes, 'other raw' and salad vegetables, peas, green beans, leafy green vegetables, carrots – not raw, tomatoes – not raw, 'other vegetables' and baked beans. In line with the definitions used in the five-a-day programme, potatoes and similar starchy staples, such as plantain and yam, do not count towards vegetable intake and are excluded from these derivations. The 'other vegetables' food group includes vegetables such as mushrooms, cauliflower, onions and peppers as well as starchy staple vegetables and soya-based food items that are used as meat alternatives.

As these soya-based foods and starchy staple vegetables do not count towards intake of vegetables in this context, these items¹ were excluded at food code level. The food groups peas and 'other vegetables' include pulses and these are not included in all the derivations of vegetable intake. New groups were therefore derived which excluded pulses, and which comprised pulses only.

Quantities consumed in each of these food groups over the seven-day dietary recording period were added together and divided by seven to give an average daily intake of vegetables in grams. This was then divided by 80 to give an average daily number of portions consumed.

Baked beans and other pulses were not included in the first variable calculated for vegetables. In the second variable one portion only of baked beans and other pulses was included. Thus, if the respondent consumed a daily average of at least 80g of baked beans and other pulses this would count as one portion and a value of 80g added to the average daily amount of vegetables consumed. The third definition includes all baked beans and other pulses consumed, irrespective of the amount.

These three variables were calculated excluding composite dishes, and then including composite dishes, in this instance, vegetable dishes. As vegetables are not the only component in vegetable dishes, for example potatoes in vegetable curry, the vegetable contribution from vegetable dishes was estimated as 40% of the consumed weight. Vegetables contained in other products such as soups, quiches, omelettes, pizzas and meat dishes, for example stews and casseroles, and tomato ketchup were not included in the derivation of vegetable intake.

1.3 Fruit and vegetables

The same definitions were used in the calculations of combined fruit and vegetable intake. The first derivation of fruit and vegetables excludes fruit juice and baked beans/pulses; the second includes one portion only of fruit juice and baked beans and other pulses; and the third definition includes all fruit juice and baked beans and other pulses.

References and endnotes

- ¹ Excluded food items from the 'other vegetables' category were:
- green bananas
 - yam
 - plantain
 - soya mince
 - soya bean curd tofu
 - bacon flavoured TVP strips
 - Cheatin' meats (eg ham, chicken)
 - Quorn

Table C1 Summary of fruit, vegetable, and fruit and vegetable variables

VARIABLE	INCLUDED FOODS	EXCLUDED FOODS
FRUIT		
(1) Fruit	Apples and pears Citrus fruits Bananas Canned fruit in juice Canned fruit in syrup Other fruit e.g grapes and plums	Fruit juice Composite dishes (fruit pies)
(2) Fruit including 1 portion fruit juice	As (1) above One portion of fruit juice (80g)	Fruit juice if less than average of 80g consumed daily Fruit juice in excess of 80g consumed daily Composite dishes (fruit pies)
(3) Fruit including all fruit juice	As (1) above All fruit juice	Composite dishes (fruit pies).
(4) Fruit including composite dishes	As (1) above Fruit pies, 45% total weight	Fruit juice.
(5) Fruit including composite dishes and 1 portion fruit juice	As (2) above Fruit pies, 45% total weight	Fruit juice if less than average of 80g consumed daily. Fruit juice in excess of 80g consumed daily
(6) Fruit including composite dishes and all fruit juice	As (3) above Fruit pies, 45% total weight	
VEGETABLES		
(7) Vegetables	Raw carrots Raw tomatoes Other raw and salad vegetables Peas Green beans Leafy green vegetables Carrots – not raw Tomatoes – not raw Other vegetables	From other vegetables*: Green bananas Yam Plantain Soya mince Soya bean curd tofu Bacon flavoured TVP strips Cheatin' meats (eg ham) Quorn Baked beans Pulses (from peas and other vegetables)
(8) Vegetables including 1 portion baked beans and other pulses	As (7) above One portion of baked beans and other pulses	Baked beans and other pulses if less than average of 80g consumed daily Baked beans and other pulses in excess of 80g consumed daily Composite dishes (vegetable dishes)
(9) Vegetables including all baked beans and other pulses	As (7) above All baked beans and other pulses	Composite dishes (vegetable dishes)
(10) Vegetables including composite dishes	As (7) above Vegetable dishes, 40% total weight	Baked beans Pulses
(11) Vegetables including composite dishes and 1 portion baked beans and other pulses	As (8) above Vegetable dishes, 40% total weight	Baked beans and other pulses if less than average of 80g consumed daily Baked beans and other pulses in excess of 80g consumed daily
(12) Vegetables including composite dishes and all baked beans and other pulses	As (9) above Vegetable dishes, 40% total weight	
FRUIT AND VEGETABLES		
(13) Fruit and vegetables	(1) and (7) above combined	As for (1) and (7) above
(14) Fruit and vegetables including 1 portion fruit juice and/or baked beans and other pulses	(2) and (8) above combined	As for (2) and (8) above
(15) Fruit and vegetables including all fruit juice and baked beans and other pulses	(3) and (9) above combined	As for (3) and (9) above
(16) Fruit and vegetables including composite dishes	(4) and (10) above combined	As for (4) and (10) above
(17) Fruit and vegetables including composite dishes and 1 portion fruit juice and/or baked beans and other pulses	(5) and (11) above combined	As for (5) and (11) above
(18) Fruit and vegetables including composite	(6) and (12) above combined	As for (6) and (12) above

dishes and all fruit juice and baked beans
and other pulses

* These items were excluded from all derivations of vegetable intake.

NDNS Adults Interviewer Instructions

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7. Ineligibility	19. Blood pressure & anthropometry
8. Labels and serial numbers	20. Blood sample
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15. Catering questionnaire	26. Work planning
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DOCUMENTS – NDNS ADULTS AGED 19 TO 64

Sample

Address list	-
Advance letter	-
Kish grid	K1 & K2
Household selection sheet	H1

Labels

Cryo serial number labels
Standard serial number labels
Address labels

GP notification

GP Notification form (4 part)	Z1
Notification letter to GP	Z2
Stamped envelope for GP	
Notification to GP	
Stamped HNR addressed envelope	

Purpose leaflets

General	L1
Physical measurements and blood sample	L2
24 hour urine test	L5
List of blood and urine analytes (short list)	L6
Description of blood and urine analytes (long list)	L6a
Blood sample: what is it for and what will happen?	L7

Consent forms

Blood pressure (3 part)	Z3
Blood sample (4 part)	Z4
NHSCR flagging (3 part)	Z5
Summary consents card	Z9
Checklist of consents returned	Z10
Stamped, HNR addressed envelope for each consent form	

Interview

Prompt cards	
Vitamin and mineral supplements	V1
Self-completion Eating Habits Questionnaire	S1
Envelope for self completion	

Dietary survey

Home Record Diary	E1
Green Home Record extra pages	
Blue Diary transcription pages	
Diary of Activities and Eating and Drinking	
Away from Home	E2
Envelope for eating and drinking away from home diary	
Notebook for respondent	P3
How to use the scales for weighing	W1
Check list for recording in the Home Record	W2 (other side of W1)

Interviewer documents

Food descriptions card	F1
Eating pattern check sheet	F2
Catering questionnaire	F3
Guide weights card	F5
Flags card	F6
Dietary assessment schedule	F7
Letter to employer re: visit to collect information	F8

Coding documents:

Index to food code list	FC1
Food code list	FC2
Brand code list	FC3
Crisps and savoury snacks alphabetic code list	FC4
Fats for spreading card	FC5
Oils and fats for cooking card	FC6
Tap water codes	FC7
Food source codes	FC8

Bowel movements

Bowel movements card	B1
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Physical measurements

Measurements schedule	M1
Respondent's record card	M2

Blood pressure

Reporting raised blood pressure instructions	BP1
Letter to GP reporting raised blood pressure	BP2

24-hour urine collection

24-hour urine sample record form	M3A
24-hour urine collection volume record	M3B
The Urine Samples – instructions for respondents	W3

Blood sample

Phlebotomist availability card	T
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Oral health

Counting your teeth and fillings	D7
Leaflet	D8

Other

Workplan	
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NDNS Documents that have changed since Wave 1 or 2

DOCUMENT	CHANGES MADE
K2	- amended to allow 40 addresses per quota
Leaflets L1 and L2	- Reference now to 1½ hour interview (not 2 ½!) - No mention of PABA
L5a 24-hour urine test (PABA)	- no longer exists
L6a Description of analytes	- being updated to remove mention of witnessed consent to bloodtaking
Z4 Blood sample consent	- no space for witness signature and details
M1 Measurement schedule	-pages 24-5. You now need to STICK A SERIAL LABEL on this page as it is copied and sent to HNR -clothing record for men and women now a double spread so respondent can not see other questions -additional page for recording medication.
M3a and b 24-hour urine collection forms	- no reference to PABA
W3 Urine Sample respondent instructions	- no reference to PABA
Z10 Checklist of consents completed	- new document return to HNR

EQUIPMENT LIST

Dietary

- Food scales
- Spacer bowls
- 9v batteries
- White plastic carrier bags for collecting wrappers
- WH Smith gift vouchers
- NDNS pens for respondent
- Plastic zip wallet for respondent
- Green pens for interviewer coding
- Flags for dietary record queries

Blood pressure

- Dinamap
- 3 cuffs - large adult, adult, small adult,
- Mains lead
- Connector hose
- (Manual)
- Case

Height

- Leicester Height Measure
- Case

Weight

- Soehlne personal weighing scale
- 9v battery

Circumferences

- Standard insertion tape

24-hour urine

Bag with urine collection equipment
24 Hour Urine Collection Record Form (M3A)
Large 5 litre screw-cap plastic bottle with boric acid preservative
Plastic jug
Plastic funnel
Safety pin
Small 2-litre screw-cap plastic bottle – for making collections while out of the home
Carrier bag – for carrying the small plastic bottle
Disposable absorbent work mat
Protective gloves
“Hanging”-type electronic balance
Yellow-topped Sarstedt syringe-type urine containers (4 per respondent)
Yellow syringe extensions
Cryo-labels, printed with serial numbers & barcode
Cryo-pen (to write date on cryo-labels)
Parcel tape and scissors (to seal jiffy bags)
Postal container packs, comprising:

- 4 colourless (green-topped) screw-cap safety containers with a sheet of absorbent material inside
- cardboard outer box
- pad of 24-hour urine collection volume record sheets for respondent details and urine weights
- Jiffy bag with Business Reply label

Postal container pack for tap water sample:

- 1 colourless (white-topped) screw-cap safety containers with a sheet of absorbent material inside

Self-tooth count

Small dental mirror

Administration

Wallets for returning documents
Fragile tape for returning equipment
Note book
Red stickers for {Enter} key

EQUIPMENT DELIVERY and TRANSFER

1 General

You will be supplied with all the necessary equipment to carry out the all the elements of the survey. See the separate list of equipment.

Each piece of equipment is individually labelled with a serial number. The number is used for recording the location of the equipment so it is important that it stays on throughout the period.

In most instances, the equipment will be sent to you via Interlink - a UK wide carrier. The equipment will be issued to you for the whole period and you will have sufficient sets of dietary scales to follow the suggested working pattern for this survey which is a pattern of placing diaries with 3 people one week and with 2 people the next.

You will be asked to check equipment you receive and return the 'equipment receipt confirmation' sheet to us. Should you transfer equipment from one interviewer to another please make sure you send an 'equipment receipt confirmation' sheet with the parcel and one to us in the Field Office indicating what equipment you have transferred; that way we will be able to keep track of the location of equipment.

2 Care of the equipment

The equipment is fragile and expensive (particularly the Dinamaps) and you should take care when handling it, particularly when you are transporting it between your home, the respondent's home and your car. Try to ensure that it is kept dry. Take care also with the packaging/boxes the equipment comes in, as you will need to use this when you return it to HQ. You should have be able to carefully open out and flatten some of the boxes sent to you for easier storage.

Do point out to your respondent that the food scales you are leaving with them are fragile and ask them to take care of them while they are using them.

3 Reporting broken or faulty equipment

If over the fieldwork period you find that some of the equipment is not working properly - not giving readings, showing error messages or broken in some other way - you should call the Field Office **immediately**.

You will need to explain which piece of equipment is faulty or broken and what the problem is. You will also need to have the serial number from the label on that piece of equipment. The Field Office will instruct you on what to do and how to return the equipment. They will also arrange to have replacements sent to you.

If it is one of the rod sections of the Leicester height measure which you are having problems with; you should specify this to the Field Office as they will be able to arrange for a replacement of that section to be sent to you.

4. Returning equipment at the end of the period

Once you have finished all the fieldwork and you are sure that you will no longer require the equipment, contact the Field Office to arrange to send it back. Please pack the equipment securely back into the same packaging that was used before. Please reassemble (if you have flattened them for storage) and seal the boxes with the 'fragile' tape you will be sent.

Please be prompt about returning equipment, as it is time consuming for us to have to chase you up!

Contacts

Karen Irving

Michaela Pink

Field Office

020-7533-5424

020-7533-5465

NATIONAL DIET AND NUTRITION SURVEY (NDNS): ADULTS AGED 19 TO 64 YEARS

What is the purpose of the survey?

This survey is part of the National Diet and Nutrition Survey (NDNS) programme, which aims to provide a comprehensive cross-sectional picture of the dietary habits and the nutritional status of the population of Great Britain¹.

The present NDNS for adults aged 19-64 years is the first study to be carried out on this age group since 1986/7 and follows on from similar surveys of children and young people aged 1½ to 18 years, and of older adults aged 65 years and over.

The aims of the mainstage adult NDNS will be to:

- provide detailed quantitative information on the food and nutrient intakes, sources of nutrients and nutritional status of adults as a basis for Government policy;
- describe the characteristics of adults with intakes of specific nutrients which are above and below the national average;
- provide a database to enable the calculation of likely dietary intakes of natural toxicants, contaminants, additives and other food chemicals for risk assessment;
- measure blood and urine indices which give evidence of nutritional status or dietary biomarkers and relate these to dietary, physiological and social data;
- provide height, weight and other measurements of body size on a representative sample of adults and examine their relationship to social, dietary, health and anthropometric data as well as with data from blood and urine analyses;
- monitor the diet of adults to establish the extent to which it is adequately nutritious and varied;
- monitor the extent of deviation of the diet of adults from that recommended by independent experts as optimum for health, in order to act as a basis for policy development;
- help determine possible relationships between diet and nutritional status and risk factors in later life;
- assess physical activity levels of adults; and
- provide information on oral health in relation to dietary intake and nutritional status.

Which organisations have commissioned the survey?

As part of the NDNS programme, the survey was commissioned by the Departments of Health (in England, Wales and Scotland) and the Food Standards Agency (FSA). It is being carried out by the Social Survey Division of the Office for National Statistics (ONS) in collaboration with the Medical Research Council Resource Centre for Human Nutrition Research in Cambridge.

Mainstage

The mainstage NDNS of adults has been commissioned following the success of the feasibility study conducted in the autumn 1999. The various elements of the study: blood sample, 24-hour urine collection, blood pressure and anthropometric measurements, eating behaviour questionnaire etc and the CAPI program were all tested live on a sample of around 100 adults. Some changes have been made to the protocol and survey documentation following feasibility.

¹ See also NDNS purpose leaflets 1 and 2.

When does the survey take place?

Fieldwork for the adult NDNS will start 1 July 2000 and will run for 12 months, to account for any seasonal variation, until 30 June 2001.

What topics are covered by the survey?

- **Food and nutrient intake**, including all medicines, and dietary supplements;
- **smoking and alcohol intake**;
- nutritional status, measured through analysis of **blood and urine samples**;
- **oral health** and self-count of teeth and amalgam filled teeth;
- level and frequency of **physical activity**, assessed through a seven-day diary;
- frequency of **bowel movements**; and
- **blood pressure and anthropometric measurements** – height, weight, waist and hip measurements.

Who will take part in the survey?

The survey will be based on a random sample of the population of Great Britain. We will interview people aged between 19 to 64 years living in private households. One household will be selected at each sampled address. The survey will be conducted in 152 areas covering England, Wales and Scotland and with achieved sample size of 2,000 adults.

Voluntary nature of the survey

As with all our surveys we rely on people's voluntary help, which is essential if our work is to be successful. We would like as many people as possible to agree to help with all parts of the survey, but if some people prefer not to take part in some aspects then the rest of the information they provide is still extremely valuable. Also, anyone may withdraw from participation at any time. As with all other parts of the survey, agreeing to each of the physical measurements, the urine collection and the blood sample is voluntary.

If the survey is to be successful then we need as many people as possible to help with all these aspects, but we understand if some people are unwilling to take part in some aspects. The information these people give is still extremely valuable to us.

Is the survey confidential?

Yes – the survey is confidential and used for statistical research purposes only. Access to the completed questionnaires and diaries is restricted to the Social Survey Division of ONS and the Food Standards Agency. The names and addresses of co-operating households are always kept separate from any other information given to us during this survey. Furthermore, names and addresses will not be released to the Food Standards Agency, or to any other government department. The survey results will not be presented in a form which can be associated with names and addresses. No survey results are ever made available to local authorities, members of the public or the press where it is thought that individuals or households might stand a small chance of being identified.

Indemnity

Government departments carry their own risks. Participants in the survey would, with respect to claims against DH, FSA, ONS or the Medical Research Council, be in the same position as if public liability insurance had been taken out.

When will the results be available?

It is hoped that results for the main survey will be available from around autumn 2002.

For more information about the adult NDNS survey contact:

Lynne Henderson or Jackie Hoare
ONS D2/23
1 Drummond Gate
London
SW1V 2QQ

Telephone: 020 7533 5385 or 5413
Fax: 020 7533 5499
e-mail: lynne.henderson@ons.gov.uk
jacqueline.hoare@ons.gov.uk

For more information about the overall NDNS programme contact:

Jan Gregory
ONS D2/23
1 Drummond Gate
London
SW1V 2QQ

020 7533 5387
020 7533 5499
jan.gregory@ons.gov.uk

OVERVIEW OF THE SURVEY

Fieldwork will take place in 152 postcode sectors across Great Britain. Each interviewer quota of work will consist of 40 allocated addresses. Obviously we are aiming to achieve 100% response at all eligible addresses containing an eligible adults aged 19-64 years. However, our minimum target response is 70%. Interviewers are therefore likely to obtain around 13 or 14 interviews per quota.

The survey is split into 4 waves conducted throughout 1 year. Each wave is therefore 3 months in length. You will be allocated one quota of work to complete within that 3-month period.

Fieldwork for the main survey starts at the beginning of July 2000. Interviewers will be able to start work in their designated area only when:

1. Ethical approval is obtained from the locally based ethical committee (LREC) responsible for that area.
2. Interviewers have successfully completed their post-briefing exercises and have been given permission to begin work by the Nutritionists working at ONS Titchfield.

Summary of components

152 quotas - 40 addresses per quota
Face-to-face interview
Detailed weighed food and drink record for 7 days
Physical activity diary – 7 days
Bowel movement frequency diary – 7 days
Catering questionnaire – Paper
Oral health component – self-assessment of teeth.
Eating behaviour questionnaire
Notifying respondent's GP of participation in survey
Consent forms: GP notification Blood pressure Blood sample Urine sample Consent to flag NHSCR
Anthropometric measurements – height, weight waist and hip.
Measurement of blood pressure .
Blood sample – taken by phlebotomist, sent to laboratories in Southampton, Cambridge & Great Ormond Street.
Collection of urine sample – (24-hour) and tap water sample for despatch to HNR.
Data transmission. All Blaise data transmitted to HQ.
Booking-in. All documents booked in (Titchfield based) using bar-coded booking-in system.
Coding and editing (Titchfield based). All dietary records to be keyed using data entry program. All dietary records checked and edited using editing program. Crosschecks also made against Blaise interview data.
Nutritionists (Titchfield based). New food and recipe codes added. Weights calculated.
Computation of consumption of foods into intakes of nutrients using a nutrient data bank supplied by Food Standards Agency.
Analysis and report writing. Data merging. SPSS analysis and report writing for publication.

Dietary diary – 7-day weighed intake method.

Respondents are asked to keep a 7-day weighed intake diary. Respondents are asked to record everything they eat or drink over that 7-day period. Everything eaten or drunk at home needs to be weighed and described accurately. Respondents are provided with a set of food weighing scales and instructions cards but it is the interviewer who must teach them exactly how to weigh and record their intake. Respondents are given one day in which to practise the weighing and recording prior to starting the 7-day diary. A 24-hour checking call is made by the interviewer after the diary keeping period has begun in order to confirm that weighing and recording is being done to the standard necessary and to give support and encouragement to the participant. This is the most important element of the survey. Without it the rest of the data we collect is of little value.

Eating away from home diary (7 days)

Respondents are also asked to record everything they eat and drink outside of the home over the 7-day period on the eating away from home diary. Where possible respondents are also asked to weigh the food using the scales provided but we appreciate that this is not always possible. Therefore we simply ask them to record as much information as they can about the food/drink items consumed including a full description of the item, the amount and where the item was consumed and whether there were any left over. Ideally respondents should carry these diaries around with them and record the information required at the time of consumption.

Gift voucher

Each respondent who fully completes the 7-day dietary home diary as well as the 7-day eating away from home diary will be given a £10 W.H.Smith voucher as a token of our appreciation for taking part. This voucher should not be used as an incentive in any way to encourage people to take part.

Catering questionnaire

Many respondents will eat at a workplace/college canteen during the recording period. For these cases you are asked to complete a workplace/college canteen questionnaire which asks about the kind of foods provided and how they have been prepared and cooked. This is a paper document and the information does not need to be input into the Blaise program. The completed questionnaires are returned to the Nutritionists working at our Titchfield office who will use the information to help them code the foods correctly.

Activity diary

Respondents are also asked to maintain a 7-day activity diary. The recording for this is combined with the eating away from home diary which respondents should carry with them, as ideally activities should be recorded as they are carried out or shortly after completing them. We are interested in the degree of physical activity which people take on a daily basis as an indicator of energy expenditure.

Bowel movement record

The relationship between diet and bowel movement has long been established. Therefore we also ask people to record information on the number of bowel movements they make, each day, for the duration of the 7-day recording period.

Height, weight, waist and hip measurements

Obviously what people eat affects their weight so we are interested in people's weight. By itself though, weight is of limited use because taller people will probably weigh more anyway. Hence we need to know about weight in relation to size and the amount of muscle and fat. We will need to measure weight, height, and waist and hip circumference, which are all useful indicators of body size.

Blood pressure

It is also interesting to look at any relationship which might exist between diet and blood pressure. Blood pressure will be measured by the interviewer using Dinamap 8100, provided that consent is given by the respondent. If the individual consents, their GP will also be informed of the result. If any respondent's blood pressure is found to be abnormally high they and the survey doctor will be informed as well as their GP (if the respondents consents for us to inform their GP).

Blood sample

The analysis of the blood will tell us a great deal about people's health and give us further information on their diet. The blood sample is required for a variety of biochemical and haematological tests, which will measure nutritional status and biomarkers. A haematological profile and related biochemical indices will provide evidence of iron, folate and vitamin B12 status; another group of blood tests will provide evidence about fat and water soluble vitamin status and trace minerals. Blood lipids levels will be measured as a diet related cardiovascular risk factor.

Results for blood analytes with a recognised clinical significance will, if the respondent agrees, be reported to the respondent's GP for further investigation or advice if needed. The results will also be sent to the participant.

A small amount of blood (no more than five or six teaspoons or 30ml) will be taken from the arm, using new, sterile equipment, by a qualified person. The blood is sent to laboratories in Cambridge, Southampton and Great Ormond Street Hospital in London, for a number of analyses, including measurements of haemoglobin, vitamins and minerals.

24-hour urine sample

We would like each person taking part in the survey to collect their urine over a 24-hour period, at a time that is convenient to them. This can be analysed to tell us the level of salt in their diet which cannot accurately be measured from information collected in the food diary. We need a full collection of urine rather than a single sample as the level of salt in urine fluctuates according to what was eaten at the last meal; a collection over 24 hours gives much more reliable information on the usual levels of salt in a person's diet.

A robust 24-hour urine collection is needed to provide estimate sodium, potassium, fluoride and ochratoxin A intakes by measuring the amount of these substances excreted in 24 hours.

You will provide the respondent with all the equipment for making the collection, which will be sterile and used only once. The collection container will contain a small amount of preservative.

You will give the respondent an information sheet telling them exactly how to make a 24-hour collection of urine, and answering some of the questions they may have. You will also give them a record sheet to keep during the collection.

The respondent, under your supervision, will take 4 test tubes of urine from the 24-hour collection for you to send by post to HNR for analysis.

Flagging on the NHSCR

The Department of Health and Food Standards Agency would like to be able to find out something about what eventually happens to the people who take part in this survey; in particular: how old they are when they die, the cause of their deaths, and if they are ever diagnosed as having cancer. Information on these events will allow the Department of Health and Food Standards Agency to look at the results from this survey and see whether diet and the other aspects of their health which are being measured are eventually related to age at death, cause of death and the likelihood of getting cancer. The National Health Service Central Register (NHSCR) already keeps a record of everyone who is in the National Health Service.

We would like to flag the respondent on the Register so that in the future we can be told about any deaths and cancer registrations of individuals who took part in this survey. This means their existing record will have an electronic code attached indicating that they took part. This code will be attached to their name until they die. Flagging the name on the NHSCR will NOT mean that they are contacted again in connection with this survey, and information from the flagging will not identify individuals but will be presented as tables of results in any future reports. Respondents are not obliged to have their name flagged. You must obtain their signed permission to do this.

Assessment of number of natural teeth

Respondents will be asked to count their own natural teeth and teeth containing amalgam fillings using a set procedure which you will describe to them along with a set of written instructions and a card for them to record on. We have already conducted a validation exercise both at the feasibility stage of this survey and as a follow-up study to the 1998 Adult Dental Health Survey. We found that respondents are fairly accurate at counting their own teeth but need a lot more guidance on identifying amalgam. It is therefore important that they are given thorough instruction and practice time.

Eating Behaviour Questionnaire

This is a self-completion exercise and can be administered at the diary collection call. Respondents are offered either CASI (Computer Assisted Self-completion) or a paper self-completion form. The questionnaire has been developed as a means of investigating people's attitude and relationship with food.

Blaise CAPI interview

A face-to-face Blaise interview is conducted when the diaries are placed with the respondent and again when the diaries are collected at the pick-up call. The Blaise interview is designed to collect demographic information about the respondent as well as information about their eating preferences and patterns. A detailed description of the Blaise interview is given below.

Content of interview questionnaire¹

1. Basic background information and demographic details, including:
 - age, sex, date of birth
 - household composition
 - information to derive social class of respondent, Head of Household and Household Reference Person (HRP) if appropriate
 - highest educational qualification level of respondent and HRP if appropriate
 - gross household income
 - receipt of benefits
 - employment status
 - ethnic origin
2. Basic demographic information such as household tenure, type of accommodation and length of residence.
3. Background information on respondent's usual eating behaviour to help assess dietary record – weekdays and weekends - including:
 - type of milk used
 - use of salt at the table and in cooking
 - consumption of tea, herbal teas and coffee
 - consumption of artificial sweeteners in drinks and cooking
 - appetite
 - food allergies and food avoidance (whether self or medically diagnosed)
 - special diets (e.g. vegetarianism/veganism, whether dieting to lose weight)
 - other dietary restrictions (e.g. due to illness)
 - food preferences and choices.
4. Information on social and domestic circumstances which may influence respondent's food consumption and nutritional status, including:
 - food storage and cooking facilities (e.g. availability of refrigerator, freezer, conventional cooker, microwave oven etc.)
 - distance from the coast
 - access to car
5. Fruit and vegetables, including:

¹ Most of the questionnaire will be administered prior to the start of the dietary record keeping. However, some of the questioning will be carried out after record keeping at diary collection.

- whether eaten peeled or unpeeled
 - consumption of organic home grown and 'free' food.
6. Storage practices in the home (e.g. storage of food in open cans)
 7. Brief medical history. Information on serious medical conditions and disabilities which might affect dietary behaviour or physical activity or the physical measurements, including conditions which might preclude subject taking part in some of the survey components (e.g. haemophiliac). Also:
 - attendance at GP other than for minor ailments
 - hospital treatment.
 8. Details of current medication (self and prescribed) and use of dietary supplements including name, brand, strength and product licence number (if any).
Also:
 - use of prescribed antihypertensives
 - use of folic acid supplements by women of child bearing age
 - use of oral contraceptives
 9. Alcohol consumption
 - current practice
 - type of alcoholic drinks
 - quantity.
 10. Smoking habits
 - current practice
 - quantity
 11. Information on menopausal state and use of hormonal replacement therapy.
 12. Frequency of consumption of foods to determine usual dietary patterns and also intakes of foods which may not be consumed in the short time of the study period.
 13. Physical activity:
 - amount of physical activity involved in occupation
 - amount of physical activity done outside of work
 14. Psychometric restraint questions to assess eating behaviour
 15. Questions on usual eating behaviour to assess accuracy of dietary diary
 16. Questions on the presence of natural teeth and on dietary habits considered to be of dental relevance

Self-completion forms

1. Oral contraception, menopause and HRT – CASI only
2. Eating behaviour questionnaire – CASI and Paper
3. Self-tooth count – paper only, keyed by interviewer
4. Catering questionnaire – paper only, not keyed

Diaries

1. Dietary diary
2. Eating and drinking away from home diary
3. Physical activity diary
4. Bowel movements diary

Blaise structure of interview

The Blaise interview is basically divided into 3 main blocks consisting of the main interview and 2 parallel blocks, the administration block and the progress monitoring block. The main interview consists of a placement interview questionnaire and a pick-up interview questionnaire. Certain subjects are covered at the placement interview and others at the pick-up call. They are located in the same Blaise programme as this makes it easier for us to cross check against placement and pick-up interviews and speeds up the interview in general as you are not having to switch from one interview program to another, as in the past. You will be routed to the relevant survey components whenever appropriate.

The Admin. Block is standard and should be familiar to you all. The progress block is something that we have introduced for this survey. We are asking you to try and update the progress block on a daily basis and, while you are working in the field, to also try and transmit on a daily basis. This is why we have made it a separate parallel block. The whole block works in a similar manner to the Hstatus variable in the Admin block in order that we can continually monitor your work progress on a daily basis. We will be able to pick-up information you have recorded in the progress block as long as you make a transmission. Even if you are transmitting work back to HQ for another project you are working on we will still be able to monitor your progress on NDNS. Although there are some consistency checks in this block please try to ensure that you keep everything consistently up-to-date.

We have given you the option to code or key each section as you come to it so that you can skip through items that you have not yet covered in the interview process.

Block name	Subject
QID	Address ID
QSAMPLAB	Routing for sample A or Sample B
QSIGNIN	Date of placement/Who lives here?
QTMTPROG	Timing block
Q NAMES	Names of household members
QTHCOMP	Household composition
QHOH	Who is HoH?
QHRP	Who is HiH?
QTPERID	Person numbering
QTHRELS	Relationships grid
QTCRESP	Identifying respondent

QINTER	Main interview
Qworks	Does respondent work?
Qdurable	Household durables
Qmilk	Use of milk
QteaCofTea	Use of tea/coffee
Qtea	Tea
Qherbal	Herbal tea
Qcoffee	Coffee
QartSwee	Artificial sweeteners

Qsalt	Use of salt
Qappetit	Respondent assessment of appetite
Qfreq	Food frequency questions
QspecDie	Special diets?
Qallerg	Allergies?
Qveggie	Vegetarian/Vegan?
Qorganic	Whether eats organic food
Qfreefood	Whether eats food grown themselves
Qstorage	Food storage
Qvitmins	Vitamin supplements
Qphysact	Physical activity
Qmedical	Medical problems – long standing illness
Qantihyp	Whether taking anti hypertensives
Qdent	Whether has any own natural teeth
Qsmoke	Smoking habits
Qalcohol	Drinking behaviour
Qwomen	Oral contraceptives and the menopause
Qeduc	Education
QethnicO	Ethnic origin
Qtenure	Tenure
Qincome	Income
QwrkResp	Occupation of Respondent
QILOResp	ILO Classification
QlastJBR	Last job
Qmain JBR	Main job
Qemplen	Description of employment
QjbHrsUR	Hours of work
QwrkHoH	Occupation of HoH
QwrkHiH	Occupation of HiH
QendPlac	End of placement interview
PTIMESTAMP	Time stamp
QTMDPLACE	Start timing pick-up interview
QPICKUP	Start of pick-up interview
QPUQuest	Quality assessment of diary
QTIIDiry	Illness during diary keeping
Qpsyche	Eating behaviour questionnaire
Qoral	Oral health component
QADMIN	Admin Block
QTCalls	Call block
QoccResp	Occupation and industry classification Respondent
QoccHoH	Occupation and industry classification of HoH
QoccHiH	Occupation and industry coding HiH
QPROGRESS	Monitoring progress in the field
Qmeasure	Measurements schedules
QBPress	Blood pressure results
Qdental	No of teeth and amalgam fillings
Qdiaries	Whether kept diaries
QactPhy	Physical activity keying and coding
Qbowel	Bowel movement keying
END INTERVIEW	

The overall calling structure for the survey is detailed below.

Main procedures, in order, carried out at each call for a fully co-operating respondent completing a 7-day dietary intake record

Advance letter

Because of the length of the field period interviewers are asked to send out the advance letter themselves. The letter should arrive with the respondent about 3 to 4 days before the interviewer calls.

Initial visit

At your first visit you will seek to ascertain how many households are at the address, select a household at random and then ascertain whether there are eligible individuals within the selected household. One individual is then selected at random. You do not have to go into great detail at this stage but it is essential that the respondent is giving '*informed consent*' at every stage in the survey process. The respondent *must* understand what it is they are agreeing to take part in. Respondents are then invited to take part in each element of the survey in a staged manner. Consent for each element is obtained only after a full explanation of what is required. You should explain that consent to one element does not imply consent to any other elements of the survey. You should use the corresponding explanatory leaflets. It is important that, for those elements requiring written consent, you give participants 48 hours to consider and discuss with advisers.



For those elements requiring written consent respondents should be given 48 hours to consider.



Remember – informed consent.

Calling strategy

Call	Task	Timing
Appointment	Interviewer makes initial contact and an appointment to conducting placement interview.	First contact with respondent after respondent receives advance letter.
Placement interview	Interviewer gives explanation of the study. Interviewer conducts main interview, places dietary diaries, bowel record and self-tooth count instruction form with dental mirror.	Call made by appointment with selected respondent.
24 hour checking call	Interviewer checks quality of recording and helps respondent with any problems. Interviewer encourages respondent.	Call made 24 hours after diary keeping has begun.
Mid-week checking call	Diary checking and encouragement. Interviewer probes for any missing information. Anthropometric and blood pressure measurements made.	Call made mid-way through 7-day dietary diary recording period.
Additional check	Collecting pages for coding. Interviewer encourages respondent and helps with any difficulties.	Call made at the discretion of the interviewer if she/he feels that respondent needs help and would appreciate an additional visit.
Pick-up call	Interviewer conducts post-diary interview	Call made as soon as is convenient for respondent after 7-day diary keeping completed.

Other calls combined with previously described calls wherever possible.

24-hour urine collection	Respondent mixes and samples 24-hour urine.	Call made immediately after 24-hour collection.
Blood taken	Sample taken by phlebotomist.	Call made either during or after diary completion and pick-up call. Weekday before 3.30pm in order for phlebotomist to be able to transport blood sample to laboratory.

Summary of consents

Item	Verbal consent required	Has GP and agrees to GP notification	Written consent required	Other
1. GP notification	YES	YES	YES	****
2. Anthropometric measurements	YES	NO	NO	****
3. Blood pressure	YES	NO	YES	****
4. Blood sample	YES	NO	YES	Written consent plus phlebotomist checks for clotting/bleeding disorders or anticoagulants. No consent needed to notify GP
5. 24 hour urine	YES	NO	NO	****
6. NHSCR flagging	YES	NO	YES	****
7. Self-tooth count	YES	NO	NO	

THE SAMPLE

1 Documents

You will be provided with the following documents:

an address list;

an advance letter for each address in your quota;

Household selection sheet (H1)

Doorstep selection sheet (K1)

Kish Grid (K2)

2 Sample selection

The fieldwork period for each wave of the survey is 3 months starting from beg-July 2000 to end-June 2001.

The fieldwork will take place in 152 postcode sectors in England, Wales and Scotland; we are aiming to achieve about 2000 interviews.

The sample of addresses has been selected from the Postcode Address File.

Eligible households are those containing an adult aged between 19 and 64 years. Pregnant women or women who suspect that they might be pregnant or those who are breastfeeding are also ineligible.

You will be issued with 40 addresses randomly selected from the postcode sector allocated to you.

3. Household selection

Often there will only be one household living at an address. However, at some addresses, particularly in inner city areas, you will find more than one household at an address. You are required to select only one household for interview at each address.

The term 'multi-household address' relates to an address with more than one household present. There has to be more than one household actually resident.

In other surveys you may have come across the use of two types of multi-household sheets:

- Pre-selected for addresses in Scotland which have MO indicators;
- Concealed for all addresses in England, Wales and Scotland where there is no MO indicator.

Since the NDNS only requires the selection of one household per address it is not necessary to issue two types of forms. Thus for the NDNS ONLY one pad of multi-household selection sheets is issued to cover all instances of multi-occupancy. The pads comprises four sheets – A,B,C and D.

At each address you should try to find out how many households are present at your first call. If the address contains more than one household you should apply the procedures described below.

1. Take the next sheet from your pad of multi-household selection sheets.



It is important that you do take the next sheet as there are four different types of sheet to ensure that all households get an equal probability of selection.

2. On the front of the sheet stick on your serial number label with barcode for the address concerned.
3. After talking to a responsible adult at the address, list all the households living there at your first call.



This procedure will vary according to the particular layout of the address but it must be carried out in the way described below so that you (or another interviewer) can re-identify the household selected.



The total number of households you have listed should be the total number at the address.

4. Listing procedure

1. If the address is a block of numbered flats you should simply list them in numerical order, starting with flat 1,2,3 etc or A,B,C etc.
2. If the address consists of unnumbered flats or bed-sitters, whether in a purpose built block or converted house, you should list the flats in a systematic way, starting with the lowest floor and working in a clockwise direction on each floor, starting from the front left-hand side of the property. Thus, if the address contained eight households, four on each floor, you would list them starting with the flat immediately on your left entering the main door.
3. If the address is marked as a 'Divided address' on your address list, you should list the households only at those parts at which you have been instructed to interview:


FOR EXAMPLE: If you were asked to interview at 12A High Street (and only 12A) and when you arrived you found four separate households within 12A then you would list only those four and would exclude those at 12B, 12C etc. However, if you were asked to interview at 12B and parts not listed and 12A was the only other part listed, but the address contained C,D and E then you would need to list all the households at 12B,C,D and E, and carry out your concealed multi-household procedures.

4. Remember to include all flats that are known or appear to be empty. However ineligible addresses, such as businesses or derelict accommodation, should be excluded from your listing.
5. Column 4 tells you which household you are to interview according to the number of households found at the address. Ring the row number of the selected

household in column 1 (this is not the number that you will eventually use). Once the interview has been completed, enter the outcome code in column 5.

The household that you select should ALWAYS be numbered (1).

You should return the multi-household selection sheets to the Titchfield office, room 5002, for booking in.


 You will be required to enter the total number of households listed on your selection sheet (column 3) into the Blaise questionnaire.

Please note: if you are working in Scotland some addresses will have a multi-occupancy indicator on the address list. You are therefore pre-warned that there will be more than one household living at the address. However, you will still only interview at a single household. Use the household selection sheet, as described above, to ensure you make a random selection.

5. KISH sampling

You should list all household members who satisfy the age criteria (19-64) and are not pregnant, potentially pregnant or breastfeeding, on form K1 – doorstep selection sheet.

One person per household will be selected for interview using a Kish Grid (K2)¹. The total number of eligible people will be recorded in the Blaise program as will the person number² of the person selected. (We need this information for the data analysis to calculate the person's chance of selection.)

 one eligible individual is selected per household.

6. Ineligible

1. People younger than 19 or older than 64.
2. Pregnant, potentially pregnant or breastfeeding

Women who are pregnant or breastfeeding their baby are NOT eligible to take part in the survey - because their nutritional status and physiology will be significantly different to that of women of the same age who are not pregnant or breastfeeding.

If, when you make your initial visit, you see that a woman is obviously pregnant or breastfeeding then you can explain why we are unable to include them in the survey. Otherwise you will need to ask the question of women of child bearing age before you begin the kish selection process.

7. Kish grid listing

1. List all eligible household members on the doorstep selection grid (K1) column b).
2. If two or more adults are listed then you should use the Kish Grid (K2) to select the respondent and for interview. For example, if you are interviewing at address number 6 from your quota list of addresses then use address 6 as your row identifier and then use the number of eligible adults listed as your column identifier. The intersection will tell you which person listed on form K1 you should interview.

¹ Please make sure you are given 2 copies of the Kish Grid in your packs.

² As recorded in the household box.

3. You will need to record the total number of people listed on the doorstep selection grid in the Blaise program as well as the actual person number of the respondent selected as listed in the household grid and not the doorstep selection sheet.

NOTE: You should only list individuals present in the household who are eligible to take part in the survey. Those outside of the survey age-range and women who are pregnant, potentially pregnant or breastfeeding are also excluded for the reasons given above.

If you can find out in advance if a member of the household is pregnant, potentially pregnant or breastfeeding then you can exclude them from the doorstep selection sheet listing. However, you may not find out that this is the case until after you have started the Blaise interview and have checked directly with the women herself. In which case you explain why you cannot proceed. If there are no other eligible household members then you should withdraw and the case will be given an outcome code of ineligible (61). If however there are other eligible household members you should return to the doorstep selection sheet (K1) delete the pregnant women from the listing. Re-number the eligible people in order and make the selection again using the Kish grid (K2). Obviously if there is only one other eligible household member then that is the person you should choose to interview.



You will also then need to revise the total number of people listed on the doorstep selection sheet.

7 Queries

Information on address lists and locating addresss:

SIU Titchfield: 01329 81 3028

Other sample/eligibility queries:

Lynne Henderson: 020 7533 5385
Michaela Pink: 020 7533 5465

**NATIONAL DIET AND NUTRITION SURVEY
OF ADULTS AGED 19 TO 64 YEARS
PA322**

MULTI-HOUSEHOLD
TITCHFIELD
SELECTION SHEET (A)

TO BE RETURNED TO

H1

H1

Serial number label

LIST OF HOUSEHOLDS

H/HOLD NO (1)	DESCRIPTION OF HOUSEHOLDS EG. LOCATION AND SURNAMES (2)	NO OF H/HOLDS FOUND AT ADDRESS (3)	INTERVIEW AT H/HOLD (4)	OUTCOME CODE (5)
1		1	1	
2		2	1	
3		3	1	
4		4	4	
5		5	1	
6		6	6	
7		7	4	
8		8	7	
9		9	8	
10		10	3	
11		11	8	
12		12	3	
13		13	5	
14		14	11	
15		15	3	

IF MORE THAN 15 HOUSEHOLDS PLEASE TURN OVER

Procedure:

1. Note down the households on the table above. This must be done systematically. If numbered, then list in numerical order (ie, flat 1,2,3, etc). Otherwise start at the lowest floor and work in a clockwise direction.
2. Ring the number of households found at column 3. Read column 4 to identify which households are selected for interview. Ring the selected household number in column 1.
3. Return this household selection sheet to Room 5002, Titchfield.

H/HOLD NO (1)	DESCRIPTION OF HOUSEHOLDS EG. LOCATION AND SURNAMES (2)	NO OF H/HOLDS FOUND AT ADDRESS (3)	INTERVIEW AT H/HOLD (4)	OUTCOME CODE (5)
16		16	1	
17		17	12	
18		18	14	
19		19	1	
20		20	2	
21		21	19	
22		22	11	
23		23	17	
24		24	12	
25		25	18	
26		26	18	
27		27	8	
28		28	12	
29		29	15	
30		30	7	

IF MORE THAN 30 HOUSEHOLDS PLEASE RING RESEARCH:

020 7533 5321 or 020 7533 5392

IN CONFIDENCE

Area No	Address No	Check Letter	Wave Number

K1***K1******K1*******

Interviewer's Name _____

Auth No

--	--	--	--

Doorstep selection

Please complete for all eligible households. Only list eligible adults aged 19 to 64. Do not list women who are pregnant, potentially pregnant or breastfeeding.

(a) Pers Ring	(b)	(c) M F	(d) Age	(e) Number adults, starting with the eldest
01		1 2		
02		1 2		
03		1 2		
04		1 2		
05		1 2		
06		1 2		
07		1 2		
08		1 2		
09		1 2		
10		1 2		
11		1 2		
12		1 2		
13		1 2		
14		1 2		

If two or more adults are listed in the box above, use the K2 Kish Grid to select the respondent and ring selected respondent in column (e).

**NATIONAL DIET AND NUTRITION
SURVEY
OF ADULTS AGED 19 TO 64 YEARS**

KISH GRID [K2]

K2

Address	Number of eligible adults in household												
	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1	1	2	1	2	5	7	3	2	6	9	7	1
2	2	3	1	2	4	3	6	8	4	4	1	9	13
3	2	2	3	5	3	7	5	1	10	7	12	4	9
4	1	2	4	4	5	2	8	6	3	11	8	5	3
5	2	1	2	3	1	4	1	2	1	3	6	12	8
6	1	3	1	1	6	1	3	7	9	5	2	11	4
7	1	2	3	3	4	6	4	9	6	2	5	8	6
8	2	1	4	4	1	7	2	4	8	8	11	2	12
9	1	3	4	5	3	1	4	5	5	10	7	6	11
10	2	3	1	2	5	6	7	8	7	9	10	13	2
11	2	2	3	4	2	3	5	4	6	1	4	10	14
12	1	1	2	2	6	5	2	1	5	5	3	1	5
13	2	1	4	1	4	4	1	7	2	8	11	3	7
14	1	2	2	3	1	2	3	2	10	4	10	5	10
15	2	3	3	5	5	2	8	3	7	6	5	10	14
16	1	2	1	3	3	1	6	5	3	10	1	1	5
17	1	1	3	5	6	4	8	9	4	7	9	9	6
18	2	3	4	4	2	7	2	6	9	3	4	2	13
19	2	3	1	1	2	3	7	8	8	1	2	3	4
20	1	2	2	2	5	5	3	2	1	2	8	12	10
21	2	1	2	4	3	6	1	1	10	11	7	8	7
22	1	2	4	5	4	2	5	6	8	9	6	4	8
23	2	3	3	2	1	7	4	7	9	4	12	13	9
24	1	1	1	3	6	3	6	5	6	2	3	11	3
25	2	3	1	1	4	4	8	3	1	9	5	6	1
26	1	1	3	1	5	6	2	9	5	10	12	7	2
27	1	2	4	2	1	5	5	4	3	5	6	4	11
28	2	3	2	5	2	1	3	8	7	8	7	5	12
29	2	1	1	3	6	5	7	9	4	6	10	1	12
30	1	2	4	4	3	1	4	4	2	7	9	11	11
31	1	3	2	5	4	3	8	6	1	4	11	9	7
32	2	1	3	4	6	1	5	3	9	2	8	12	4
33	1	1	2	1	2	5	7	3	2	6	9	7	1
34	2	3	1	2	4	3	6	8	4	4	1	9	13
35	2	2	3	5	3	7	5	1	10	7	12	4	9
36	1	2	4	4	5	2	8	6	3	11	8	5	3
37	2	1	2	3	1	4	1	2	1	3	6	12	8
38	1	3	1	1	6	1	3	7	9	5	2	11	4
39	1	2	3	3	4	6	4	9	6	2	5	8	6
40	2	1	4	4	1	7	2	4	8	8	11	2	12

INELIGIBILITY

1. The survey as a whole

Adults aged less than 19 years or greater than 64 years are not eligible to take part in the survey. Furthermore, pregnant women or women who might potentially be pregnant or those who are breast feeding are excluded from taking part in the survey.

2. 24-hour urine

Women may not wish to provide a 24-hour urine sample during their periods. This does not exclude them from the survey but means that you will have to arrange a convenient time for them to take part in this aspect.

3. Blood sample

People with a bleeding or blood clotting disorder are excluded from providing a blood sample. Your phlebotomist will check this before proceeding.

4. Self-tooth count

Excludes people without any teeth at all.

LABELS AND SERIAL NUMBERS

1 Types of label

You are provided with the following types of label:

- **1 interviewer address label, to use in your notebook**

Example of Interviewer address label and standard contents

NDN 123/45/A	MO No
THE STREET	
LOCALITY	
TOWN	COUNTY POSTCODE
**** WARNING DIVIDED ADDRESS****	
Local Authority	GR 12345/12345

(MO appears for Scottish addresses only)

- **12 postal address labels, containing serial number**

Example of Postal address label

NDN 123/56/A
1 THE STREET
LOCALITY
TOWN
COUNTY
POSTCODE

- **96 standard (paper) serial number labels**

Example of serial label

NDN 123/45/A
123/45/a
123/45/A

- **28 Cryo serial number labels**

Example of Cryo label

*12345A
*
*12345A
*
NDN 123/45/A

2 General points about using the labels

By providing you with labels we hope to avoid any transcription errors that might occur if we asked you to write the serial number on all the various documents. However the system will only work if **you use the correct serial number** for the correct person on **all** the documents for that person.

Before you start your quota of work you should therefore create a separate document pack for each case in your quota with all the fieldwork documents you are going to need, and keep the sets of correct labels with the set of documents.

You should use one of the address labels provided to attach to the back of the set of standard serial number labels, so that you always have a check that you are using the correct serial number label for an address.

The importance of using the correct serial numbers on blood and urine samples, consent forms and documents relating to the measurement of blood pressure cannot be over emphasised.

3 Address labels

These should be used as follows:

- 1 interviewer address label in your notebook
- 4 postal address labels on the GP notification form
- 1 postal address label to be stuck to the back of serial number labels; this should ensure that you use the correct serial number labels for the correct address.
- You may use 1 postal address label on the document pack that you make up for each serial number. **If you do this you MUST remove it** from the wallet **before** you return it to the office with all its contents or you are compromising the respondents confidentiality

If the address information on the labels is incorrect please **immediately correct all address labels**.

4 Standard serial number labels

These should be **used on all the paper documentation**, as detailed throughout the interviewer instructions, except:

the GP notification form Z1 which uses an address labels.

Note that the phlebotomist will want to have some standard serial number labels for use on his/her phlebotomy documentation. You should provide these from your set of labels. Although you have 96 serial number labels, given the number of documents involved you may find that there are insufficient for every page of the Home Record Diary to be labelled. Please always use a label on the front cover and the pages for the first day; thereafter you may write in the **serial number in full** if necessary.

5 Cryo serial number labels

These are labels which are able to withstand very low temperatures and will be used to label the urine sample and the blood samples, which will be stored at very low temperatures in a freezer.

You will need to use one cryo serial number label for each syringe containing a sample of urine. The remaining cryo serial number labels should be handed over to the phlebotomist.

6 Format of the serial number

The serial number has more parts than you would normally have in a serial number; this is to meet the needs of the Human Nutrition Research Unit (HNR) in identifying the blood and urine samples from the survey amongst all the other samples they have for analysis, and to ensure that the correct serial number is attached to the correct blood/urine sample.

The serial number takes the form:

NDN ; ; ; / 0 0 / P

Where :

NDN = National Diet and Nutrition (Survey)

; ; ; = area number, 101 - 252

0 0 = address number, range 01 to 99

P = a check letter , A-Z, except I, O and U

Examples:

NDN 016/18/Q = area 16, address 18, check letter Q,

NDN 031/02/B = area 31, address 02, check letter B,

The addition of the check letter at the request of the HNR, means that when they subsequently key in the results from the blood analyses, by checking against a master list they can check that they have not mis-keyed the serial number. They will know, for example that serial number NDN 016/18/D is an invalid serial number - the check letter associated with area 016 and address 18 is 'Q'; NDS 16/18/Q is valid.

7 Bar codes

We have pioneered the use in SSD of barcodes on survey documentation. Both ONS and HNR have the necessary equipment to read the barcodes.

Each paper document that needs to be 'booked-in' has a barcode. Each serial number also has it's own individual barcode that appears on the labels. This should enable faster throughput of returned document and enable us to keep track of where any of the

documentation is at any time. We hope the use of the barcodes will further reduce the risk of later errors associated with ms-keying as documents and samples pass through the later stages in the survey process.

CONSENTS

Before the respondent can take part in some aspects of the survey certain consents need to be obtained. HNR is responsible for producing the various consent forms.

1. Consents required

The following consents need to be sought at various stages:

- to notify the respondent's GP of their participation in the survey – Z1
- to inform the respondent's GP of their blood pressure – Z3
- to obtain a blood sample - Z4
- to inform the respondent's GP of the results of the blood analyses – Z4
- to store any remaining blood after the analyses have been completed – Z4
- to flag the respondent on the NHS Central Register (NHSCR) – Z5

Summary checklist Z10 should be returned to HNR after completion, detailing the information which has been sent back to HNR for each respondent.

2. GP notification of participation – Z1

2.1 You need:

- GP notification forms (4 part) – Z1
- HNR addressed pre-paid envelopes
- Pre-paid blank envelopes
- GP notification letter – Z2
- Purpose leaflet
- Address label

As soon as you have verbal agreement to take part in the survey, consent must be obtained to notify the respondent's GP of their participation in the survey.

If this is refused, then the respondent can take part in all other aspects, including providing a blood sample, taking blood pressure and the anthropometric measurements.

2.2 Completing the forms

For each respondent recruited to the survey you must complete and return consent form Z1 (GP notification form).

Where a respondent has a GP and gives permission for their GP to be informed of their participation in the study then you should complete form Z1 as described below.

Even if the respondent does not have a GP or refuses permission for their GP to be notified of their participation in the study you should complete the form and indicate whether refusal or no GP. However, it is important that you then do NOT send the top copy to the GP but return it to HNR instead.



Remember: For each respondent recruited you must complete and return, as indicated below, a GP notification form. If the respondent refuses consent to inform their GP of their participation, or are not registered with a GP then you will not need to send the top copy to the GP. You will instead return it along with the first copy to HNR. The second copy should be sent to Titchfield.

(a) If consent is given:

- Complete all the information on the form
- Ring code 1 at the bottom of the form to indicate that consent was given

Please take particular care in getting the respondent's details correct. Don't forget that the GP needs to be able to identify the respondent as one of his/her patients. Please make sure you indicate whether the respondent is male or female, their title (Mr, Mrs, Miss, Ms) and their marital status.



Tip: A GP may know a married woman by her married or her maiden name – you may need to check with the respondent.

Now send the completed copies of the forms as follows:

Top copy of the notification form:

- Send immediately with the GP notification letter (Z2) and a copy of the general purpose leaflet (L1) to the respondent's GP in the pre-paid blank envelope. You will need to write the GP's name and address on the envelope.

First carbon copy of the notification form:

- Send immediately to Lucy Winter at HNR in a white pre-paid pre-addressed envelope. HNR does not need copies of the covering letter to GPs or the purpose leaflet.

Second carbon copy of the notification form:

- Retain and return to ONS with all other completed consent forms, but separately from other documents for the same serial number. All consent forms contain personal identifiable information, and must **NOT** be sent to ONS with other completed fieldwork documents for the serial number.

Third carbon copy of the notification form:

- Give this to the respondent.

(b) If consent is refused, or the respondent is not registered with a GP:

- Complete all the information on the form, except the GP details – strike through the section marked 'GP DETAILS'
- Ring code 2 or 3 to indicate the reason for no GP details

Now send the partially completed copies of the form as follows:

Top copy and first carbon copy of the notification form:

- Send immediately to Lucy Winter at HNR in a white pre-paid pre-addressed envelope.

Second carbon copy of the notification form:

- Retain and return to ONS with all other completed consent forms, but separately from other documents for that serial number. All consent forms contain personal identifiable information, and must NOT be sent to ONS with other completed fieldwork documents for the serial number.



Remember: Please ensure that the information can be clearly read on all copies of the form.



Remember: Each copy of the form must have an address label securely attached. Note that this is the only consent form where an address label is required: on all other consent forms, standard serial number labels are used.

2.3 Respondents who are not registered with a GP

If a respondent is not currently registered with a GP you may encourage him/her to register. The local Post Office will provide them with a list of GPs in their area. If, during the course of your visits to the household the respondent becomes registered then you can complete the GP notification form.

2.4 GP refusal

In very rare circumstances the respondents GP may decide that they should not participate in the study for whatever reason. If this happens you should contact the survey Doctor and inform the field office. You can code these cases as ineligible – Hout = 61. We did not have any cases of GP refusal for respondent to participate at the feasibility study.

3. Obtaining signed consent procedures – general points

3.1 Date of signature

Please check that the signatures on all consent forms are dated at the time they are signed.

3.2 Progress Block

Each time you obtain a consent, key it into the Progress Block (see separate instructions on the Progress Block).

3.3 Returning consent forms to ONS Titchfield room 5002.



Remember: Because the consent forms contain personal identifiable information, they must NOT be sent to ONS with other completed fieldwork documents for that serial number, as the information in the fieldwork documents then becomes identifiable. All consent forms should therefore be returned to ONS separately from other fieldwork documents for that serial number.



Remember: Do NOT retain all the ONS copies of the consent forms until the end of your quota – despatch all the consent forms for the same serial number as soon as you have completed them all.

4 Blood pressure consent form – Z3



Remember: You can still take blood pressure if the respondent is not registered with a GP or if they have refused to allow you to notify the GP, as long as the respondent provides written consent on this form. If the respondent refuses to give written permission, there is no need to return the empty form.

4.3 You need:

- Blood pressure consent form (3 part) – Z3
- Serial number labels

4.4 Completing the forms

Attach a serial number label to each part of the form

Complete all the information on the form, ensuring that it is clearly readable on all copies.

Ask the respondent to read, sign and date the form in the two places specified. The first one obtains consent to take the blood pressure readings. This one is necessary to proceed with the blood pressure readings. The second one obtains consent for the respondent's GP to be informed of the readings. If the respondent refuses this second signature or does not have a GP, you can send the form back with just the first signature and proceed.

4.5 Returning the completed consent forms

If signed consent to taking blood pressure is obtained then, after the blood pressure measurements have been made:

- Copy the 3 systolic and 3 diastolic readings onto the form
- Keep the top copy of the completed consent form until you have completed the blood sample consent form (Z4). Then return both completed consent forms, Z3 and Z4, **immediately** to Lucy Winter at HNR in a white pre-paid pre-addressed envelope. If subsequently consent to take a blood sample is refused, then return the completed blood pressure consent form (Z3) on its own, **immediately** to Lucy Winter at HNR in a white pre-paid envelope
- Hand the first carbon copy of the completed BP consent form to the respondent for them to retain

- Keep the second carbon copy of the completed BP consent form and return it to ONS with all the other completed consent forms for that serial number, as described above

5 Blood sample consent form – Z4



Remember: if consent to notify the respondent's GP of his/her participation in the survey is withheld or the respondent is not registered with a GP, you can still proceed with taking a blood sample if the respondent gives written consent on this form.

5.1 You need:

- Blood sample consent form (2 pages, 4 part) – Z4
- HNR addressed pre-paid envelopes
- Serial number labels
- Purpose leaflets L2, L6, L6a and L6b to show respondent

5.2 Completing the forms

Attach a serial number label to each part of the form

Complete all the information on the form, ensuring that it is clearly readable on all copies.

Signatures required:

- Before blood can be taken, signed consent is required for the following:

Taking/providing a blood sample

- If consent to pass the results to the GP is not given, blood can still be taken.



Remember: Taking blood without the necessary consents being fully and properly completed equates to taking blood without consent.

- Signed consent is also sought for any remaining blood to be stored and analysed in the future for analyses related to nutrition. If this storage is refused, provided ALL other consents have been signed, then blood may still be taken. Any remaining sample will be destroyed by HNR.

5.3 Returning the completed consent forms

If consent to take the blood sample and report the results to the respondent's GP are obtained then:

- Send the top copy together with the completed blood pressure consent form (Z3) **immediately** to Lucy Winter at HNR in a white pre-paid, pre-addressed envelope
- Hand the first carbon copy of the completed consent form to the respondent for them to retain
- Keep the second carbon copy of the completed consent form and return it to ONS with all the other completed consent forms for that serial number, as described above

- Hand the third carbon copy of the completed consent form to the phlebotomist when you visit to take the blood sample; the phlebotomist will return this copy to HNR with the other phlebotomist documentation

6 Consents summary card – Z9

In order that Lucy Winter can check that she has received the relevant GP, BP and blood sample consents for a particular case we are asking you to complete the card Z9, indicating the outcome to the various consents.

As soon as you have completed the BP and blood sample consents (Z3 and Z4), including recording the blood pressure measurements on Z3, you should return the card indicating the outcome to the various consents **immediately** to Lucy Winter at HNR.

Attach a serial number label to the card, where indicated, and then ring the outcome for each of the 3 documents – GP notification of participation; BP consent and BP measurement; and blood sample consent. Note: if consent to obtain the sample was given, but consent to store any residual sample was refused, then code consent to blood sample = 'Yes'.

A cross check can then be made that all the appropriate consent forms have been received at HNR, and that where a particular consent form has not been sent it is because that consent was refused.



Remember:

- This card must be completed for EVERY serial number
- The card must be sent at the earliest possible time, NOT retained until the remaining consent forms are complete
- If on receipt of this card it is apparent that completed consent forms have not yet been received at HNR you will be requested URGENTLY to provide them – this may mean returning to the respondent

7 Consent to flag on the NHSCR – Z5

EVERY respondent taking part in the survey should be asked if they consent to their name being flagged on the NHSCR. Respondents who refused to let their GP be notified of their participation in the survey, or who are not registered with a GP are eligible to be asked for consent to flagging.

If consent to flag on the NHSCR is not given this does not affect eligibility to participate in any other aspect of the survey.

7.1 You need:

- NHSCR consent form (3 part) – Z5
- HNR addressed pre-paid envelopes
- Serial number labels

7.2 Purpose

The Department of Health and the Food Standards Agency would like us to obtain consent for the names of participating adults to be added to the National Health Service Central

Register (NHSCR) for the purpose of monitoring specific aspects of their future health – being notified if they develop a cancer and, when they die, their age and the cause of their death. Flagging does not mean that we have access to the person's medical records and it does not mean that they will be contacted personally in the future.

7.3 Completing the forms

Attach a serial number label to each part of the form.

Complete all the information on the form, ensuring that it is clearly readable on all copies.

- If the respondent is married or has previously had different surnames, then record all previous names
- Ensure that date of birth and age are accurately recorded
- Record NHS number – we would advise you to ask to see their medical/health card as this will have their NHS number on it. This is different from the NI number shown on payslips, P45s, National Insurance cards etc. Please do not record NI number by mistake. If the NHS number is not known, and the respondent's medical card is not available, the respondent may be prepared to phone his/her GP to ask for the NHS number; note that this information will not be given by a GP, either over the phone or in person, to an interviewer.

Obtain the signed consents

7.4 Returning the completed consent forms

- Send the top copy to Lucy Winter at HNR in a white pre-paid, pre-addressed envelope
- Hand the first carbon copy to the respondent for them to retain
- Keep the second carbon copy and return it to ONS with all the other completed consent forms for that serial number, as described above

8 Summary checklist– Z10

In order that Lucy Winter can check that she has received the relevant GP, BP and blood sample consents, GP notification and NHSCR flagging forms for a particular case, we are asking you to complete the card Z10, indicating whether the information has been despatched to HNR.

Attach a serial number label to the card, where indicated, and then tick the boxes as appropriate as a record that the information has been despatched to HNR.

A cross check can then be made that all the appropriate consent forms have been received at HNR, and that where a particular consent form has not been sent it is because that consent was refused.



Remember:

- This card must be completed for EVERY serial number
- The card must be sent at the earliest possible time, once all the forms are complete
- If on receipt of this card it is apparent that completed consent forms have not yet been received at HNR you will be requested URGENTLY to provide them – this may mean returning to the respondent

9 Summary of consents required for procedures

<u>Blood pressure</u>	written consent – form Z3
<u>Blood</u>	written consent – form Z4
<u>NHSCR flagging</u>	written consent – form Z5
<u>24 hour urine collection</u>	verbal consent only

10 Queries

Queries on the GP notification form, and all the consent forms, including supply of documents to Lucy Winter, HNR on 01223 437541 (direct line).

DEFINITIONS

Household members

Having identified the members of the household you will need to identify the following individuals:

1. Head of Household (HoH)
2. Highest Income Householder (HIH)
3. Respondent – person to be interviewed

Head of Household

The definition for this is as follows:

- In a household containing only husband, wife and children under 16, the husband is always the HoH.
- Similarly, when a couple are living together/cohabiting the male partner will be the HoH.

In all situations where there are relatives in the household or where some or all of the household are unrelated, you should ask the following question:

'In whose name is the accommodation owned or rented?'

Except that a husband always takes precedence, the person named in reply to this question should be recorded as HoH.

Occasionally more than one person will have equal claim to be HoH. In these cases, the following rules apply:

1. Where they are of the same sex, the eldest is HoH
2. Where they are of different sexes, the male is HoH

Highest Income Householder

For many years, the HoH has been used by data analysts as the 'household reference person'. But HoH has been criticised for being outdated and sexist. Therefore for government surveys there will be a new definition of the household reference person – the Highest Income Householder.

Temporarily, we are asking you to collect both HoH and HIH information, so that we can assess the effect of changing.



There is no requirement to find out how much income people have; just who has the highest.

Similar to HoH, you will start with asking in whose name is the accommodation owned or rented.

- Where the accommodation is owned or rented by only one person, that person will automatically become the new reference person (HIH) without needing to ask about income.
- Where there are two or more householders, this question will appear:

'You have told me that [names] jointly own or rent the accommodation. Which of you/who has the highest income (from earnings, benefits, pensions, and any other sources)?

*'INTERVIEWER: THESE ARE THE JOINT HOUSEHOLDERS:
[display of names and person numbers up to 10]*

ENTER PERSON NUMBER – IF 2 OR MORE HAVE SAME INCOME, ENTER 11.'

- If respondent asks for period to average over – 1 year.
- Prompt as necessary for joint householders: is one of them the sole person with paid work or occupational pension?

If you code one person, there are no more questions.

If two or more householders have the same income, you enter code 11, in which case you then need to enter the eldest at the next screen.

Respondent

The respondent refers to the person you have selected for interview at this household.

ORAL HEALTH: TOOTH COUNT PROTOCOL

1. Introduction

We know that for those over 65 years there is a two-way relationship between diet and oral health: not only does diet and nutrient intake and status affect our oral health, but also our oral and dental health affects our food choice. We would like to find out whether a similar relationship exists for younger people as well.

As an indicator of oral health we need to know how many natural teeth the respondents have and how many of their teeth have amalgam fillings. We are asking about amalgam fillings in particular because the survey dentists are interested in mercury: they want to know more about the associations between mercury status, diet and the number of mercury (dental or silver amalgam) fillings. This information will enable us to look at the relationship between diet and oral health.

We are using a self counting methodology to establish how many teeth respondents have and how many teeth they have with amalgam fillings.

2. Equipment and documents required

- Counting your teeth and amalgam-filled teeth: Examples leaflet (D8)
- Respondent's tooth count form: Counting your teeth and amalgam-filled teeth (D7)
- 1 serial number label
- 1 disposable dental check-up mirror

Leaflet D8 shows some examples of amalgam fillings to help respondents identify them; you should leave this at the placement interview when you give the respondent the tooth count form D7.

3. Eligibility

All respondents who have ANY natural teeth are eligible for the tooth count.

- During the placement interview you will have asked the following question:

Do you have any of your own natural teeth?

Yes/No

- If the respondent has **NO** natural teeth, you should ring the following option on the front of form D7:

Yes, I wear a complete denture in my upper and lower jaw..... 4

The respondent does **not** then need to complete the tooth count.

- If the respondent has some natural teeth they should answer the question on the front of the form about complete dentures. If they have a complete denture (ie no natural teeth) in either jaw they will only need to fill in the parts of the form relating to the jaw with teeth.

4. The tooth and amalgam-filled tooth count

4.1 Counting teeth

We need the respondent to count how many natural teeth they have in their upper and lower jaws separately.

The tooth count has been designed as a **self-completion** form (D7), but you should be aware of what respondents are being asked to do in case you are required to give any clarification or further explanation.



Remember: you should not offer to help the respondent to carry out their tooth count and should politely refuse if asked.

They should count **every** tooth:

- crowns should be included;
- if any part of a tooth is visible (or can be felt) above the gum, this should be included as a tooth, eg younger respondents may have wisdom teeth coming through and some people may have very worn teeth.

4.2 Counting the number of teeth with dental amalgam fillings

We also need the respondent to count the number of teeth they have that have dental amalgam fillings. A dental amalgam filling looks grey or black on the surface. They should only count the number of teeth that have these grey or black-looking fillings. They should not count any teeth with white, shiny gold or **very shiny silver** fillings. There are pictures of amalgam fillings in leaflet D8.



Remember: a filling can be on the top or sides of a tooth and some people have more than one filling in the same tooth. If the respondent has any teeth with more than one filling, they should only count the filled tooth once – not the number of fillings. This is shown in Diagram 4 on form D7 and is illustrated in Pictures 3 and 4 in the Examples leaflet, D8.

4.3. Protocol for the interviewer

- **If you know the respondent has no natural teeth**, ring code 4 (Yes, I wear a complete denture in my upper and lower jaw) on the front page of the tooth count record D7 and return the form with the other documents for the serial number to ONS.
- **If the respondent has ANY natural teeth**, leave the respondent tooth count form D7, a disposable mouth mirror and the Examples leaflet D8 at the placement interview, explaining that you will collect the completed form at the end of the 7-day record-keeping period.

At the end of the 7-day record-keeping period you should:

- Collect the form, checking that it has been completed;
- Return form D7 to ONS with the rest of the documents for the serial number.

4.4. Protocol for the respondent

You will need to explain the procedure to the respondent using the following as guidelines. The respondent will be required to do the following:

- Record on the front page of form D7 whether they wear a **complete** denture in their upper jaw, lower jaw or both; partial dentures are not recorded as we only need to establish why no teeth are recorded for the upper or lower jaw.
- If they have any of their own teeth - continue with the tooth count.
- Dip the mirror into warm, not hot, water first to stop it fogging – they should use only lukewarm water or the surface of the mirror will melt.



Tip: The respondent may not need to use the dental mirror to help to count their teeth as this is done as much by touch as by sight. They may not need to use it to count the filled teeth in their lower jaw, because these can often be seen adequately in a well-lit mirror. They are most likely to need to use the dental mirror to help them count the filled teeth in their upper jaw, by holding the mirror behind their teeth and counting them in another mirror.

- Stand in front of a mirror so that when they open their mouth they can see into it. Good lighting in front of them will help – a bathroom mirror with a light above it is a good place.
- Take out any partial dentures they wear before starting to count.



Tip: If the respondent has difficulty in seeing or counting their teeth or filled teeth they could ask a member of their family or a friend to help them.



Tip: Comments from respondents on this procedure from the Feasibility study indicated that it is very worthwhile practising the counting before writing anything on the form, and you should encourage respondents to do this.

Counting teeth - the lower jaw

- If they have a complete denture with no natural teeth in their lower jaw, they should go on to count the teeth in their upper jaw.
- If they have some natural teeth, they should follow these instructions:
 - Open their mouth and look at the teeth in their lower, bottom jaw.
 - Put their index finger, right or left whichever is easiest, into their mouth and touch the outside of the very last back tooth on one side of their bottom teeth. By the outside of the tooth we mean the side that is closest to their cheek. See Diagram 1 on form D7.

- Keeping their finger on the outside of the teeth they should move it slowly towards the middle of their mouth, counting each tooth as their finger moves over it, and carry on round, with the same finger, until they reach the very back tooth on the other side of their bottom jaw. This is shown in Diagram 2 on form D7.
- As they move their finger over the outside of their teeth, they will feel the grooves between each tooth. These grooves will help them to find the end of one tooth and the beginning of the next as they are counting. This is shown in Diagram 3 on form D7.
- They should practise feeling their teeth and grooves and counting them BEFORE they write down the number of teeth in their lower jaw. When they are happy with the way they are counting the teeth in their lower jaw they should write down the number of teeth they have in the box at the bottom of page 2 of form D7.

Counting teeth - the upper jaw

- If they have a complete denture with no natural teeth in their upper jaw, they should go on to count the number of filled teeth in their lower jaw.
- If they have some natural teeth, they should use the same methodology as described for counting the teeth in the lower jaw. Counting the upper teeth is generally a bit more difficult, because they are more difficult to see. The respondent may find using the mouth mirror helps or they might want to ask a member of the family or a friend to help.
- They should practise feeling their teeth and grooves and counting them BEFORE they write down the number of teeth in their upper jaw. When they are happy with the way they are counting the teeth in their upper jaw they should write down the number of teeth they have in the box on page 3 of form D7.

Counting the number of filled teeth – the lower jaw

- They should stand in front of a mirror so that when they open their mouth they can see into it. Good lighting in front of them helps – a bathroom mirror with a light above it is a good place.
- Take out any partial dentures they wear before starting to count.
- If they have a complete denture with no natural teeth in their lower jaw, go to the next section to count the filled teeth in their upper jaw.
- If they have some natural teeth:
 - Open their mouth and look at the teeth in their lower, bottom jaw.
 - Start with the very back tooth on one side and work round to the very back tooth on the other side of their lower jaw, counting the teeth which have grey or black-looking fillings.
 - They should practise counting their fillings BEFORE they write down the number of teeth with grey or black-looking fillings in their lower jaw. When they are happy with the way they are counting the number of filled teeth in their lower jaw they should write down the number of filled teeth they have in the box on page 4 of form D7. If they have no teeth with fillings in their lower jaw they should write '0' in the box.

Counting the number of filled teeth – the upper jaw

- If they have a complete denture with no natural teeth in their upper jaw, they have finished the tooth count.
- If they have some natural teeth:
 - They should open their mouth and look at the teeth in their upper, top jaw.
 - Start with the very back tooth on one side and work round to the very back tooth on the other side of their upper jaw, counting the teeth which have grey or black-looking fillings.
 - They should practise counting their fillings BEFORE they write down the number of teeth with grey or black-looking fillings in their upper jaw. When they are happy with the way they are counting the number of filled teeth in their upper jaw they should write down the number of filled teeth they have in the box on page 4 of form D7. If they have no teeth with fillings in their upper jaw they should write '0' in the box.



Remember: co-operation with the oral health component of the survey is voluntary and independent of co-operation with the dietary survey, although our experience on the Feasibility study was that very nearly all those who took part in the dietary survey also co-operated with the oral health survey.

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THE DIETARY ASSESSMENT SCHEDULE - F7

This document contains three sections which relate to the dietary record:

- record of the respondent's typical eating pattern - Section A
- record of foods usually eaten by the respondent - Section B
- quality assessment of the dietary record - Section C

1 Eligibility

This schedule applies only to those who **fully or partially** complete a dietary record.



Remember: a schedule should be returned for each serial number, except outright refusals, to take part in the survey. If the dietary record is refused, then complete the front page only and return the document to ONS with all other documents for the serial number.

A: TYPICAL EATING PATTERN

A1 Purpose

This Section is designed to help you, the interviewer, and the nutritionists and coders at HQ, when coding the dietary record. It will not be entered into the Blaise object, nor will it be analysed.

The Section collects information on the respondent's typical eating pattern, what meals they have, their approximate times, and the types of food eaten at the different times. We know from our own experience and from previous studies, that for most people behaviour on weekdays varies from that on weekend days, and that Saturdays are different from Sundays.

For example:

- if you know that the respondent has breakfast on weekdays and weekend days, and there is no entry at breakfast time for a particular day, you should be alerted to the fact that it is missing and check with the respondent whether they did skip breakfast that day, or whether they forgot to record what they ate.
- if a respondent has a drink to take to bed, this should alert you to checking that there is such an entry each day. If this record shows that typically the respondent has a cooked meal at lunchtime, but the entries show only a snack, again you should be ready to check whether their normal habit changed (and why) or whether they are failing to record accurately what they are eating.



Remember: this is not infallible information; people change their habits for good, and valid, reasons, but you should be alert to these changes so that you can always check that the record is complete and accurate.

A2 Timing

This section should be completed after carrying out the initial face-to-face interview, but before placing the 7-day dietary record.

A3 Completing the information

- Q1 Record the approximate times that the various eating occasions take place on weekdays and on weekends days. If the respondent does not have a particular eating occasion listed, for example, does not have supper, then in the appropriate space, write “not taken”.



Remember that this document is initially for your use; you can change the names of the eating occasions if those listed do not correspond to what the respondent takes, e.g. dinner is “not taken” but “high tea” replaces dinner and supper.

- Q2 For each occasion on which the respondent eats, write in a short description of the type of ‘meal’ it is.



There is no need to collect detailed menu information; what is required is a basic record of the type of meal. For example, for breakfast on weekdays - juice, cereal, toast and tea; on weekend days - a cooked breakfast with toast and coffee; on weekdays - a sandwich lunch with fruit or yogurt; at weekends - “something on toast”.



Tip: We have found that drinks (and food) taken in bed before getting up, and at night, are frequently missed in the dietary record, so please make sure that you check carefully whether these are part of the respondent’s usual eating pattern.

Please use the additional space on the schedule to record any other information about the respondent’s eating pattern that will be useful to you and to us.

- Q3 The purpose of this question is to alert you to the fact that you will need to use a catering questionnaire (F3).
- Q4 Check which days of the week the respondent buys food from the canteen. This will give you an idea of how often they may eat canteen food. If the canteen menu varies according to the day of the week, this information will be useful when you visit with the canteen questionnaire.

A4 Using the information

- You should have this information readily to hand when you are checking the entries in the dietary record with the respondent before you take the completed pages away for coding, and when you are coding.
- Make a note for yourself on the dietary record of any discrepancies that you find, which you can check when you next call.

- If you make notes on the dietary record of any such queries, please also annotate the record to show us that you did check the entry and the outcome.

B: USUAL FOODS

B1 Purpose

Again this section is to help you and the nutritionists and coders with checking and coding the dietary record. As with section A, this information will not be transferred into the Blaise object or subsequently analysed. Information is collected about a range of foods that are likely to appear frequently in the diary, about which you will need some detail in order to code accurately.

If details are missing about frequently eaten items, and cannot be collected at a subsequent call, then there will be some information available from this section about the type of food item that is usually purchased and consumed.



Remember: you should not expect that the information in this section will always correspond to that in the diary. For example, the respondent may usually have semi-skimmed milk, but if they run out, and the shop only has whole milk, you would correctly find an entry for whole milk in the diary.

B2 Timing

This section should be completed before leaving the dietary record, and is probably best collected immediately after completing section A.

B3 Completing the information

- Q1 For codes 3, 4 and 5 record the brand of milk usually used, and at code 6 specify the type if it is not among the types listed, e.g. unpasteurised.
- Q2 The full brand name, copied from the container, will give you the best information, e.g. Tesco Olive Gold Reduced Fat Spread.
- Q3 Again, looking at the container, record full details of the type and brand, e.g. Mazola Pure Sunflower Oil.
- Q4 Collect information about what the respondent usually drinks.
- Q5 Make any notes which will help you, e.g. buys cans to take in their packed lunch, but bottles for drinking at home.
- Q6 Make any notes which will help you, e.g. has white bread for toast and brown for sandwiches; buys a granary loaf for Saturday lunch.
- Q9 Looking at the container, check which type of juice it is: longlife/UHT juices come in TetraBrik/TetraPack cartons, are not refrigerated, and have a long shelf-life; pasteurised juices come in bottles or tall cartons with a 'roof', are refrigerated and have a short shelf-life.
- Q10 You will have asked this question during the interview, so ask it as a check question. If fruit or vegetables are home-grown, you may find it a help to list what is grown, but

only record what is available, fresh or from store, **at that time**. Remember that home-grown means in **their own** garden or allotment.

B4 Using the information

You should have this section to hand when you are coding the dietary record.



Remember: if there is insufficient detail in the dietary record for you to code an item that is included in this section, you should **not** assume that it will be the same.

You must always check the dietary record with the informant at your next call.



Remember: if you are unable to collect the missing information, you should still **not** make any assumption about coding a food item; flag the entry and the nutritionists will decide how it should be coded.

C: QUALITY ASSESSMENT

C1 Purpose

In previous dietary surveys, an interview has been carried out at the end of the dietary recording period when the person who completed the record was asked about how well it was kept. Comparing the views of interviewers and our assessments of the diaries with those of the person who completed the record, it has been evident that record keepers, quite naturally, tend to under report or not report problems, errors and omissions. Moreover interviewers have always said that they have felt uncomfortable asking these sorts of questions.

We have decided therefore that interviewers should be asked to make this assessment of the quality of the dietary record.

It is very important that we have this assessment. FSA and other users of the data are naturally concerned to know that the results from the survey are reliable and accurate, and although we can carry out some independent checks on the information collected, it can be very difficult. For example, some respondents quite genuinely live on a diet of soft drinks and snacks; some people will only eat the same thing in their sandwiches every day; will never eat fruit or vegetables; will eat 4 yoghurts at one sitting, etc, etc. We are therefore looking to you, as the person with the closest knowledge of the respondent, to make the assessment of the quality of the recording and weighing.



Remember: we want an objective assessment of the quality of weighing and recording.

Please do not let your answers be coloured by the ability, or personal circumstances, of the respondent. We know that some people will find it hard to keep the record and although they do their very best, it will not be an accurate record, because, for example, they copy over the weights of drinks and food items. Please, when making your assessment, disregard how difficult they found it; your answers must reflect what was actually done.



Remember: that we are interested in the final quality of the record; some people may need a great deal of support and help from you which will involve you in a lot of re-

writing and perhaps helping them with the weighing. If however at the end of the day the record *does* accurately reflect what was eaten, then your assessment should be based on this, the final product.

Most of this information will not be entered into the Blaise object; only the information at Q7 is keyed into Blaise by you. So, although the section takes the form of a structured questionnaire, please make any additional notes which you feel will be helpful, or add points which are not covered in these questions. This section will be carefully scrutinised by the nutritionists, and on the basis of your answers they will decide whether or not the dietary information is sufficiently accurate to be included in the dataset for analysis.


C2: Timing

You should complete this section as soon as you have completed coding the dietary record.

C3: Completing the information

Qs 1 and 2 Confectionery and snacks, biscuits and cakes, and drinks are the items most likely to be omitted. The Eating Pattern Check Sheet (F2) should alert you to occasions when these items are being missed, which is most likely to be during the middle days of the 7-day period.


Q3 When checking the dietary record you should be looking for weights which are repeated, especially for drinks. This suggests that a first drink was weighed and thereafter the weights have been copied over.

 **Remember:** It is quite difficult to make a fruit drink or a cup of tea or coffee with exactly the same weights of the constituent items each time.

Qs 4 and 5 Apart from missing items, is the information about food items accurate; were you able accurately to collect information on fats used in cooking; were all leftovers identified; etc?

Q6 There are many circumstances which might have affected the respondent's eating habits during the recording period; these should be recorded at this question. They might include going to a party or other celebration, being unwell, eating out more frequently than normal; visiting or staying with someone else, etc. Details of these situations should be recorded at this question with some indication of what the effects on the eating habits of the respondent were, e.g. drinking more alcohol than normal; bigger meals; more meals out, etc.

Q7 This question summarises your opinion of the quality of the dietary information. It measures two dimensions; completeness and accuracy of weighing, both of which are covered separately by earlier questions.

 **Remember:** The answer (single code) to this question must be entered into the Blaise object before transmission, so that it is available for analysis.

Q8 This question must **always** be answered.

RETURNING THE DIETARY ASSESSMENT SCHEDULE

If a dietary record was refused: return this schedule, completed on the front page only, to ONS (Titchfield), with all other documents for this serial number.

If the dietary record was partially or fully completed: return this schedule, fully completed, to ONS (Titchfield), tagged to the front of the Home Record Diary, with all other documents for this serial number.

THE DIETARY DIARIES



1. WEIGHING AND RECORDING

This section describes the method of weighing and recording the foods eaten. Detailed instructions on weighing and recording are given, followed by a summary, which should help you introduce the task to the respondent.

1.1. Weighing the Food Items

1.1.1. The scales

You will be issuing people with a lightweight electrical scale, powered by a 9v battery, called the Soehnle Quanta. The scales are easy to read because they give a digital readout. But apart from the weight of an object, the readout panel can tell you other things about the scale.

When you first switch on the scales, 8888 appears briefly, then a zero should appear. The scale is now ready for the container to be added.

If ---- appears, then the scale cannot register any weight as the item is too light for the scale.

If when something is weighed - - - appears, the scale has been overloaded, so use a lighter plate or cup.

If the digits appear disjointed, it means the batteries are failing. Replace with a new 9 volt battery, and claim for the cost.

If the plate is removed from the scale to add more food to it, a minus number will appear. When the plate is placed back on the scale the number will be positive.

The food scales are calibrated in 1 gram units up to 1kg, and in 2 gram units from 1-2kg.

The machine will switch off automatically after about two minutes.



Remember: The plate or cup can be removed from the scale to add food items, but the scale must be zeroed before removing the plate. In this way, when the plate and food items are put back on the scale, only the weight of the last food item added, is displayed.

Note: you may have difficulty in getting the scales to work if the battery has been kept in a very cold place (e.g. the boot of your car); try to keep the spare batteries at room temperature. Please also remove the battery from the scales when they are not being used and check that all batteries have been removed from all scales before returning them at the end of your quota of fieldwork.

1.1.2. Weighing and recording with the scales

- 1) Switch on the scale by pressing firmly on the word "on".
- 2) Place the plate / container on the scale and record its weight in column A on the '**empty container**' line.
- 3) Leaving the plate on the scale, press the tara pad firmly so that the scale reads zero again.
- 4) Write down the description of the first food in the brand and food description columns (B and C), e.g. Birds Eye, 2 economy cod fishfingers in breadcrumbs, grilled.
- 5) Place them on the plate (still on the scale) and record their weight in column E.

- 6) Leaving the plate on the scale, press the tara pad firmly so that the scale reads zero again.
- 7) Record the next food item – e.g. Tesco frozen peas, boiled - in the diary.
- 8) Place the helping of peas on the plate and record the weight, and so on.



Tip: If a large plate is being used, e.g. a dinner plate, placing it on the scale obscures the digital display. To overcome this you have been given a plastic bowl which should be used as a spacer to raise the plate so that the digital display can be read.

If the spacer is needed follow the procedure below:

- a) Turn on the scale and place the spacer on it.
- b) Press the tara button to zero the scale.
- c) Place the plate on top of the spacer, and record its weight in the Home Diary.
- d) Food items should be described and recorded in the diary as described earlier.



Remember: Once the scale has been zeroed, the plate (and previously weighed foodstuffs) can be removed to add the next food to it. When the plate is returned to the scale, the weight shown will only be that of the last food added. But remember that when the scale has been zeroed, and the food has been removed (for example, bread taken off the scale to spread butter on it), the scale will only stay switched on for about two minutes. If more time is taken to spread the bread, when the scale is switched on again the weight will be the weight of bread AND butter. If this happens, "bread and butter" should be written in the diary, and the combined weight which the scale shows recorded.



Tip: Where several items served on the same plate need to be weighed and recorded, it may be easier to record in the diary all the separate items being served, before starting to weigh the portions. This avoids having to eat cold dinners!

1.2. The Food Diaries

We need a record of all food and drinks consumed which can be coded in such a way that a computer can convert it to a measure of the intake of energy, protein and a wide range of other nutrient values. Brand names of foods are also required so that we can identify the additives, colourings, etc., in the foods; for the same food type these may vary between manufacturer, for example, the amount of artificial sweetener in different brands of soft drink. In order to do this we need very exact details of the food and its preparation.

Obviously we do not expect respondents to remember or understand all the detail required and you must expect omissions and mistakes in the recording of the food information; you will need to identify and correct these at checking calls. Notes on the sort of detail required are given later.

There are two food diaries; a large A3 diary with green & white recording pages (called the 'Home Diary') which is used for all foods eaten or prepared in the home; and a smaller A4 diary (called the 'Eating and Drinking Away from Home Diary') used for all foods and drinks consumed away from home and not weighed - this will include snacks and drinks, as well as meals. The Eating and Drinking Away from Home Diary (i.e. the Eating Out Diary) also includes pages for recording details of physical activities. Ideally the Eating Out Diary should always be carried when the respondent is away from home during the recording period, together with a small pencil or the survey pen. Less information is recorded in the

Eating Out Diary than in the Home Diary, but the Eating Out Diary should show the description and brands of foods eaten, and, if they were purchased, the place of purchase, as well as where and when they were eaten.

We appreciate that not all respondents will be prepared or able, to take the diary with them when they are away from home; they should be encouraged to do so, but if they refuse then they should take the small notebook - P3 - to jot down details of what they eat and drink while they are out of the home, and then fill in the Eating Out Diary at the end of each day.

We have provided a plastic zip wallet for each respondent to keep their diary in, together with an envelope to keep their diary private, a survey pen & a notebook.

You should also leave the respondent a white plastic carrier bag, with a serial number label attached. This should be used by the respondent to collect any wrappers from snacks eaten away from home; where the recording of brand or weight information is incomplete, referring to these wrappers might help you in your coding and checking. Please return any wrappers or containers for items where you have a coding, weight or other query to ONS, in the serial number-labelled plastic bag, with the completed diary. It is not necessary to return every wrapper and container that the respondent collects. For health and hygiene reasons, please ensure that all containers returned to ONS are clean.

The following instructions apply to both recording in the Home Diary and in the Eating Out Diary, unless otherwise stated.



1.3. Completing the Diaries: General Points

1. Put serial number labels on the cover of the Home Diary and Eating Out Diary, on the back cover of the small pocket diary and on the white plastic carrier bag. Make sure that every page in the Home Diary, including any pages you re-write, and all blue & white transcription pages should have either a serial number label or the serial number written in.
2. On the front cover of the Home Diary you will find an appointment table. Use this to record the time of your next visit (checking calls) as a reminder to your respondent.
3. For both the Home Diary and the Eating Out Diary, a new page should be started at the beginning of each day. In the Home Diary, any continuation sheets for the same day should have the day of the week and the date filled in.
4. Both the Home Diary and the Eating Out Diary have a space for recording the time of day (specifying am or pm) when the item is consumed; this information is required for ALL container entries in the Home Diary and for all entries in the Eating Out Diary. You should check that each '**empty container**' line has a time recorded against it. If it is missing, you should probe for the information when you pick up the completed pages. You will need to convert the time recorded by the respondent into the 24 hour clock.
5. In the Home Diary, each food item or drink should be described on a separate line. Where there is more than one component to a food item, for example, a cup of tea, each component should be weighed and fully described on a separate line. See the example page at the front of the Home Diary for examples of this.
6. Home Diary only:
 - a) Everything eaten should be weighed on a plate or in a container. The plate / container should be weighed first, and the weight entered on the '**empty container**' line.

It is important that all items are weighed on a plate so that any leftovers can be correctly allocated (see *later*), and for your own purpose when checking the entries in the diary.

Items not normally eaten from a plate, e.g. an apple, should be weighed on a plate or container with a plate / container entry in the diary. The '**empty container**' line is there as a reminder to always weigh on a plate; if the respondent forgets to weigh on a plate you should write in a weight of 1 gram against the '**empty container**'.

If more than 7 items are served on the same plate then, after the 7th item, the respondent should cross through the '**empty container**' line and continue using the following line for the 8th and subsequent items served on that plate.

If a food is eaten from the container in which it was purchased, e.g. yoghurt, Pot Noodles, etc., then the following method should be used:

Weigh the food and container together, and note the weight in column E. Then weigh the empty container after eating the food, and note the weight in column A. The description should look like this:

A	C	E
Wt of empty container = 10 g	EMPTY CONTAINER	
	Low fat, vanilla flavoured, sweetened yoghurt, not fortified <u>and container</u>	120

When you code the completed record, you must subtract the weight of the container from the combined weight of yoghurt plus container, and enter the net weight of the yoghurt in column E. The entry will now look like this:

A	C	E
Wt of empty container = 10 g	EMPTY CONTAINER	
	Low fat, vanilla flavoured, sweetened yoghurt, not fortified <u>and container</u>	120
		<u>110</u>

Alternatively, if you find it easier to weigh the item on a plate and record the pot/container as a leftover (column F), then please use this method. For example, you would record an empty plate weight as normal, then weigh the yoghurt and pot and record the weight in column E. When the yoghurt has been eaten, the weight of the empty plate plus the pot would be recorded in column F – don't forget to tick, and write 'pot' in column F.

b) Second helpings should be weighed on the original plate and recorded in the diary using the following procedure.

Original serving of baked beans, one fried egg and chips. The respondent eats all the chips and has another helping. The plate still has an egg and beans on it when the second helping of chips is weighed:

- (i) The plate (with egg and beans) is placed on the scales and the scales are zeroed.
- (ii) Put the second helping of chips on the plate and record the weight of chips as another chips entry.
- (iii) Flag the second helping for the attention of the nutritionists at Head Office.

Any leftovers should be recorded in the usual way. The entry in the diary should be as follows:

A	C	E
Wt of empty container = 150 g	EMPTY CONTAINER	
	One egg, fried in lard	50
	Baked beans, canned	50
	Chips, crinkle cut, deep fried in lard	100
	Chips, crinkle cut, deep fried in lard	50

c) Weighing a cup of tea made with a tea bag:



Tip: As this seems to cause some difficulty, it may be worthwhile demonstrating the procedure if your respondent drinks tea made with a tea bag.

In the food code list, you will find that the food code refers to 'tea infusion'; if you remember that you need the weight of tea infusion, then the method for weighing is straightforward.

- weigh the empty cup / mug and record the weight in the diary;
- zero the scales;
- remove the empty mug / cup from the scales, add the tea bag and hot water and allow to infuse; remove the tea bag;
- place the mug / cup containing the tea infusion back on the scales - record the weight of tea infusion in the diary;
- zero the scales;
- add milk; record the weight of milk in the diary;
- zero the scales;
- add sugar; record the weight of sugar in the diary;
- drink the tea;
- if any remainder, weigh and record as leftovers in the usual way.

1.4. Summary: Completing the Diaries

- Everything eaten or drunk must be recorded either in the Home Diary or in the Eating Out Diary, including drinks of water, medicines, vitamin supplements (tablets or drops) and fluoride supplements.
- A new page must be started each day in both the Home Diary and the Eating Out Diary.
- Each day in the Home Diary should show whether the respondent was well or unwell (and if 'unwell' was recorded whether their eating habits were affected that day) by a tick in the boxes at the top of the recording page.

- iv) The time of day (specifying am or pm) when the item is consumed must be written in column A of the diary.
- v) The place the food was eaten, i.e. whether eaten at home or elsewhere, and the person who weighed the food, i.e. respondent or other person, should also be shown in column A of the diary page.
- vi) The food should be described, and for foods eaten or prepared at home, weighed. It is particularly useful to include a description of the portion size here, i.e. 2 slices of medium-cut bread, or half a large banana.
- vii) Each item of food must be weighed and recorded on a separate line of the diary. For example, for a cup of coffee, the weights and descriptions of the coffee granules, milk, water and sugar should be shown separately.
- viii) There must be a completed '**empty container**' line preceding every item or group of items served together.
- ix) Liquids added during cooking should be recorded as part of any recipe (see *later*). If eggs are used in a recipe, the size of the egg should be recorded.
- x) Condiments used at the table, other than salt and pepper, should be recorded in the diary with the weight and a description of how much was used, e.g. 1 tablespoon of tomato ketchup. Descriptions of amounts should be recorded in column C, not in the 'weight' column (column E) - the entry should be flagged for the nutritionists. Salt and pepper should not be recorded in the diary. Where no weight has been registered for items, e.g. Marmite or vinegar, the quantity should be fully described but the weight column left blank and the entry flagged.
- xi) For medicines, prescribed or bought without a prescription, artificial sweeteners, in tablet or liquid form, vitamin or fluoride supplements, etc., the quantity taken or used must be fully described and recorded in the diary. The description should include the quantity; e.g. the *number* of tablets, the *number* of 5ml spoonfuls, the *number* of drops, etc. (i.e. NOT the weight), and the entry flagged. This information should be recorded as part of the food description, NOT in the weight column. Ask to see the container for any medicine recorded in the diary and write down the full product name from the container (on the back of the diary page, if necessary). Proprietary medicines normally have a product number printed on the packaging. You should record this as it can provide nutritional information. All medicines should be flagged. For liquid oral medicines, check and record as part of the description whether the medicine is labelled as a sugar-free formulation.
- xii) You have been given a card which gives advice on using the scales (**W1**), and on the other side on recording in the Home Diary (**W2**). This should be left with the respondent as an aide-memoire.

2. RECORDING LEFTOVERS

When food is left over we need to know the total weight of all leftovers (including the weight of the plate) and what items were left.

Respondents should weigh the plate or container containing all the leftovers and record this total weight in the leftovers column (column F), against the '**empty container**' line, then put a tick next to those items that were leftover. Here is an example of how it should look:

A	C	E	F
Wt of empty container = 140 g	EMPTY CONTAINER		207 g
	1 slice, cheese and tomato pizza, deep pan, home made	168	✓
	Frozen, crinkle cut chips, fried at home in corn oil	140	
	Baked beans in tomato sauce, canned	74	✓

Here the leftovers consisted of some of the pizza and some baked beans. Weighed on the plate this was 207 grams - entered in the leftovers column opposite '**empty container**'. The pizza and the beans lines are ticked to show that both were left.



Remember: Ticks should appear next to ALL items which are leftover. For example, if the respondent had a bowl of cornflakes with sugar and milk, and some was leftover, there should be ticks next to the cereal, sugar and milk, as all these items would be leftover.

The weight recorded in column F should be the weight of the plate and leftovers. Please check that the weight given for leftovers is greater than the weight of the plate alone, but not greater than the weight of the plate plus all the original served weights – i.e. the plate cannot weigh less with leftovers than empty, and you cannot have more leftovers than the original servings.

On other dietary surveys, we have found that some people were able and willing to weigh the different leftover items on the same plate individually, and entered the separate weights in the leftovers column. If this appears to have happened on a recording sheet you are checking, ask the respondent if this is what they have done, and if so, flag the entry for the attention of the nutritionists. There is no need to change it back to the conventional way of recording leftovers.

2.1. Summary: Recording Leftovers

- i) The total weight of any leftovers plus the plate weight, should be recorded against the '**empty container**' line and all the leftover items ticked. If food is left over when eating away from home, then the respondent should write in the Eating Out Diary, against the relevant entry, an indication of how much was left, e.g. "half a round of sandwiches", "2 slices of tomato". If all of a particular item is left, this should be indicated in the description. For example, "cheese and tomato sandwich, all tomato left and half the sandwich".
- ii) Make sure that ticks appear next to ALL food items that are left over. Assuming there is spread on bread, toast, rolls, etc., if any bread is left over, then there should always be a tick in the leftovers column against the entry for spread. Similarly, if cereals are served with milk (and sugar) then if any cereal is left, there should be ticks next to the milk and sugar as well.

3. SPILT AND LOST FOOD

It is very important that we collect accurate information on the amount of food and drink being consumed, which may be different from the amount served. It is not unlikely that some food will be split, or lost in other ways.

If the respondent eats some of the food and leaves the rest on his / her plate then the leftovers can be recorded in the normal way. However, there may be several situations when this does not happen. Some examples of possible situations are:

- ❖ half a mug of coffee is spilled on the table;
- ❖ some food may be accidentally dropped onto the floor;
- ❖ some food may be fed to the dog;
- ❖ someone else consumes some of a weighed item.

Wherever possible, we want any food lost due to spillage, etc., re-weighed. If something is spilt or dropped, then an attempt should be made to pick it up and re-weigh it on the original plate together with any other leftovers. In some cases however it will just not be possible to re-weigh food that has been lost and sometimes this may be a considerable amount of food. In cases where lost food cannot be re-weighed, we would like an estimate of how much of the original item was lost, and a record of this in column G of the Home Diary. For example, if the respondent has a slice of toast, and half the toast gets fed to the dog, then the diary should show in column G that half of the original serving of toast was lost, and that it was not possible to re-weigh it.

4. KEEPING THE DIETARY DIARY

You will notice that both the Home Diary and the Eating Out Diary are tagged documents - loose pages held together with a treasury tag. This means that you can collect completed pages at mid-week calls for checking and coding. Please ensure:

- that the respondent realises that there is space on the back of each page for recording notes and queries;
- that each page is serial numbered (either a label or written in by you);
- that the pages are tagged back into the diary in the correct day order before returning the diary back to Titchfield.

The respondent should weigh everything s/he can. If food is brought into the home from outside (e.g. fish and chips, other takeaway), the respondent should be encouraged to weigh this. If s/he is eating somewhere where the food and drink cannot be weighed (e.g. at work, in a café, or on the move), then s/he should write down as much information as possible in the Eating Out Diary. The Eating Out Diary should only be used when food cannot be weighed. It is important that details of where the food was purchased from, and eaten, are recorded in all Eating Out Diaries. It will be needed by you for coding; it is also needed in order to buy duplicates (see later).



Remember: For food and drink purchased from, or consumed at, work or college, you will probably need to get in touch with the workplace / college catering staff to find out further information, for example, on portion sizes, fats used for cooking and spreading, etc. (see instructions on the Catering Questionnaire).

5. TRANSFER OF INFORMATION FROM THE EATING OUT DIARY TO THE HOME DIARY

The Eating Out Diary will contain entries for all items bought and eaten away from the home which were not weighed. If the respondent is able to weigh food eaten outside the home, or bought from outside the home (e.g. fish and chips), then it should be recorded on a green & white Home Diary page. If food or drink has been prepared at home but eaten away from it, e.g. a sandwich lunch, this should be noted in the Eating Out Diary as well as being fully recorded in the Home Diary, as it was made at home.

All Eating Out Diary entries must be transferred onto the blue & white Home Diary transfer sheets. These should be inserted in the Home Diary at the appropriate place. If the food was prepared and weighed at home, but eaten away from home, then the time the item was eaten should be copied from the Eating Out Diary onto the green Home Diary page where details of the food have already been recorded. Also copy over any details about leftovers, etc. This is the only situation in which foods recorded in the Eating Out Diary will appear on green sheets.

All entries require a container entry. However, when transferring information from the Eating Out Diary to the Home Diary, the weight of the plate will generally not be known, so record it as 1g.

The foods entered in the Eating Out Diary will generally not have their weights given. This information is required where at all possible, and can be obtained in a number of ways:

- 1) Buying duplicates: when food is bought out as a 'take-away' you may, in certain circumstances, need to buy a duplicate of what was eaten and weigh it yourself (and then you can eat it if you want to!). The Eating Out Diary should show you where the food was purchased. You should expect to have to buy duplicates of items from *local* shops:
 - cakes and buns;
 - ice creams: weigh the ice cream and wafer components separately;
 - sandwiches: weigh the bread and fillings separately;
 - fish and chips; and
 - take away hamburgers, kebabs, pizzas, etc., from LOCAL and NON-NATIONAL cafes and shops.



Tip: When buying duplicates of sandwiches you need to ask about the spread used. When buying duplicates of fish and chips or other fried foods, you need to check what type of fat or oil they were fried in and record this.



Remember: Take-away food purchased from NATIONAL fast food chains, e.g. Wimpy, McDonalds, Kentucky, Pizza Hut, Burger King, Huckleberry's, Little Chef, Happy Eater, etc., will be dealt with by the nutritionists, as portion sizes are roughly similar from all outlets in a chain. Duplicates are NOT required for purchased pre-packaged foods that are widely available, e.g. confectionery, soft drinks, sandwiches. If you have any doubts as to whether you should purchase a duplicate, ring the nutritionists for guidance.

Please note that you are NOT authorised to purchase duplicate meals eaten out in a cafe or restaurant - sorry! In these and similar cases, e.g. meals at a friend's house, the respondent should have given as much detail about portion size as possible.

- 2) Weight information on packaging: bought snacks and drinks will often have packaging which gives information on weight. You have been provided with white carrier bags which you should give to the respondent and ask them to collect the wrappers and cartons of food items they consume while out of the home. You can use these to fill in the missing weight information in the Eating Out Diary. Return

(clean) wrappers for products where you have queries in the serial number-labelled plastic bag to ONS with the completed diary.

- 3) Meal at work / college: where the respondent has food prepared by their college or workplace employer at lunchtime, we would like you to try to get some further information about the sizes of portions served and any other information which will allow you more accurately to code the foods. For example, type of spread used in sandwiches, type of fat used for cooking / baking; type of milk used; cooking methods, etc. Separate instructions are given on collecting this information (see the *Catering questionnaire*).

Where it is impossible to collect weight information by any of the above means, e.g. in a restaurant, or when the food scales have not been taken out to a friend's house where the respondent has eaten, then they should be encouraged to estimate the size of the portion or food item.



5.1. Summary: the Eating Out Diary

- i) The Eating Out Diary should be taken with the respondent whenever they are away from home without the food scales. If they are not able to do this, then notes should be made in the small notebook provided - P3 - and the Eating Out Diary completed at the end of each day. Please return the notebook, whether or not it was used, with the Diary.
- ii) Anything eaten or drunk away from home which cannot be weighed, should be entered in the Eating Out Diary.
- iii) The time of day (specifying am or pm) that the item was consumed must be recorded in the Eating Out Diary.
- iv) The place where the item was consumed must be recorded in the Eating Out Diary.
- v) For items bought and consumed away from home, the place of purchase must be recorded.
- vi) The description of the item should be as detailed as possible with an indication of portion size.
- vii) Brand names should be recorded (when known); the respondent should keep wrappers / containers of food and drink items. These will be useful to you when checking / coding foods and brands, and you will need to see them for information on weight.
- viii) All entries in the Eating Out Diary (except food prepared and weighed at home and eaten out) must be copied onto the blue transfer sheets and tagged into the Home Diary in the appropriate place at the end of that day. Entries which appear as composite items in the Eating Out Diary must be split into their components when transferring to the blue sheets, even though the individual weights may not be known, e.g. a cup of coffee should have separate line entries for coffee granules / powder, water, milk and sugar; a toasted cheese sandwich should have separate line entries for toasted bread, butter / margarine and cheese. The total weight of the composite item, if known, should be recorded in the description column - column C, bracketing the components together, NOT in the weight column.
- ix) If so authorised, the weights of foods eaten away from home should be determined by buying duplicates.
- x) When transferring information from the Eating Out Diary to the Home Diary make sure every food entry has a corresponding container entry. Where the weight of the plate is not known, use 1g.
- xi) When transferring weight information from the Eating Out Diary to the Home Diary, if the weight information is taken from a wrapper, please tick the 'estimated weight column' in the OFFICE USE ONLY box. If the weight information is in household measures or in centimetres, record it as part of the food description. The nutritionists at Head Office will convert this information to grams.

6. ESTIMATED WEIGHT COLUMN

The *estimated weight* column should be ticked when a food item has not been weighed but its weight has been estimated.

You are most likely to use this column as a result of probing and checking the diary with the respondent and finding that s/he has forgotten to record a drink or snack. For example, the respondent remembers a drink of tea that s/he had but did not record it in the diary. The weight of the drink is estimated using the recipe of a previously recorded drink of tea. The weight of the mug, tea infusion, milk and sugar are taken as standard. However you should tick the *estimated weight* column to indicate that the weight of the mug, tea infusion, milk and sugar are all estimates. They were not weighed by the respondent when s/he made this particular drink.

This procedure should be used whenever a substitute weight is used, i.e. when you have bought a duplicate or used the weight information from a wrapper or carton.

*** The respondent should not use this column ***

This column will also be used by the nutritionists to estimate the weight of foods eaten outside the home which could not be weighed, and for composite items which were split, for example oranges in jelly, where the weight of the composite is known but the individual weight of components will be estimated. All items on green Home Diary pages shown with estimated weights should be flagged.



Remember: This column should only be ticked to indicate a food item weight which has been estimated. It should not appear on a container line, whether the container / plate was weighed or not.

7. FOOD DESCRIPTIONS

7.1. Introduction

The description of the food in either the Home Diary or the Eating Out Diary needs to be sufficiently detailed to allow the item to be coded. However, the food code list not only separates different food items, but also takes account of how any particular food item was processed before it was purchased, e.g. bought as frozen, canned, fresh or dehydrated produce; how it was cooked e.g. fried, boiled, roasted, grilled, etc.; and its fat content, e.g. low fat products, meat dishes with the fat skimmed or removed. This amount of detail is necessary in order to determine the nutrient value of the food item.

Because we need very detailed descriptions of the food items, and because respondents will not always record all the information we need, we are asking you, the interviewers, to undertake the coding of the food items. In this way you will see when an item cannot be coded because the description is inadequate, and you will have the opportunity to try to collect the information by calling back shortly after the diary entry was made. Also, as you become more familiar with the food code list you will be able to probe inadequate food descriptions when you call to collect the completed records.

You have been given a '**Food Descriptions**' prompt card (**F1**) to remind you about the sort of probing questions you will need to ask in order to get a description detailed enough for you to select the correct food code.

7.2. Probes for Food Descriptions

As well as the basic, but full, description of the food item, e.g. All Bran cereal, Danish blue cheese, honeydew melon, etc., you will need to check that you have recorded information on:

- the bought form: e.g. fresh, frozen, canned, dehydrated, bottled, or was the item home made or home grown (fresh);
- any coatings: was the item cooked in a coating; what was the coating - flour, batter, egg, breadcrumbs, etc.;
- any thickenings in sauces, gravy, stews or casseroles;
- details of pastry products: what type of pastry was it - shortcrust, flaky, etc.; was there a pastry crust top and bottom or only one crust; what type of flour was used - wholemeal or white; what type of fat was used (see below);
- cooking method: grilled, shallow fried, deep fried, boiled, poached, roasted (with fat), baked (no fat), or reconstituted, i.e. water added to dried product, e.g. Pot Noodles. For poached items, record what the food was poached in - milk, milk and water, or water only. For fried items, record the type of fat the food was fried in (see below);
- the fat content: for dairy products check and record whether it is a low / high fat item, e.g. low fat milk (semi-skimmed or skimmed), low fat or creamy yoghurt, and low fat cheese. Also check for low fat sausages, ready meals, puddings and snacks.
 - For items cooked in fat (fried or roasted) which will absorb fat in cooking, e.g. fried fish, chips, or products in batter or coated, record the type of fat used. Also record the type of fat used in home made pastry and cakes. *See later for notes on the different types of fats and oils.*
 - For meat, meat products and meat dishes record whether the fat was removed before or after cooking (i.e. not eaten) or, if appropriate, whether fat was skimmed from the dish before serving.

NOTE: accurate information on the amount and nature of the fat in adult's diets is VITAL to this survey because of the apparent association between fat intake, cholesterol levels in the blood and coronary heart disease.

- Sweeteners used: record whether the item was sweetened or unsweetened. If sweetened, we need to know whether the sweetener was sugar or an artificial sweetener. For cooked items sweetened with an artificial sweetener, e.g. stewed fruit, the fruit and artificial sweetener should be weighed, recorded and coded separately, coding the fruit as 'unsweetened'.
- Smoked or not: for foods such as cheese, bacon, cold meat and fish, record if the item was smoked.
- As well as weighing each food item, it is useful if the description includes information on the portion size; e.g. 2 slices of bread; 1 teaspoon of brown sugar; 6 eating cherries. This information will alert us to any problems in weighing; or if a weight is omitted in error, it means we can make an estimate of the weight consumed.

7.3. Brand Information

Brand names should only be coded for the following items; herbal and fruit teas, bottled waters, fruit juices and soft drinks and artificial sweeteners. However, because FSA may require other types of food to be brand coded at a later date, and because recording brand names for only selected types of food may lead to omissions, the brand or product name should be recorded for every food item or drink EXCEPT fresh foods.



By 'fresh foods', we mean foods which are not pre-packaged, such as meat, fish, cheese or pasta sold loose, and unwrapped bread and cakes; doorstep delivered fresh milk, and all eggs. Fresh fruit and fresh vegetables do not require brands whether or not they are pre-packed.



Foods bought as fresh, and then frozen at home, are regarded as fresh produce, and hence will not have a brand name.

NOTE: shrink wrapped / vacuum packed cheese and meats have a brand.

In many cases the brand name will be an "own brand", e.g. Sainsbury's, Tesco, St Michael, Leo's, etc. Local shops may also market "own brands".

It is important that the brand and product name are as detailed as possible. Again you will be coding the brand information because it may only be at the point of coding that a brand description is found to be inadequate.

7.4. Summary: Food Descriptions

The detail required for food descriptions should answer these questions:

- i) What type of food or drink was it?
- ii) Did it have a brand or product name?
- iii) How was it bought - fresh, canned, frozen, etc?
- iv) How was it cooked - boiled, poached, fried, etc?
- v) If it was cooked in fat, or fat was used in pastry or cakes, what sort of fat or oil was used?
- vi) Was fat skimmed from any meat dish? Was fat on meat eaten or removed before or after cooking?
- vii) If it was a dried / dehydrated product, was it reconstituted using water, milk (type), both, etc. ?

- viii) Was the food item coated before cooking?
- ix) Were any sauces thickened?
- x) What type of flour was used in pastry?
- xi) Was it unsweetened, sweetened with sugar, or artificially sweetened?
- xii) Was it a low fat / low calorie item?
- xiii) Was it smoked or unsmoked?
- xiv) Is there a description of the portion size as well as the weight?
- xv) Was it home grown or not?



Tip: When introducing this part of the survey we suggest that you go over the foods that the respondent has eaten so far that day and ask them to record the descriptions as practice. Try also to get the person(s) who will be doing the weighing and recording to weigh something that they would normally eat, and to weigh and record the components. They may be willing to get a drink or make a sandwich, and you can help in the weighing and recording. If this is not possible then demonstrate the procedure using pens, pencils, or whatever you have to hand.

There is an example of what a completed diary page should look like at the front of the Home Diary. However, many interviewers who worked on previous dietary surveys did their own example page. If you can think of a more helpful example then please use it.

8. CODING THE DIARIES

8.1. Food Coding: General Points

The description of the food, with the recorded information on its bought form, how it was cooked, etc., should enable you to identify the correct food code.

The food code is a number with a maximum of 4 digits, and should be written in under the 'food' column of the recording sheet headed "*Office Use Only*" adjacent to the food weight to which it refers. The "*Office Use Only*" is to discourage respondents from writing in the boxes. Where a food code has fewer than 4 digits, the numbers should be "right adjusted"; there is no need to fill the empty boxes with leading zeroes.



Remember: On the '*empty container*' line, the food and brand code boxes should be left blank.

The food code list you have been given classifies foods according to their type - bread and rolls, fruit, eggs and egg dishes, etc., and within each group, food items are generally listed alphabetically. For some foods, inclusion in more than one group might be appropriate; where possible we have included them (with the same code number) in all places, but inevitably there will be some cases where the food item does not appear where you might first expect it.

Eventually every line entry in the Home Diary, **except** the '*empty container*' line, should have a food code. However, you may not be able to code all the entries. This is because:

- a) The code list does not cover every possible food item, only those for which information on the nutritional content is available or can be calculated.
- b) The food item as recorded is not discrete, but is a composite food item or a recipe dish, e.g. home made pies, cakes, casseroles, etc. Some common recipe dishes have their own single code in the food code list, but for others special treatment is required.

8.2. Flags

You are provided with 'flags'. Flags indicate coding and other queries for the nutritionists. For example, you are unable to match a food description with a code, or a composite recipe item needs to be checked by the nutritionist.

*** The rule with flags is, 'If in doubt, flag' ***

Flags should be stuck to the right hand side of the diary page, so that they protrude over the edge of the page and can be seen: make sure they do not cover any coding columns. The flag should be as near to the item to which it refers as possible. The flag should contain a brief description of the item to which it refers and the nature of the query.

8.3. Composite Foods and Recipe Dishes

- a) Composite foods

Although you should be asking the respondents to make separate entries for each food item, some foods are served in combinations which cannot easily be weighed separately, e.g. fruit in jelly. In some cases, a single code covers a combination - for example, code 542 covers the fruit and sponge in a fruit sponge pudding. For other combinations, there are no such single codes and the foods must be split into their separate components and coded individually.

Examples:

- Mixed salad: no composite food code, therefore code individual food items, and flag.

How much lettuce: a few large leaves, half a small lettuce?

How many tomatoes: 3 large, half a pound?

How much celery: a few sticks, a medium sized head?

Anything else?

- Toad-in-the-hole: no composite food code, therefore code as separate food items, sausages and Yorkshire pudding, and flag.

How many sausages? Pork or beef sausages?

What quantity of Yorkshire (batter) pudding: made with one egg and half a pint of whole milk?

What size of egg was used in the Yorkshire pudding?

b) Recipes

For all items in the food code list with a numerical code prefixed by the letter "R" (*Recipe*):

- (i) If the dish was home-made, you need to record, on the back of the diary page, the ingredients and their relative quantities in the whole dish (not just in their serving). If the recipe matches the description in the food code list, then allocate the code and flag. If the description of the recipe is different to that in the food code list then you cannot allocate a code - just flag the entry.

Examples:

Lasagne: composite food code 1348; therefore do not code separate items but record recipe, and flag

e.g. 8 oz Safeway dried lasagne
12 oz fresh minced beef
12 oz can of tomatoes
2 large onions
1 dessertspoon of cornflour
pinch of mixed herbs
½ pint – Coleman's packet mix cheese sauce, made with whole milk
2 oz English cheddar cheese, unsmoked

Chilli Con Carne: no composite food code (recipe different to food code list description), therefore flag the entry.

e.g. 250g extra lean minced pork
half a can of kidney beans
1 large onion
2 medium sized fresh tomatoes
30g fresh mushrooms
1 teaspoon chilli powder
2 tbsp. Tesco's vegetable oil
one clove of garlic



Remember: To record the weight of the **serving** in column E.

NB: Food items recorded for recipes DO need their brand names recorded EXCEPT when a recipe dish was eaten away from home and it was not possible to obtain this information.

Recipe information should be recorded on the back of the diary page containing the original entry, in the space indicated for recipes. All recipe dishes recorded in this way should be flagged and referenced

back to the original entry. Flags should not cover coding columns. Nutritionists at Head Office will allocate weights to the components of a recipe dish where there is no composite food code. They will also code items not on your food code list, and will check your coding of recipe data where there is a composite food code.

NB: For recipes using eggs, please record the size of the egg as part of the recipe.

- (ii) If the item is purchased, and the description matches the item in the food code list, then allocate that food code. If the description is different to that in the food code list, you cannot allocate a code, just flag the entry.



Remember: All composite and recipe items need to be flagged.

Where a combination food or recipe dish can be coded straight from the food code list, we need the recipe so that the nutritionists can check that the home recipe is sufficiently similar to the standard recipe on which the nutritional information for food is based, and hence that the single code can be used. If the recipe differs significantly, then the nutritionists will have the information in the Home Diary to allow them to code the separate components.

8.4. Liquids Used in Cooking

FSA are interested in the amount of liquid consumed by adults. Liquids in recipes are important in order to know the 'concentration' of nutrients, e.g. vegetable soup - 2 pints of water in the recipe or ½ pint?

8.5. Coding Fats and Oils

You have been given two cards; one (FC6) showing how all the various fats and oils that can be used in cooking are classified, i.e. what products are polyunsaturated fats and oils, what fats should be included under the heading of "dripping", etc. This will help you allocate the correct food code to foods cooked in, or made with, fats and oils. The other card (FC5) shows the various fats used for spreading.

8.6. Coding Leftovers

Some food codes relate to what has been consumed, thus the associated weight information should reflect the actual amount of the item consumed, and should not include the weight of any wastage. For example, for a banana, the food code relates to the edible flesh, and the weight recorded against that code should therefore be the weight of the edible flesh only, not the skin.

If foods are weighed with parts that are not eaten, e.g. nuts weighed in shells, bananas weighed in skins, the wastage or inedible portion should be weighed and shown as a leftover. The food code used will be for the edible portion only and the computer will calculate the net weight eaten, i.e. the total weight less the weight of the leftovers. For example, a fresh peach should be weighed whole, on a plate, eaten, and then the weight of the stone shown as a leftover, as follows.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		210 g	
	Fresh peach	100	✓ stone	2101

The food code for the peach is 2101 - "peach, fresh, flesh and skin only, no stones, or leftover stones weighed", i.e. weight of fruit eaten is known. The computer will calculate the weight associated with that code as 90 grams, i.e. 100 grams less 10 grams leftovers (stone).

Unfortunately, respondents will not always record in the way that we would like and may forget to weigh leftovers: for example a peach may have been weighed whole (on a plate) but the weight of the stone left

over is not shown. The computer will then have to estimate the weight of the eaten fruit. To indicate this estimation, it is necessary that the food code should show that the stone was not weighed as a leftover, and the weight recorded is greater than the weight of the fruit eaten. In this case, code 2102 should be used, "peach, fresh, leftover stone not weighed". The entry should then look like this:

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		.....g	
	Fresh peach	100	✓ stone	2102

Please note:



In cases where the fruit has not been weighed at all, always use the code for fruit 'without the inedible portion' (skin, stones, pips, etc.). This will apply to all Eating Out Diary entries, and any cases in the Home Diary where the fruit has not been weighed at all.

Here are some more complicated examples.

Example A: A Grilled Lamb Loin Chop

- i) Lamb loin chop, grilled, weighed with fat and bone. All the fat and the bone are not eaten, they are weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		260 g	
	Lamb loin chop, grilled, lean and fat	120	✓ bone & all fat	980

The code used, 980, is for a lamb loin chop, grilled, lean only, leftover bone weighed; the weight of meat is known. It is important to record whether any of the fat was eaten.

- ii) Lamb loin chop, grilled, weighed with fat and bone. The bone is not eaten, and is weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		240 g	
	Lamb loin chop, grilled, lean and fat	120	✓ bone	982

The code used, 982, is for a grilled lamb loin chop, lean and fat, leftover bone weighed; the weight of lean and fat meat eaten is known.

- iii) Lamb loin chop, grilled, weighed with fat and bone. All the fat and the bone are not eaten, but they are not weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		..... g	
	Lamb loin chop, grilled, lean and fat	120	✓ bone & all fat	981

The code used, 981, is for a grilled lamb loin chop, lean only, leftover bone not weighed; the weight of the lean meat is not known. It is important to record whether any of the fat was eaten.

- iv) Lamb loin chop, grilled, weighed with fat and bone. The bone is not eaten, and not weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		..... g	
	Lamb loin chop, grilled, lean and fat	120	✓ bone	983

The code used, 983, is for a grilled lamb loin chop, lean and fat, leftover bone not weighed; weight of lean and fat meat eaten is not known.

Example B: Skate (cartilaginous fish)

- i) Skate, fried in butter, weighed with flesh, skin and bones. Skin and bones not eaten, weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		220 g	
	Skate, fried in salted butter	130	✓ skin & bones	1549

Code 1549: skate, fried in butter, leftover bones and skin weighed; weight of flesh eaten is known.

- ii) Skate, fried in butter, weighed with flesh, skin and bones. Skin and bones not eaten, and not weighed as leftovers.

A	C	E	F	Food code
Wt of empty container = 200 g	EMPTY CONTAINER		..... g	
	Skate, fried in salted butter	130	✓ skin & bones	1550

Code 1550: skate, fried in butter, leftover bones and skin not weighed; weight of flesh eaten is not known.

8.7. Coding Tap Water

FSA are interested in the amount of water that adults drink both on its own and as a diluent to make up other drinks, such as squash, coffee, instant chocolate drinks, etc.

The food code for tap water depends on how the tap water was used. Tap water drunk on its own, not used as a diluent, is food coded 5000; there are separate codes for water used to dilute concentrated soft drinks - non-diet and diet separately (5101 and 5102); to make up instant coffee (5103); instant tea (5104); dried milk (5105); instant beverages (5106); and to make up powdered medicines or dietary supplements (also 5106).

For water used in any other way, for example to dilute fruit juice, you should flag the entry.

The food codes for water are shown in the food code list on page 8 and on the pages with drinks they are used to dilute, and for ease of use on a card (Card FC7).

8.8. Summary

- 1) Food codes have a maximum of 4 digits. Where a food code has fewer than 4 digits the number should be right adjusted.
- 2) Empty plates, bowls, etc., are NOT food coded.
- 3) All other diary entries should have a food code. If you cannot code the item because it does not appear in the code list or because it is a composite or recipe item, the entry should be flagged for the attention of the nutritionists at Head Office.
- 4) All home-made recipe items should be written out on the following diary page. Recipe food items in the food code list are indicated by an 'R'. All recipes should be flagged.
- 5) Composite items for which a food code cannot be found should be split into their constituent parts, showing the weight of each part in the serving, and flagged.
- 6) Use the *Fats and Oils for Cooking* and the *Fats for Spreading* cards to help you identify the type of fat or oil used.
- 7) Food descriptions need to contain details of leftovers, as some food codes relate to what has been consumed; i.e. have skin, bones or stones been weighed as leftovers or not? Ticks should appear next to the items left over, in the weight column, column F, with notes, e.g. leftover stone, bone or fat, etc.
- 8) Note the form of the artificial sweetener, i.e. liquid, granulated, tablet, etc., as the food code list is organised according to the form of the sweetener.

- 9) Code tap water according to whether or not it is used as a diluent.
- 10) 'B' to indicate brand information required, and 'R' to indicate recipe information required, are not part of the food code, and should NOT be written in the food code column.

9. BRAND CODING

Brand coding is not needed for all items at present; only the following types of food should be brand coded:

- ❖ herbal and fruit teas
- ❖ fruit juices and soft drinks
- ❖ bottled waters
- ❖ artificial sweeteners

We have decided, however, that respondents should be asked to record the brand names of all the items that are consumed; selective recording is likely to lead to lost information. Also it is likely that at some time in the future FSA will ask for other types of food to be brand coded. You will find that in the Food Code List, those foods or food groups that need to be brand coded are marked with a 'B' against the food code.

Brand codes are needed for items eaten in and outside the home. Artificial sweeteners should be brand coded when they are used 'at the table' and when they are used in cooking. Artificial sweeteners added to pre-packaged products, such as yoghurt and soft drinks, are not coded separately.

You have been provided with separate brand code lists (FC3) for each of the food types that need brand coding. These lists can be filed with your food code list if you wish, with the brand code pages following the relevant food code pages.

The brand code has a maximum of three digits and should be entered in the three digit space headed 'Brand' in the *Office Use Only* Column. Codes with fewer than three digits should be right adjusted; there is no need to enter leading zeros. If the food item is not one of those to be brand coded then the 'Brand' Column should be left empty.

9.1. Herbal and Fruit Teas

Note that we are interested not only in the brand name, but also in the flavour of the tea.

Codes are included for 'own brand' herbal teas at the end of the list.

Any herbal tea sold loose (i.e. not pre-packed) should be brand coded 243.

Any herbal tea brand not separately listed should be brand coded 600.

If the brand of the herbal tea is not known then brand code 601

Note that all herbal and fruit teas should be flagged

9.2. Bottled Waters

The codes listed cover the most popular brands of bottled water and those of specific interest to FSA. We are not interested in the specific brand of any bottled water not listed, but we do need to know whether it is a British Isles product (code 318) or a foreign product (code 328). Therefore any 'own brand' bottled water not specifically listed will be coded according to its place of origin: there are no 'own brand' codes for bottled waters.

If the brand of bottled water is not known brand code 601.

9.3. Fruit Juices and Soft Drinks

As for bottled waters, the brand codes for soft drinks cover the most popular brands. Codes for 'own brand' soft drinks are given at the end of the list.

Any brand (including own brands) not listed should be coded 600 (there is no need to flag).

If the brand of fruit juice or soft drink is not known brand code 601.

9.4. Artificial Sweeteners

Note that we are interested not only in the brand name of the artificial sweetener but also in its form, that is, whether it is in tablet or minicube form, granulated (or powder), or a liquid.

The brand code list is organised according to the form the sweetener is in for non-own brand products. Codes for own brand artificial sweeteners are given at the end of the list; cross-checking with the food code will tell us the form (tablet / granulated / liquid) for own brands.

Any brand not given on the code list should be coded 600.

If the brand of artificial sweetener is not known, brand code 601.

Note that all artificial sweeteners should be flagged

9.5. Summary:

- 1) Foods requiring brand coding are marked with a 'B' against the food code. Do not write this 'B' in the brand code section in the *Office Use Only* box.
- 2) Artificial sweeteners should be food and brand coded when added at the table or used in cooking. All artificial sweetener entries should be flagged.
- 3) Brand codes have a maximum of 3 digits. Where the brand code has fewer than 3 digits it should be right adjusted.
- 4) All herbal and fruit teas should be flagged
- 5) All own brand herbal and fruit teas should be brand coded as well as flagged.
- 6) Herbal and fruit teas sold loose and not branded should be coded 243 as well as flagged.
- 7) Any fruit juice or soft drink not listed on the brand code list should be brand coded 600. It does not need to be flagged.
- 8) Own brand bottled waters should be brand coded according to their country of origin. There are no own brand codes for bottled waters.
- 9) Any artificial sweetener not listed on the brand code list should be coded 600.
- 9) If the brand name is not known, use brand code 601.

10. FOOD SOURCE CODES

The food source code is a single digit range 1-5. Start by checking whether the food was eaten at home or eaten out.

- If food is eaten in the home, whether it is from the 'larder', or a takeaway, or food of any kind brought into the home, then no food source code needs to be allocated. Food source codes are only required for **food eaten out of the home**.
- All eating out diary entries transcribed onto blue & white pages should have a food source code recorded. Also, all home diary entries on green & white pages, where the food is eaten outside the home (e.g. packed lunch), need to have a food source code recorded.
- Food is source coded at 'container level', therefore the code should be entered on the line immediately below the '**empty container**' line in the *Office Use Only* box.

Codes:

1. All food derived from the household food supply that is eaten outside the home, e.g. a packed lunch.
2. Food obtained from the work/college canteen, including vending machines in the canteen.
3. Food obtained from, and eaten at, a commercial catering establishment, e.g. restaurant, pub, café, fast food outlets. Includes any foods eaten on the premises of such establishments, e.g. a burger bought at, and eaten in, the cinema.
4. Takeaway food - food obtained from a commercial eating establishment but NOT eaten on the premises; food from a retail outlet NOT eaten at home. Includes food eaten on the move, e.g. a hot-dog bought from a stand and eaten in the park. Includes sandwich from a sandwich bar eaten in the office.
5. Other source – any food which cannot be allocated codes 1-4. Includes food given to respondent by some one else. Includes tea/coffee from office coffee club.

Examples: Biscuits brought into office by colleague	= code 5
Sandwich from sandwich bar eaten in the office	= code 4
Takeaway meal purchased and taken to friends house to eat	= code 4

- The codes should be assigned to foods in priority order:
 1. the source of the food, i.e. where the food was obtained from;
 2. where the food was eaten.
- Adopting a 'decision tree' approach may help you to decide which code to assign, i.e. consider codes 1 and 2 first, then codes 3 and 4. If none of these fits, assign code 5.
- Only one food source code is entered on the line immediately below the '**empty container**' line, not against every food on that container / plate. If the container is made up of food derived from different sources, the food should be sourced at container level, where the majority rules. E.g. a meal from the works canteen, and respondent adds salad bought from local sandwich bar, both eaten in the canteen together, would be coded 2. (The salad eaten on it's own in the workplace canteen would have been coded as 'takeaway' code 4).
- Flag any queries or entries you cannot code.

- Card FC8 is a quick reference card to the 5 food source codes, and is tagged in with your multi-coloured documents of brand codes/ fats for spreading/ tap water codes, etc.

11. FLAGGING ENTRIES ON THE HOME DIARY- Card F6

Card F6 is a summary of the items that you will need to flag on the green & white Home Food and Drink Diary pages. These are:

Weight information

- Any item not weighed
- Any item where the quantity is not in grams – e.g. drops / units / teaspoons / fl.ozs
- Cumulative weights
- Any item where an estimated weight has been recorded
- Items too light to register on the scale
- Condiments added at the table (not salt and pepper) and not weighed in grams
- All second helpings

Food descriptions

- All composite and recipe items
- All artificial sweeteners
- All herbal and fruit teas (both pre-packaged and loose)
- Any medicine recorded
- Any vitamin, mineral or other food supplement

Food codes

- Foods not shown in the food code list
- Tap water used to dilute fruit juice or in any other way not covered by the diluent codes

Leftovers

- All cases where some of the item was lost, spilt etc., and could not be re-weighed (entry in Column G of the Home Diary)
- Cases where individual leftovers have been weighed (rather than total weight of leftovers)
- Cases where the total weight of leftovers is more than the total weight served

All cases where food has been prepared and weighed at home, but eaten away from home (e.g. a packed lunch).

Any other queries on weights, food codes, brand codes (including tap water), and food source codes.



Remember: All entries recorded on blue & white diary pages will be checked by the nutritionist; there is no need to flag blue sheets.

We do not expect you to be able to code all the items in the diaries', but you should be flagging all your queries.

12. WEIGHING AND RECORDING IN THE DIETARY DIARIES: A STEP-BY-STEP GUIDE TO FIELD PROCEDURES

12.1. At the Placement Call

1. Demonstrate the scales and how to use them, with an example.
2. Demonstrate how to record in the diaries, again using an example.



Tip: while you will have to explain that we need detailed descriptions in the diaries, if you go into too much detail at this stage, the respondent may be discouraged from participating - you can always explain and probe for more detail on the brand and food descriptions at subsequent calls and as the need arises.

3. Explain that you will be calling back after 24 hours to see how the respondent is getting on and to help with any difficulties. By way of explanation you can say that in our experience, most difficulties arise in the first day while people are getting used to the weighing and recording.



Remember: The 7-day diary recording period starts at 00:01 hours on the morning after your placement call. However, the respondent should start weighing and recording from the time you leave them. These items should be entered in the diary under day order "0"; this gives them the chance to try out the scales and practice the measuring techniques. The recording period lasts for 7 full days and always starts with the first item eaten or drunk on day 1, running through to the end of day 7. There should always be a practice page and it should be left in the diary for returning to ONS. However, entries during the practice period should be crossed through; there is no need to code / flag any of these entries.

12.2. At the 24 Hour Checking Call

At your 24 hour recall, and any other checking calls, the aim is to:

1. encourage the respondent who may become disheartened or bored by the amount of weighing and recording required;
2. probe for missing detail, or even missed food, in the diaries;
3. query weights of items which seem excessively high or low, or so badly written that you are unsure of what they are;
4. make sure that the respondent is remembering to record items eaten away from home either in the Home Diary, or if not weighed, in the Eating Out Diary;
5. once checked, you can detach any completed sheets from the Home Diary and take them away to code them.



Tip: during the 24 hour call in particular, it is worth checking every single entry in the Home and Eating Out Diaries while you are still in the respondent's home.



Remember: It is VITAL that you keep up with your coding of the diaries and do not leave this work until the end of the recording period. If you do leave it, you will find the task onerous, and if you find you need additional information before you can code an item, the respondent may not remember the detail. You should therefore be calling back at least once more (after the 24 hour call) during the recording period.

12.3. Checklist for Diary Checking

The following should help you when you come to checking the information recorded in the diaries.

1. **Recording day and date:** has this been recorded for each sheet? Has the respondent started a new sheet at the beginning of each day? If not, you should find, and clearly mark, where the new day starts and then re-write the necessary pages.
2. **Time eaten:** has this been entered for **each 'empty container' line** and specified am or pm? If this information is missing you should probe while you are still at the respondent's home or at your next call.
3. **Who weighed the food:** has this been entered for each empty container line on the green diary pages?
4. **Descriptions of foods and drinks:** must be adequate for you to code them. Can you code from the written description? Are the brand names included?
5. **Weight served must be correctly recorded:** has each food item been separately weighed? Are the individual weights sensible? If the weight of an item seems a bit unusual but not obviously mistaken, then query it, making a note to show you have done so. If you are very suspicious of the weight, it might be better to ask if the respondent has another example of the food item in question for which you could check the weight – you can explain this with "because we have found x food is often difficult to weigh".

To help you judge whether a weight is sensible or not:

- use the **Guide Weights (F5)** card;
- encourage respondents to include, as part of the food description, the number of units served, for example, 2 Weetabix or 3 fish fingers.

Watch out for 'g' for grams; this is already printed in the weight column. Weights not in grams, and volumes, should be written in the food description column and flagged.

6. Leftovers

- Leftovers should be weighed. Certain types of food are likely to include leftovers which are not eaten, such as bones from meat and poultry, cores from apples, stones from peaches, etc. Check for leftovers in these and other cases where they are likely.
 - Check that the weight given for leftovers plus plate is greater than the weight of the empty plate, and that the weight of leftovers is no greater than the original weight of all foods served on that plate. Please check any such entries with your respondent and amend.
 - We must have a weight and ticks to show us what was left from the items shown in the diary. For example, where chicken bones are left, a tick would appear by the chicken entry, with the word "bones" next to it.
 - Remember that if bread and spread appear in the diary, and bread is leftover, then there should be ticks next to the bread AND spread. Breakfast cereals served with milk and sugar which are leftover will also have milk and sugar as leftovers. Check ticks appear next to these items as they are commonly missed.
7. **Time periods:** most respondents will eat at breakfast, lunch and evening meals. While precise times and types of food consumed will vary, you should expect to have entries for all time periods - or a note to explain why not, e.g. "does not eat breakfast".

8. **Drinks:** there should normally be a minimum of 2 litres of drink in a day's diet - if not probe for missed drinks. You may find, for instance, that nothing has been recorded because the respondent thought that water did not count. If the respondent genuinely has not had any fluids, note this clearly.

9. **The Eating Pattern Check Sheet (F2)**

- This lists particular types of food that are often missed in the diaries: drinks; crisps and savoury snacks; biscuits, cakes and confectionery and food supplements. This sheet is designed to help you check for under-recording of these food items.
- For each diary day you should ring the number of entries you find of each type of food in both the Home Diary and the Eating Out Diaries. If you find, for example, that the respondent has had no or very few drinks on a particular day you should query this with him/her at your next call.
- If the Eating Pattern Check Sheet identifies any daily differences in the intake of a particular food, you should query this at the next call, and write a note in the diary to explain why the difference occurred, for example, "the respondent was ill".
- If no snacks are recorded, this should be queried, and a note made of the answer.
- If a meat dish is recorded without any vegetables, this should be queried, and noted.
- Please complete the Eating Pattern Check Sheet as you pick up and code a few days completed pages. There is little point in finding out several days after the whole diary has been completed that items are being omitted; you need to identify the problem while something can still be done about it.

10. **Separate Weighing**

- However much you stress to the respondent the importance of separately weighing every item, our experience shows that some tend to forget. Some of the most commonly forgotten items are the separate components in bread and butter, cups of tea / coffee and glasses of squash. If possible, when this happens try to persuade the respondent to make a duplicate glass of squash or whatever and weigh the items (you may already have a duplicate example from the practice weighing on the placing day). If that is not feasible, try to gather sufficient information about the components to enable us to make a duplicate. Even with the most forgetful or careless person you should try to achieve at least one fully detailed weighed record of squash/ cup of tea, and bread and spread(s).
- However, when pointing out that the respondent has forgotten to separately weigh the items in a particular cup or bowl, don't forget to say that you are pleased that they did at least record the items. After all, we do not want to encourage people who have forgotten to separately weigh the components of a dish to "forget" to record it at all; we would rather have an inadequately weighed dish than a non-recorded one.
- It is important to check soft drink concentrates made up with water, cups of tea / coffee with milk, and breakfast cereals with milk for cumulative weighing errors, with the respondent. It is almost impossible for us to tell whether a series of increasing weights are cumulative or not, especially for drinks of squash where dilution varies. Please check such entries and make a note to reassure us.

11. **Liquids used in cooking / recipes:** you should check that respondents are recording how much liquid they use in cooking, i.e. how much water they add to a casserole or how much milk they add to a sauce. This should appear in the recipe, and not separately in column E.

12. **Food supplements:** check that respondents who said at the interview that they take food supplements are recording them in the diary. If they are not, ask why and record the answer. Check that all medicines (prescribed and proprietary) that are taken by mouth are recorded. Also, check that the respondent has recorded any drinks (including sips of water) that have been taken with the medicines/supplements.

12.4. Before Sending in the Diaries

Before sending in the diaries you should check:

- the food items and brand information have been coded as far as you are able. Any food descriptions or brand name that you cannot code should be checked with Head Office and, whether or not you get a ruling or a request for further information, you should flag the query for the attention of the nutritionists. Any code about which you have doubts should also be flagged, and detailed notes given;
- you have recorded all recipes for home-made dishes, including those for home-made dishes which are in the food code list, which are prefixed by the letter "R";
- every group of foods eaten together has the necessary plate line information in column A ;
- all entries from the Eating Out Diary have been transferred to the blue & white transfer sheets (EXCEPT where food has been prepared and weighed at home to eat out); that the food and brand information has been coded; that a food source code has been allocated; and that where you bought a duplicate item, the weights are shown in the weight column. There should be a tick in the 'estimated weight column' if a duplicate was bought, and its weight recorded in the diary.
- any leftovers have been recorded against foods where leftovers would be expected; or that there is a note attached to explain an unexpected situation;
- that you have given empty containers which were not weighed a weight of 1 gram;
- that if more than one entry has been written on the same line, you have transferred the entries to two separate lines;
- that each page is correctly dated and serial numbered; if there are entries for more than one day on the same page, you should transfer one day's entries to a separate page; the pages should be tagged into correct day order; entries for day 0 should be crossed through but left in the diary.

NOTE: the entries on the green and blue pages do not have to be in time order, but the pages must be in date order and entries for more than one day should not appear on the same page.

- the *Eating Pattern Check Sheet* is completed and tagged to the front of the Home Diary;
- that you return the Eating Out Diary with the Home Diary in all cases, even when it has not been used;
- please use the green pen provided for all your notes on the diaries unless the respondent has used this colour. In this circumstance you should use a different colour and indicate this on the front cover of the Home Diary, so that your entries and amendments can be distinguished;
- if you rewrite any pages, return the original entry, crossed through;
- the bag for collecting food wrappers etc should be attached to the diary, whether used or not;
- the notebook (P3) should be returned with the diaries, whether used or not;
- the catering questionnaire should be returned, whether used or not
- the dietary assessment sheet should be returned with the diaries;
- send the completed Home Diary and Eating Out Diary with their cover pages back to the Titchfield office in the wallet provided, with a serial number label attached to the outside.

The documents should be sent to:

NDNS Nutritionists
Room 5002, Social Survey Division
Office for National Statistics
Segensworth Road
Titchfield
Fareham
Hampshire PO15 5RR

There is no need to address documents to any of the nutritionists in person.

Anything queried with the respondent should be noted in the diary so that the coders and nutritionists at Head Office know that you have correctly coded the food.



13. CONTACTS

Names, addresses and telephone numbers:

Research - Drummond Gate, London

Lynne Henderson	Room D2/23	020 7533 5385 (with answer-phone)
Jackie Hoare	Room D2/23	020 7533 5413 (with answer-phone)

Field Officers - Drummond Gate, London

Michaela Pink	Room D1/14	020 7533 5465 (with answer-phone)
Karen Irving	Room D1/14	020 7533 5424 (with answer-phone)

Nutritionists – Titchfield, Hampshire

Debbie Hartwell	Room 5002	01329 813928 (with answer-phone)
Robert Anderson	Room 5002	01329 813696 (with answer-phone)
Michaela Davies	Room 5002	01329 813701 (with answer-phone)
Laura Hopkins	Room 5002	01329 813977
Sui Yip	Room 5002	01329 813928 (with answer-phone)

Date:

The Manager

Dear Sir/Madam

NATIONAL DIET AND NUTRITION SURVEY OF ADULTS

This survey is part of the National Diet and Nutrition (NDNS) programme, which aims to provide a cross-sectional picture of the dietary habits and the nutritional status of the population of Great Britain.

The study is commissioned by the Departments of Health (in England, Wales and Scotland) and the Food Standards Agency. It is being carried out by the Social Survey Division of the Office for National Statistics (ONS) in collaboration with the Medical Research Council Resources Centre for Human Nutrition Research in Cambridge.

A random sample of people living in private households will be selected to take part in the study and, as part of the study, will be asked to keep a record of all food purchased and consumed during a 7-day period. **This will include food consumed at a workplace or college canteen.** In order to assign codes and include foods purchased in a canteen in our data, we need to know about the food preparation and ingredients, as well as portion sizes.

I would very much appreciate your co-operation in allowing our interviewer to visit your canteen in order to collect some of this information. The interviewer is an employee of ONS and will carry an identity card with them which will have been issued by this office. They will have a questionnaire to complete, covering such items as the type of fat used in food preparation and cooking, whether vegetables are fresh or frozen and whether or not you stock low calorie or diet drinks. The interviewer can talk to whoever will be able to provide the relevant information and will make a mutually convenient appointment for the visit.

Any information you give will be treated in strict confidence and will not be presented in any way that can be associated with your business or college. If you have any questions or would like to discuss this further, please do not hesitate to call. You can contact the project senior nutritionist on 01329 813928 or the project manager on 020 7533 5385.

Thank you for your co-operation.

Yours faithfully

Lynne Henderson
Project Manager

THE WORKPLACE/COLLEGE CATERING QUESTIONNAIRE

1 Purpose

In the analysis of the results from the survey we will be looking at the contribution made to the diets of respondents by food that they consume while they are away from home, and at the source of this food - hence you are food source coding all the information in the diaries. For many respondents what they eat while they are away from home will be a major contributor to their diet; it is therefore extremely important that the information about items eaten away from the home is accurate and reliable. This means that the information in the Eating Out Diary must be:

- complete - all snacks, drinks etc must be included;
- reliable - if food is bought outside the work place rather than at the canteen this must be shown.

and

- the information must be sufficiently detailed to allow coding to the level of precision we require.

Most of the respondents in the sample will be attending work or college and their Eating Out Diaries should give details of what they eat during the time they are at work or college.

This may include:

- food and drinks consumed during break times;
- food and drinks consumed at lunchtime;
- food and drinks consumed on other occasions at work/college – meetings, parties, drinks or things to eat provided at other activities at work/college etc.

The items they consume at these times may be:

- brought from home - weights and descriptions of these should be recorded in the Home Record, as well as in the Eating Out Diary;
- bought from establishments off the work/college premises - sweet shops, cafes; fish and chip shops, etc. The instructions on the 'Dietary Diaries' explain how you should collect more detailed information on such items to help you in the food and brand coding - asking the respondent to keep wrappers; purchasing duplicates, etc.
- purchased or supplied by the work/college - from on-site shops, vending machines, self-service cafeterias or in work/college canteens. For many of these items you will probably need to collect further information from the work or college.

2 Documents

We have produced a short questionnaire which should help you in collecting some of the information you require from the canteen about food provided by the work/college - the Workplace/College Catering Questionnaire - **F3**.

3 Using the Workplace/College Catering Questionnaire

While it is not a requirement of the survey that information on workplace catering is collected using this questionnaire, we would strongly recommend that you use it whenever you need to collect this information.

The document has been produced as a result of feedback from interviewers working on previous rounds of the NDNS to help you in collecting information from canteens.

Whenever you use the catering questionnaire:

- attach a serial number label to the front;
- write in the name of the workplace or college;
- when complete, return the completed questionnaire to ONS with all the documents for the respondent to whom it relates.
- if more than one respondent in your area attends the same college or workplace, please ensure that you don't repeatedly ask the catering manager to complete the questionnaire. When fully completed once, you can copy the relevant information provided by the canteen onto a separate catering questionnaire for each respondent (so that you can return a separate questionnaire for each respondent with their diary). Of course, you will also need to probe for further information about the specific foods that each respondent has eaten and this should be included on the catering questionnaire and on the home record as part of the food description (column C).
- please also **always** emphasize that any information provided will be treated in confidence; it will not be presented in any way that can be associated with the name or address of the workplace or college, or the organisation providing the catering, and that the purpose is simply to get better information about what the respondent is eating and drinking; we are not carrying out a survey to assess and compare the quality of canteen meal provision.



Remember: where the catering is contracted out, and the contract competitively tendered, there may be some suspicion about the purposes to which the information will be put, so it is important that you explain why we need the information and how it will be used.

The questionnaire covers standard items of food, cooking methods and portion sizes; this information will probably be needed for every respondent who has food provided by their workplace or college. However, the questions do **NOT** cover **ALL** of the specific items in any respondent's diary that will need extra information from the workplace or college catering service.



Remember: we would ALWAYS expect to see additional information relating to specific items in the respondent's diary recorded in this document - page 10 is left blank for this purpose.

3.1 If the food is prepared on the premises

We would prefer you to collect all the information on the questionnaire. However, we appreciate that this can be difficult and time-consuming for some catering managers/representatives, so there is a table on page 2 for you to indicate which sections need to be completed. However, we would always like you to **add any specific questions relevant to the items the respondent has consumed.**

You may collect the information you need **either** by:

- **telephoning** the workplace or college and collecting the information over the phone from the catering manager/supervisor/head cook;

or

- **visiting** the workplace/college yourself. If visiting, you may need to telephone the canteen in advance to explain why you would like to make a visit and to arrange a suitable time for an appointment.



Tip: It may be more convenient for the catering manager to self-complete the document, preferably while you wait, so that you can then check that you have all the information you need, but as a last resort, you may have to leave it with the catering manager and collect it later.



Remember: if you leave the questionnaire at the canteen and collect it later, write down on page 10 any specific questions that you want answered relating to the foods and drinks that the respondent has consumed, that are not already covered in the questionnaire.



Tip: If you visit the workplace/college, make sure that you have a set of food scales with you, so that any standard or duplicate portions can be weighed and the weights recorded.

3.2 Food prepared off the premises

In some workplaces these days, the catering is contracted-out to a company which supplies the food for several canteens in an area, or the food is prepared centrally and sent to the individual canteens to be reheated.

In such cases it may be that the catering staff at the workplace or college will not be able to provide you with all the information you need. For example, while they should be able to provide you with information on average portion sizes, they may not know details about food preparation, such as the types of fats and oils used for baking and frying.

You may therefore need to ask the catering staff at the canteen to tell you whom you should contact for this sort of detail. You will then have to use your own judgement as to how to proceed:

- you might be able to collect the information from the central caterer by telephone
- **or** get the canteen to pass on the questionnaire and have it returned to the workplace or college for you to collect later
- **or** you may be able to visit the central catering manager and collect the information yourself.

4 Queries

Field Office: Michaela Pink
Nutritionists: Debbie Hartwell

PHYSICAL ACTIVITY DIARY

1 Introduction

Some information on physical activity at work and in respondents' free time is collected in the placement interview and in the pick-up interview. There is also a physical activity diary which is included in the Diary of Activities...and Eating and Drinking Away from Home (document E2). **These instructions relate to the physical activity diary.** Instructions relating to the physical activity questions are included with the *Additional Recording and Coding Tasks* section.

2 Purpose

The information collected in the Activity Diary is used as an indicator of energy expenditure. This will then be related to energy intake - as recorded by the dietary diaries - and body composition – calculated using the anthropometric measurements. This survey provides a unique opportunity to directly relate these three elements with one another.

The health implications of physical activity relate to body composition and obesity; if the body does not use the energy it takes in as food, then it stores it; in time this will lead to an increase in body weight and Body Mass Index (BMI) and an increased risk of obesity. Many illnesses and conditions are related to obesity, such as the risk of cardio-vascular disease.

In the previous Adults' Survey we found that mean energy intakes were below the standard Estimated Average Requirements (EARs). Since people were not losing weight, it was presumed the EARs possibly overestimated energy requirements.

The current figures for EARs have been used for a number of years. It is thought that requirements may have changed over that period due to a number of factors, including a reduction in the amount and quality of physical activity people do. Some possible explanations are the reduction in manual jobs, an increase in the prevalence of labour-saving devices in the home and an increase in the number of car-owners. There are other reasons why energy requirements may be lower - including a reduction in the body's requirement to use energy to keep warm - our houses are more likely to be centrally heated, and a reduction in the body's requirement to use energy to fight infections - we are more disease resistant. Analysis of the relationships between energy intake, energy expenditure and body composition will be used to provide EARs for the population.

3 Background

Activities are divided into four categories according to how much energy they use. These are:

- Sleep
- Very light/light activities - very light activities include sitting watching TV, using a computer, reading, listening to music or playing cards etc; light activities include light cleaning, cooking, light DIY, walking around the shops, bowling
- Moderate activities e.g. active childcare activities, hard cleaning, swimming
- Hard/very hard activities e.g. aerobics, weight training, rugby, squash, athletics

We collect information on time spent doing all of these types of activity. The program adds up the time spent doing all the other activities, including time spent at work and college, and then subtracts this from 24 hours. Any remaining time is assumed by the program to be spent doing very light/light activities. The information you collect and code in the pick-up interview on the level of activity involved in the respondent's job(s) is fed into this equation automatically by the program.

From this information we will be able to categorise respondents into a small number of groups - very inactive, inactive, moderately active and active. These results will then be analysed in relation to energy intake and body size.

4 Eligibility

A *Diary of Activities ..and Eating and Drinking Away from the Home* (E2) should be completed by all respondents.

5 Timing

The physical activity diary should be kept for the same 7 days as the dietary record.

6 Documents

- A4 blue and green *Diary of Activities ...and Eating and Drinking Away from Home* (E2). This is a tagged document, so completed pages can be taken away for checking before the end of the 7-day recording period;
- envelope for the respondent to keep the diary;
- plastic zip wallet for the respondent to carry the diary around (and keep other documents together);
- survey pen;
- Pocket Notebook (P3).

7 The physical activity diary

Document E2, the *Diary of Activities...and Eating and Drinking Away from Home*, contains 6 pages for each of the 7 recording days. Information relevant to physical activity is collected on the first 3 pages for each day. You should explain to the respondent that they will need to fill in these pages at the END of EACH day.

The first page for each day collects information about:

- which day it is, the date and the recording day;
- time spent in bed asleep (calculated by asking the respondent to record what time they went to bed and what time they got up);
- whether they were at work that day (including paid and unpaid work);
- if at work, time spent at work – in their main job and any second job;
- whether they went to college that day;
- if at college, time spent at college;
- any other time spent sleeping during the day, e.g. napping
- an opinion question asking them to assess whether they were more active, about as active or less active than usual that day.

To summarise, this page collects information on all the time the respondent spent on sleep, and at work/college.



Remember: on the 7th and final recording day we need to know what time the respondent went to bed. There is a space for recording this information on the front cover of the diary, where hopefully it will not be forgotten. Please make sure that this piece of information has been recorded when you collect this diary at the end of the 7-day recording period.

The second page for each day collects information about:

- time spent walking at an average pace;
- time spent walking briskly;
- time spent on a range of listed light and heavy housework, gardening, DIY jobs and active caring;
- time spent on any other similar activities
- for each of the above, respondents are asked to give a few details about the activity; this information will help you to determine whether the activity the respondent has recorded is in the correct category.

To summarise, the second page for each day collects information about light and moderate activities.

The third page for each day collects information about:

- time spent on a range of listed sports and leisure activities;
- whether the exertion of doing each of these activities was enough to make the respondent 'out of breath or sweaty';
- time spent on any other similar activities and whether these made the respondent 'out of breath or sweaty';

The reason we ask respondents to record whether doing the activity made them out of breath or sweaty is that some activities can be categorised differently according to how strenuously they were performed. For example cycling leisurely along a flat road is in a different category to cycling off road up a hill. This question will help us to categorise activities more accurately. It also brings NDNS into line with other surveys that look at physical activity, such as the Health Survey for England and the Health Education Monitoring Survey, and should therefore ease comparisons between the findings of the surveys.

To summarise, page 3 collects information on mainly moderate and hard/very hard activities.

Pages 4 to 6 for each day collect information about eating and drinking out of the home (see separate instructions). You have been supplied with additional 'eating out' pages to give your respondent if he/she needs them.

8 The procedure

8.1 General points

- The diary should be completed for each of the 7-days of the dietary record.
- Ideally we would like respondents to take this diary with them when they are out of their home, so that they can record information at the time. You should therefore encourage them to take the diary with them, in the plastic wallet provided, together with the pen.
- We recognise that some people will not be prepared to do this or may forget. You should ask these people always to carry the small notebook (P3) and a pen or pencil with them when they are away from home, so that they can make notes about their activities (and what they are eating and drinking) and then complete the diary at the end of each day. There are some pages at the back of P3 for recording activities.
- In order to get accurate and reliable information the diary must be completed on a daily basis at the end of each day. Please give the respondent an envelope for them to keep their diary in, for their privacy.
- At each visit to the home, you must check that the Activity Diary is being kept, and help with any problems. Take away completed pages for transferring dietary information onto blue transcription pages and coding.
- Attach a serial number label to each page of the diary and to the small pocket notebook (P3).

- You should show the respondent how to complete the diary at the placement interview; there are instructions at the front of the diary. As a practice you could ask them what they did the previous day, and show them how that would be recorded.

8.2 Completing the diary

Try to make sure you cover the following points when you are explaining how to complete the diary:

- The diary is private.
- It is not a test; there are no right or wrong answers.
- Respondents should record only activities that are not part of their everyday work. For example, a gardener should not record heavy gardening activities that he or she does as part of his/her everyday job, because these will be counted as part of the time he/she spent working that day. On the other hand, if, for example, an office worker has a game of golf during the working day, this should be recorded, and the recording of the number of hours spent at work that day should be reduced accordingly.
- Recording time spent:

should exclude any activities that lasted less than 10 minutes;

should be as accurate as possible, not rounded - to the nearest 10 minutes is acceptable;

should be in hours and minutes; 2.5 hours could mean 2 hours and 5 minutes, or 2 hours and 30 minutes; check and, if necessary, amend any times which are unclear each time you check the diary with the respondent - and at the end of the 7 days;

should be the total time spent on the activity that day; if it is done more than once then the times need to be added together;

should only include time spent actually doing the activity - not getting ready, changing, on breaks etc. For example, an hour spent at the swimming pool, with only 40 minutes swimming, should be recorded as 40 minutes. Please make this very clear to the respondent; there is a tendency for the total length of a football or squash session to be recorded rather than just the time spent on the activity; this obviously will lead to an overestimate of energy expenditure. Please carefully check times spent on disco dancing and the like; was all the time recorded spent actually dancing or does it include time chatting to others etc? This applies equally to activities such as active childcare - how much time was spent actually pushing a pushchair and lifting the child?

- Other activities:

At the end of each of the lists of household activities and sports/leisure activities there is space for respondents to write in any other activities which

are not on the lists. You will be assigning a physical activity code according to how strenuous the activity is when you come to key the diary. The section on physical activity coding contains a list of activities grouped according to how much energy they use for you to do this. It also includes instructions on how to code any activities that are not included in the list. If you are not sure what the activity is or what it involves, you need to probe the respondent for a more detailed description. For example: tobogganing – did it involve lifting and carrying the toboggan; pushing the toboggan; pulling the toboggan uphill etc.

If you are still unsure about how to code an activity then ring Amanda Wilmot (020 7533 5321).

- more than one job

There is space on the first page for each day for the respondent to record the time they spent at work for a main job and a second job. If, when you are explaining to the respondent how to fill in the diary, it emerges that they have more than two jobs (although this seems fairly unlikely), then call Amanda (020 7533 5321).

- night shifts

Some people will work night shifts and therefore sleep during the day and work at night. This is of course perfectly acceptable. However, the questioning asks 'what time did you go to bed **last night**' so you might want to explain to the respondents working night shifts that this means at what time did they go to bed last time they went to bed!



Remember: Although we are not doing a proper 'time-use diary', it is very important that the information we do collect is as accurate and reliable as possible. There will be a tendency for people to over-record both the length and the intensity of activities. The diary has been designed to minimise this, but the accuracy of the diaries will depend on your checking them carefully and probing respondents for additional detail.

9 Transferring the information to your laptop and into Blaise

The information on physical activity needs be entered into the Blaise object before you transmit all the data for the case. Separate instructions are given on how to do this.

You may like to know how the information is then stored.

For each day the following, calculations are made directly from the information you key in:

- total time spent on sleep
- total time spent on very light/light activities
- total time spent on moderate activities
- total time spent on hard/very hard activities

Any remaining time is assumed to have been used doing very light/light activities and is calculated by subtraction.

Each of these categories is then multiplied by a factor, called a MET value, **Metabolic Equivalent value**. These are then added together to give a total score for the person each day. The scores each day are then added together and divided by 7 to give an average daily score, and this represents the respondent's average activity score.

PHYSICAL ACTIVITY: KEYING THE DIARIES

The information collected in the Activity Diary is entered into the Blaise program by the interviewer at home. To key the information you must go into the Progress Block, which is a parallel block in the Blaise instrument.

1. Keying the information

From the information collected in the '*Diary of Activities ... and Eating and Drinking Away from Home*' it is possible to calculate a score which indicates the respondent's level of physical activity. This will be done by the Blaise program following fieldwork.

To obtain a score which accurately reflects the activity level of the respondent the information collected in the diary must be as accurate and complete as possible. For the clients, who want to assess the activity levels in adults and the relationship between this, their diet and their body composition, an overestimate or an underestimate could have consequences for further health education or policy.

The keying program in the Progress block has been designed to appear like the physical activity diary. The information you are required to key is:

- on the first page for each day;
- on the pages where the physical activities have been recorded, ie the second and third pages for each day;
- on the front cover of the diary - time the respondent went to bed on the last recording day.

The remaining information in the diary, on food and drinks consumed away from home, is not keyed; you will transcribe this into the *Home Food and Drink Diary* (E1), code and return this to Titchfield with the Home Diary.



One of the most important things to remember when keying the information is the format for entering the information. Keying errors could have the effect of under or over estimating the activity level.



You should never enter 'Don't know' into the laptop program in answer to any question - if the respondent has written don't know in the diary you should probe for an answer.

2. Keying prompts and questions

The progress block comes on line once the respondent in the household has been identified and the interview has been started. The progress block is set up as a parallel block and is accessed by pressing <Ctrl + Enter>.

You will be able to reach the physical activity block by keying 'later' at other measurement entry points or by pressing <END>. **Do not enter later to any sections which you have already keyed otherwise you will lose the work.**

You will be required to complete the physical activity section for those who have fully or partially completed their diaries. Leave blank the days on which respondents have not kept their activity diary.

How many days of the diary do you have to key?

All of them! If for some reason the diary has not been kept for the full seven days you should still key the information that has been collected.

Day and date

Firstly you will be asked to enter the first recording day and the date of that day. After this the day and date will be automatically imputed by the program for the full 7-day period.

Time spent in bed asleep last night

At BEDLAST, the time when the respondent went to bed the night before must be entered using the **24 hour clock**. If they have written down 11 o'clock then you should enter 23 for hours and 0 for minutes (having first checked with the respondent that it was 11.00pm). Note that you enter 'hours:mins'.



Remember: You should enter the time the person went to bed on the last night of diary-keeping from the front page of the diary.

Going to bed after midnight

It is possible to enter bedtimes that are after midnight. Don't forget to use the **24 hour clock**. This means, for example, that midnight is 0 hours and 0 minutes, and not 12 hours and 0 minutes or 24 hours and 0 minutes. If you key 12 hours 0 minutes the program will assume that you mean 12 o'clock noon and base its calculations on this figure.

At GETUP, enter the time the respondent got up that morning, again using the 24 hour clock.

Staying in bed all day

If the respondent was ill or stayed in bed all day for some reason, then leave the time they got up field as empty and make a note in your Blaise program that the respondent was in bed all day.

Time spent at work and at college?

Like the diary, the program asks separately about whether the respondent was at work (WORKTOD) and then at college (COLLEGE), since some people may have attended both places on the same day. The Diary allows respondents to say how long they were at work (in their main and/or their second job) and how long they were at college separately each day.

If they were at work and/or college it is important that we know how long they worked and/or attended college, as this is needed to compute their activity level score. You will have collected information about their occupation and the level of activity in their job(s) during the pick-up interview. At home you will have coded the occupational activity CATEGORY of their job (1,2 or 3) as this defines the level of activity for the job(s). The activity score for attending college is calculated automatically by Blaise.

Record at HOWLONG1 the length of time they worked in their main job and at HOWLONG2 the length of time they worked in their second job, if they have one – in

hours and minutes. If someone has 2 jobs, the main job is defined as the one where they generally spend more time (even if they earn less in this job).

At TIMSLEEP, enter, in hours and minutes, the amount of time the respondent spent asleep e.g. napping etc that day. The program computes how long the respondent has spent on the activities you have entered so far at DAYPHYS.



Remember: When keying times, the time spent on any activity should be entered as hours or minutes or both. If the respondent has entered 1.5 hours then, having previously checked that this is 1 hour 30 minutes, please enter 01:30; do not enter 1.5 under hours.



Tip: In other situations, e.g. where there are more than two jobs in the 7-day recording period and there is not enough room to key all the activities in the program, please ring HQ for advice on how to key the information. Call Lynne Henderson on 020 7533 5385.

Activity coding

First, you will be asked to record information about the amount of time the respondent spent (TIMSPEND) doing light and heavy housework, gardening, brisk walking and the other activities that appear on the second page of each day of the Activity Diary. Please note that at TIMSPEND you should enter the time in the same way as you would enter a 24 hour clock time. For example, if the respondent spent 45 minutes walking at an average pace then you should enter 0:45.

The category of Active Caring has been included to take account of all of the time the respondent has spent that day carrying out the more energetic aspects of caring, such as running around and playing with the children, lifting somebody else, pushing a pushchair etc. It is very unlikely, however, that a person who spends all day caring for a child/children would be that active all day and you should probe for how long was actually spent on these more energetic aspects of childcare. There are spaces for any other categories we have not considered, as on the diary. When you enter any 'other' activities, please open the Blaise notebook and tell us as much as you can about this activity.

After you have keyed the walking and household activities for that day, you will see a list of the different types of physical activity that are listed on page 3 of each day in the Activity Diaries (ACTNUM and ACTIVITY). You should enter the amount of time (TIMSPEND) spent doing a particular activity and whether or not it made the respondent out of breath or sweaty (SWEATY). The time in minutes will be automatically calculated by the program at TIMPHYS.

Again, the respondent may have recorded some physical activities under 'other' in their diary. Please type in the name of the activity in the space provided at the end of the list. Again, you should also code whether or not this activity made them out of breath or sweaty. Please open a note in the Blaise notebook and give us as much information about this 'other' activity as possible. The next section tells you how to code 'other' activities.

At TOTPERDAY, the program calculates the total time accounted for by all the activities, including sleep, that you have keyed so far. We have assumed that the

respondent would have spent around 9 hours a day either sleeping or doing light activities. If the time you have entered adds up to more physical activity than we would expect in one day a signal check will appear and you should double check that you have keyed in the correct amounts. Go back and check your keying, check the diary and if necessary check back with the respondent.



Tip: When checking the diaries you should be sure to probe the 'other' category specified to be sure that it has been coded correctly. There may be a category already listed which the respondent had missed.

Once you have completed the tables for the first day of diary recording you will automatically be routed to day 2 and so on. The day number and the date will now be automatically imputed by the Blaise program.

3 How to code activities listed in the 'other' sections using the Physical Activity Diary Coding Guide

Very light activities

This section has been included in the Coding Guide simply to give you some examples of very light activities. Respondents are not asked to record the length of time they spend doing very light activities. This information is imputed by the program. If the respondent records any of these types of activity on pages 2 or 3 for any day, do not key the activity, make a note in the paper diary that this is a very light activity and open a note in Blaise to explain that this is what you have done.

Light, moderate and hard/very hard activities

1. Use the coding guide to check if the activity is listed
2. If it is not listed, use the respondent's detailed description of the activity to try to identify a similar activity in the coding guide and code the activity accordingly
3. If you cannot find a similar activity in the coding guide, use the following guidelines to code the activity as light, moderate or hard:
 - First, establish the amount of body movement involved in the activity – think firstly about the size of the body movements and secondly about the speed
 - If the activity involves not very much body movement and/or not very quickly, then code the activity as light
 - If the activity involves more body movement then use the answer to the question 'Did doing this activity make you out of breath or sweaty?' to code the activity as moderate or hard: if the answer to this question is 'No', code it as moderate; if the answer is 'Yes', code it as hard.
4. If you are still unsure, call Lynne Henderson (020 7533 5385).
5. In order to code activities as accurately as possible, you will need to probe the respondent for as much detail as possible as to what the activity involved.

PHYSICAL ACTIVITY DIARY CODING GUIDE



Remember: activities marked with an asterisk * are coded under more than one intensity level



Remember: any activities not included on this list need to be classified as light, moderate or hard/very hard at the interviewer's discretion, by comparing the activity with those listed under each level of intensity.



If you are not sure whether an unlisted activity should be either light, moderate or hard/very hard, use the following guidelines:

- think about the amount of body movement involved in the activity – if it involves not very much body movement or slow body movement, code the activity as light
- if the activity involves more body movement and/or quickly, then check the whether the respondent answered 'Yes' or 'No' to the question 'Did doing this activity make you out of breath or sweaty?'
- if the answer is 'No', code it as moderate; if the answer is 'Yes', code it as hard/very hard

Note: These codes are a **guide** to what activities should be coded under which intensity level - if an activity is not listed or you are not sure how to code something, **please call research for advice** (Lynne Henderson 020 7533 5385).

VERY LIGHT or LIGHT ACTIVITIES - AVERAGE 1.5 to 2.5 METS

This section has been included simply to give you some examples of very light and light activities. If the respondent records any of these, or any similar, activities in his/her diary, you do not need to key it into Blaise.

Card or board games

Drawing or painting

Inactivity

Knitting

Listening to music

Playing a musical instrument

Reading for work or pleasure

Sewing

Sexual activity, general

Studying (including reading, writing, note-taking, class discussion)

Talking with friends

Travelling as a passenger in a car

Using a computer/playing computer games

Watching television or videos, going to the cinema

Writing a letter

Bowling

Caring for pets

*Cleaning – light (mainly dusting, ironing, laundry, washing up or tidying up)

Cooking or food preparation

*Cricket - light

Darts

*DIY – light (including mainly wiring, plumbing, light carpentry, sweeping)

Driving a car, motorbike, van

*Golf - light

Horse riding

*Playing with children – sitting or standing, rather than active play

Pool, snooker

Shopping, walking around the shops

Table tennis

*Walking, strolling – include with 'walking at an average pace'

Working on the car

MODERATE ACTIVITIES - AVERAGE 4.0 METS

*Aerobics, step aerobics, keep fit, gymnastics - light

*Badminton - light

Canoeing

Child care activities – including mainly grooming, feeding, bathing, occasional lifting of child

*Cleaning – hard (mainly scrubbing floors, sweeping, washing windows, mopping)

Coaching sports (including football, hockey, rugby, netball, softball, swimming)

*Cricket - heavy

*Cycling - light

*Dancing (including disco, line or step) - light

*DIY – hard (mainly refitting a kitchen, or bathroom, laying concrete, sawing wood)

Gardening

*Golf – heavy

*Netball - light

Painting, plastering, home repair

*Playing with children – walking or running

*Rounders - light

*Softball - light

Stretching exercises

*Swimming - light

Tai Chi

Volleyball

*Walking briskly

Yoga

HARD or VERY HARD ACTIVITIES - AVERAGE 6.0 to 10.0 METS

*Aerobics, step aerobics, keep fit, gymnastics - heavy

Athletics

Backpacking

*Badminton - heavy

Basketball

Circuit training

*Cycling - heavy

*Dancing (including disco, line or step) – heavy

Football (soccer), including refereeing

Hockey – field or ice

Ice skating

Jogging

Martial arts – including judo, karate, kick boxing, jujitsu

*Netball - heavy

Rock or mountain climbing

*Rounders - heavy

Rowing

Rugby, touch rugby

Running

*Softball - heavy

Squash

*Swimming – heavy

Tennis, NOT table tennis

Weight lifting or weight training

THE BOWEL MOVEMENTS RECORD – CARD B1

1 Documents

- Recording card B1

2 Purpose

Frequency (and type) of bowel movement is implicated in some diseases of the gastro-intestinal system - some more serious than 'simple' constipation - and the relationship between diet and bowel movement has long been established. Hence we have been asked to collect information on the numbers of bowel movements the respondents in this sample have over a 7-day period.

3 Eligibility

All respondents should be asked to provide this information, even if they decline to complete a dietary record.

4 Timing

A record should be kept of each bowel movement the respondent has on each of the 7 dietary recording days, starting at just past midnight on the first recording day.

If a dietary record is not being kept then the bowel movement record should be kept for the 7 days immediately following the first interview.

5 Consent

Only verbal consent is required.

6 Procedure

(i) Assuming that the respondent is keeping a dietary record, after placing the record, give each respondent card B1.

(ii) Ideally the card should be carried around by the respondent so that all bowel movements can be recorded both in and out of the home. If they are unable or unwilling to do this then the record of bowel movements should be completed at the end of each of the 7 days.

(iii) Attach a serial number label to card B1 write in the days on which the record should be kept, before giving it to the respondent.

(iv) Go through the procedure for recording:

- explain that any bowel movement after midnight should be counted as the first bowel movement of the day;
- bowel movements during the day and in the evening up to midnight should count towards that day's total;
- the recording finishes at midnight on the final day of the dietary recording period;
- if the respondent does not have a bowel movement on a particular day either at home and/or away from home then they should ring '0' on card or chart.

(v) At the end of each day the respondent should write in the total for the day (at home plus away) in the column on card B1. If they did not have a bowel movement on any particular day they should enter '0' as the day's total.

(vi) Check any blanks.

(vii) The completed card B1 should be collected when you collect the Home Record Diary; please return Card B1 tagged to the front of the Measurement Schedule M1.

(viii) You should enter the total number of bowel movements for each of the 7 dietary recording days into the Blaise progress block.

(ix) Please use the remaining space on the reverse of card B1 to note any exceptional circumstances:

- explain why a full record has not been kept;
- if you think it may not be an accurate record;
- other comments about this aspect of the survey.

EATING HABITS SELF-COMPLETION QUESTIONNAIRE

1. Background

The investigation of disorders of eating and weight has led to the suggestion that there are a number of eating style characteristics which are relevant to the development of obesity, anorexia nervosa and bulimia. Research has shown that overweight subjects are over-responsive to external food cues and under-responsive to internal cues of hunger and fullness. Overweight subjects have also been found to eat more under stress, in contrast to normal subjects, who eat less. Both concepts, externality and emotionally triggered eating, are important in models of obesity.

Bulimia nervosa is also marked by excessive eating when food cues are prominent and attractive, and under conditions of emotional stress. However, vomiting and strict dieting usually ensure that bulimic people do not actually get fat.

The balance of controlled versus undercontrolled eating is different in anorexic patients, who generally keep their food intake at a very low level. It is thought that loss of body fat might trigger a variety of psychological and physiological adaptations tending to restore weight. However, there are problems in identifying people who are restricting their diets or who have sub-optimal weight.

Measuring restraint can be one method of identifying these people. A questionnaire, the Dutch Eating Behaviour Questionnaire (DEBQ), has been developed as a means of investigating the issue of the relationship between restraint and loss of control over eating. A number of academic researchers have used the DEBQ in their studies and this is one of the few questionnaires the use of which has actually been validated. This is why we are using this questionnaire in our study.

2. Administering the Eating Habits Self-completion Questionnaire

The questionnaire is administered as part of the pick-up interview and is a self-completion questionnaire, which can be completed by the respondent either using CASI¹ or on paper. You will be asked at the start of the section which method the respondent prefers. If the respondent chooses to answer on paper then you will need to key the information into your laptop at home, later.



Remember: It is important that you stress to the respondent that they complete the questionnaire on their own and in one sitting. It will only take about 5 or 10 minutes for them to answer the questions but they must not get up and make a cup of tea half way through!

Some of the question wording may sound rather odd to you and indeed to the respondent. This is because it is a translation from the Dutch version of the eating behaviour questionnaire. You can explain this to the respondent before they start but you should also explain that you are not allowed to help them interpret the questions in any way.

¹ CASI = Computer Assisted Self Interviewing

GIFT VOUCHERS

As a token of appreciation for completing a 7-day dietary record, we are giving respondents a WH Smith voucher (redeemable at John Menses for respondents living in Scotland) worth £10.

Points to note

- to receive the voucher a dietary record (Home Record and Eating and Drinking Away from Home) must be kept for the **full 7-days**;
- apart from completing a 7-day dietary record, eligibility to receive the voucher is **NOT** dependent on co-operation with the blood sample, anthropometry or urine collection;
- the voucher is to thank the respondent for keeping the diary; it is a token of appreciation, not payment for the time and effort involved;
- you are being given sufficient gift vouchers with cards and envelopes for your quota;
- if you wish to write your own thank you note in the card, then please do so;
- On receipt of the vouchers you will have a return slip enclosed. Please write the serial numbers of each voucher you have received and return to the Field Office;
- any unused vouchers, cards and envelopes must be returned to the Field Office at the end of your quota of work;
- Please keep a note of the serial number issued to each respondent at each address.

You will need to enter the serial number into the questionnaire. The reason for this is, we are required by the Inland Revenue to account for the vouchers we issue. We have to check that the number of vouchers you are issued corresponds to the number of completed 7-day dietary you have recorded in the questionnaire.

If you pass any of your vouchers to another interviewer, then, for your own protection, you should get a 'signed receipt' from them for the vouchers - listed by serial number and send this back to the Field Office.

A: BLOOD PRESSURE AND HEART RATE READINGS

1 Purpose

High blood pressure is a known important risk factor for cardiovascular disease.

2 Eligibility and consents

All respondents are eligible to have their blood pressure monitored provided the following consent has been obtained:

- written consent to proceed with the blood pressure measurement (Z3).



Remember: respondents who are not registered with a GP or withhold consent for HNR to inform their GP of the results of the measurement can still have their blood pressure measured.

3 Timing

The blood pressure readings can be taken at any time during the survey; we recommend that they are taken at one of the checking calls you make during the 7-day dietary recording period.

We are NOT standardising the time of day when blood pressure is measured, but it is important that the respondent should not have eaten or drunk anything, or smoked for at least 30 minutes prior to the measurements being taken. It is also desirable that they have been relatively quiet for about 10-15 minutes prior to the measurement - watching television or listening to music, not going jogging or working out to an exercise video. This will therefore need to be explained at the previous visit and the timing of your appointment will need to take these requirements into account.

4 Explaining the procedure

As well as explaining the purpose of the blood pressure measurement - described above - it is important that you briefly outline the procedure to the respondent because if they are anxious about what will happen, this may increase their blood pressure. The points to cover are described below (see **Protocol**).

5 The equipment

- DINAMAP 8100 blood pressure monitor
- Blue pneumatic hose with connector fittings
- Small adult cuff (17-25 cm)
- Standard adult cuff (23-33 cm)
- Large adult cuff (31-40 cm)
- Power cord fitted with 13 amp plug
- Operation Manual

The DINAMAP 8100 blood pressure monitor measures systolic blood pressure, diastolic blood pressure, mean arterial pressure (MAP) and pulse rate automatically at pre-selected time intervals. For this survey three readings are collected at one minute intervals.

The monitor will run for several hours from the integral rechargeable battery. When the battery is fully charged it should provide a minimum of six hours operation. It is best to keep the battery charged as fully as is practical. The yellow BATTERY light will flash when less than 10% battery charge remains. To recharge, simply connect the monitor to the mains. Some monitors have a rear panel AC power switch, if this is the case on the machine you have been issued, press this switch to the ON ('I') position. The green MAINS AC light will indicate that the battery is charging. An overnight charge (eight hours) will provide about four hours of operation.



PLEASE CHARGE YOUR MONITOR OVERNIGHT BEFORE USE.

When the monitor is turned on eight's are shown momentarily in the four digital displays ('888') and all indicators flash as a check for the operation of all L.E.D.s. If any of the displays does not show 3 eight's when the monitor is turned on, contact HQ at once. If outside office hours, please leave a message, and try to arrange to call again at the address.

The appropriate cuff (see *below*) should be connected via the blue pneumatic hose to the two cuff connectors at the bottom of the display. It is important to ensure these screw type connectors are properly connected to avoid any air leak. However, **do not over tighten**. The pneumatic seal is made by the increased air pressure when the Dinamap starts to pump and **not** by tightening the connector.



Remember: the Dinamap monitor should not be kept anywhere cold for long periods of time, or it will become damaged. In particularly cold weather do not leave the monitor in the boot of a car overnight (in any case this is inadvisable for security reasons). During the day, in cold weather, it is best kept inside the car on the floor, and covered/concealed with a blanket, car rug or coat.

6 The protocol

It is essential that all interviewers measure blood pressure in exactly the same way otherwise it will be very difficult to understand and compare the results. This protocol must therefore be followed every time you take a blood pressure measurement.

1. **Correct clothing:** ask the respondent to **remove any jumper, cardigan, jacket, etc.** If he/she is wearing a sleeve this should be rolled up, but it should not restrict the circulation of blood in the arm. If this is likely, ask the respondent if they would mind slipping their arm out from the sleeve while you take the measurement.
2. The respondent ideally will not have eaten, drunk or smoked in the previous 30 minutes.
3. The respondent should be seated relaxed with feet flat on the floor for five minutes before measurements begin.
4. **Getting the respondent in the right position:** the respondent should be **sitting** in a comfortable chair with the **right arm** resting on any suitable support to bring the **elbow** to approximately **heart level**. Feet should be flat on the ground with legs uncrossed.

This is a good time to **explain the procedure**:

- the cuff is going to inflate three times and the respondent will feel some pressure on the arm while this occurs



Tip: explain to the respondent that they will feel greater discomfort on the first measurement than on the second and third measurements because the Dinamap holds the previous measurement in its memory and only inflates to a level just above that required to halt the flow of blood.

- the respondent should not be eating or drinking or smoking during this time

5. **Positioning the cuff:** Choose the **correct cuff size** (acceptable zone is marked on cuff) and place it on the **right upper arm**. You can either try different cuffs for size or use the tape measure to measure around their upper arm to decide which cuff size is likely to be required. It is easier if you position the cuff around the arm before attaching it to the Dinamap.

Use the left arm only if it is impossible to use the right, e.g. right arm is in cast or amputated. If you do not use the right arm record this on the Measurements Schedule (M1) and open a note in the Blaise progress recording block.

The lower edge of the cuff should be about **2 cm above the elbow crease** and the arrow placed over the **brachial artery** (just medial to the biceps tendon). Do not put the cuff on too tightly or bruising may occur upon inflation, nor too loosely as an inaccurate measurement will result.



Remember: the cuff should be tight enough to admit **two fingers between cuff and arm at both the top and the bottom edges of the cuff**

6. **Using the Dinamap:**

- Switch the monitor '**ON**'.
- Press the SILENCE button until the **yellow triangle** above it lights up.
- Press the AUTO/MANUAL button until the **green triangle** above it lights up. The cuff will now start to inflate and take the first measurement.
- Whilst the first measurement is being taken, press cycle SET button until the **number 1** lights up in the minutes box. Blood pressure will then be recorded at one minute intervals thereafter. After each interval record the reading on the Schedule (see *below*).
- After the three measurements have been recorded, switch the monitor '**OFF**' and remove the cuff.



Remember: If it becomes necessary to stop cuff inflation at any time, simply press the red **CANCEL** button or the power **OFF** button and start again.

7 Difficulties in wrapping the cuff:

You may experience problems in fitting a cuff as described above if the respondent has an obese upper arm, or the upper arm is conical (i.e. the sides of the arm are not parallel).

- **Obese arms:** With an obese upper arm you might find that you have to use a large circumference cuff (large adult size). As the circumference of the cuff increases so does the depth, and you may find that while the circumference wraps correctly, the depth of the cuff is too great for the length of the upper arm. In these circumstances you should continue to use the larger size cuff and make notes.
- **Conical arms:** Here you will find that you can either correctly fit the lower circumference of the cuff around the arm, but that the upper circumference of the cuff will be tight or if you correctly fit the cuff to the upper circumference the lower is too loose. As the microphone is in the lower part of the cuff you should fit the cuff as correctly as you can to the lower circumference. There is little more that can be done about this, but it should be noted on the Measurements Schedule (M1).

8 Error reading 844

This is a common error reading and is indicated by a flashing '844' in the PULSE display. The error reading is displayed if time taken by the monitor to take the measurement exceeds 120 seconds, which is usually caused by excessive patient movement and/or erratic pulse rate. Try another measurement ensuring the respondent sits still. If it is still not possible to determine the respondent's blood pressure abandon the procedure and record this on the Schedule.

The monitor can display a number of other error readings. Fortunately these do not occur frequently. However, if necessary, you can find an explanation of all possible error readings in the manual on pages 33 to 35.

9 Recording

Documents required:

- Measurements Schedule (M1)
- Respondent's record card (M2)
- Blood pressure consent form (Z3)
- Information about the blood pressure measurement should be recorded, at the time the measurements are taken, on the paper Measurements Schedule (M1), and subsequently transferred into the Blaise object before transmitting the completed case.
- The Measurements Schedule when completed should be returned to ONS Titchfield with other documents for the serial number.
- Each respondent taking part in the survey should be given a Respondent's Record Card (M2) completed by the interviewer with all their measurements.

- You also need to copy the blood pressure measurements onto the blood pressure consent forms which should be sent to the Resource Centre for Human Nutrition Research (HNR) in the white pre-addressed, pre-paid envelope (*see Consents*).

Recording information about blood pressure on the Measurements Schedule M1:

D1 Ring the appropriate codes to show if consent has been obtained. If 'No', there is nothing more to complete in this part of the measurements Schedule.


D2 As explained above (ideally) the respondent should not have eaten or drunk anything or smoked in the previous 30 minutes because this could affect the blood pressure measurements. However, some respondents may have forgotten or ignored the request.

At the beginning of your visit, before you start measuring blood pressure you should therefore check whether the respondent has eaten or drunk anything or smoked in the previous 30 minutes and if they have, please make a note on the Schedule.

D3 and 4 Record the date and time of the first measurement taken on the Schedule.

D5 Record the blood pressure readings in the boxes on the Schedule. The layout of the boxes on the Schedule is comparable to that on the DINAMAP machines.

Make sure that you copy the correct readings into the correct boxes; do not write the systolic reading in the diastolic boxes - or *vice versa*.

 **Remember:** irrespective of their behaviour in the 30 minutes **before** you take their blood pressure, the respondent must not eat or drink or smoke **while the measurements are being taken**. In the unlikely event of them wanting to do so, you should try to persuade them to stop. If you are unable to stop them then, as a last resort, you should continue with the measurement but record details of their behaviour at D9 code 4.

D6 **Check the three systolic readings:**

if they are **all equal to or above 160 mmHg** then ring code 1. You will then need to report these readings to the Survey Doctor and to the respondent's GP, if they consented for you to do so, as soon as possible.

Check all three diastolic readings:

if they are **all equal to or above 95 mmHg** then ring code 1. You will then need to report these readings to the Survey Doctor and to the respondent's GP as soon as possible.

See the separate instructions on reporting high blood pressure readings.

D7 Record which size cuff was used.

- D8** Were there any difficulties in wrapping the cuff? If so, please ring the code to indicate what difficulties you had.
- D9** Different types of problems could occur while measuring blood pressure. The most common difficulties are listed on the Schedule. There are two possible causes for the DINAMAP 8100 to show a flashing '844' in the pulse display. Either the respondent has an erratic pulse or he/she moved excessively while the measurements were being taken. Repeat the measurements ensuring that the respondent is sitting still. If '844' still shows ring code 2 at D9(a).
- If the respondent has eaten, drunk or smoked while the measurements were being taken, ring code 4 and give full details, as explained above.
- D10** Give your opinion as to whether the reading was reliable or not. If you think it was not, explain your reason.
- D11** This question applies only if all the necessary consent to take blood pressure were obtained, but the measurements were not made.

THE ANTHROPOMETRIC MEASUREMENTS - HEIGHT, WEIGHT, WAIST AND HIP CIRCUMFERENCE

Purpose

What respondents eat clearly affects their weight, so we are interested in the respondent's weight. By itself though, weight is of little use because taller respondents will probably weigh more. Hence we need weight in relation to size - not just height, but bone size and the amount of muscle and fat and its distribution. The circumference measurements will give us some information on body and bone size and growth; the waist to hip ratio will tell us about the distribution of fat in the body.

We have produced a purpose leaflet (L2) which explains why the measurements are being taken. This can be left with the respondent at whatever point you feel is most appropriate.

- The anthropometric measurements can be taken at any visit.



Tip: we suggest you take the weight measurement first as generally this is the measurement for which it is easiest to gain co-operation from the respondent.

- As many of the measurements require the respondent to be partially undressed (and special requirements such as hair not being plaited for the height measurement etc), you should let the respondent know in advance when you intend to take them so that they can be prepared.
- All measurements should be recorded on the Measurements Schedule M1 at the time they are taken, and subsequently entered into the Blaise object.
- Each measurement should be added to the Respondent's Record Card M2.
- Each measurement needs to be made twice at the same visit. However, if you are unhappy with any measurement then you should repeat it until you are satisfied that it has been done correctly. You can repeat the measurements at a subsequent visit.
- The purpose of taking the measurements twice is to improve the accuracy by taking an average of the two readings. For waist and hip circumferences, the difficulty of taking accurate and consistent measurements is widely acknowledged. Methodological work has shown that there is significantly more variation when taking these measurements than when taking measurements such as height or weight. However, the best way of minimising the error in any measurement is to give careful training in the measurement procedure and then to take the measurements twice and use the average of the two readings as the best estimate of the 'true' value.



Tip: You may like to mention that we have taken two of each measurement on other surveys (for example the Health Survey and for previous versions of this survey) and found that the averages had less variation and error than if we used the single readings.

- Please record the date on which the successful measurements were made
- **Please note on the Measurements Schedule if you think a recorded measurement is inaccurate and the reasons.**
- The anthropometric measurements being taken are as follows: standing height, weight and waist and hip circumferences. If any measurement is not taken you should ring the appropriate code to explain the reasons.



Tip: practise these measurement techniques on your family or friends as the more practice you get before going into the field the better your technique will be.

B: MEASUREMENT OF HEIGHT

1 Equipment: the Leicester Height Measure
Frankfort Plane card

2 Eligibility: applies to all respondents.

3 Using the Leicester Height Measure

1. **Construction:** the Measure consists of a base plate, four measuring rods, two white stability bars and a blue head plate. The head plate is constructed so that it moves up and down the vertical measuring rods. A frame on the head plate, with black arrows, indicates the point at which measurement should be read from the vertical rods.

Each measuring rod is marked in metric (centimetres and millimetres) and imperial (feet and inches) units; the recording is made in **metric**. At the ends of each rod are pairs of symbols - stars, squares and circles. The rods slide together, and by matching the symbols at the top of one rod with those at the bottom of the next you will ensure that the rods are put together in the correct sequence.



Tip: for smaller respondents all four rods may not be needed; you only need to slot together as many as you need to measure the respondent.

- Place the base plate on a flat, level surface, preferably un-carpeted.
- Push the first rod into the post on the base plate, ensuring that it is pushed in as far as possible. If this first rod is not fully into the base plate then the measurement of height will be inaccurate.
- Slide the second measuring rod fully onto the first rod, matching the symbols, and ensuring that it is fully pushed into the first rod.
- Slide one of the white stability bars over the top of the second rod, with the longer edge to the back of the rod. When the fully constructed Measure is placed against a wall or door, and the respondent stands on the base plate, if this stability bar is against the wall or door it stops the rods flexing.
- Slide the third measuring rod fully onto the second rod, matching the symbols, and ensuring that it is fully pushed into the second rod.
- Slide the round blue head plate over the third rod, with the rounded head plate facing forward and the flat surface of the plate facing downwards.
- If needed, slide the fourth and final measuring rod onto the third rod, above the head plate, matching the symbols and ensuring that it is fully pushed into the lower rod.

- Slide the second white stability bar over the top measuring rod - third or fourth depending on height required - above the head plate. Position as for the first stability bar, with the longer edge towards the back and space the two stability bars along the vertical length of the now fully constructed measure.
- Position the constructed Measure against a wall, door or other vertical surface, such that when the respondent stands on it, the back of the stability bars will touch the wall, door, etc.
- To take the Measure apart reverse the above procedure. Take care not to bend the measuring rods. To remove the bottom rod easily from the base plate, stand on the base plate and pull upwards. Store the parts of the Measure securely in the case supplied.


PLEASE TAKE CARE WITH THE MEASURE. It is considerably more robust than previous equipment we have used but will not tolerate misuse; do not force the parts into each other, they fit quite easily, and do not bend the rods when taking the Measure apart after use. If any part should get damaged please let Michaela Pink at the Field Office know immediately, stating exactly which component is damaged and needs replacing. As the Measure is of modular construction, replacement parts are available for the separate sections. PLEASE ALSO TAKE CARE WITH THE CARRY CASE AND CARDBOARD SLEEVE. This may be needed for safely despatching the equipment to other interviewers at the end of your quota of work.



Remember: the respondent will be standing on the base plate of the Measure in bare feet; to avoid the possibility of Verruca or other skin infections being passed on, it would therefore be advisable if you wiped the base plate with a mild disinfectant solution (e.g. Dettol, dilute solution of Dettol etc) after use.

4 Protocol

1. The respondent should be wearing as few clothes as possible; shoes and socks should be removed. Socks make little difference to actual height, but loose or baggy socks may disguise the fact that a respondent has lifted their heels off the floor.
2. Hairstyles which are non-permanent, such as braids or buns, should be rearranged. Ask the respondent if they can avoid putting their hair in such styles on the day you call. 'Permanent' hair styles such as dreadlocks and plaits should be dealt with as suggested later in these instructions.
3. The correct head position for the measurement of standing height is known as the Frankfort plane.
 - Position the respondent's head so that the bottom of the eye socket (top of the cheek bone) is in line with the protruding flap of firm skin on the front edge of the ear above the ear lobe, and parallel to the floor (for standing height). This position is very important if an accurate measure is to be obtained.
 - Use the card provided to check that the correct 'line' has been achieved. In this position the head plate of the Height Measure should rest on the crown of the head.
4. Raise the head plate so that it is well above the height of the respondent.

5. The position of the respondent is crucial to obtaining an accurate measurement. The simplest approach to ensure correct positioning is to start at the feet and work upwards.
 - Stand the respondent on the base plate with their back against the rod.
 - The feet should be together and flat on the ground.
 - The legs should be straight as should the back. Arms should hang loosely at the side of the body.
 - The head should be in the correct position.
 6. Gently lower the head plate until it is resting on the top of the respondent's head. Check the position of the head.
 7. Ask the respondent to take a deep breath in, and without moving their head or lifting their heels off the ground, to stand as tall as possible. You should note that the head plate will move upwards slightly when the respondent breathes in.
 8. You should check that the respondent's feet are still flat on the base plate and that they have maintained the Frankfort position.
 9. You should ask the respondent to bow their head while they step away from under the head plate to avoid pushing it upwards and changing the measurement.
-  **Remember:** for your own health and safety we are **not** asking you to stand on a chair, or stool to obtain this measurement. Any interviewer who has particular difficulties because of the height of a respondent, should ring Michaela Pink at the field office for advice – 020 7533 5465.
10. You can then read the measurement from the vertical rod. To read the measurement accurately the black arrows indicating the point of measurement must be at your eye level; if necessary, ask the respondent carefully to step off the measure, and then move the measure until you can read the measurement at your eye level.



Tip: you can remove the top section of the measure to read the measurement – the friction lock will hold it in place as long as you are careful.

11. Repeat the procedure to take the second measurement; you will need to reposition the head plate, and correctly position the respondent before you take the second measurement.

Dealing with 'permanent' hairstyles

You may come across respondents who have 'permanent' hairstyles, such as dreadlocks or braids, which will affect the accuracy of the height measurement you take as the head plate will not rest on the crown of the respondent's head but on a thickness of hair.

If you find that your quota has a significant number of respondents with 'permanent' hairstyles you should contact Michaela Pink at the Field Office – 020 7533 5465. Arrangements will then be made to train you in how to measure the thickness of the hair between the head plate and the crown of the head. If you only come across one or two respondents with such hairstyles, you

should take the height measurement in the way described and record at B3 on the Measurements Schedule M1B the type of hairstyle the respondent had.

6 Recording the height measurement on the Measurements Schedule M1

- Record the date the measurements were made at B1.
- Record the two measurements of height at B2. The measurement should be shown in centimetres, for example, entering leading zeros, e.g. 163.1 (cm) or 099.5 (cm). If you are not used to dealing with centimetres remember that 100 cm is just over 3 feet, so always check that the measurement you have recorded is correct and sensible - 995.0 cm would be over 27 feet; 099.5 cm is about 3 feet.
- Indicate anything which might have affected the measurement, for example a hairstyle, at B3(a).
- Please give your opinion as to whether you think the measurements were reliable at B4. If you think they were not reliable, please say why.
- If you are unable to measure the respondent please code the reason at B5.
- Copy the height measurement onto the Respondent's Record Card M2.
- When all the measurements are complete transfer the information from the Measurements Schedule to the Blaise object.

C: MEASUREMENT OF WEIGHT


1 Equipment the personal weighing scales
'Clothing Record' - pages 5 and 6 of the Measurements Schedule M1

2 Eligibility applies to all respondents.

3 The scales

The scales are calibrated in kilos and 100 gram units. When recording the weight the decimal point has been printed on the Schedule for you.

The respondent would ideally be weighed nude; as this is not possible, then as much clothing as possible, without causing embarrassment, should be removed, including any heavy jewellery, shoes etc.

 **Remember:** you should warn the respondent of this at a previous visit, asking them to wear light clothing such as shorts and a T-shirt for this visit.


Using the scales:

- Insert one 9v battery into the battery compartment underneath the scale.



Tip: during particularly cold weather, keep the batteries in a warm place or the scales will not work. Keeping the battery in your pocket will be fine, but make sure that it is not next to coins or keys (or it may discharge).

- Turn on the scale.
- If - - - appears then the maximum weight the scale can read has been exceeded. Should this happen, please contact Michaela Pink at the field office – 020 7533 5465.
- If a series of digits and letters are displayed, i.e. 6AE, the battery needs replacing.

 **Remember:** remove the battery when the scales are not in use; and at the end of your quota of work.

4 Protocol

- Place the scales on a hard, flat level surface, preferably un-carpeted. If this is not available record at A4 on the Measurements Schedule.
- Press on the scales until (old type) 8888 appears or (new type) _ _ appears.
- Ask the respondent to step onto the scales, with his/her heels towards the back edge; check that both feet are fully on the scales. The respondent should look ahead, not downwards, and their arms should be by their sides. Ask the respondent to stand perfectly still.

- Having recorded the measurement, ask the respondent to step off the scales; allow the scales to switch off.
- Switch the scales on again ready to make the second measurement.



Remember: before weighing the respondent stand on the scales yourself and allow the scales to register your weight. In this way you will clear the memory (of the respondent's weight) from the scales before re-weighing the respondent. If the respondent is re-weighed without this procedure being followed then the scales will automatically reproduce the previous measurement.

- Make the second measurement of the respondent.



Remember: when you have taken the second measurement of the respondent, **clear the memory of this respondent's weight from the scales as before, by weighing yourself.** This is to ensure that when you weigh the next respondent in your quota the scales display his/her weight, and not the weight of the previous respondent measured.

- After weighing the respondent, hand them the Clothing Record in the Measurements Schedule and ask them to tick all the items of clothing they were wearing while being weighed. The record on page 5 is for men and has male items of clothing listed; on page 6 the items of clothing are for women.



Remember: please remove the batteries when you have finished using the scales at the end of your quota of work.

5 Recording the measurement of weight on the Measurements Schedule M1

- Record date weighed at A1.
- Record the two weight measurements at A2, entering leading zeros e.g. 063.8.
- Complete sections A3 and A4.
- Indicate any special circumstances which might have affected the measurement, for example the wearing of heavy clothes at A5(a).
- At A6, we would like you to give your opinion as to whether the weight measurements were accurate or not. If not, then please state why.
- If you are unable to weigh the respondent code the reasons at A7.
- Copy the first weight measurement onto the Respondent's Record Card M2. Note that there is a chart on the back of the Measurements Schedule (M1) which converts metric measurements, kilograms, to imperial, stones and pounds. Most respondents will be more familiar with the imperial values.
- When all the measurements are complete transfer the information, including the information on the Clothing Record, from the Measurements Schedule to the Blaise object.

D: MEASUREMENT OF WAIST AND HIP CIRCUMFERENCES

1 Purpose

There has been increasing interest in the distribution of body fat as an important indicator of increased risk of cardiovascular disease. The waist-to-hip ratio is a measure of the distribution of body fat. Analyses suggest that this ratio is a predictor of health risk like the body mass index (weight relative to height).

To calculate the waist-to-hip ratio we need to have the waist circumference and hip circumference measured twice. At HQ the average measurement of the waist circumference will then be divided by the average measurement of the hip circumference giving us the waist-to-hip ratio.

2 Eligibility

You cannot measure waist and hip circumference if the respondent is chairbound or bedfast or has a colostomy.

If any of these apply, record this on the Measurements Schedule at C6.

3 Equipment

Plastic tape calibrated in centimetres and millimetres on one side and inches on the other, with a metal buckle at one end.

To use the tape:

Pass one end up and then down through the buckle on the other end, ensuring that the metric measurements are on the outside facing surface of the tape loop that you are making.

To read from the tape:

The metric measurement is read from the furthest outside flat edge of the metal buckle.

4 Protocol

A. Preparing the respondent

- 1 At a previous visit you should have asked the respondent not to wear thick or baggy clothing, or anything tight, which might compress the waist or hips, for the visit when you make this measurement. Studies have shown that taking the measurement over light clothing does not affect the waist-to-hip ratio significantly. It is therefore important that where possible you ask the respondent in advance to wear clothing which will not significantly alter the measurement, e.g. shorts and a T-shirt. As the index is a ratio - waist to hip circumference - it is important that both measurements are made over the same thickness of clothing. So, for example the respondent is wearing jeans, do not measure the waist above the jeans, on bare skin or a T-shirt;

make both measurements over the same thickness of the jeans. Remove any belt from the jeans for the waist measurement.

2. If possible, without embarrassing you or the respondent, ensure that the following items of clothing are removed: all outer layers of clothing, such as cardigans, jumpers or waistcoats; any tight garments such as belts, corsets, support tights or lycra body suits. Pockets should be emptied.
3. If any heavy outer garments or tight garments have not been removed and you are of the opinion that this will significantly affect the measurement of waist-to-hip ratio, record this on the Schedule.
4. Ask the respondent to empty their bladder, if possible, before taking the measurements.
5. The respondent should be standing erect in a relaxed manner, weight evenly balanced on both feet and the feet about 25-30 cm (1 foot) apart. The arms should be hanging loosely at the sides.

B. Using the insertion tape

6. All measurements should be taken to the nearest millimetre.
7. You should kneel or sit on a chair to the side of the respondent while taking both measurements. This allows you to make sure that the tape is horizontal all the way around the body.
8. Pass the tape around the body of the respondent and insert the plain end of the tape up and then down through the metal buckle at the other end of the tape.
9. Hold the buckle flat against the body and flatten the end of the tape to read the measurement from the **outermost edge** of the buckle. Do not pull the tape towards you as this will lift it away from the respondent's body, affecting the measurement.

C. Measuring waist circumference

10. The waist is defined as the point midway between the top of the hip bone and the lower rib. The most acceptable way of locating this point is to ask the respondent to bend to one side and mark, with their hand, the crease where they bend. Note that in adults, men's waists tend to be above the top of the waist band of their trousers whereas women's waists are often under the waistband of their trousers or skirts. Bearing in mind that both measurements need to be made over the same thickness of clothing you may have to try to adjust the way the waist band on trousers, jeans and skirts are sitting in order to achieve this.
11. Ensure that the tape is horizontal. If the tape needs adjusting at the front or back then ask the respondent to make the adjustment, under your directions. It is not advisable for you to be making these adjustments. Carefully allow the tape to move as the respondent breathes in and out. Take the measurement at the end of a normal expiration. Record the measurement on the Schedule to the nearest millimetre, with leading zeros, e.g. 089.5 (cm).
12. If you are of the opinion that clothing, posture or any other factor is significantly affecting the waist measurement, record this on the Schedule.

D. Measuring hip circumference

14. The hip circumference is defined as being the widest circumference over the buttocks and below the top of the hip bone. To obtain an accurate measurement you should measure the circumference at several positions and record the widest circumference.
15. Ensure that the tape is horizontal. Again, if adjustments at the front or back are required, instruct the respondent; do not make the adjustments yourself. Pull the tape, allowing it to maintain its position but not to cause indentation. The respondent should stand without contracting the buttock muscles. Record the measurement on the Schedule to the nearest millimetre, with leading zeros, e.g. 095.3 (cm)
16. If you are of the opinion that clothing is significantly affecting the hip measurement, record this on the Schedule.

5 Recording waist and hip circumferences on the Measurements Schedule M1.

- C1** Record the date you make the measurements.
- C2** Record the waist and hip circumferences in cm and to the nearest mm in the boxes provided on the Schedule, e.g. 094.6 (cm). The decimal point has been printed on the Schedule for you. Note that you must measure one waist and one hip circumference before measuring each for a second time.
- C3 and C3(a)** Studies have shown that taking the measurements over light clothing does not affect the ratio significantly. However if the clothing is very baggy or very tight, or the thickness of the clothing is not the same at hip level as at waist level this could affect the ratio. Please give full details if you think this is the case. Also note anything else that could have affected the waist/hip ratio measurements, e.g. poor posture, difficulty in keeping the tape horizontal or in holding the tape flat.
- When recording special circumstances please always distinguish between factors which tend to increase or overestimate the measurement and those which tend to decrease or underestimate the measurement.
- C4 and C5** Please give your opinion as to whether you think the measurements are reliable or not. If not, please say why at C4(a) and C5(a).
- C6** If a measurement is not taken, please code the reason.
- It is possible (though unlikely) that the respondent allows you to measure his/her waist and hip circumferences once but refuses the second measurements. Explain the purpose of taking the measurements twice (see above) but if they still refuse, ask them why and give full details on the Schedule.

Copy the weight measurement onto the Respondent's Record Card, M2.

When all the measurements are complete transfer the information from the Measurements Schedule (M1) to the Blaise object.

Informing people of their blood pressure measurements

If the respondent has said that they would like to know what their blood pressure measurements are you should write down the three readings for the systolic and diastolic pressures for them on the Measurement Record Card provided (M2).

You will probably then be expected to explain or comment on the readings. It is very important that you avoid giving any interpretation or advice on the measurements. You do not have any medical training or qualifications and are not acting in a medical advisory capacity. You therefore must NOT offer advice. You should explain this to the respondent and suggest that their GP is the best person to help them.

Reporting blood pressure results

The measurements should be copied onto:

- the paper Measurements Schedule (M1) - and subsequently entered in the Blaise progress block;
- the Blood Pressure Consent Form (Z3) - copy immediately sent to HNR;
- the person's Measurement Record Card (M2).

Reporting raised blood pressure

There may be situations where you need to take action because the respondent's blood pressure is sufficiently raised that their GP needs to be informed as soon as possible. These situations are rare, but you must know how to deal with them.

Action on your part is required as follows:

If all three **systolic** readings are - **equal to or above 160mm**

and/or

If all three **diastolic** readings are - **equal to or above 95mm**

(These ranges are the same for all ages (19 – 64 years).)

In these circumstances you should:

1. Contact the respondent's GP surgery or health centre.
2. Contact Dr Maureen Birch (the survey Doctor) on **07713 181595**.

Contacting the GP surgery or health centre:

You should do this either by phone or in person as soon as possible. You have a record of the GP's name and address and telephone number on the consent to inform GP of participation in the survey form (Z1). If the respondent did not know their GP's telephone number then you will have to get it from a local phone book or Directory Enquiries.

NOTE: if the surgery is closed, wait until the next day - it is not necessary to leave a message on an ansaphone or with a deputising service.

You have been given a form (BP2) with a standard wording that you can use when you phone the surgery, or you can complete the form, put it in an envelope addressed to the GP and drop it into the surgery. You should report all three systolic and diastolic readings (mean arterial pressure (MAP) and pulse readings should not be reported).

NOTE: you do not have to insist on speaking to or seeing the GP - it is acceptable to leave the information with the receptionist.

If the surgery has any questions then they should be referred to Dr Maureen Birch - your responsibility is fully discharged once you have taken the readings and passed on the information.

NOTE: If you are having problems following the protocol detailed above or in any doubt at all as to how to handle a particular situation contact the Field officer or member of Research immediately.

Contacting Dr Maureen Birch

Ring Dr Maureen Birch's number (**07713 181595**); If she is unavailable you may be asked to leave a voicemail message. Please leave your name, interviewer number and contact telephone number and Dr Maureen Birch will call you back ASAP. When you speak to Dr Maureen Birch she will ask you for the following details:

- details of the respondent - full name, serial number, date of birth and sex;
- their BP readings;
- their height and weight;
- GP's name, address and telephone number.

If there were any unusual circumstances relating to the blood pressure measurement - for example, you could not get the cuff to wrap around the arm properly, the respondent's arm was too large for the cuff, but the next size cuff was too deep, then you should also report this to Dr Birch.

Please make a note in your notebook of the time you phone or call at the surgery and the time you call Dr Birch.



NATIONAL DIET AND NUTRITION SURVEY OF ADULTS aged 19 to 64 YEARS

IN CONFIDENCE

As you will be aware, your patient..... is taking part in the National Diet and Nutrition Survey of adults aged 19 to 64 years. As part of the survey, consent was given to measure his/her blood pressure and to inform you, as the GP, of the result.

When measured today/yesterday, the blood pressure readings were higher than 160/95, and were recorded as given below.

Should you have any queries or wish to discuss this information further, please contact the Survey Doctor, Dr Maureen Birch on 07713 181595. Please leave your number and Dr Birch will call you back.

BP readings

1st reading

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Systolic (mmHg)

--	--	--

Diastolic (mmHg)

2nd reading

--	--	--

Systolic (mmHg)

--	--	--

Diastolic (mmHg)

3rd reading

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Systolic (mmHg)

--	--	--

Diastolic (mmHg)

BP2

THE BLOOD SAMPLE

1 Documents

- consent form - Z4 and pre-addressed, stamped envelope
- purpose leaflet – L2
- blood taking leaflet 'The blood sample: what is it for and what will happen?' – L7
- short list of blood analytes – L6
- detailed list of blood analytes – L6A
- phlebotomist availability calendar - T
- measurements schedule - M1

2 Purpose

All the surveys in the NDNS programme so far have included blood sampling, even for children aged 1½ to 4½ years. The analysis of the blood samples will tell us a great deal about respondents health and nutrient status. The results from the analysis of the blood sample will provide information for a range of needs:

- they will provide results which indicate the range of values for a normal healthy population; most blood analyses are carried out on samples from people who are unwell;
- they will provide information on the nutritional status of the individual which can be related to their diet; for example their haemoglobin levels as related to their intake of dietary iron;
- they will provide information on a variety of indicators which can be used to monitor the 'health' of the group; for example, changes in mean blood cholesterol levels over time in response to health education messages;
- they will allow the identification of possible 'at risk' groups; for example the characteristics of groups with low levels of a particular vitamin can be identified. Health education can then be specifically targeted to such 'at risk' groups, or remedial or preventative measures can be developed.

As with so many elements of this survey, having the results from both a dietary survey and the blood samples together adds considerably to the value that would have been obtained from the two independent sets of data.

1.1 What is being measured

Everything that is being measured in the blood sample is related to nutritional status: blood lipid (cholesterol) levels, vitamin status, iron status, etc.

It is just as important for you to know what will NOT be measured either now, or if there is any residual sample, in the future. The samples will not be analysed for HIV, nor for evidence of any other infection. This should be made clear to the respondent when explaining the purpose of the blood sample.

You should also emphasise that, apart from themselves, ONS, their GP and the Human Nutrition Research Unit (HNR), no-one else will be able to identify the results of the blood analyses with the name of the respondent.

1.2 Outline procedure

Everyone, except those who are pregnant or have a blood clotting or bleeding disorder or are taking anticoagulant drugs will be asked to consent to a blood sample being taken. Interviewers will explain why a blood sample is being requested, and the procedure. The interviewer will also obtain all the necessary signed consents, and make an appointment to call with a phlebotomist who will take the sample

You will accompany the phlebotomist to the home when the sample is taken. If blood is obtained, the phlebotomist will pack and despatch part of the sample to Great Ormond Street Hospital for a haematological profile analysis, and take the remainder to a local hospital where it will be prepared for freezing and storage. When all possible samples have been obtained in an area, the frozen samples will be taken by courier to the HNR laboratory in Cambridge. A portion of the sample will then be sent to laboratories at Southampton University for some analyses, the remainder being carried out at the HNR. Any remaining, sample after all the analyses are complete will, with consent, be stored at the HNR.

The respondent and their GP will be informed of the results of the analyses by the HNR.

2 Eligibility

All respondents, EXCEPT those suffering from a bleeding or clotting disorder or those taking anticoagulants are eligible to provide a blood sample, provided the necessary consent has been obtained (see below).

3 Timing

At the feasibility study we asked interviewers to take half of their blood samples for a quota during the dietary diary recording period and half afterwards, as we were concerned that there might be an effect on response. We found that there was no effect on response. Indeed, in some areas interviewers reported that the blood taking was a positive incentive for people to take part.

We would therefore like you, as far as possible, to try to combine your blood taking with an already scheduled visit. We understand however that the opening times of the laboratories and the availability of the phlebotomists might not always allow for this and you may need to make a visit solely for the purpose of blood taking.

If you arrange for the blood sample to be taken after diary keeping then it should be taken as soon as possible after the end of the 7-day dietary recording period - preferably within 10 days. If there are exceptional circumstances which make this impossible, please contact the Field Office to explain the position before making an appointment.

If a dietary record is not being kept, then the blood sample may be taken as soon as possible after the initial interview.



Remember: blood can only be taken **Monday to Thursday before 2.00pm**. This means that your appointments will most likely take place in the morning before people leave for work.

Blood cannot be taken:

- on any Friday or weekend day;
- on any day when the local hospital or processing laboratory is closed - for example on Bank or other Public Holiday days;
- when the following day is a Bank or other Public Holiday day.

4 Consents required -see also *Consents instructions*

The following **MUST** be acquired before a blood sample can be taken:

- signed consent from the respondent (Z4);

We are also asking for the following consents on form Z4:

- consent to inform the GP of the results of the blood analyses;
- consent to store any residual sample.

If these are refused or if the respondent does not have a GP or refuses consent for HNR to inform their GP of their participation in the survey (Z1), provided the respondent has given written, witnessed consent, ***then a blood sample can still be taken.***

In relation to the stored sample you should reassure the respondent that:

- any future analyses will NOT include an HIV test;
- the samples are treated in confidence and will be identified by the serial number and not associated with the name and address of the respondent;
- nothing will be measured which could have a clinically significant result i.e. respondents should not worry that at some point in the future they may be informed of an abnormal result.

You may be asked about the purposes for which any remaining stored sample may be used. A hypothetical example, which most people should understand, is to test a new analytical technique for measuring something that has already been measured - the new technique may have advantages of cost, speed etc. The results from using the new technique could then be compared with the results that were previously obtained.

5 Results of blood analysis

HNR will report all results to the respondent and to their GP, if the respondent consented to this. The respondent will be given an indication if any results are abnormal and advised to contact their own GP if this is the case. The results for haematology will be reported first, with results for other analytes following. The HNR expect that the respondent should receive their first results within 2-3 weeks but the final biochemistry blood results will take several months to come through as they are done in batches at the end of the survey.

6 Interviewer role - summary

Your responsibilities are:

- at an appropriate point to give a full explanation of the purpose of the blood sample and what is involved;
- to obtain the necessary signatures on the blood consent form;
- to arrange an appointment suitable for the respondent and the phlebotomist on a day and at a time when a sample may be taken;
- to liaise with the phlebotomist regarding the time for the appointment (you have been given a calendar – T – to help you to keep track of the phlebotomist's availability);
- to collect and take the phlebotomist to the respondent's home;
- to pass the phlebotomist a copy of the signed, witnessed consent;
- to confirm, prior to blood taking, that the respondent assents to the procedure;
- to provide the phlebotomist with the necessary standard and cryo serial number labels for the sample;
- to record on the Measurements Schedule (M1) details of the blood taking procedure, and subsequently to enter these details into the Blaise progress block;
- if necessary, to take the phlebotomist to the local hospital/laboratory where the blood sample will be processed prior to being stored;
- to ensure that at the end of the blood taking procedure the respondent is satisfied with the procedure, that any questions they have were answered and that they know where to get any further information; ie that good 'public relations' have been maintained.

YOU ARE NOT RESPONSIBLE FOR:

- establishing whether the respondent has a blood clotting disorder or is taking anticoagulant drugs;
- labelling the blood samples;
- despatching or in any way handling the blood samples;
- disposing of any of the equipment used to take the blood samples;
- physically assisting in any of the blood taking procedure; obviously you may offer reassurance to the respondent as necessary;
- providing or storing any of the equipment needed for blood taking.

If you are asked to do any of these please contact the Field office.

7 The documentation

7.1 The 'phlebotomist availability calendar' (T)

You have been given two copies, one for you, one for your phlebotomist, to record details of when you are both likely to be available, contact telephone numbers, mileage/time to collect phlebotomist and get to the local hospital/laboratory. These calendars should be completed as soon as possible and exchanged before the start of fieldwork, so that you can plan your blood taking appointments around your phlebotomist's availability. You will probably find it useful to have met your phlebotomist before you start working together so, if your phlebotomist was not at the briefing, you should take the initiative to make contact and set up a meeting, prior to your arranging appointments, to sort out any detail regarding transport arrangements, contact numbers etc.

7.2 Consent form (Z4)

This comes in 4 parts - top copy plus 3 carbonised sheets. Please ensure that the signatures and other information are clearly visible on all the carbonised copies.

When complete:

- the top copy should be returned to the HNR in the white pre-paid, pre-addressed envelope;
- the first carbon copy should be left with the respondent;
- the second carbon copy should be returned to ONS Titchfield with other consent forms and forms containing personal, identifiable information i.e. separate from the other fieldwork documents for that serial number;
- the third and final carbon should be handed to the phlebotomist.

7.3 General purpose leaflet (L2), blood purpose leaflet (L7), short list of blood analytes (L6) and detailed description of blood analytes (L6A)

L2 gives some general background information, L7 explains the blood procedures in detail, L6 lists the analytes being measured, and L6A gives additional information about the blood analytes. These should be left with the respondent after you have given your full explanation of the purpose, procedures etc and before the blood sample is taken.

7.5 Measurements Schedule M1

Details of the blood taking procedure should be recorded at section E of the Measurements Schedule M1. The information in this section is the same as the details that the phlebotomist will need to record on his/her documentation. Before leaving the phlebotomist you must ensure that you have the information necessary to complete this record.

7.6 Cryo-labels

These are labels which will withstand very low temperatures in a freezer. There are a set of 56 labels for each serial number. You will be needing four cryo-labels per case for the 24 hour urine collection. The remainder for that serial number should be passed over to the phlebotomist.

Please note that the phlebotomist will also require some standard serial number labels for his/her documentation which you should provide from your set of labels for that case. You will therefore need to have these with you at the visit you make to the home with the phlebotomist.

The phlebotomist does not need, and should not be passed, any address labels (with serial number).

8 Other things you should know

- Local National Health Service Research Ethics Committees (LRECs) have given their approval for the phlebotomy to take place in their area;
- Directors of Social Services, Public Health, Chief Executives of Health Authorities and Chief Constables in the sampled areas have been informed that the survey will be taking place in an area for which they have responsibility;
- each interviewer should have his/her own phlebotomist allocated to them;
- before attempting to take a blood sample the phlebotomist will check whether the respondent has a clotting or bleeding disorder or is taking anticoagulant drugs; if this is the case, blood will not be taken;
- a maximum of two attempts at blood taking is allowed;
- the maximum volume of blood to be taken is prescribed; this is 30ml;
- the phlebotomists will use a 'butterfly' procedure to bleed the respondent;
- the phlebotomist must take all waste away from the home to dispose of at the local hospital/laboratory; nothing must be left at the home;

- if at any time the respondent no longer wishes to co-operate then the procedure should not be attempted, or should stop immediately, even though written consent has been obtained;
- if, after two attempts, bleeding is unsuccessful, then, even if the respondent requests further attempts, they cannot be made.

IF YOU HAVE ANY CONCERNS ABOUT ADHERENCE TO THE BLOOD TAKING PROCEDURE AS DESCRIBED HERE, ANY OTHER CONCERNS ABOUT THE PROTOCOL, OR ABOUT THE RESPONDENT'S REACTION, YOU SHOULD RING DR MAUREEN BIRCH (07713 181595) AND CALL HQ - FIELD OFFICE (020 7533 5465) OR RESEARCH (020 7533 5321) - AS SOON AS POSSIBLE. IT IS IMPORTANT THAT YOU ALSO MAKE FULL NOTES IN YOUR NOTEBOOK.

THESE PROCEDURES HAVE BEEN USED SUCCESSFULLY ON THE TODDLERS', AND YOUNG PEOPLE'S SURVEYS.

9 At the end of your fieldwork quota



Remember: it is important that you let your phlebotomist(s) and Lucy Winter at HNR know that there are no more respondents in your area to give blood samples.

10 Queries

Problems with blood taking

Please be sure to contact Dr Maureen Birch in the first instance if you have any problems with, or are concerned about, the blood taking:

Dr Maureen Birch 07713 181595 mobile (best time: 9.00am – 3.00pm Mon-Fri)

Phlebotomist availability and arrangements; consents:

Lucy Winter (HNR) 01223 437541 direct line (office hours)

Other queries, concerns:

Field Office:

Michaela Pink	020 7533 5465
Karen Irving	020 7533 5424

Research:

Lynne Henderson	020 7533 5385
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CONTRAINDICATIONS TO PHLEBOTOMY

Please do not take blood if:

1) The respondent suffers from a clotting or bleeding disorder

Clotting disorders are mostly hereditary conditions & may include Haemophilia, von Willebrand's disease & Christmas disease. Other rare bleeding disorders include Hereditary haemorrhagic telangiectasia & thrombocytopenias (may be due to leukaemias, bone marrow disorders or idiopathic thrombocytopenic purpura).

2) The respondent is taking anticoagulant drugs

These are drugs to stop the blood clotting excessively & may be given to people suffering from, or at risk of, blood clots (eg. deep vein thrombosis, pulmonary embolus, some heart murmurs, artificial heart valves). Such drugs include Warfarin, Sinthrome (acenocoumarol) & Dindevan (phenindione) tablets or heparin injections.

3) Severe illness

4) Extreme anxiety

5) The respondent has informed you that they are HIV or Hepatitis B Positive

It is our policy not to request blood samples from respondents known to be infected or in high risk categories for HIV/ Aids or Hepatitis B. This is because of the additional risks involved in transporting and handling these samples. We do **NOT** have ethical permission to ask respondents if they are infected or at high risk (drug abusers, haemophiliacs, homosexuals or the sexual partners of any of these). If respondents volunteer this information spontaneously then blood should not be taken. Please do not take a blood sample if you are unhappy about doing so for whatever reason – there is no need to discuss the reason why.

**PLEASE DO NOT UNDER ANY CIRCUMSTANCES ASK A
RESPONDENT IF THEY ARE HIV OR HEPATITIS B POSITIVE OR
IN A HIGH RISK CATEGORY.**

IF IN DOUBT PLEASE CONTACT DR MAUREEN BIRCH (SURVEY
DOCTOR) ON 07713-181595

THE 24-HOUR URINE COLLECTION

1. Documents

- Purpose leaflet – L2
- 24hr urine test (information leaflet) – L5
- Urine analyses (short list) - L6
- Urine analyses (long list) – L6A
- 24 hour urine collection record form – M3A
- 24 hour urine collection volume record – M3B
- Urine samples – instructions to respondents for making urine sub-samples – W3

2. Purpose

The Department of Health and the Food Standards Agency are interested in people's intake of salt. Salt intake has implications for health, in particular high blood pressure. The dietary diaries cannot estimate salt intake accurately and, as nearly all the salt that is consumed is rapidly excreted in the urine, the best way to estimate salt intake is to analyse its presence in urine. To do this, we need a full 24-hour collection of urine, rather than a single sample, as the level of salt in urine fluctuates according to what was eaten at the last meal and how much fluid has been drunk.

A “complete” 24-hour urine collection gives a good estimate of salt intake during that 24-hour interval, and also enables the MRC Human Nutrition Research Centre to measure potassium and fluoride intakes.

3. Overview of procedures

The respondent collects all of the urine passed, from after breakfast (for example) on one day to just before breakfast on the next, in the container provided by HNR, which contains a boric acid preservative. The 24-hour urine collection should overlap with the diary-keeping period if possible.

Once complete, you will need to thoroughly mix the urine collection and weigh it using the balance provided by HNR. From the weight measurement HNR will be able to calculate the volume of urine. Having weighed the full collection you will ask the respondents to take four identical sub-samples and transfer them to the yellow-topped Sarstedt containers which HNR have sent you. Finally, you will need to post the sub-samples to HNR in the special postal package they have provided, using the green-topped postal containers.

4. Consent

Before a respondent can proceed with making the 24-hour urine collection, the following must have been achieved:

- verbal consent.

No written consent or consent to inform GP is required for the 24-hour urine collection and you do not need the survey doctor's approval.

5. Equipment for respondents to make the 24-hour collection

- Purpose leaflet L2, information leaflet on making the 24-hour collection L5, information leaflet on making the urine sub-samples W3, analyses leaflet L6 and the more detailed analyses leaflet L6A (if the respondent is interested).
- 24 Hour Urine Collection Record Form (M3A), with serial number label attached.
- Large 5 litre screw-cap plastic bottle with boric acid preservative.
- Plastic jug.
- Safety pin.
- Small 2 litre screw-cap plastic bottle – for making collections while out of the home.
- Carrier bag – for carrying the small plastic bottle.

NOTE: Equipment will be provided by courier from HNR. At the briefing, each of you are asked to complete a form giving Steve Austin at HNR your own contact and delivery availability details: telephone number, address for delivery and any times to be avoided etc. If and when you need 'top up' equipment, please inform Steve in good time to ensure its delivery before you run out!

6. Equipment for the interviewers

- Protective gloves.
- "Hanging"-type electronic balance.
- Cryo-labels, printed with serial numbers + barcode.
- Cryo-pen (to write date on cryo-labels).
- Parcel tape and scissors (to seal jiffy bags).
- Pad of 24-hour urine collection volume record sheets (M3B) for respondent details and urine weights.
- Jiffy bag with Business Reply label.

7. Equipment for interviewers to give to respondents when taking urine sub-samples

- Protective gloves.
- Disposable absorbent paper.
- Disposable absorbent work mat.
- Yellow-topped Sarstedt syringe-type urine containers (4 per respondent).
- Yellow syringe extensions.

- Postal container packs, comprising:
 - 4 colourless (green-topped) screw-cap safety containers with a sheet of absorbent material inside
 - Cardboard outer box

Please note that the postal containers for the urine, which are green-topped, differ from the single postal container for the water sample, which is white-topped.

8. Protocol

8.1 Placing the equipment

1. You will have already explained the principle of the 24-hour urine.
2. Arrange with the respondent a mutually convenient day for them to make the collection. You should bear in mind the following when doing this:
 - you need to pick up the urine collection as soon as possible after the respondent has provided it;
 - if possible, it is best to select a day when the respondent is at home most of the time, to minimise collections away from home;
 - women should avoid doing the collection on days when they are having a period.
3. Provide the equipment items needed by the respondent, as listed in section 5 above and go through the procedure step-by-step. Explain that although only a small sample of the collection is needed for the analysis, it is very important for us to have a complete 24-hour sample for it to be representative.
4. Be sure to provide your respondent with the instructions leaflets:
 - L5 – which will explain how to make the 24-hour collection, and
 - W3 which will explain how to make the sub-samples.

NOTE: Please explain to your respondent that you will return at a pre-arranged time after they have made the full collection to help them make the sub-samples. You are giving them the leaflet W3 to read in advance but you do not want them to make the sub-samples without you being present as you will need to weigh the entire collection first. You may need to reassure respondents at this point in time not to worry about the sub-sampling, that it is actually very simple and you will be able to explain it to them when the time comes. (You may also decide to demonstrate the sub-sampling procedure to respondents using tap water (not urine) if they are still confused about taking sub-samples.)

8.2 Step-by-step procedure for respondent

On the morning of day 1 of the collection, normally after the first urine void (which should not be included), but before breakfast.

1. Attach the safety pin to an item of underclothing as a reminder to collect all subsequent urine voids. Please be sure to keep the safety pin in a safe place to avoid accidental injury.

2. At breakfast, make a note of the start time and date on the record form (M3A).
3. Collect all urine passed for the next 24 hours, in the **large** 5 litre bottle containing the preservative. Remind the respondent to record the time of the last urine collection on the record form (M3A). The plastic jug is provided so as to make collection easier and safer.

CAUTION: Please note that boric acid powder (preservative), like any other antiseptic, is an irritant, and must not be swallowed or allowed to come into contact with eyes or delicate skin surfaces, etc. Keep the large 5L bottle out of reach of young children and avoid splashing or spillage of the powder. In case of accidental skin or eye contact, wash thoroughly with water. We recommend that male respondents should first collect their urine in the jug and then immediately transfer it to the large 5L bottle.

4. The **small** 2 litre bottle is provided in order to make collections during short periods outside the home more convenient. Take the jug, if needed, and the small bottle, in the carrier bag. Remind the respondent to add any urine collected in the small bottle to the large bottle as soon as possible after returning home, so as to mix it with the preservative.
5. Whenever adding more urine to the large bottle, the respondent should always swirl it around in the large bottle so as to mix in the preservative.
6. If the respondent misses collecting a urine sample for any reason, e.g. because of a bowel motion at the same time, this should also be noted on form M3A.
7. The collection will normally end after the first urine collection on the second day, before breakfast. The respondent should not collect any more urine after this.

NOTE: It is very important that the respondent does not collect any more urine after the end of the 24 hour period.

8.3 Picking up the urine after the 24-hour collection: protocol

1. You need to collect the urine as soon as possible after the end of the 24-hour period.
2. Check the following points with the respondent:
 - were there any problems?
 - has the record form (M3A) been completed?Note anything that has not already been noted on form (M3A).
3. Put the record form (M3A) in the jiffy bag so it is not forgotten.
4. Put on a pair of gloves. Ask the respondent to put on a pair of gloves. Make sure all the urine from the small 2 litre bottle has been added to the large 5 litre bottle. If this has not been done ask the respondent to do it now. With the cap on, ask the respondent to swirl the contents of the 5 litre bottle thoroughly, for a count of 20, to ensure complete mixing. You are now ready to weigh the urine.

8.4 Weighing the urine sample (Interviewer)

- Affix a serial number label to form M3B, the 24-Hour Urine Collection Volume Record. Switch on the balance readout. If it does not come on, check the battery (spare provided). Check that the balance is correctly zero-adjusted and that it is set on the grams/kilograms (**not the pounds/ounces**) scale.
- Weigh and record the total weight of the 5 litre bottle + urine + cap.
- Zero the balance. Repeat the weight measurement and record it again, to ensure that the balance records the same weight. If the two readings do not agree within 0.02kg, and the balance gives persistently unreliable readings, please contact HNR for assistance. Remember to switch the readout off, every time, after use to conserve the battery. Do not attempt to make any correction for the weights of the bottle and cap; this will be done later. You are now ready to ask the respondent to take the urine sub-samples.

8.5 Labelling

Write the date on four of the cryo-labels (with the serial number), using the cryo-pen provided (please do not use this pen for any other purposes). Fix a cryo-label to each of the four containers of urine making sure that you start with the white rectangle, wrapping the label horizontally round the container without creasing it, until the clear tail overlaps over the white rectangle, and thus protects it. Do not label any of the other postal containers, and **never** pour any urine directly into the colourless outer containers. The remaining cryo-labels must be saved and given to the phlebotomist, for labelling of the blood samples.



Remember: it is very important that you affix the cryo-label to the containers in the manner described above. If you do not do this correctly or the label is creased it is impossible for the bar-code readers to correctly read the serial numbers.

8.6 Taking the urine sub-samples (respondent)

- In order to reach the surface of the collection, it may now be necessary to pour some of it into the plastic jug.
- With the aid of a yellow extension tube, fill four yellow-topped Sarstedt containers with urine. These containers do not contain any extra preservative. To fit the extension tube, remove the small push-on cap only, and push the yellow extension tube onto the nozzle. After filling, remove the extension tube and replace the push-on cap firmly, with a twisting action.
- In order to avoid spillage of urine while removing the extension tubes, expel a small amount of urine into the jug, invert the Sarstedt container, and draw a small volume of air into the container, making sure the plunger is pulled back as far as it will travel. Remove the extension and push the cap on firmly.
- Remove the plunger stems by bending them sideways to snap at the constriction.

- Place each Sarstedt container full of urine inside a colourless (green-topped) postal safety container with its absorbent material; screw the cap on tightly.

NOTE: We are asking the respondent to take the urine sub-samples themselves. There may be occasions where your respondent is unable to make the sub-samples themselves. In such cases, if you are happy to make the sub-samples for them you may do so. However, if you are not happy to make the sub-samples for them then you should not do so.

NOTE: If the urine sample is contaminated with blood you should not proceed with the sub-sampling. You should explain that this will affect the analysis and ask the respondent to dispose of the collection

8.7 Packing

- Place the colourless (green-topped) postal safety container in the outer cardboard box, and put the box in the jiffy bag.
- Insert the record form (M3B) with urine weights and respondent ID details into the jiffy bag.
- Seal the jiffy bag with parcel tape, carefully avoiding any overlap over the labels on the jiffy bag, and discard gloves. Discarded items such as used gloves, Sarstedt plungers and extension tubes can go in the plastic carrier bag.
- Post the packet of samples as soon as possible in a post-box, preferably one with frequent collections.

8.8 Disposal

- After the respondent has made the sub-samples needed for analysis from the full 24-hour collection, you will need to ask the respondent to dispose of the remainder of the urine in the toilet (not from a height).
- Then ask the respondent to rinse the jug, extension tubes and 24-hour collection containers and to discard the plastic equipment as household waste.

8.9 Failed collection

If the respondent fails in making a full 24-hour collection we do not want you to ask them to try again. We do not have ethical approval for a second attempt and do not want to over burden the respondent. We may be able to make some use of the incomplete collections so make notes as to why the collection was incomplete in the progress monitoring block of the Blaise interview.

9. Practise

Please practise the procedure of filling the four Sarstedt containers yourself, using water, before beginning the fieldwork. This extra experience will help you in advising and assisting the respondents, and it will also give us additional feedback about the efficacy of the procedure. Please fill the four containers with water, label each of them with a cryo label, add the date, and put them into the postal container in the jiffy bag for posting. Complete and insert two forms (M3A and M3B) and please include your name and ID number in case we need to feed back to you, any information about the procedure. Then post the sealed jiffy bag to HNR, just as you would do with the real samples.

10. Contacts

24-hour urine collection equipment and samples:

Steve Austin
MRC Human Nutrition Research
Elsie Widdowson Laboratory
Fulbourn Road
Cambridge
CB1 9LR
Office: 01223 426356
Mobile: 07850 121988

COLLECTING TAP WATER

1. Purpose

To measure levels of fluoride in domestic water supplies.

These levels will be related to the level of fluoride in urine & the dietary intake. Because fluoride levels in domestic water fluctuate, it is important to obtain samples from each participating household at the time of the survey.

2. Procedure

If possible, identify a tap that comes straight off the mains (rather than via a storage tank).

Collect some tap water in the clean plastic jug provided (the same one that is also used for collecting the urine sample). It is important to ensure you collect the tap water sample first before you use the jug for the urine sample.

Once the sample has been collected – take a sub-sample by filling a yellow-topped urine monovette and put a cryo-label onto the tube. Please write on the date of collection with the cryo pen provided. Put the labelled monovette into the **white-topped postal container** and place it in the jiffy bag (without the pathological specimen tape) and post it back to **HNR**.

3. Consent

You need to explain the purpose of this sample to respondents & obtain their **verbal consent** to take the sample.

PRESCRIBED MEDICINES

(Taken during the dietary diary record keeping period)

1 Purpose

The dietary record should include details of all proprietary and prescribed medicines being taken orally. This will include supplements, such as vitamin and mineral preparations and folic acid supplements, cough medicines and sweets, pain killers etc. Apart from the vitamin and mineral supplements we have little nutrient information available about medicines.

There is also a need to know about all prescribed medicines that are being taken by the respondent, not just those being taken by mouth. The information is needed because some prescribed medicines may have an effect on some of the blood or urine analytes being measured or the person's blood pressure. For example, it would be relevant to know when considering a person's blood cholesterol levels that they were taking drugs prescribed to lower their blood cholesterol. Similarly when considering blood pressure readings it would be relevant to know whether the person was taking anti-hypertensive drugs - to lower their blood pressure.

2 Documents

- Measurements Schedule M1

3 Eligibility

All respondents fully or partially co-operating with the survey should be asked about prescribed medicines.

4 Timing

If the dietary record is fully or partially kept:

- ask at the pick-up call at the end of the 7-day recording period;
- ask about any prescribed medicines taken since the start of the record keeping period.

If the dietary record is refused:

- ask at the end of the placement interview;
- ask about any prescribed medicines currently being taken.

5 Recording the information on the Measurements Schedule

Details should be recorded for every prescribed medicine, including any injections, inhalers, skin or eye preparations and the oral contraceptive pill.

NOTE:

Women aged 19 to 49 years will already have recorded whether they are currently taking the oral contraceptive pill, by keying their answers into your laptop computer. You will need to use your discretion as to whether you can now ask openly for details of the oral contraceptive pill being taken; if there is any possibility of it causing embarrassment, breaching confidentiality within the household, or affecting public relations or co-operation in any way, then do NOT ask for details, simply record that the oral contraceptive pill is being taken.

Record all the information in BLACK PEN, in BLOCK CAPITALS; we need to photocopy these pages from the Measurements Schedule.

Ask to see each medicine bottle, packet or container and carefully copy down the details required - the full name of the preparation, including the brand name, if this is available, and the strength.

Some medicines are dispensed in the manufacturer's packaging, and for these the brand name should be obvious. Medicines dispensed into different containers may or may not have the brand name shown on the dispensing label. In either case the strength will be shown; do not confuse strength with dose and frequency.

Strength will be shown in units such as mg; dose is number of tablets/spoons/puffs etc taken each time; frequency is the number of times per day the dose should be taken. Information on dose and frequency is **not** required.

6 Recording the information in Blaise

In the Blaise progress block you will be asked to confirm that you have asked about prescribed medicines and code whether any prescribed medicines are being taken - 'Yes' or 'No'. No detail about the medicines is transferred from the Measurements Schedule into Blaise.

ADDITIONAL RECORDING AND CODING TASKS

Checklist:

1. **During the placement interview** you will need to complete the following recording and coding tasks:
 - Herbal teas, green teas or herbal drinks:
 - record the full brand name;
 - record the flavour.
 - Artificial sweeteners:
 - record the full brand name;
 - record the form the sweetener takes.
 - Dietary supplements (vitamins, minerals, herbal preparations):
 - record the name or brand;
 - record the form the supplement takes;
 - record the product licence number if available;
 - code using card V1.
2. **At home**, after you have carried out the placement interview, you will need to complete the following coding tasks:
 - Occupation and industry:
 - code using 3-figure SOC and SIC codes.
 - Herbal teas, green teas or herbal drinks:
 - code using brand code list.
 - Artificial sweeteners:
 - code using brand code list.
3. **During the oral health component of the pick-up interview**
 - Toothpaste:
 - record the full brand name;
 - record the fluoride content.
4. **At home after the pick-up interview**
 - Occupation activity coding:
 - code using the occupation activity coding list.

Recording and coding herbal teas

During the interview:

If the respondent drinks herbal teas you should ask to look at the packages and record the FULL BRAND NAME and the FLAVOUR.



Remember: only record the details for herbals teas or drinks that the respondent themselves drinks – not brands or flavours drunk by other members of the household.



Remember: if the respondent has multiple flavours in one box, each of which they drink, you should code each separately.



Tip: make sure you write down the full description to the level of detail needed to assign a brand code e.g. Brand name – Net Foods Ltd
Flavour – Hedgerow Rose Flavour Tea.

Please take special care to distinguish between 'blackcurrant' and 'blackberry'! It's easy to mix them up, but they are coded differently

ONLY if the container is not available, should you ask the respondent whether they know the brand and flavour – you can use the key strokes for 'don't know' if they can't remember – we still need to know that they drink herbal teas or drinks even if the brand information is not available.

At home:

The details about brand and flavour copied down from the container at the placement interview are displayed on the screen. Using the BRAND CODES FOR HERBAL AND FRUIT TEAS AND GREEN TEAS coding list, you should find the correct brand code for this product.

Chooz1

DO YOU WANT TO DO THE HOME CODING NOW OR LATER?

1: Now

2: Later

At this question you will be asked whether you want to do this home coding task. If you code 'Yes' you will be taken to **BRAND**.

Brand

****HOME CODING TASK****

ENTER BRAND CODE FOR THIS PRODUCT

00001..99997

If the brand of drink you have recorded is not on the list or you have entered 'don't know' for brand you can use the following codes:

- **Code 600 – Other brand**
- **Code 601 – Brand not known**

Recording and coding artificial sweeteners

During the interview:

If the respondent uses artificial sweeteners you should ask to look at the container and record the FULL BRAND NAME and the FORM the sweetener takes .



Remember: only record the details for artificial sweeteners that the respondent themselves uses.



Remember: the respondent may use a granulated sweetener for some purposes and tablets for others.



Tip: make sure you write down the full description to the level of detail needed to assign a brand code e.g. Brand - Hermesetas New Taste, Form – tablets.

ONLY if the container is not available, should you ask the respondent whether they know the brand and form – you can use the key strokes for ‘don’t know’ if they can’t remember – we need to know whether they use artificial sweeteners even if the brand information is not available.

At home:

The details about brand and form of artificial sweetener copied down from the container at the placement interview are displayed on the screen. Using the BRAND CODES FOR ARTIFICIAL SWEETENERS coding list, you should find the correct brand code for this product.

Chooz1a **DO YOU WANT TO DO THE HOME CODING NOW OR LATER?**
1: Now
2: Later

At this question you will be asked whether you want to do this home coding task. If you code ‘Yes’ you will be taken to **BRAND**.

CodeSw ****HOME CODING TASK****
ENTER BRAND CODE FOR THIS PRODUCT

If the brand of artificial sweetener you have recorded is not on the list or you have entered ‘don’t know’ for brand you can use the following codes:

- **Code 600 – Other brand**
- **Code 601 – Brand not known**

Recording and coding dietary supplements (vitamins, minerals and herbal preparations)

During the interview:

If the respondent takes any dietary supplements you should ask to look at the containers and record the FULL NAME, including the BRAND NAME, the FORM the supplement takes and the PRODUCT LICENCE NUMBER where available.



Tip: The product licence number usually appears in the following format:

PL_ _ _ _ / _ _ _ _ e.g. PL7685/4055



Remember: only record the details for supplements that the respondent themselves takes.



Tip: Make sure you write down the full description and check the full description against the list – NOTE that products containing only Vitamins A, C and D are coded separately from other multivitamins

ONLY if the container is not available, should you ask the respondent whether they know the brand and form – you can use the key strokes for ‘don’t know’ if they can’t remember – we need to know whether they take supplements even if the brand information is not available.

Using the CATEGORIES FOR DIETARY SUPPLEMENTS IN THE INTERVIEW coding list (V1), you should use the name of the product to find the correct code and enter this.

VitCateg CODE CATEGORY FOR THIS SUPPLEMENT

At this question you should record preparations such as Ginseng and any other natural supplements. If you are unsure about a product or if the product you have recorded does not fit into any of the categories listed you can enter

- **Code 24 ‘other’.**

Occupation and Industry coding

At home:

You will need to complete occupation and industry coding for:

- HOH;
- HIH if they are not HOH;
- The respondent if they are not HOH or HIH;

SocNow DO YOU WISH TO DO THE S.O.C. CODING NOW OR LATER?
1: Now
2: Later

At this question you will be asked whether you want to code the occupation and industry details for the appropriate household members. If you code 'Now' you will be taken to **SOC**.

SOC REVIEW OCCUPATION DETAILS AND ASSIGN 3-DIGIT SOC CODE.

At SOC you are asked to review the occupation details of this household member's current or most recent job before entering a 3-digit occupation code. You should be using the edition revised in 1995 to do your coding. If you are unable to allocate a SOC code you can use code 0.

SIC REVIEW INDUSTRY DETAILS AND ASSIGN 3-DIGIT SIC CODE.

Assign a 3-digit SIC code using the industry description. You should be using the November 1993 edition to do your coding. Codes 459 to 462 are allocated to Inadequate description/no reply, No answer, Workplace outside UK and DNA respectively.

Note: There are checks on the program which will identify any combination of occupation/industry codes which are not acceptable.

Occupation activity coding

During the pick-up interview:

You will ask the respondent whether they worked at all during the diary-keeping week. If the answer is yes, the respondent will be asked to give a description of the kinds of tasks they do on a day-to-day basis. The kind of information you should be probing for should include whether the respondent's job involves mainly sitting, standing or moving about; using light or heavy machinery; carrying light or heavy loads etc. There is also space for you to record similar details about the respondent's second job, if they have one.

CHOOZ3 You will be asked if you want to do the home coding now or later

At home:

OACTCODE Using the PHYSICAL ACTIVITY DIARY CODING GUIDE FOR OCCUPATIONS (page 8 in this section) you should code the respondent's occupation into one of the three available codes:

Code 1 – very light/light occupations

Code 2 – moderate occupations

Code 3 – hard occupations



Remember: these codes are only a guide to what occupations should be coded under which activity level - if an occupation is not listed or does not seem to fit within the descriptions given, **please call research for advice** (Lynne Henderson 020 7533 5385).



Remember: Blaise will send this information to the physical activity section in the progress block, where you will be keying the data from *the Diary of Activities and Eating and Drinking Away from Home*. But you may also like to make a note of this code in your notebook.

Recording toothpaste

During the oral health section of the pick-up interview:

If the respondent uses toothpaste you should ask to look at the tube (it is unlikely that they will have the box the tube came in, although the information on the box is often more detailed than that on the tube) and record the FULL BRAND NAME, KIND(S) OF FLUORIDE PRESENT and FLUORIDE CONTENT.

Fluoride can be added to toothpaste in three main forms, each of which needs to be recorded:

- Stannous fluoride
- Sodium fluoride
- Sodium monofluorophosphate

It is unlikely that you will come across 'Stannous Fluoride' as it is used mainly in the US and on the continent.

You should code one or more of these ingredients if they are present in the toothpaste. We are interested only in ingredients that contain fluoride. Any other ingredient should be ignored.



Remember: we do not want to know about other ingredients such as 'Potassium Chloride' or 'Triclosan' which may also be listed as 'active ingredients'.



Tip: these ingredients are usually listed first on the tube and may be listed separately from other ingredients under the subtitle 'Active Ingredients'.



Remember: some kinds of toothpaste DO NOT CONTAIN FLUORIDE

If none of the three types of fluoride is present then please code 'none of the above present'. If no ingredients are listed you should enter 'don't know'. If you are unsure about an ingredient or the percentage present you should make a note.



Remember: only record the details for the toothpaste that the respondent themselves uses – different members of the household often use different brands.

For each of the kinds of fluoride present in the toothpaste, you will be asked to record the fluoride content. Fluoride content can be shown in the following formats:

- percentage e.g. 'Sodium Fluoride 0.32% w/w'
- parts per million e.g. 'Sodium Fluoride 1450 ppm F'

First you will be asked to code which format you are going to record and at the next question you will be asked to record the fluoride content.

IF BOTH ARE LISTED (e.g. Sodium Fluoride 0.32% w/w (1450 ppm F) please record the figure in **ppm** because it is easier for us to analyse.

If the kind of fluoride is listed but not the fluoride content, then you should use the key strokes for 'don't know' under fluoride content.



Tip: The fluoride content (if listed) can usually be found in the list of ingredients, although sometimes it is highlighted elsewhere on the tube e.g. 'Contains 0.32% Fluoride'.

ONLY if the toothpaste tube is not available, should you ask the respondent whether they know the brand they usually use – you can use the key strokes for 'don't know' if they can't remember.

Check that home coding is complete

If you try to code **intdone** as '1' there is an automatic check to make sure that you have completed the home coding section. If the program finds that you have not completed the appropriate home coding tasks you will be reminded to return and complete them.

PHYSICAL ACTIVITY DIARY CODING GUIDE FOR OCCUPATIONS

Use this as a guide to help you code respondent's job(s) in the pick-up questionnaire.

Note: These codes are a guide to what occupations should be coded under which activity level - if an occupation is not listed or does not seem to fit within the descriptions given, **please call research for advice** (Lynne Henderson 020 7533 5385).

Code 1 – very light/light occupations

Code 2 – moderate occupations

Code 3 – hard occupations

VERY LIGHT/LIGHT OCCUPATIONS - AVERAGE 1.5 METS – OCCUPATION ACTIVITY CODE 1

Very light occupations involve mainly sitting, including office or clerical work, the use of light tools, light assembly or repair.

Chemistry lab work

Factory work – very light (involving mainly sitting)

Office or clerical work

Printing

Student – including subjects with no aspect of physical activity, mainly attending lectures and reading or studying

Typing – including electrical, manual or computer

Light occupations involve mainly standing or walking, but no heavy lifting or carrying, including operating automated machinery.

Cleaning – light (including mainly dusting, straightening up, emptying rubbish bins, wiping up)

Cooking or food preparation

Factory work – light (involving mainly standing or walking)

Machine tooling, working with sheet metal

Laundry work

Repair work (including electrical)

Shoe repair

Tailoring – including cutting, hand or machine sewing

MODERATE OCCUPATIONS - AVERAGE 4.0 METS
– OCCUPATION ACTIVITY CODE 2

Occupations that involve mainly walking, lifting or carrying light loads

Carpentry

Cleaning work – hard (including mainly scrubbing floors, sweeping, washing windows, mopping)

Delivery work – light (mainly driving and the lifting of light loads)

Electrician

Factory work – moderate (involving mainly lifting, carrying light loads or operating heavy machinery)

Locksmith

Masseuse

Painting and decorating, including hanging wallpaper

Plumbing

Police work

Farming – light (including feeding small animals, shovelling grain)

HARD OCCUPATIONS - AVERAGE 6.0 METS
– OCCUPATION ACTIVITY CODE 3

Occupations that involve mainly hard physical labour

Coal mining

Delivery work – hard (mainly walking, lifting and carrying heavy loads)

Factory work – hard (involving mainly carrying heavy loads, shovelling, rolling steel)

Farming – hard (including baling hay, poultry work, forking straw bales)

Fire fighter

Labourer – any job involving carrying heavy loads, shovelling, digging

Road or house construction (including driving heavy machinery)

Using heavy power tools e.g. pneumatic drill

Any other occupations need to be classified as very light/light, moderate or hard at interviewer's discretion

PROGRESS BLOCK

For most of our surveys, we monitor progress in the field by waiting for you to transmit your cases back to the office, and looking at the admin block. This is adequate for most surveys, but does not keep us sufficiently up-to-date when objects have to remain on the laptops for a long time (eg on most diary-keeping surveys). We have ways of getting some of the information back quickly, but these methods are not adequate for the NDNS.

Because of the large number of different elements, it is vitally important on the NDNS that we have a very good idea of exactly what is happening in the field. This is important to help us plan our day-to-day work (eg “how many diaries are going to need coding in the next couple of weeks?”), to manage problems as they arise (eg “the interviewer posted the diaries a week ago, but we haven’t received them - did they have the correct serial number? or were they lost in the post?”) and to inform us so that we can make sensible decisions (eg “are we going to achieve our target response, or do we need to reissue / issue more addresses?”).

To help us answer these questions as quickly as possible, we have developed a different way of collecting information about progress on the survey; the Progress block in the Blaise instrument. Every time you open the questionnaire and access the Progress block, the system will create an object in your out-tray containing the progress information. This will be transmitted back to the office next time you connect, and will feed information into our brand new all-singing all-dancing case management system.

For us to receive the information we need to manage the survey, it is really important that you:

1. **Keep the information in the progress block up-to-date.** Every time you do anything in connection with an NDNS sampled address, enter the progress block and enter any relevant information.
2. **Transmit data frequently** (at least every other day, but preferably daily). This will ensure that the information gets back to the office quickly. If you look in your out-tray, you should see the progress objects waiting to be transmitted.
3. **Complete the progress block for ALL fully co-operating AND partial interviews.** Even if the respondent refuses after the placement interview, and/ or no measurements you need to enter this in the progress block. Please ensure all Now/ Later questions are coded ‘Now’ and details entered. If the respondent has refused we need to know why they have refused.

THE INFORMATION ENTERED INTO THE PROGRESS MONITORING SYSTEM IS TRANSCRIBED FROM THE MEASUREMENTS SCHEDULE (M1).

THE ADMIN BLOCK

The admin block is a standard block in most ways. The main differences that you will notice are related to the complexity of the survey.

A fully co-operating case must include all of the following aspects of the survey:

- A complete placement interview
- A full 7 day Home Record Diary and Eating out diary
- A full pick-up interview

If any of these aspects are not completed the case must be given the outcome code of 20, 21, 22 or 23 'partial'

OVERVIEW

You should complete the block at home before each daily transmission of data, for all addresses at which you have called during that day.

Varying amounts of information are needed about different types of address.

a) Addresses at which you have not yet called

It is not necessary to provide us with any information about these addresses because the computer knows that if the questionnaire has been opened, then no calls have been made yet.

b) Addresses at which you've called but at which you have not started interviewing

For these addresses you should open the appropriate Household questionnaire and at the Current Interview Status question (HStatus) use either code 1 (Calls made but no contact) or code 2 (Contact made, no work yet done on questionnaire), e.g. if an appointment had been made.

c) Interviews started but not completed

You will need to enter at what stage you are at in the interviewing process.

d) Completed households - fully and partially co-operating

Before completing the Admin. Block of the questionnaire, you must be satisfied that there is no further work to do.

In the admin block:

Record details of all calls made at the address

Code final outcome

Enter the amount of time spent working at your home on the address

e) Completed addresses/ Refusals, non-contacts, ineligible

Open a Household questionnaire for the address.

If a refusal, code main reason(s) for refusal.

For a non-contact, code main reason(s) for the non-contact

Enter the amount of time working at home on the address

ADMIN BLOCK

Entering Admin. Block details

At the end of the interview, or at any point during the interview, if you need to stop for some reason, you leave the questionnaire by pressing <Ctrl> + <Enter>. You will then be able to highlight the Admin Block option - one of the parallel fields - press the <Enter> key and enter the Admin Block. You will then be presented with the following questions:

Thanks

THAT'S THE END OF THE INTERVIEW - THANK RESPONDENT

<CTRL> + ENTER TO LEAVE QUESTIONNAIRE

1. OR PRESS ENTER IF YOU WANT TO CONTINUE

IntNum

Interviewer Number

Enter a numeric value between 1 and 6999

MenuNote

Reminder/Note for opening menu

OPTIONAL

ENTER HERE ANY USEFUL DETAILS YOU WISH TO APPEAR ON THE OPENING MENU

After entering your calls details you will have the chance to enter any note you might find useful to have on your opening household menu. [NB. Note only appears after entering the final question 'Ok' in the Admin Block.]

For example for an address where you have made an appointment (code 2 at HStatus) you might want to record the time/date of the appointment.

Do not enter anything here that you would not wish your respondentss to see.

HStatus

Current Interview Status

**UPDATE THIS BEFORE TRANSMISSION TO HEAD OFFICE.
ONCE SET TO 3, IT CANNOT BE CHANGED**

- 0: No work done yet**
- 1: Calls made but no contact**
- 2: Contact made, no work yet done on questionnaire**
- 3: Interview started/Any interviewing done**
- 4: Other - no interviewing required (e.g. ineligible, refusal)**

When to use the codes:

0: No work done yet

This is the code that is already on the laptop - it means that you have not entered any information into the household menu.

1: Calls made but no contact

If you have called at the address and received no reply but intend to call again, then enter code 1.

You would expect to change this code later in the field period to either code 3 or 4.

2: Contact made, no work yet done on questionnaire

This code should be used when you have made contact with the household, possibly made an appointment but have not yet started any interviewing.

As for code 1, you would eventually update this code to either code 3 or 4.

3: Interview started/Any interviewing done

This is the code that you enter when you start interviewing.

4: Other - no interviewing required

This code should be used if the address/household is definitely an ineligible, refusal or non-contact and you will be making no further calls to the address.

WhereRU

Update this as you proceed with the interview.

When to use the codes:

1: Placement interview done

Use this code once you have completed the placement interview

2: 24 hour check made (and other measurements possible)

Use this code once you have done your checks

3: Midweek checking call made (and other measurements possible)

Use once you have done your midweek check that the respondent is still keeping their diary and is not having any problems.

4: Pick-up interview done

Use this code once you have returned to the household picked up the respondents diary and completed the pick up interview.

5 Home coding completed

Use once you have completed your home coding of the diary

**6: All complete - placement and pick-up interview
and home coding**

This code can only be used once you have completed the interviews and coded your diaries.

LaterCall

DO YOU WISH TO ENTER THE CALLS BLOCK NOW OR LATER?

- (1) Now
- (2) Later

CallDat**DATE OF THIS CALL**

USE <CTRL-K> FOR HQ REFUSAL AND OFFICE USE

The date of the call should be entered in the same format as dates are entered in the rest of the questionnaire (except where the full year has to be entered), e.g. 4 11 97 or 11 11 97.

CallDay

AUTOMATICALLY ENTERED : Day of week, e.g. "Mon"

CallTim**TIME OF CALL**

(USE 24 HOUR CLOCK)

The time at which the call took place should be recorded, e.g. 1830 if you called at 6.30pm.

CallRes**CODE THE RESULT OF THIS CALL**

- 1: No reply**
- 2: Appointment made**
- 3: Placement interview done**
- 4: 24 hour checking call (+ blood/urine/anthropometry if any at this call)**
- 5: Mid-week check (+ anthropometry or blood/urine collectionn if any at this call)**
- 6: Additional diary checking call (+ blood/urine/anthropometry if any at this call)**
- 7: Diary collected and pick-up interview conducted (+ blood/urine/anthropometry if any at this call)**
- 8: Separate blood visit**
- 9: Separate 24 hour urine collection visit**
- 10: Interviewer withdraws**
- 96: Refusal to HQ**
- 97: OFFICE USE ONLY**

CalDur

Time spent on call

There is an upper limit of 300 minutes (5 hours) on the length of call. If for any reason you are in the house or flat for more than 5 hours then enter <CTRL + R> and open up a note using <Ctrl + M> to explain the actual time and the circumstances that led to this long a call.

CalMor

Any more calls to record?

1: Yes

2: No

Once you have entered details of all the calls made on this household/address you should use code 2 at this question.

Note: For HQ refusals the computer will still ask for details of calls made at the address. Please enter "Don't know" (CTRL +K) for the date at CalDat.

Final Outcome Codes

The next two screens contain all the final outcome codes.

Please note: When completing the admin block you may not have be asked for a final outcome code before completing the case. In these circumstances you should enter 97 as a temporary final outcome code to all Hout variables.

Hout1

ENTER FINAL OUTCOME CODE

IF NONE OF THE OUTCOME CODES AT THIS QUESTION APPLIES, USE CODE 97 TO REACH MORE OUTCOME CODES

11: FULLY CO-OPERATING

Full interview (placement and pick up interview) as dietary diaries, other elements may have been refused

20: PARTIALLY CO-OPERATING – USE ONLY if codes 21, 22 or 23 do not apply

Explain in a note

21: PARTIALLY CO-OPERATING - Placement or Placement and Pick up interview only

Dietary diaries refused or incomplete.

22: PARTIALLY CO-OPERATING - Dietary diaries completed BUT placement and/or pick- up interviews refused

23: PARTIALLY CO-OPERATING - Placement interview, pick-up interview and dietary diaries refused BUT participation with 1 or more other elements.

31: Refusal to HQ letter

Respondent has written or called into the office to say they do not want to take part in survey, before you called at this address. You can only use this code if the Field Office contacted you.

32: Refusal at introduction/before placement interview

Respondent has decided not to take part in the interview at the introduction.

33: Refusal during interview

Respondent refuses to answer any more questions mid way through the interview.

34: No interview - contact incapable

This code should only be used if the respondent is incapable of taking part. This could be due to language problems or mental illness.

41: NON-CONTACT - with any HH member

Unable to make contact with any member of the household having spoken to neighbours.

42: NON-CONTACT - with any selected or chosen HH member

Unable to make contact with the selected or chosen household member

43: NON-CONTACT - HH away all field period

Informed by neighbour or relative that the respondent is away for the whole field period

97: CODES 11-42 DO NOT APPLY

Hout2

Final Outcome Codes- ineligible

IF NONE OF THE OUTCOME CODES AT THIS QUESTION APPLIES, USE CODE 97 TO REACH MORE OUTCOME CODES

51: INELIGIBLE - no trace of address

This code should be used as a last resort and you must have contacted sampling first.

52: - Not yet built

Property has not yet been built or completed.

53: - Demolished/derelict

Includes addresses that have been combined into two.

54: - Empty

The address was empty at your first call, but you did not establish this until a later date. If a household moves into this address after your first call, they should not be included in the sample.

55: -Non-residential

The premises is used solely for business purposes.

56: - Institution- with no private household residing there

Use this code only if there is no private household for whom the institution is their main or only address, e.g. a hospital

57: - Temporary accommodation/second homes

The household does not live permanently at this address, e.g. a holiday home

58: - Household of foreign diplomat or foreign servicemen living on the base

59: - DIRECTED not to sample at address

Have contacted sampling and told not to interview at this address.

61: - Respondent pregnant, breastfeeding or ineligible because of medical reasons includes cases where the respondents own GP has said that they cannot take part in the survey.

62: - Respondent is under 19 or over 64 years of age.

97: CODES 51 - 60 DO NOT APPLY

HoutOU

Final Outcome Codes FOR OFFICE USE ONLY..

IF NONE OF THE OUTCOME CODES AT THIS QUESTION APPLIES, USE CODE 97 TO REACH MORE OUTCOME CODES

- 71: FULL INTERVIEW ACHIEVED BUT - disk corrupted/ lost in transmission**
- 72: PARTIAL INTERVIEW ACHIEVED BUT - disk corrupted/ lost in transmission**
- 73: - FULL: respondent demanded that data be deleted**
- 74: - PARTIAL: respondent demanded that data be deleted**
- 75: - FULL: disk stolen and not transmitted**
- 76: - PARTIAL: disk stolen and not transmitted**
- 97: Final HQ code if nothing else applies**

HoutTemp

Final Outcome Codes FOR TEMPORARY USE ONLY - MUST BE RECORDED IN RANGE 11-79 ...

CODES 71-79 ARE FOR OFFICE USE ONLY - REACHED VIA CODE 97 AT THIS QUESTION

- 83. For reallocation**
- 97. NOT FOR INTERVIEWER USE**
- Use this code to reach OFF USE outcomes 71-76**

If there is a refusal by to the interviewer (i.e. code 32 or 33) the following question will be asked:

RefReas

Code main reason(s) for refusal...

(enter at most 5 codes)

- 1: Doesn't believe in surveys**
- 2: Anti-government**
- 3: Invasion of privacy**
- 4: Concerns about confidentiality**
- 5: Can't be bothered**
- 6: Previous bad survey experience**
- 7: Disliked survey matter**
- 8: Genuinely too busy**
- 9: Temporarily too busy**
- 10: Personal problems**
- 11: Refusal to HQ after interviewer's visit**
- 12. Put off by recording keeping**
- 13: Late contact/insufficient field time**

- 14: About to go away**
- 15: Language difficulties**
- 16: Too old/infirm**
- 17: Not capable**
- 18: Broken appointment**
- 19: other**

In line with current Field Branch practice you are no longer required to expand on the other code.

If there is a non-contact, i.e. no-one is seen in household (i.e. code 41), the following question will be asked:

NCREas

Code main reason(s) for non-contact...

- 1: Away all survey period**
- 2: Working shifts/odd hours**
- 3: Rarely at address**
- 4: Will not answer door**
- 5: Think address is empty but could not confirm**
- 6: No information gathered**
- 7: Other**

If code 7 is entered at NCREas, the following question will appear:

If refusal code 34 is entered the following question(s) will appear:

RUnable

CODE REASONS FOR NOT CARRYING OUT THE INTERVIEW

- 1. Language difficulties**
- 2. Respondent too old/infirm**
- 3. Respondent not capable**
- 4. Other**

SOCNOW

Interviewer

DO YOU WANT TO DO OCCUPATION CODING FOR [name]:

- 1: Now**
- 2: or later?**

The question above asks whether you wish to code occupation (and industry) 'Now' or 'Later'.

If you code 'Now'- Details of this section can be found in the home coding section of these instructions.:

Mins Prog

ESTIMATE TOTAL TIME SPENT COMPLETING PROGRESS BLOCK AT HOME in minutes

Enter a numeric value between 1 and 997

MinsHcode

ESTIMATE TOTAL TIME SPENT DOING HOME CODING in minutes

Enter a numeric value between 1 and 997

MinsAdm

TOTAL TIME WORKING AT HOME ON THIS HOUSEHOLD in minutes?

Enter a numeric value between 1 and 997

Please enter the actual amount of time taken doing admin. on this household. Although time allowances will be set for claiming purposes it is important to record here exactly how long admin. did take.

NoteToHQ

ENTER ANY ESSENTIAL NOTES TO HQ ABOUT THIS CASE

Enter a numeric value between 1 and 997

This is a final field to enter any further notes that you feel may be of use to the office. If the interview has to be taken over by another interviewer, anything else you can tell us about the address might be useful, e.g. "back from holiday 10th of May ".

IntDone

HAVE YOU COMPLETED ALL POST-INTERVIEW CODING, CHECKING & NOTES?

CODE '1' (Yes) SIGNALS THAT THIS HOUSEHOLD IS READY FOR TRANSMISSION TO HEAD OFFICE

- 1. Yes, completed all coding, etc.**
- 2. Not yet**

'Ok' is the question at which you confirm that you have finished all work for the household. If you suddenly realise that you haven't completed all coding, then you have the option of re-entering the questionnaire via the parallel fields after coding the question.

Ok
INTERVIEWER

PRESS 1 - *IT MUST BE 1 ***- TO CONTINUE**
(the purpose is to trigger some final computer calculations for CaseBook to use)
NB. Remember to save the questionnaire before quitting!

Guide to handling HIV positive respondents.

There have been a couple of calls this week from interviewers about respondents who have volunteered the information that they are HIV positive. After discussion with everyone involved at HNR the following has been agreed.

The policy is not to request blood samples from respondents known to be infected or in high risk categories for HIV/Aids or Hepatitis B because of the additional risks involved in transporting and handling these samples.

However, we do NOT have ethical permission to ask respondents if they are infected or at high risk (drug abusers, haemophiliacs, homosexuals or the sexual partners of any of these).

PLEASE DO NOT UNDER ANY CIRCUMSTANCES ASK A RESPONDENT IF THEY ARE HIV OR HEPATITIS B POSITIVE OR IN A HIGH RISK CATEGORY.

If respondents volunteer this information spontaneously to interviewers or phlebotomists then blood should NOT be taken. Phlebotomists have been briefed not to take a sample if they are unhappy about doing so for whatever reason.

PLEASE DO NOT DISCUSS THE REASON FOR NOT TAKING BLOOD - IT WOULD BE BEST TO SIMPLY STATE THAT WE DO NOT NEED A BLOOD SAMPLE ON THIS OCCASION.

All respondents can provide a urine sample. Neither HIV nor Hepatitis B are present in urine (unless very heavily blood-stained). As a precaution female respondents should be asked not to do the 24 hour urine collection during their period.

All respondents can take part in all other components of the survey & these can be carried out in the normal way even if it is known that the respondent is infected or in a high risk group.

IF YOU HAVE ANY CONCERNS PLEASE CONTACT DR MAUREEN BIRCH.