National Diet and Nutrition Survey (NDNS).

Interviewer Project Instructions

P1255

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1 Study Overview

1.1 Background

The National Diet and Nutrition Survey Rolling Programme (NDNS RP) is a survey of the food consumption, nutrient intakes and nutritional status of people aged 1.5 years and older living in private households. The survey is carried out in all four countries of the United Kingdom (UK) and is designed to be representative of the UK population.

NatCen, in partnership with Medical Research Council Human Nutrition Research (MRC HNR) have been carrying out the NDNS RP since its inception in 2008/09. The study is jointly funded by Public Health England (PHE), an executive agency of the Department of Health, and the UK Food Standards Agency (FSA).

Fieldwork in Northern Ireland is carried out by the Northern Ireland Statistics and Research Agency (NISRA). Haematological and biochemical analyses of blood samples are carried out at MRC HNR and Addenbrooke's Hospital NHS Trust, Cambridge. Expert input on the analysis of physical activity data will be provided by the University of Exeter.

1.2 NDNS In a nutshell

NDNS is a UK wide study that aims to measure people's nutritional health. It involves participants aged 18 months upwards. Pregnant and breastfeeding women are excluded because of their special nutritional needs. There are 3 main interviewer visits to each household covering face-to-face interviews and self-completion questionnaires, a 4-day food diary and height & weight measurements. The interviewer visits are then followed by a nurse stage.

Purpose and Aims

NDNS provides the only source of high quality nationally representative data on the types and quantities of foods consumed by individuals, from which estimates of nutrient intake for the population are derived. Results are used by Government to develop policy and monitor progress on diet and nutrition objectives of UK Health Departments, for example those set out in the Healthy Lives, Healthy People White Paper in England and the *Supporting Healthy Choice paper* which sets out the action required to shape and better support healthier diets in Scotland.

The food consumption data are also used by FSA to assess exposure to chemicals in food, as part of the risk assessment and communication process in response to a food emergency or to inform negotiations on setting regulatory limits for contaminants.

The specific aims of the NDNS RP are to:

- provide quantitative data on the food and nutrient intakes, sources of nutrients and nutritional status of the UK population aged 1.5 years and above;
- provide information on trends in food consumption, nutrient intake and nutritional status in different age groups;
- describe the characteristics of individuals with intakes of specific nutrients above or below the national average;
- produce a database of food consumption which will be used to calculate intakes of natural toxicants, contaminants, additives and other food chemicals;
- measure blood and urine indices that provide evidence of nutritional status or dietary biomarkers, and to relate these to dietary, physiological and socio-demographic data;
- provide height, weight and other anthropometric measurements and examine their relationship to socio-demographic, dietary, biochemical and health data;
- monitor the diet of the population to establish the extent to which it is adequately nutritious and varied;
- monitor the extent to which the diets of population sub-groups vary from expert recommendations;
- assess total energy expenditure and physical activity levels and patterns in the study population; and
- provide information on oral health status in relation to diet and nutritional status.

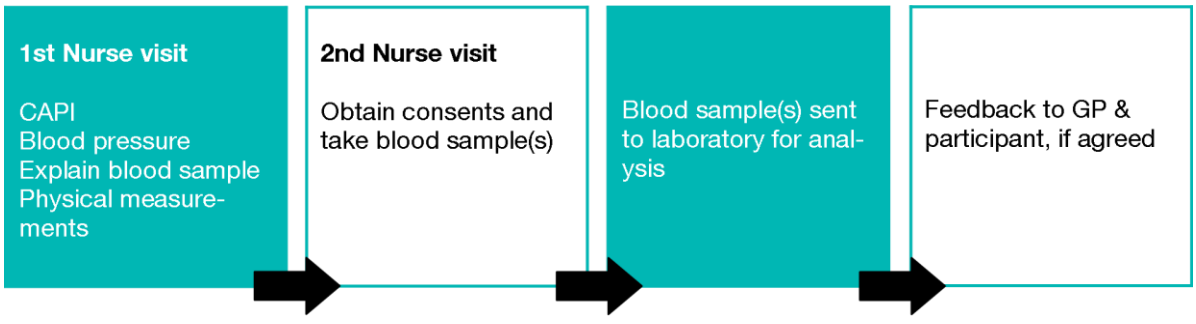
Interviewer stage

Interviewer fieldwork will be issued in 12 monthly waves (April 2015 – March 2016) and will run until May 2016. Below is a flowchart for NDNS, which you might find useful when mapping out your visits.

*Heights and weights are included in the CAPI as a parallel block. This can be completed at any point after CAPI 1

**Spot urine is included in CAPI 1; however there will be an option to collect urine on visit 3 as well. (Urine samples cannot be collected at visit 2).

Nurse stage



1.3 Website

We have a website specifically dedicated to NDNS, which provides information about what taking part in NDNS involves. It also explains why we need NDNS and what the data produced are used for. We have only provided the basic information about what taking part involves as we want to leave the finer details to be explained by you, our expert interviewers! The website can be found at:

www.nationaldiet.co.uk

The website address is also on advance letters. Please take time to familiarise yourself with the site and direct participants or potential participants towards it.

1.4 NDNS report publications

1.4.1 NDNS UK Report

The report for Years 1 to 4 (2008/09 – 2011/12) combined was published on PHE's website on 14 May 2014 and is available on the NDNS website; www.nationaldiet.co.uk .

This report presents combined results for a sample of the UK population designed to be nationally representative. This report also includes findings from blood indices of nutritional status and salt intakes from 24-hour urinary sodium in young children and older adults for the first time in the RP. Analysis is also presented by household income and with a more detailed age breakdown for adults.

Some key findings from the report are as follows;

Fruit and veg

Most people did not meet the '5-a-day' guideline:

- Adults aged 19 to 64 years on average consumed 4.1 portions of fruit and vegetables per day, while adults aged 65 years and over consumed 4.6 portions per day. Just thirty per cent of adults aged 19-64 years and 41% of older adults met the "5-a-day" recommendation.
- Mean consumption of fruit and vegetables for children aged 11 to 18 years was 3.0 portions per day for boys and 2.7 portions per day for girls. Ten per cent of boys and 7% of girls in this age group met the "5-a-day" recommendation.

Oily fish

Most people don't eat enough oily fish:

- Mean consumption of oily fish in all age groups was well below the recommended one portion (140g) per week. For example, mean consumption in adults aged 19 to 64 years was 54g per week (52g for men and 54g for women) and for adults aged 65 years and over mean consumption was 91g per week (103g for men and 81g for women).

Red meat

- Mean consumption of red meat including the contribution from composite dishes (i.e. not just discrete items) for adults aged 19 to 64 years was 71g per day (86g for men and 56g for women) and for adults aged 65 years or over was 63g per day (75g for men and 54g for women). The recommendation is that adults with relatively high intakes of red and processed meat (of 90g or more per day) should consider reducing their intakes.

Sugars

Non-Milk Extrinsic Sugars (NMES) are added to foods during manufacture and preparation and also include naturally occurring sugars in foods such as fruit juices. Mean NMES intake exceeded recommendations (no more than 11% food energy) for all age/sex groups:

- Most notably for children aged 4 to 10 years and 11 to 18 years where mean intake provided 14.7% and 15.6% of food energy respectively.
- For children, the main sources of NMES were non-alcoholic beverages (soft drinks and fruit juice), particularly for those aged 11 to 18 years, and cereals and cereal products.
- For adults, the main sources of NMES were table sugar, preserves and confectionery, cereals and cereal products and, in addition, for adults aged 19 to 64 years, non-alcoholic beverages.

1.4.2 NDNS Scotland Report

The Scotland report for Years 1 to 4 (2008/09 – 2011/12) combined was published on FSA Scotland's website on 24 September 2014 and is available on the NDNS website; www.nationaldiet.co.uk

Some key findings from the report were as follows;

- Mean consumption of "5-a-day" fruit and vegetables portions was significantly lower in Scotland compared with the UK for men aged 19 to 64 years (3.7 compared with 4.1 portions) and women ages 19 to 64 years (3.8 compared with 4.1 portions).
- Mean consumption of fruit and vegetables for children aged 11 to 18 years was 2.7 portions per day. Twelve per cent of boys and 8% of girls in this age group met the "5-a-day" recommendation.
- Consumption of oily fish was below the recommendation of one portion (140g) per week in all age groups.
- Mean intake of NMES was higher than the recommendation of less that 11% of food energy in all age groups. The highest of which was 15.4% for children aged 11 to 18 years.

1.4.3 NDNS Northern Ireland Report

The Northern Ireland report for Years 1 to 4 (2008/09 – 2011/12) combined was published on FSA Northern Ireland's website on 12 February 2015, it is also available on the NDNS website; www.nationaldiet.co.uk

Some key findings from the report were as follows;

- Fruit and vegetable consumption in Northern Ireland was significantly lower than in the UK as a whole; 82% of adults, 77% of older adults and 96% of children aged 11 to 18 years in Northern Ireland did not meet the five-a-day recommendation.
- Mean consumption of oil-rich fish was well below the recommended one portion per week and was significantly lower than in the UK as a whole.
- Mean salt intakes exceeded the recommended maximum in all age groups. Mean intake for adults was similar to that in England.
- Mean intakes of NMES exceeded recommendations in all age groups except those aged 65 years and over, and were similar to or slightly lower than mean intakes in the UK as a whole.

1.4.4 Upcoming Reports

There are a number of reports that are due to be published throughout 2015;

- The Wales Years 2 to 5 combined report is due to be published in Spring/Early Summer 2015.
- A report on folate intakes is due to be published in March 2015
- Key findings from Years 5/6 combined are due to be published in Summer 2015.

1.5 NDNS Impact

NDNS data provides crucial evidence for major health campaigns and policy making. Some examples of these are the Public Health Responsibility Deal and the Change4Life campaign.

Public Health Responsibility Deal

The Responsibility Deal challenges businesses and other organisations to lead the way in positively shaping and creating an environment that supports people to make informed, balanced choices and help them live healthier lives.

Organisations sign up to the Responsibility Deal and commit to taking action to improve public health. These actions come from pledges that are issued by the Department of Health.

Examples of these pledges include;

- Reducing the amount of salt in foods
- Eliminating artificial trans-fat from foods
- **Out of Home Calorie Labelling** providing calorie information for customers on menus and menu boards.

More information on the Responsibility Deal can be found here: http://responsibilitydeal.dh.gov.uk/.

Change4Life

The Change4Life campaign is a commitment for individuals, families and communities to live healthier lives. Their aim is to educate people on healthy eating and how to stay active, providing useful tips such as how to get your 5-a-day, how to reduce salt and how to cut back on fat. Their slogan, *Eat Well Move More Live Longer* encourages people to adopt simple behaviours that will help them to be healthier.

1.6 Media coverage

The data contained in the NDNS reports receives fantastic coverage; here are just a few of the articles that have referenced NDNS.

2 Planning and organising your time

2.1 Contact list

If you have a project specific query, you should first contact your Field Performance Manager or Regional Manager. They will then pass you on to the appropriate colleague if they cannot answer your question.

The Equipment team, Logistics, IT support, Data Unit and the Freephone team are all based in Brentwood.

- The **Equipment Team** will assist you if you have any queries relating to documents or supplies.
- **Logistics** organise briefings, issue assignments, deal with incentives and help with translations.
- **IT support** will help you with any IT issues.
- The **Data Unit** should be contacted if you have any queries with the CAPI program
- The **Freephone Team** operates the participant helpline, so they will contact you if someone calls to cancel or reschedule their visit.

Contact list		
Project Number	**P1255**	**Telephone**
Brentwood	**Switchboard** – call and ask to speak to the relevant department	01277 200600
	Equipment Team Equipment@natcen.ac.uk – Subject: Stationery\Workpack on P1255	01277 690006
	Logistics Logistics@natcen.ac.uk – Subject: Incentives on P1255	Call switchboard and ask to speak to Logistics
	IT Support	01277 690200
	Data Unit DataUnit@natcen.ac.uk - Subject- Program query on P1255	Call switchboard and ask to speak to the Data Unit

2.2 NDNS Fieldwork dates

Fieldwork dates						
Quarter	**Month**	**Work pack dispatch**	**CAPI LIVE Date**	**Fieldwork start**	**Interviewer deadline**	***Nurse start***
Q1	**804: APR**	Wed 25 Mar	Fri 27 Mar	Wed 1 Apr	Thu 14 May	Fri 10 Jul
	805: MAY	Fri 24 Apr	Tues 28 Apr	Fri 1 May	Mon 15 Jun	Mon 10 Aug
	806: JUN	Thu 21 May	Fri 29 May	Mon 1 Jun	Tue 14 Jul	Tue 8 Sep
Q2	**807: JUL**	Wed 24 Jun	Fri 26 Jun	Wed 1 Jul	Wed 12 Aug	Thu 8 Oct
	808: AUG	Fri 24 Jul	Wed 29 Jul	Sat 1 Aug	Mon 14 Sep	Mon 9 Nov
	809: SEP	Tue 25 Aug	Fri 28 Aug	Tue 1 Sep	Wed 14 Oct	Wed 9 Dec
Q3	**810: OCT**	Thu 24 Sep	Mon 28 Sep	Thu 1 Oct	Thu 12 Nov	Thu 7 Jan
	811: NOV	Fri 23 Oct	Thu 29 Oct	Sun 1 Nov	Mon 14 Dec	Mon 8 Feb
	812: DEC	Mon 16 Nov	Fri 20 Nov	Mon 23 Nov	Mon 18 Jan	Tue 15 Mar
Q4	**801: JAN**	Wed 16 Dec	Wed 23 Dec	Sat 2 Jan	Mon 22 Feb	Tue 19 Apr
	802: FEB	Mon 25 Jan	Fri 29 Jan	Mon 1 Feb	Tue 15 Mar	Wed 11 May
	803: MAR	Tue 23 Feb	Fri 26 Feb	Tue 1 Mar	Wed 13 Apr	Thu 9 Jun

2.3 Documents and Equipment

Please see below for a list of documents and equipment you will need, in visit order. Before starting work, check that you have all supplies and contact Operations in Brentwood immediately if anything is missing (see contact list in Section 2.1).

Pre Doorstep	
Project instructions	White
Doorstep	
Laminated advance letters	White
ARF (Basic addresses)	Blue
ARF (Young person addresses)	Cream

NatCen leaflet	White
Stage 1 leaflet – Adult	Turquoise
Stage 1 leaflet – Child	Turquoise
Visit 1	
Contact cards	Turquoise
CAPI showcards	Cream
Interviewer laminate pack	Various
Smoking & drinking self-completion – 8-12yr	Green
Smoking & drinking self-completion – 13-15yr	Pale blue
Smoking & drinking self-completion – 16-24yr	Peach
Interviewer diary assessment schedule	White
Food diary – adult (A4)	White
Food diary – adult (A5)	White
Food diary – child (A4)	White
Food diary – toddler (A5 – parent fills in)	White
Diary instruction booklet – adult (A5)	White
Packaging cards *(in zipper bag)*	White
Extra diary pages	White
Food diary reminder card	Pumpkin
Carer letter	White
Carer food and drink recording sheet *(4 in each carer pack zipper bag)*	Blue
Measurement Record Card	White
BMI Leaflet (16+)	Turquoise
Scales	N/a
Stadiometers	N/a
Spot Urine (Can be done at visit 1 or visit 3)	
Spot urine leaflet – Adult	Turquoise

Spot urine leaflet – Child	Turquoise
Spot urine consent form - Adult (16years+)	White
Spot urine parental/guardian consent form - Child (14- 15 years)	Light Blue
Spot urine child assent form - Child (14- 15 years)	Light Blue
Interviewer laminate pack	Various
Spot urine kit • Universal tube – labelled • Rigid outer packaging – labelled • Padded envelope – Pre paid and pre-addressed	N/A
Permanent marker pen	Black
Disposable gloves	N/A
Sealable plastic bag	N/A
Certificate for children	White with stars
Sticker for children	N/A
£5 gift card	N/A
Visit 2 (Midweek diary check)	
Interviewer diary assessment schedule	White
Green pen	N/A
Laminate pack – IDAS prompt	White
Diary instruction booklet – adult (A5)	White
Young person food atlas – booklet (x3)	Purple
Visit 3	
CAPI showcards	Cream
Stage 2 leaflet – Adult	Turquoise
Stage 2 leaflet – Child	Turquoise
£30 Gift Card	N/A
Physical Activity self-completion (16+)	Lilac
Interviewer diary assessment schedule	White

Diary instruction booklet – adult (A5)	White
Laminate pack – IDAS prompt	White
Young person food atlas – booklet (x3)	Purple
Diary evaluation sheet	Light Green
NHSCR consent form	Pink

2.4 Interviewer calendar

You will receive an 'Interviewer calendar' within your workpack. These calendars outline start and end dates of fieldwork, as well as key deadlines for the very last day you can do CAPI 1, place diaries, and complete CAPI 2.

2.5 General milestone guidance

Below is a list of all key milestones for NDNS assignments. Field Performance Managers will be checking progress against this information:

Before fieldwork start

All advance letters must be mailed out ahead of fieldwork start.

Day 1

Start assignment on the first day of fieldwork.

At the very latest assignments must be started within 3 days of fieldwork start.

By week 2

All Young Person boost addresses (10-28) screened to assess your workload.

By week 3

All addresses have been contacted/attempted.

Aims for week 5

All visit 1's (CAPI 1 & diary placement) to be completed.

Diaries

Midweek checks must be carried out on day 1 or 2 of the diary recording period (ideally face-to-face).

Fieldwork end

Return all documents including your set of young person's photo food atlases.

2.6 ARF Task list

Make use of the task list and section to record diary dates on page 3 of the ARF – this will help you keep track of dates household visits are needed and tasks that you will need to complete.

2.7 KPIs

- You should aim to visit all your addresses within the first 7 days of fieldwork
- Milestone 1 – by half way through the fieldwork period, 60% of your addresses should be covered
- Milestone 2 – by three quarters of the way through the fieldwork period, 80% of your addresses should be covered

2.8 Field Performance Managers

Field Performance Managers will contact interviewers on a weekly basis to monitor progress on NDNS.

3 Definitions for selection

3.1 Dwelling Unit (DU)

A Dwelling Unit (DU) is an address or part of an address, which has its own front door. The front door does not have to be at street level, but it must separate one part of the address from other parts (i.e. only those who live behind the door have access to the area, it is not a communal part of the address).

A DU need not be fully self-contained - for example, an address may contain four bed-sitters, the inhabitants of whom share a bathroom. Each bed-sitter would count as a DU as long as it had its own front door.

3.2 Household

The standard definition of a household applies to NDNS: One person living alone or a group of people (not necessarily related) living at the same address (or the selected DU within the address) who share cooking facilities AND share a living room or sitting room or dining area.

Also see the Interviewers' Manual for further information on establishing who is resident at the address and on dividing residents into households.

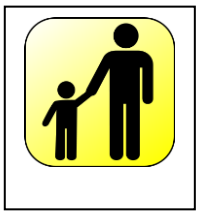
3.3 Catering Unit (CU)

The Catering Unit (CU) is the primary grouping for this study. It is a "group of people who eat food that is bought and prepared for them (largely) as a group".

Occasionally a household will be found to consist of more than one CU. Although people may share accommodation and even be related, they may not be in the same CU. For example, young adults sharing a house with their parents may shop, cook and eat by themselves, in which case the parents would be in one CU and the children in another.

3.4 Main Food Provider (MFP)

The Main Food Provider (MFP) is the person in the CU with the main responsibility for shopping and preparing food. If these tasks are equally shared between two people for example if one person does all the shopping and another person does all the cooking, then either resident can be classified as the MFP but, if possible, information should be obtained from both of them when the MFP interview is being completed.



3.5 Adult and young people age groups

For the purposes of participant selection:

- **adults** are aged **19 years and over**
- **young people** are aged **18 months – 18 years**

So, for participant selection, those aged 16, 17 and 18 are counted as young people rather than adults but in the questionnaire and for all other purposes (e.g. diary administration, obtaining consents), they will usually follow the same routing and be treated the same as those aged 19+.

What to do if a participant is aged 18 at selection, but turns 19 before doing CAPI1?

The age at the time of participant selection (i.e. the date you administer the ARF) determines adult/young person status on NDNS, regardless of any imminent birthdays.

If during selection someone is currently 18 but will have their 19th birthday soon, they are still counted as a young person and should be included in the relevant person selection grid on the ARF.

If they are selected as the young person participant and turn 19 before you return to do CAPI 1, you will have to allocate the appropriate unproductive code for this individual. You should not do a re-selection.

4 Your sample

4.1 Who to interview

In year 8 4424 addresses will be issued to interviewers in 158 points across the UK. This sample will include boost addresses in Wales and Northern Ireland, with the fieldwork being carried out in Northern Ireland by NISRA (Scotland is included in the core UK sample but there is not an additional boost in Scotland).

Selecting participants;

- There are 28 addresses in each assignment.
- There are 2 types of addresses: 'Basic' and 'Young Person Boost' addresses.
- Pregnant and breastfeeding women are excluded from taking part.

Basic adresses

- Addresses 1-10 are basic
- Has a **blue ARF**
- Select up to 2 participants: one adult (aged 19+) and one young person (aged 18months-18years) using the ARF.

Young Person boost addresses

- Addresses 11-28 are young person boosts
- Has a **cream ARF**
- Select only one person aged between 18months-18years
- Screen out any households that don't have anyone aged 18months-18years
- No adult will be selected at these addresses

The ARF will guide you through the procedures for participant selection (see section 6)

4.2 Household visits

Interviewers make three main visits to a participating Catering Unit (CU).

- For CUs with an adult and a young person participant you should try to interview the adult and young person at the same visits, to avoid additional visits.
- Page 3 of the ARFs have space for you to enter appointments made with participants and a checklist of tasks.

4.3 Consent for children aged under 16 years

For all **children under 16 you must get permission from the child's parent(s) before you interview** the child. Always give preference to the natural/adopted parent and, where appropriate, to the mother. If a child is not living with his/her natural or adoptive parent, permission should be obtained from the person(s) in the CU who is *in loco parentis* for that child on a permanent/long-term basis. For example, a foster parent or a grandparent.

If the **parent(s) are temporarily away** from home and will be throughout your fieldwork period and have left them in the care of a close relative, then if that relative feels they can give permission for a child to be interviewed, this is acceptable. A non-relative must never be taken as the person *in loco parentis* in this type of situation.

You are asked to record the name of the parent/guardian who gave permission for their child to be interviewed on the ARF and in CAPI.

If there is any disagreement between parents, or between parent and child about taking part, you should respect the wishes of the non-cooperating person. You can interview a child under 16 if the adult selected doesn't want to take part but is happy for the child to be interviewed. Young people who are aged 16 or above and give consent to take part can do so without permission from their parents.

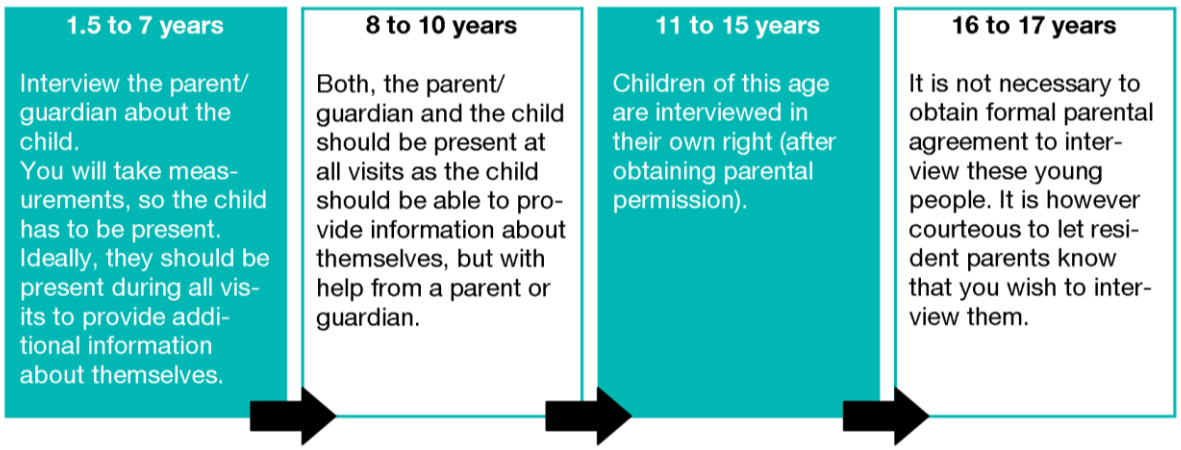
4.4 Interviewing children aged under 16 years

The parent or "guardian" of a child **must** be present at the time you carry out the interview.

For **children under 8**, the interview will be mainly completed by the parent/guardian about their child.

For **children aged 8-10**, the parent/guardian and the child should both be present whilst you carry out the interview, and the interview will be a "joint effort" between the child and their parent/guardian.

Older children (11-15 years) do the interview themselves. The parent/guardian need not necessarily be in the same room but they must be at home and be aware that you are carrying out the interview. This protects both the child and yourself.



4.5 Proxy interviews

Apart from interviews with young people you should not complete individual interviews by proxy. If a person is unable to complete the interview in person and no translator (within the household) is available then use the appropriate code (e.g. language difficulties).

You may conduct the **MFP interview** with the selected adult if the MFP is not – and will not – be available.

4.6 Excluding pregnant/breastfeeding women

NDNS does not include pregnant nor breastfeeding women, because of their special nutritional needs.

- On the doorstep, before beginning the participant selection process, if possible find out whether any of the women or teenagers in the CU are pregnant/breastfeeding, and exclude them from the selection grid. The total number of people in the CU should not include a pregnant/breastfeeding person.
- If you select a woman between the ages of 16 and 50, you might want to check with her then that she is not pregnant/breastfeeding, before beginning the interview. If she is pregnant/breastfeeding, you will need to carry out another selection.
- CAPI includes an early question which double-checks that the selected participant(s) is not pregnant/breastfeeding. If you accidentally select a pregnant/breastfeeding woman you can reselect your participant. Note that this is the only opportunity/instance in which you can re-select participants.
- If it is a single adult (19+) CU with children, and the adult is pregnant/breastfeeding, then you will attempt to interview a young person (18mths-18 years) only.

5 Doorstep approach

5.1 Advance letters and Survey leaflets

- An advance letter, printed on PHE and FSA headed paper, describing the purpose of NDNS is sent **by you** to all sampled addresses a few days in advance of fieldwork. The letter briefly describes the study and states that you will be calling.
- There are two versions of the letter – one for the 'basic' addresses (1-10) and another for the 'young person' addresses (11-28).
- You have been given a laminate copy of the advance letters to use as a reminder.
- You must include a copy of the stage 1 leaflet (adult version) with the advance letter.
- There are adult and child versions of the stage 1 leaflet. The appropriate version of the leaflet should be given to the participants selected for full interview. Read the leaflets carefully - they will help you answer some of the questions people might have.
- If participants would like more information about the survey they can visit our website www.nationaldiet.co.uk, contact NatCen by phone using the freephone number 0800 652 4572, or emailing NDNS@natcen.ac.uk. All these details are found on the advance letter.

5.2 Doorstep introduction

The general rule is to keep your initial introduction short, clear and to the point. Keep your explanation as short as possible saying as little as you can get away with.

Only elaborate if you need to. Introduce one new idea at a time. Do not give a full explanation right away - you will not have learned what is most likely to convince that particular person to take part.

On the doorstep, concentrate on obtaining the interview. Do **not** mention measurements – this may put some people off. The interview and dietary data collection are very important, and we want them even if we do not get any measurements for a person.

What you might mention when introducing the survey

- It is a national survey being carried out by NatCen on behalf of Public Health England (PHE) and the Food Standards Agency (FSA).
- **For Scotland** The survey is being carried out by NatCen on behalf of the Food Standards Agency in Scotland.
- **For Northern Ireland** The survey is being carried out by NISRA on behalf of the Food Standards Agency in Northern Ireland.
- **For Wales** The survey is being carried out by NatCen on behalf of the Welsh Government.
- It is an extremely important survey, this is because it is the only way of collecting accurate information on the diet and nutrition of the UK population.
- It will provide PHE and FSA with accurate and up-to-date information on the diet and nutrition of the population.
- The information will be needed by whichever government is in office. To get an accurate picture, we must talk to all the sorts of people who make up the population - the young and the old, those with varied and unvaried diets, and those who like the current government's policies and those who do not.
- Each person selected to take part in the survey is vital to the success of the survey. Their address has been selected - not the one next door. No-one else can be substituted for them.
- No-one outside the research team will know who has been interviewed, or will be able to identify an individual's results.
- The data will be an anonymised statistical summary of everyone's answers.
- Participants who complete four diary days can receive feedback based on their diet over the four days of recording.
- Use information about previous waves about how the results are used to inform policy and help people in society now and for future generations e.g. health issues in schools, childhood obesity, levels of salt in food.
- Highlight the benefits to the participants – incentives, dietary feedback, how they will help improve food standards.
- Be positive and keep smiling. Be polite and persistent.
- Avoid too much detail upfront on the doorstep.
- Highlight we want to do the study regardless of what participants eat (for those put off by the negative feedback on their bad diets).
- Highlight PHE and FSA (and Welsh Government if in Wales)– they add authenticity.
- **THERE IS A £30 TOKEN OF APPRECIATION FOR EACH INDIVIDUAL TAKING PART (Plus £5 for providing a urine sample)**

5.3 Doorstep introduction for the Young Person boost sample

At 'young person' addresses we are only looking for young persons aged 18mths -18 years. We are therefore looking for people from what might be seen as a 'vulnerable' group. You need to think carefully about your doorstep approach in these cases and be ready with explanations if questioned by household members.

What you might mention when introducing the survey

- The main reason we are targeting people in this age group is to get an accurate picture of diet and nutrition from all different people, including those who are younger.
- The diet, nutrition and health of children and young people are very important to us so we need to interview more people of this age to get accurate data. This is why in some addresses we will be focusing our attention on young people.
- Make it clear to parents that you can only interview children under 16 if the parent or legal guardian is present.
- There is a freephone number on the advance letter if the participants want further clarification. Brentwood operation staff and the research team would be happy to answer any questions they may have.
- There is a £30 token of appreciation for each individual taking part.

5.4 Dietary feedback example

In your laminate pack there is an example of the personalised dietary feedback that the participant can receive if they complete four diary days. You may wish to use this to encourage people to take part in the study.

6 The ARF

6.1 Basic and Young Person ARFs

You will receive a pre-labelled ARF for each of the addresses in your sample. Note that there are two versions of the ARF. The ARF header tells you whether the address is a basic address or a young person address.

BLUE - BASIC ADDRESS ARF

- for addresses 01-10 where you will aim to select one adult (19+) and one young person (18 months -18 years)

CREAM - YOUNG PERSON ADDRESS ARF

- for addresses 11-28 which includes a screen for young people aged 18months - 18 years. (No adult is selected at these addresses)

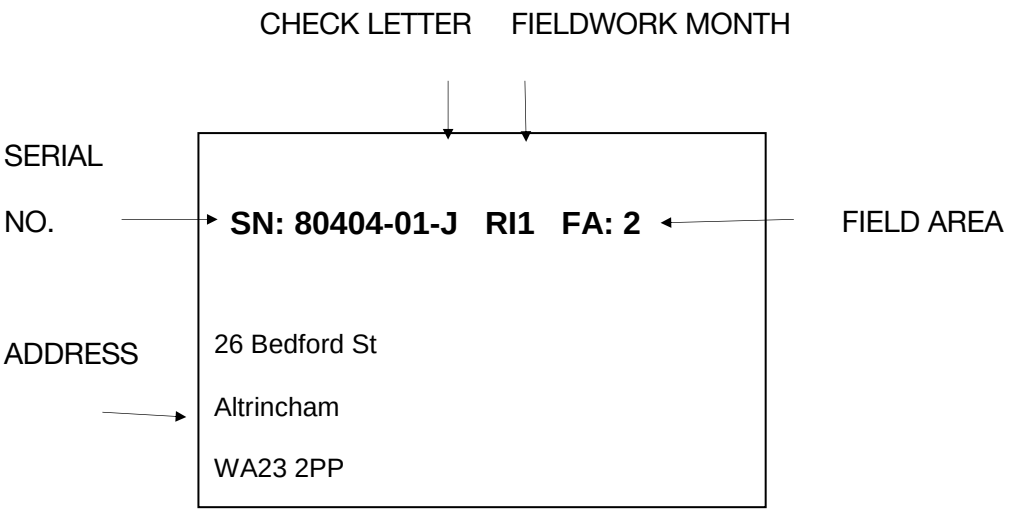
Each ARF enables you to:

- record all attempts to make contact at the address
- select a DU
- select a CU (within the selected DU)
- at basic addresses: select an eligible adults (19+) within the selected CU
- at young person addresses: select an eligible young person (18 months-18 years) within the selected CU
- record the name of the legal guardian who gave consent for anyone under 16 years old
- record the final outcome for the selected participant(s)
- It also provides a checklist of the tasks

6.2 Address label

The Address Label at the top of the ARF gives, in addition to the full address, a seven-digit serial number plus a check letter. It is made up of:

- One digit for the YEAR ('8' for year 8, 2015/16)
- Two digits for the MONTH (01=January; 04=April etc.)
- Two digits for the Point number, within month (01..12)
- Two digits for the Address number, within point (01..28)
- A check letter.
- **Country boost points** (for interviewers working in Wales and Northern Ireland), will be indicated by *CB* in the top right hand corner of the address and selection labels.



The **serial number** is the anonymised number assigned to that household. You will be asked to write it on a number of documents (e.g. self-completions). This enables the office to match all the documents from one household together. You also use this serial number to access the interview in the CAPI. When you open a CAPI questionnaire you should make sure that you select the address number that corresponds to the address number of the ARF label.

6.3 Selection label

The selection label on the front page should be used where there are two or more DUs or CUs and you have to select one at which to interview. This label is also used when the selected CU contains two or more persons and you have to select one as the participant. Further information on selection procedures and an example of the label is provided in section 6.7

6.4 Final outcome (top right corner of the ARF)

This is the outcome code for the **whole** CU. For addresses or CUs which are totally unproductive, this code will come from the ARF. For CUs which were productive (or partially productive) it is calculated within CAPI. It can only be coded when you have completed all your tasks for that CU and will be given in the Admin block.

6.5 Calls record

Keep a full record of all the **visits** you make to an address/CU on the bottom half of the front page and page 2 – include abortive visits as well as productive ones. Any notes about what happened at each call should be made in the notes box. Label the notes with the call number. There is also a grid (on the bottom half of page 2) where you can keep track of all **telephone calls** you make. You may need to phone participants, to check how they are doing and to remind them to start/keep going. All attempts and actual calls you make can be recorded here.

6.6 Task list and diary dates

On page 3 there is a task list, to remind you of the tasks that need to be completed and allows you to record details of the dates that the diary will cover and to keep track of what appointments you have made.

6.7 Basic address (1-10) ARF / blue ARF

SECTION A - DWELLING UNITS (DUs)

This section guides you through the process of establishing: whether the address is eligible for interview (i.e. traceable, residential and occupied as a main residence) and the number of DUs at an eligible address. You will need to follow the routing instructions carefully.

You will need to complete the **observation information** at Section J before making contact.

A1 You first need to establish whether the address is **traceable, residential and occupied** as a main residence. If is not traceable, residential or occupied then you will proceed to Section G. If you are not sure, you are routed to section H. If it is residential and occupied, then proceed to A2.

A2/A3 At this question you should establish the number of DUs at the address. NDNS only allows one DU within an address to be selected. You need to enter this information into the Admin block. If you are unable to establish the number of DUs, you will go to Section F to record why the address is unproductive. This information is needed to help assess eligibility for reissue so please give as much demographic information as possible, and any reason given for refusal.

A4 If there are **2 or more DUs at your address**, list all of them in the grid in the order indicated. Then use the selection label on the front of the ARF to select one DU. Go along the first row ('DU/AD') until you reach the number of DUs at your address, and then look below for the selection code of the DU to include. Ring this code in the column headed *DU Code*. An example of a selection label is shown below.

GridRef: 238665/344822

DU/AD:	2	3	4	5	6	7	8	9	10	11	12
	2	3	1	1	5	1	1	9	9	11	6

CU/CH:	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	5	6	6	1	4	8	7	7

If have an address with 13 or more DUs, list the DUs on a separate sheet of paper in the order indicated at A4. Then use the look-up chart in Section I of the ARF. E.g. if you have 17 DUs, the DU to be included in the survey is the 13th. Pin the sheet on which you have listed these DUs to the back of your ARF.

An example of a completed DU selection is shown below. Given the selection label shown earlier, you can see that the basement flat was the selected DU:

A3. DU SUMMARY

ONLY 1 DU	A	***Go to* A5**
2+ DUs	(B)	***Go to* A4**

A4. DU SELECTION

List all DUs (in flat/room number order, or from bottom to top of building, left to right, front to back) **then select one using selection label on front of ARF.**

DESCRIPTION	DU CODE	DESCRIPTION	DU CODE
Basement Flat	(01)		07
Ground floor flat	02		08
First floor flat – front	03		09
First floor flat – back	04		10
	05		11
	06		12

IF 2-12 DUs:
- Look at the selection label on front page
- In 'DU' row: find number matching total number
- Look at 'Select' row directly beneath showing you which DU code to select
- Ring corresponding DU code in grid above
- Write in code number of selected DU at A5

IF 13+ DUs:
- Continue list on separate sheet if necessary
- Make a selection using the lookup chart in section I.
- Write in at A5.

A5.

CODE NUMBER OF SELECTED DU:	0	1	*Go to Section B*

Once you have selected a DU, make sure that the address label on the front of the ARF is updated so that if another interviewer needs to take over any of your work, they know which DU has been selected.

SECTION B -CATERING UNITS (CUs)

B1/B2 Here you will establish the number of CUs in the (selected) DU. Again, you will need to enter this information into the Admin block. If you are unable to establish the number of CUs, go to Section F and code why.

B3/B4 If there are 2 or more CUs, list all of them in the grid in alphabetical order of the name of the MFP in each CU. Then use the selection label on the front of the ARF to select the CUs to include in the survey. Go along the first row until you reach the number of CUs at your address, and then look below for the selection code of the CUs to include. Ring this code in the column headed *CU Code* and write it down at B4.

It is very unlikely that you will come across a DU with 13 or more CUs. If you do, list the CUs on a separate sheet of paper in the order indicated at B3. Then use the look-up chart in Section I. For example, if you have 13 CUs, the CU to be included in the survey is the 12th. Pin the sheet on which you have listed these CUs to the back of your ARF.

B5 Having selected the CU (or in most cases, having found that there is just one), you need to establish who the MFP is for that CU. The MFP is "the person with the main responsibility for shopping and preparing food". As discussed in section 3 it is possible for these tasks to be equally shared, in which case put both names on the ARF (and try to ensure that both are present for the household questionnaire).

The following example shows the selection of a CU. Given the selection label shown earlier (section 6.3), you can see that the 'Jill' was the MFP in the selected CU. Enter the number of the selected CU at B4.

• B: Catering Units (CUs)

B1. **NUMBER OF CATERING UNITS IN DU**

A Catering Unit is a groups of people that eat food that is bought and prepared for them (largely) as a group.

ASK: ***Do all the people who live together in this dwelling unit eat food that is bought and prepared for them (largely) as a group, or do any of them buy and prepare their food separately?***

NUMBER OF CUs:	**0**	**2**	***Go to* B2**
Don't know	A		***Go to* SECTION F**

B2. **CU SUMMARY**

ONLY 1 CU	A	***Go to* B5**
2 + CUs	(B)	***Go to* B3**

B3. **CU SELECTION**

List the name of the **Main Food Provider** (MFP) in each catering unit (i.e. the person with main responsibility for shopping and preparing food in each Catering Unit) **in alphabetical order.** Then select one using selection label on front of ARF.

DESCRIPTION	CU CODE	DESCRIPTION	CU CODE
Jill	(01)		07
John, Katie	02		08
	03		09
	04		10
	05		11
	06		12

IF 2-12 CUs:
- Look at the selection label on front of ARF
- In 'CU' row: find number matching total number of CUs
- In the 'Select' row: the number beneath total number of CUs is the 'selected CU' code. Ring on grid above and record at B4.

IF 13+ CUs:
- Continue list on separate sheet if necessary.
- Make a selection using the lookup chart in section I.
- Write in at B4 below.

B4.

CODE NUMBER OF SELECTED CU:	**0**	**1**	***Go to* B5**

SECTION C - ADULT SELECTION (AGE 19+)

C1 Once you have made contact with the CU and introduced the study, you then need to **establish the number of eligible, non-pregnant or breastfeeding adults (aged 19+) in the CU.** As in most cases the CU will include all those living at the address, ask "I would like to ask you a few questions about the people who live here. Including yourself, how many adults aged 19 or over live here?" Then you will need to check if any of these adults are currently pregnant or breastfeeding, and exclude them. If the accommodation consists of more than one CU, you will need to be careful to establish that we are only interested in those who are part of the selected CU.

If there is no-one aged 19 years or over in the CU, but there is someone aged 16-18 (i.e. the eldest CU member is aged 16-18), you will go onto Section D to select a young person participant (Participant 2). If there is no-one aged at least 16 (i.e. the eldest CU member is aged 15 or younger) you will not make a selection / interview anyone. Ring code C at C3 and go to Section E. Select outcome 770 and record this on the front of the ARF.

C2 There are notes at C2 that remind you who is and is not eligible. **Record the number of eligible adults.** If you are unable to establish this, go to Section H to record the reason why.

C3 If the **CU comprises just one person aged 19+** (not pregnant nor breastfeeding) then they will be selected for interview.

C4 In **CUs containing two or more such adults** then one participant needs to be selected at random. Use the grid to select an adult participant for interview. Remember only non-pregnant/breastfeeding CU members are eligible. If at this stage you identify that there are no non-pregnant/breastfeeding adults in the household, use final outcome code 770 at section E for Adult then continue to section D (to ascertain whether there is an eligible young person).

All eligible adults (19+) should be listed in the grid at C4, in alphabetical order. Then use the selection label on the front of the ARF to select the adult to include in the survey. Go along the first row (DU/AD) until you reach the number of eligible adults in the CU, and then look below for the selection code of the adult to include. Ring this code in the column headed *Adult Code*.

C5/6 Enter the code number of the ADULT participant and record their full name on the front page of the ARF.

The following example shows an Adult participant selection in a CU comprising of three eligible adults. Following the protocol and the selection label, the third adult (Steve) has been selected as the participant.

ADULT (AGED 19+) SELECTION

List name or initials of each non-pregnant/breastfeeding person aged 19+ in **alphabetical order**. Then select one using selection label on front of ARF.

NAME/INITIAL	ADULT CODE	NAME/INITIAL	ADULT CODE
Katrina	01		07
Paul	02		08
Steve	(03)		09
	04		10
	05		11
	06		12

IF 2-12 NON-PREGNANT/BREASTFEEDING PERSONS AGED 19+:	IF 13+ NON-PREGNANT/BREASTFEEDING PERSONS AGED 19+:
• Look at the selection label on page 1 of the ARF • In the 'DU/AD' row: find number matching total number • of persons • In 'Select' row: number beneath total number of persons is the 'selected person code'. Ring on grid above and record at C5.	• Make a selection using the lookup chart in section I. • Record selection code at C5

CODE OF SELECTED ADULT:	0	3	*Go to* C6

SECTION D – YOUNG PERSON SELECTION (18 MTHS-18 YRS)

D1 Here you will establish if there are any eligible young people in the CU, and if so, select one. Young people who live in that CU and are aged 18mths -18yrs are eligible. (Please exclude: teenagers who are pregnant or breastfeeding). Record the number of eligible young people at D1.

If you are unable to establish the number of young people, ring code A and record the reason at section H. You will then continue to interview/record the final outcome for the selected adult.

Note that if you are told that someone is currently (i.e. on the date you are doing the participant selection) 18 but will soon have their 19th birthday then you must include them in section D. It is their age at the time of selection that determines their eligibility for NDNS. If by the time you return to do the main interview they have turned 19 (i.e. are now an adult, according to the NDNS definition) then you would have to code them as "599 (**OFFICE APPROVAL ONLY**: Other unproductive)". Please contact the office before using the code. You will also need to make a note of this at the *SAAdInf* field in the Admin

block, in case we decide to reissue – we would not be able to reissue this address. You would not carry out a reselection amongst those who are still classed as a young person.

D2 This summarises the number of eligible young people. If there are no eligible young people, code A, and continue to interview/record the final outcome for the selected adult. If there is one eligible young person, that young person will be selected. If there are two or more eligible young people, you will need to do a selection at D3.

D3 This grid enables you to select a young person. In CUs containing two or more eligible young people then one of them needs to be selected at random.

All eligible young people (aged 18mths-18yrs) should be listed in the grid, in alphabetical order. Then use the selection label on the front of the ARF to select the young person to include in the survey. Go along the CU/CH row until you reach the number of eligible young people in the CU, and then look below for the selection code of the young person to include. Ring this code in the column headed *YP Code*.

D4/5 Enter the code number of the young person participant and record their full name on the front page of the ARF.

D6 If the selected participant is aged under 16, you will need parental consent to interview the child. Always check that the consent giver is the legal guardian of the child. If consent is given, write the name of the person agreeing. If consent is not given, go to section E and code 432 (proxy refusal). Remember to return to section E to record the outcome of the selected adult participant.

Now follows an example of participant selection in a CU comprising four eligible young people. Following the protocol and the selection label shown earlier, the third young person (Kitty) has been selected as the participant.

TOTAL NUMBER OF PERSONS AGED 18 MTHS – 18 YRS:	**0**	**4**	***Go to* D2**
Don't know	A		***Go to* SECTION H**

D2 **YOUNG PERSON SUMMARY**

No eligible persons aged 18 mths –18 yrs (pregnant or breastfeeding)	A	***Go to* SECTION E**
1 person aged 18 mths –18 yrs	B	***Go to* D5**
2 or more people aged 18 mths – 18 yrs	(C)	***Go to* D3**

D3 **YOUNG PERSON SELECTION**

List name or initials of each non-pregnant/breastfeeding person aged 18 mths - 18 yrs in (selected) CU in **alphabetical order**. Then select one using selection label on front of ARF.

NAME/INITIAL	YP CODE	NAME/INITIAL	YP CODE
Felix	01		07
Gabriel	02		08
Kitty	(03)		09
Nell	04		10
	05		11
	06		12

IF 2-12 NON-PREGNANT/BREASTFEEDING PERSONS AGED 18 mths – 18 yrs: • Look at the selection label on page 1 of the ARF • In the 'CU/CH' row: find number matching total number of persons. • In 'Select' row: number beneath total number of persons is the 'selected person code'. Ring on grid above and record at D4.	**IF 13+ NON-PREGNANT/BREASTFEEDING PERSONS AGED 18 mths – 18 yrs** • Make a selection using the lookup chart in section I. • Record selection code at D4

D4

ENTER CODE NUMBER OF SELECTED YOUNG PERSON:	**0**	**1**	***Go to* D5**

SECTION E- OUTCOME FOR PARTICIPANTS

This is where you record the outcome for each participant individually. The codes are standard.

SECTION F - UNPRODUCTIVE OUTCOME: ELIGIBLE ADDRESSES

Section F allows you to record an outcome code for any addresses that are eligible but unproductive. The codes are standard.

SECTION G - UNPRODUCTIVE OUTCOME DEADWOOD ADDRESSES

Section G allows you to record an outcome code for any addresses that are ineligible (deadwood). The codes are standard. Further information about the use of Deadwood codes should recorded at H4.

SECTION H -UNPRODUCTIVE OUTCOME DEADWOOD ADDRESSES UNKNOWN ELIGIBILTY

These are cases where you are unable to ascertain whether the address contains eligible participants or not, for example where you are unable to locate an address. You should only code an address as unknown eligibility as a last resort. This means you have done everything possible to locate an address, or identify whether it is residential and occupied. The codes are standard. Further information about the use of Deadwood codes should recorded at H4.

SECTIONS I AND J

SECTION I is a **Look up chart** for 13+ DUs/CUs or eligible individuals

SECTION J, Interviewer observation, is where you record the standard observations that need to be made.

6.8 Young person address ARF (11-28) / CREAM ARF

Sections A and B, and most other sections of the YOUNG PERSON ADDRESS ARF are identical to the 'BASIC ADDRESS' ARF.

SECTION C – Young person selection

C1 If there is at least one young person aged 18 mths-18 years, establish the number of persons within this age range. If you cannot establish the number code 'Don't know' and then select the appropriate outcome code in section G.

The remainder of section C is identical to Section D the 'BASIC ADDRESS' ARF – please refer to section 6.7 for instructions on how to complete this section.

Section D – Young person Outcome

This is where you record the outcome for the young person participant. The codes are standard.

7 Year 8 CAPI

7.1 Introduction

The CAPI questionnaire has **three main elements**:

- 'Household Structure' interview
- Main Food Provider (MFP) interview
- Individual interviews (including self-completions):

7.2 Household (CU) structure interview

The Household Structure interview must be completed before individual interview(s). It will be completed with the MFP or another adult participant. If other CU members are present at the time it is useful for obtaining correct dates of birth etc. If you are interviewing in a single-person CU, you must complete the Household/CU interview with that person. If that person is not capable of answering the questions, it is not permissible to collect the information by proxy from someone else.

7.3 Household (CU) grid

The information collected about the composition and structure of the CU is the basis for all subsequent questions and filtering. Please check that you have:

✓ not omitted any CU member (you need to enter **all members**, not just the selected participants)
✓ not included anyone who is not a member of the CU
✓ the correct date of birth/age for everyone.

The order in which you enter the participants is not crucial, but you may find it easier later on if they are entered roughly in age order, with the MFP first. At the very least, you should try to enter the details of parents before you enter those of young people.

7.4 Entering details of selected participants

At questions ***AdNum1 – MFPNum*** you will be prompted to record the names of the participants on the front page of the ARF. If the young person is under the age of 11 you will be prompted to record the name of the adult who will be answering questions alongside or on behalf of the young persons. Where there are two or more adults you will also be asked to enter the MFP name from the front of the ARF. If you have not already done so, you will need to ascertain who the MFP is at this point (see section 3.4 for definition).

7.5 The MFP interview

Once you have completed the Household (CU) Questionnaire, you will be routed to the start of the MFP questionnaire. The purpose of the MFP block is to gain information at CU-level about cooking facilities, food shopping and food preparation.

If the MFP is not one of your selected participants and is not currently available for interview, you have the option of doing the interview 'Later' rather than 'Now'. When you go back to carry out the MFP questionnaire later, you will need to re-open the same household (CU) interview. Press **<CTRL+ENTER>** to bring up the parallel fields. Use the down arrow key until the module – '**Main Food Provider'** – is highlighted, then press enter. You will be taken straight to *MFPNow* where you can change the code from 2 (Later) to 1 (Now). See section 7.7 for more information about navigating via parallel blocks.

If the MFP is unlikely to be available during any of your visits, you can do the MFP questionnaire by proxy with any adult (aged 16 or older) member of the CU. The preference is for the person who has the best knowledge about the cooking facilities in the CU, shopping for food, food preparation, etc. To do this, select the 'Now' option at *MFPNow,* then code at the next question, *MFPProx* that the questionnaire is being completed by proxy.

7.6 Individual interviews

Once you have completed the Household (CU) Structure Questionnaire (and hopefully, the MFP questionnaire), you will conduct an individual interview with the participant(s). The CAPI program allows only one participant to be interviewed at a time.

Basic address

- maximum of 2 individual questionnaires:
- Participant 1 / Adult : first selected person (always an adult aged 19 or older)
- Participant 2/ Young Person: second selected person (always young person aged 18 months-18 years)

Young person address

- 1 individual questionnaire
- Participant 2/ Young Person: ONLY selected person (always a young person aged 18 months-18 years)
- For consistency, the selected person in young person addresses will always be Participant 2

For each individual questionnaire (any age) there are **two main parts**: **CAPI 1** – completed at visit 1; and **CAPI 2** – completed at visit 3.

CAPI 1 (Visit 1)	Participant
Access to Food at school	All participants 18 months-18 years (except if 16-18 and in full time employment)
Usual Eating Habits	All participants
General Health	All participants
Oral/Dental Health	All participants 16+
Smoking & Drinking	All participants. For participants aged 8-17, these questions will be administered in a self-completion booklet (GREEN for 8-12 year olds, BLUE for 13-15 year olds and a PEACH booklet for 16 and 17 year olds). Participants aged 18-24 are given a choice between completing the PEACH self-completion or answering the questions in CAPI.
Education	All participants 16+
Job/Income	All participants 16+ (except if 16+ and in full-time education)
Measurements (Height and weight)	All participants
Spot urine	All participants 4+

CAPI 2 (Visit 3)	Participant
Physical activity	All participants aged 2+ Children (2-15 years) will be asked in CAPI. Adults aged 16+ will be asked in a self-completion.
Dietary supplements	All participants
Exposure to sunlight	All participants
Wellbeing questions	All participants 16+
NHS Central Register & Cancer Registry	All participants 16+
Stable address	All CUs
Nurse introduction	All participants

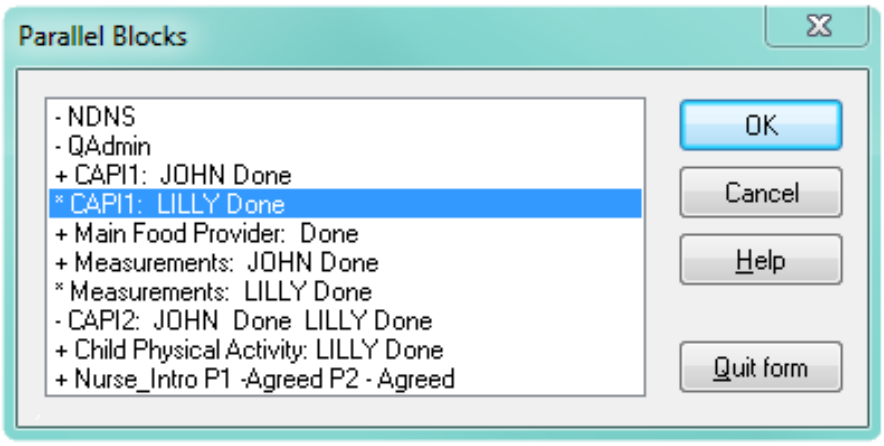
7.7 CAPI modules/ parallel blocks

The computerised questionnaire consists of:

The household (CU) structure questionnaire	**(NDNS)**
The admin block	**(QAdmin)**
The MFP questionnaire	**(Main Food Provider)**
The individual CAPI 1 interview(s)	**(CAPI1)**
The individual measurements	**(Meas)**
The individual CAPI 2 interview(s)	**(CAPI2)**
Nurse introduction	**(Nurse_Intro)**

Each component is a parallel block; this means that you can **enter any block at any time**, no matter where you are in the schedule. For example, you can enter the MFP block at any convenient moment.

Pressing **<Ctrl+Enter>**, brings up a screen called 'Parallel Blocks'. It lists all blocks, and looks like this:



8 The four-day food and drink diary

8.1 Overview

To get a detailed and accurate measure of people's diet and nutrition, each participant will need to write down everything they eat and drink for four days in their food and drink diary.

Here is a list of key points to give you an overview of what you will need to do:

- Go through the diary step by step and give the participant key instructions on how to complete the diary. Practice with your participant, giving them opportunity to demonstrate their understanding of the task
- Arrange a check-up visit for the 2nd day of recording. Visit the participants and check through the information recorded for day 1.
- Arrange to collect the diary within 3 days of completion. Check through the diary and add any missing information
- Review children's diaries (aged under 16 years) using the Young Person's Food Atlas
- Collect any additional information: packaging, carer sheets, school menus, extra pages. Fill in an evaluation sheet.

8.2 Interviewer Diary Assessment Schedule (IDAS)

The INTERVIEWER DIARY ASSESSMENT SCHEDULE (IDAS) provides a list of the documents you will need, instructions for placing the diary, what to look out for when checking the diary and other helpful reminders. **It is very important that you read through the IDAS before you start each assignment**. The IDAS PROMPT SHEET is a 2-sided abridged version of the IDAS to be used as a reference tool when going through the diary with the participant. It can be found in your laminate pack.

8.3 The food diaries

Types of food diary in NDNS

As NDNS covers such a wide range of ages, there are four types of diary:

- **Adult diary (A5)** – for participants aged 16+
- **Adult diary (A4)** – for participants aged 16+ who wish to use a larger diary
- **Child diary (A4)** – for participants aged 4-15
- **Toddler diary (A5)** – for participants aged 1.5 to 3 years

Who completes these diaries?

- For children aged 12 years and under, ask the parent/carer to complete the diary with help from the child as appropriate

- Children aged 13 years and older can complete the diary themselves but will be expected to confirm details, where necessary, with the MFP. Additional detail and information may need to be obtained from the MFP if they are not completing the diary on behalf of the child.
- The parent/carer will be asked to keep the diary for all toddlers.

Due to the Young Person boost, in some CUs, a child or toddler might be the only person keeping a diary and an adult might be asked to help a young child or toddler to complete a diary without having to keep one themselves.

8.4 Placing the food diary

Introducing the food diary

Based on the day of the first individual CAPI interview, the laptop will select four consecutive days as the diary recording period. If a CU contains two participants, both participants will be assigned the same diary days. Please complete the details on the front cover of the diary with the participant's name, male or female, date of birth and serial number and enter the date of the day they should start recording. It may also help if you write in the day and dates of the diary days allocated by CAPI in the diary itself.

Generally participants should stick to their allocated days even if they think that on some days their food and drink intake will be untypical; we do not want participants to be picking "good" and "bad" weeks to keep their diary. However, if the participant will be on holiday at any point during the allocated 4 days, assign a new start date. This is because food and drink consumption on holiday is unlikely to represent the participant's typical diet. You should replace like-with-like so if the original days were Saturday – Tuesday, the new days should also be Saturday – Tuesday.

Please familiarise yourself with the important components of the food diary in order to explain these to your participants by reading through sections 1 and 2 of the IDAS. It is important that after you have placed the diary with the participant, they feel confident with what is expected of them and are aware of the information in the diary that will help them record what they have eaten as reliably as possible. Start by spending a few minutes working your way from the front to the back of the diary so that your participant gets an overview. Then go back through giving the participant more detailed instructions using the IDAS PROMPT SHEET (see laminate pack).

For adult participants, make sure you offer the choice of the A4 and A5 diaries so that they can choose which will be most convenient for them to use.

Proxies

Where there are language barriers or other difficulties, you may find that another member of the household can act as a proxy for the participant. For example, children could act as proxies if their parents do not speak English. If this is the case, please make a note in the Diary Evaluation (see section 8.6). Where proxies are used, you should still encourage the participant to contribute as much as possible to completing the diary.

Arranging check-up visit

After placing the diary, please arrange a check-up visit with the participant before you leave. The visit should be on the **second day** of the diary recording. CAPI will tell you which day to make the appointment. CAPI will also prompt you to make an appointment to collect the diary up to three days after the last diary day. **Please make a note of the participant's phone number if they are willing to give it to you.**

The check-up visit should be a home visit (i.e. personal).

You should check that the participant has started keeping their diary. You should look through the entries for the first day so that you can gauge their completeness. Ask them if they have any concerns or questions and encourage them to continue with the diary. If you are unable to make a personal visit, you must at least phone the participant and ask them to recite entries to you. In a few cases you may feel that more than one check-up visit is required and you should arrange to go back on the third or even the fourth day of recording, as appropriate. It is up to you to decide how much support each participant needs. If a proxy is completing the diary then, whenever possible, both the participant and the proxy should be present when you check it.

Reminder phone call

If there is a gap between diary placement and the start of the diary recording period, and you have concerns that the participant will forget to start their diary, please contact the participants to remind them. If the gap is seven days or more, you will need to make a reminder phone call, running through the main points of completing the diary. These can be found on the REMINDER PHONE CALL checklist on page 16 of the IDAS. Arrange a mutually convenient time for you to call the participant, a day or two before they are due to start, when they are at home so they can have the diary in front of them. Please cover everything on the document, referring participants to the various sections in the diary where necessary. Make sure you also speak to participant 2 if they are 12 years old or above. If this is not possible, ask participant 1 to pass on the information.

Restarting the diary

If when you arrive for your check up visit and they have forgotten to start recording, they are allowed **ONE** restart. Ideally they would then start on **that day and complete four days from then**. For example, your participant is asked to keep their diary from Saturday to Tuesday but when you arrive for your check up visit on the Sunday, the participant has not started recording. Allocate them four new diary recording days starting with that Sunday through to Wednesday. Ensure that the participant is in possession of their diary and write in the new dates in the diary. If you can, start them off by getting them to fill in the first thing they had that day. Arrange a new check-up visit for the next day (now the second day of diary recording).

On some occasions, a participant may not have started recording and may want to delay for some reason. Although we do not want participants to be picking "good"

and “bad” weeks, the alternative could be that we would lose the participant. If this would be the case or it would be difficult to arrange subsequent visits, you can allocate them four new days. You should replace like-with-like so if the original days were Saturday – Tuesday, the new days should also be Saturday – Tuesday. Give your participant a new reminder card and write the new dates in the diary. Also arrange a new check-up visit for the second day of the diary recording period.

Checking the food diary

The reason why we require so much detail on the food and drink consumed by the participant is so that we can identify each food item correctly and allocate a corresponding food code from our NDNS nutrient databank as well as an appropriate portion code. Missing detail makes food and portion coding difficult and less likely to represent what the participant actually had to eat. For those participants who have requested dietary feedback (see section 5.4) inaccurate diaries result in misleading feedback. Therefore it is crucial that the diaries we receive from you are well completed with lots of detail and no missing information.

Missing information should be collected while you are at the participant’s home because this increases the chance of filling in any gaps. Please read through section 3 and 4 of the IDAS. The IDAS PROMPT SHEET provides help on what you should be looking out for when in the participant’s home. **Not everything that the participant has written (or not written) needs to be scrutinised. Priority should be given to missing portion sizes and inadequate descriptions of foods.**

If there are any omissions or ambiguities in the diary, you should clarify these with the participant. Please use a green pen (or at least a different colour from that used by the participant) when you write on the diaries so that we can see where you have needed to probe for additional information or made changes.

The Young Person’s Food Atlas

The Young Person’s Food Atlas is to be used when reviewing the diaries with children under 16. Most of the foods that appear in the atlases are shown as a series of seven photos of the ‘food served’ and seven photos of ‘leftovers’. Children, especially toddlers, leave a large proportion of the foods served to them. Therefore being able to select a photo of leftovers increases accuracy and this is one of the many advantages of using the atlas over household measures. Further details are in section 3.2 of the IDAS

IMPORTANT: Please remember that the atlas is only to be used when reviewing the diary. It should not be left with participants under any circumstances. Participants must still record how much they ate at the time of eating **for every item they record** either in household measures or weights from labels. It does not matter how accurately participants have recorded what they ate; if the food is listed on the Equivalent Food List you should show them the photos in the atlas. Do not overwrite what the participant has originally recorded. The photos codes are in addition to what the participant has written. **Remember to return all 3 atlas booklets at the end of your assignments by Recorded Delivery.**

8.5 Pick-up visit

The pick-up visit should be no later than three days after the final day of recording. Again, you should check the diary for completeness, concentrating on the entries made since your last visit as described above for the check-up visit. If the participant has followed your guidance, checking the remainder of the diary should not take very long. You must also ensure that the participant has completed the **general questions about food/drink in the last 4 days** at the back of the diary. If not, please ask them to fill these in.

Remember to collect any additional items such as the plastic bag with labels, extra pages, school menus and carer packs.

8.6 Monitoring the quality of dietary data collection

In order to maintain a high standard of dietary data collection, we continually monitor and feedback to you the quality of the diaries you send in. Feedback comes in various forms and it is very important that you take note of any comments made.

Diary Evaluation

A diary evaluation should be completed for each participant as soon as possible after collecting the diary. This form is for you to record any problems the participant might have had with keeping the diary and how well you thought it reflected on what they actually ate. For example, if a participant had language difficulties and their young son or daughter translated for them, you would note this in your evaluation. It also asks who filled in the majority of the diary (the participant or another person e.g. their parent).

Early work feedback

This is based on your first completed diary and is sent to you and your Regional Manager. It is only sent out if we pick up on any obvious omissions or errors so that these are not carried through to the other diaries.

Please ensure that you send your first completed diary back to Brentwood as soon as you have collected it from the participant.

Pre-point feedback

This is based on all the diaries from your completed assignment and is sent to you before you start a subsequent assignment. It highlights where improvements could be made but also provides positive comments.

Other types of exercises/feedback

If you have any lengthy gaps between being briefed and your first assignment or between assignments you will be asked to complete an exercise to act as a refresher. You should return the exercise as instructed and you will then receive feedback.

9 Spot urine

9.1 Background

We are asking you to collect spot urine samples so that they can be used to provide an assessment of iodine levels in the UK population. Iodine is an essential nutrient for being healthy and it is used by the body to make thyroid hormones. Thyroid hormones are important for growth and development and iodine deficiency can lead to an enlargement of the thyroid gland and an increase in the amount of TSH produced by the pituitary gland.

The best way to determine iodine deficiency across a large population is to measure the amounts of iodine in urine samples. This will provide nationally representative information that will be sufficient to categorise the iodine status of the UK population by sex-age group. As we are only looking at iodine at a population level, no individual feedback will be given to participants.

9.2 Documents

Information leaflets

You have been provided with spot urine information leaflets for your participants. There is one version for adults and one version for children. These leaflets provide participants with background information, the collection method and contact details should they have any queries or concerns.

Participants **must** read the relevant leaflet before signing the consent forms. Encourage participants to read these as they provide information about the spot urine element.

In order for participants to provide a sample they must read the relevant information leaflet then provide written consent.

Consent forms

In order to collect a sample from a participant you must first of all obtain written consent. There are 3 spot urine consent forms.

1. Adult consent form for participants aged 16 years and over.
2. Parental/Guardian consent form to be completed by parent(s) of participants aged 4 – 15 years.
3. Child assent form should be completed where possible by participants aged 4 – 15 years.

- Participants **must** initial each statement that they agree to
- Participants and interviewers should both sign and date the form

The top copy of the consent form will be returned to the Brentwood office and the bottom copy will be left with the participant.

9.3 Equipment

You will have the following equipment:

- Universal tube – labelled
- Rigid outer packaging – labelled
- Padded envelope – pre paid and pre-addressed
- Permanent marker pen
- Disposable gloves
- Sealable plastic bag
- Leaflets
- Consent forms
- Child assent form

9.4 Collecting a spot urine sample

When to collect the sample

Spot urine will be introduced during CAPI 1, however if the participant is unable or unwilling to provide a sample at visit 1, you can re-introduce it at visit 3.

Spot urine samples can only be collected at visits 1 or 3, as you will need CAPI open to get the correct sample labelling instructions.

Please **do not** leave the spot urine kit with the participant and allow them to collect the sample at a time when you are not in the household – any such samples (and any collected outside visits 1 or 3) will be deemed unusable and destroyed.

Eligibility

Participants are excluded from providing a sample if they are:

- Under 4 years old
- Children aged 4 and over who are not dry during the day
- Using a urinary catheter
- On their period

For participants aged 4 years and over, CAPI will prompt you to use a showcard which will ask the participant if they fall into any of the other exclusionary categories. If the participant is unable to provide a sample at visit 1, because they fall into any of these categories CAPI will then prompt you to ask whether they are happy to provide a sample at visit 3.

Collection procedures

1. Once eligibility has been confirmed and written consent has been obtained you can proceed with the urine collection.
2. You will need to write the participant's NDNS serial number including check letter and person number, sex, DOB and collection date on both labels using the permanent marker provided. CAPI will display the information that you will need to fill in the labels.
3. Provide the participant with the universal tube and check that they have read the information leaflet.
4. **The spot urine sample should not be the first urine of the day.**
5. Ask the participant to pass a small amount of urine directly into the container being careful not to touch the inside. There is iodine in some cleaning and antiseptic products so people may have iodine on their fingers. We only want to measure the amount of Iodine in their urine. The universal tube does not need to be filled to the top. Participants should aim to three quarters fill the tube. If they are having any difficulties then they should just try and catch what they can. This applies especially for young children.
6. Once the sample has been collected, the lid should be screwed back on tightly. Participants can wipe the outside of the container dry using an ordinary piece of toilet paper or a tissue but should not use wet wipes or any cleaning products as these could contaminate the sample. Some participants may be using toilet paper or tissues that are enriched with aloe vera or shea butter for example. This is why it is particularly important for the lid to be screwed back on before the tube is wiped. If not the sample could get contaminated.

Checking that the lid is screwed on tightly

Parents/legal guardians may need to help young children screw on the lid tightly but you should also check the lid too. Elderly people in particular may need help tightening the lid.

After checking the lid is sealed, place the universal tube in the rigid outer packaging. If you do not wish to handle the universal tube after the participant has collected the sample, you can verbally check to ensure the lid is tightly screwed on before asking the participant to place the universal tube in the rigid outer packaging. Alternatively, the participant can place the universal tube in the sealable plastic bag and hand this to you. You will be able to feel if the lid has been screwed on tightly through the plastic bag before placing the universal tube in the rigid outer packaging. **Please be careful to make sure that the plastic bag is fully inside the rigid outer packaging if the plastic bag is used.**

We will also be providing you with disposable gloves and you can wear these when handling the universal tube if you wish.

Packaging and posting

Place the filled universal tube into the rigid outer packaging and secure by applying pressure to each side. Place in the pre-addressed envelope and make sure it is posted on the same day that the sample is collected.

- The samples can be posted in a post box. There is no need for sending them via special or recorded delivery.
- Consent forms should be posted separately to the Brentwood office.

Gift card

All participants who provide a spot urine sample will receive a £5 gift card as a token of appreciation.

10 Height and Weight Measurements

You will take height and weight measurements for your participants. The questions are in a parallel block so you can introduce the measurements on your first visit, after you've introduced the diary, or at the start of visit 3.

Height measurement

You will…

- take height measurements for all participants aged 2 years and over
- use the Frankfort Plane method for all participants
- do the child stretch for all children (aged 2-15 years)
- take and record two separate height measurements. If the two measurements differ by 0.05 centimetre, CAPI will prompt you to take a third.
- record measurements in centimetres and millimetres, e.g. 176.5cm. If a measurement falls between two millimetres, it should be recorded to the nearest even millimetre.
- For the full height measurement protocol see Appendix D

Weight measurement

- You will take weight measurements for all participants (all ages)
- You will need to take and record one weight measurement in CAPI
- For the full weight measurement protocol see Appendix E

Measurement Record Card and BMI leaflet

The participant can have a record of their measurements but if they would prefer not to have them written down, then this is okay. Once you have entered the height and weight into the computer, it will calculate the person's Body Mass Index (BMI) if aged 16 or older. If the person would like to have their measurements, then fill in the measurement record card (which includes spaces for their height, weight and BMI (16+ only)). If the participant is aged 16+, hand over the BMI leaflet with the measurement record card, as this provides information on what BMI is, and how to interpret the results.

11 The physical activity questionnaire (aged 16+)

Overview

The Recent Physical Activity Questionnaire (RPAQ) is used to measure physical activity.

- To be completed by all participants aged 16 years and over
- To be completed at the beginning of CAPI2 (Visit 3), while you are carrying out an initial check of the diary
- Check the questionnaire with participants to ensure they have filled in all relevant questions
- Record any problems the participant had with completing the questionnaire in the admin block.

The questionnaire

Section A: Home activities - This section is about physical activity patterns in and around the house.

Section B: Activity at work / school or college - This section is about activities at work, school or college and travel to work, school or college. If the participant has two part-time jobs, is at school or college and also works part-time, they should think about their main activity and answer the questions about that activity or job.

> ***Q7*** *Type of work while at work / school or college:* If a participant's main activity is school or college, they should choose the answer option that best fits the type of activity they do while there.
>
> ***Q10-Q13*** *Travel to and from your main place of work / school or college in the last 4 weeks:* Below are some guidelines outlining how participants who don't have a 'usual' place of work, (e.g. a salesperson):
>
> - If the participant drives/cycles/walks to one central location, e.g. an office, and then drives out from there, the standard questions apply. The commute would be the travel from home to and from that office, the type of work would then be driving around and whatever else their job involves.
> - If the participant does a mixture of the above, i.e. works from home one week and drives out from a central location the next, they will need to estimate the average exposure over the last four weeks.

If all else fails – **write a note** on the self-completion explaining the participant's situation, so that we can decide what to do with it when it comes back to the office.

Section C: Leisure time activities - This section asks about physical activity that participants participated in during their leisure time.

Q14 *Grid about specific leisure time physical activities*

- Ensure that participants have completed each line. If participants have not done an activity, they should tick 'None'.
- If participants have done an activity, check that they have filled out the final two columns – 'Average time per episode – hours and minutes'.
- Check that participants have looked at Q15.

Q16-Q17 *Any other activities*

In particular, participants should record any other activity at these questions; such as: playing on the Nintendo Wii (e.g. Wii Sports such as golf, bowling, boxing etc), any other computer use involving active movement and housework.

12 The NHS Central Register and Cancer Registry

In CAPI 2 (Visit 3) participants aged 16 and over are asked to consent to have their name flagged on two separate registers: the NHS Central Register and the Cancer Registry.

Participants must give permission jointly for NHS Central Register and Cancer Registry together. There is only one consent form (pink).

NHS Central Register

The National Health Service has a Central Register, which lists all the people in the country and their NHS number. When the participant dies, the NHS Register provides the NDNS team with a replica of the participant's Death Certificate (something that is publicly available). The information on the Death Certificate is then attached to the data file.

Cancer Registry

The National Cancer Registry is run by the Office for National Statistics, and collects details about all types of cancer. If a participant is diagnosed with cancer, a code indicating which sort of cancer it is will be added to the data file.

What are participants agreeing to?

- The participant's details are already on the register (they are put there when they receive their NHS number).
- If participants agree to be flagged on these lists, a flag will be put against the participant's name to show that they took part in the NDNS.
- If somebody who has taken part in the survey dies or gets cancer, the cause of death or type of cancer can be linked with their answers to the survey. This information could be extremely helpful to future medical research.
- The only information that the NatCen give to the NHS Register and the Cancer Registry is the participant's full name, date of birth and address, and the fact that s/he has taken part in the survey.
- If a participant wishes to cancel this permission at any time in the future, they can do so by writing to us.

Once the participant has signed the consent form please return the top copy to the office. The bottom copy is for the participant to keep.

13 The nurse visit

Key information for interviewers:

- All participants completing at least three diary days will be eligible for a nurse visit.
- There is gap of two to four months between interviewer and nurse fieldwork.
- Nurse documents, e.g. Nurse Record Form, will be generated in the office.
- Nurses arrange their own appointments.
- Participants can 'agree', 'disagree' or say they are 'unsure' about the nurse visit.
- Anyone agreeing or unsure will receive £5 unconditional voucher, sent from the office in advance of the nurse fieldwork period.
- The admin details that you record in CAPI will help the nurse make contact with participants.

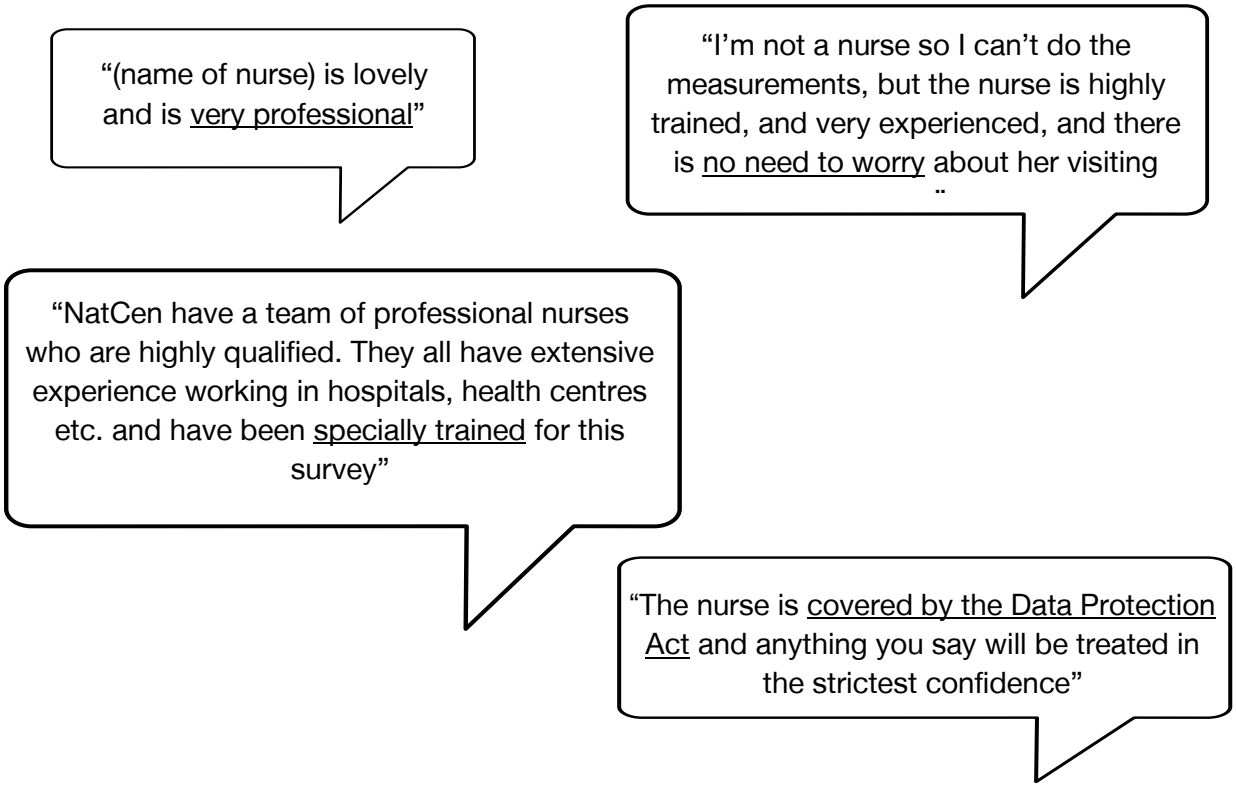
Introducing the nurse visit

The introduction to the nurse visit is at the end of CAPI2 and should be read exactly as worded. Sometimes you will need to provide further information in order to convince participants of the importance of this visit. Some may be nervous of seeing a nurse and you will need to allay their concerns. As well as the usual "yes/no" answer codes, there is an "unsure" code. Nurses will contact 'unsure' people to see if they are willing to be visited.

The measurements carried out by the nurse are an integral part of the survey data and without them the interview and diary data, although very useful, cannot be fully utilised. If your participant is reluctant to see the nurse, you can use the following arguments to encourage them to take part:

- ➔ The nurse is the best person to describe what (s)he does at their visit. The participants can always change his/her mind after hearing more about it.
- ➔ By agreeing to be contacted by the nurse, the person is not committing themselves to helping with all, or any, of the measurements.
- ➔ The nurse will ask for separate permission to carry out each measurement.
- ➔ We would still like a nurse to visit, even if a participants says that (s)he will not want to consent to all of the measurements.

Avoid calling the nurse visit a 'health check' – it is not. We don't access the medical records of the participants, so the only way to obtain medical information on them is to have a nurse visit. As with the doorstep introduction, say as little as possible in order to gain co-operation.



The Stage 2 leaflet

You will have Stage 2 leaflets to give to all participants so they can make an informed decision about whether to progress to the nurse stage. The leaflet provides information that participants might need to know before the nurse arrives, e.g. what measurements are taken. Note that there are **two versions** of the Stage 2 leaflet (one for adults and one for children). It is not your job to explain these leaflets or the measurements. The nurse will provide a more detailed leaflet and go through all of the measurements when he/she visits.

Nurse role

Nurses will ask for details of any prescribed medications before taking, with appropriate consents, a number of age-dependent measurements: infant length (ages 1.5-2 years); waist and hip circumferences (Ages 11+); demispan (age 65+ or if a valid height measurement was not taken at the interviewer stage); blood pressure (ages 4+) and a blood sample (all ages). Before the nurse carries out any measurements, the participant will be given a leaflet that describes the measurements. With the participant's permission, blood pressure readings and the results of the blood tests most relevant to their health will be sent to their GP. This information will also be sent to the participant, if they so wish.

14 Incentives /gift card

There are a number of incentives for various elements:

Element	Gift card amount per participant
Diary completion (at least 3 days)	£30
Spot urine	£5
Agreeing to a Nurse / Unsure	£5 (sent from office)
Providing a blood sample (Nurse stage)	£20 (given by Nurse)

* please note: gift cards for children should be given to the parent for their child to use.

14.1 Administering gift cards

You will receive a float of gift cards. They are not of any monetary value until activated by Love2reward upon receipt of your transmission. If you anticipate needing more gift cards, contact Logistics in Brentwood (see Contacts list in section 2.1), who will arrange for you to be sent some more. Do this as soon as you have done your selections so that the cards will reach you before your final visit to the address.

The CAPI program will automatically prompt you to enter the last **8 digits** (shown in bold) of the gift card number that is shown on the front of the card, for each participant.

When prompted by CAPI you should write the relevant amount in the area on the top right hand side of the card, give to your participant and inform them that the card will be activated and live to use after approximately 48 hours. Please note that this is dependent on you transmitting the case promptly and may take up to 72 hours if the case is transmitted on a Friday.

There is no need to get the participant to sign a receipt.

15 Returning work to the office

Transmitting CAPI work

Transmit CAPI work at the end of each day. You should not wait until a household is complete before returning your work. You can complete the admin block at a later point.

- ✓ Make sure you have a backup copy of your most recent work
- ✓ Connect up your modem
- ✓ Select 'T' for Transmit/Return data to HQ from the Action Menu and follow the instructions on the screen.

Returning paper documents

Paperwork should also be returned after work at an address is complete.

Before returning work for an address:

- ✓ check all paper dietary documents for correct serial numbering and completion – all diaries, self-completions.
- ✓ Collate documents in person number order.

Return work in **two** separate envelopes, posted at the same time

Returning Diaries

- Diaries and associated documents must be returned to the office via Recorded Delivery.
- Return your first completed diary back to the office as soon as you have collected it from the participant – please don't wait until you have several. We will provide early work feedback based on this diary.
- All other diaries should be returned in up to four batches per assignment. Self-completions should be returned in the same envelope.

Returning Spot urine samples

- Completed spot urine samples must be sent as soon as possible to HNR, in the padded envelope provided.
- Completed Spot urine samples can be posted via a post box – you do not need to go to the post office.
- Completed consent forms for spot urine should be sent separately to Brentwood

Expenses for postage

To claim for your expenses for sending the diaries back via Recorded Delivery please claim on your trip and send receipts to Pay. Your fee for visiting the post office will be generated in the CAPI. Remember you still should only make a maximum of three visits to the Post Office to send diaries back per assignment.

At the **end of your assignment**, check that you have accounted for all your addresses on the Interviewer Sample Sheet.

When your assignment is complete, make your **last return of work** as follows:

- From the main menu system select Working at Home/Support < Alt + S > / Technical Support Details to display Support menu screen.
- Select 'End of Assignment clear out' and follow on-screen instructions. For further help, consult page 73 of the CMS User Guide.
- Return all paperwork to the Office as detailed above.

16 Working mobile

Here are a few tips to help plan your limited time if you have to work mobile

Address visits

Schedule at least 4 visits to the address:

- Visit 1 for screening;
- Visit 2 for CAPI 1 / first appointments;
- Visit 3 for CAPI 2 and diary pick-ups;
- Visit 4 for a general mop up.

Placing diaries

Don't use the CAPI diary dates. Always make use of the self-selection diary dates when working mobile, to make sure you can complete work within the limited time. Make reminder phone calls to ensure your participants do start on the given date. Consider calling them on the start date to just to make sure.

Midweek diary checks

You have the option to make midweek diary checks by phone.

Collecting diaries

If possible do arrange diary pick-ups within 3 days of the last diary date, if this isn't possible make a note about why on the diary evaluation form. You should also record the fact that you were working mobile in this form.

17 APPENDIX A: Practice interview check-letters

The following check letters will be needed to access the NDNS practice interviews (P1255 PRACTICE):

Serial	Check letter
9019701	Y
9019702	Z
9019703	A
9019704	B
9019705	C
9019711	J
9019712	K
9019713	L
9019714	M
9019715	N

18 APPENDIX B: Example Interviewer Calendar

P1255 NDNS Year 8 - April (804) fieldwork dates

APRIL

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1 804 FW STARTS Start assignment	2	3 BANK HOLIDAY	4 Assignment MUST be started
5	6 BANK HOLIDAY	7	8	9	10	11
12	13	14	15 Addresses 11 to 28 (Young Person Boost) should be screened	16	17	18
19	20	21	22 All addresses should have been attempted	23	24	25
26	27	28	29	30		

MAY

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Notes *All Young person boost addresses (addresses 1 - 28) should be screened in first 2 weeks. *Diary pick ups should be no later than 3 days after the last diary recording day. *Please send back the first completed diary immediately - for early work feedback					1	2
3	4 BANK HOLIDAY	5	6	7	8	9 Last CAPI 1 day
10 Last 4-day diary start date	11	12	13	14 FW CLOSED Last CAPI 2 day	15 SEND BACK PAPERWORK	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

19 APPENDIX D: Height measurement protocol

Assembling the stadiometer

Unlock the blue measuring arm from its secure carrying position in the base plate by sliding it forward (see illustration 1).

Remove the two stabilisers from their storage in the ends of the white uprights. Slot the white uprights firmly together and check that the bottom section (marked with an arrow) sits firmly in the base plate slot.

You need only assemble 2 or 3 sections when measuring young children; use all 4 sections for older children and adults. Slide one of the two white stabilisers onto the upright, then the blue measuring arm and then slide the second white stabiliser above it. Position the stabilisers so that they are clear of the joins on the upright sections.

Place the base plate on a firm, level surface.

Adult height protocol (aged 16+)

1 Ask the participant to remove their shoes in order to obtain a measurement that is as accurate as possible.

2 Assemble the stadiometer and raise the headplate to allow sufficient room for the participant to stand underneath it. Double check that you have assembled the stadiometer correctly.

3 The participant should stand with their feet flat on the centre of the base plate, feet together and heels against the rod. The participant's back should be as straight as possible, preferably against the rod but NOT leaning on it. They should have their arms hanging loosely by their sides. They should be facing forwards.

4 Move the participant's head so that the Frankfort Plane is in a horizontal position (i.e. parallel to the floor). The Frankfort Plane is an imaginary line passing through the external ear canal and across the top of the lower bone of the eye socket, immediately under the eye (see diagram). This position is important if an accurate reading is to be obtained. An additional check is to ensure that the measuring arm rests on the crown of the head, i.e. the top back half. To make sure that the Frankfort Plane is horizontal, you can use the Frankfort Plane Card to line up the bottom of the eye socket with the flap of skin on the ear. The Frankfort Plane is horizontal when the card is parallel to the stadiometer arm.

5 Instruct the participant to keep their eyes focused on a point straight ahead, to breathe in deeply and to stretch to their fullest height. If, after stretching up, the participant's head is no longer horizontal, repeat the procedure. It can be difficult to determine whether the stadiometer headplate is resting on the participant's head. If so, ask the participant to tell you when s/he feels it touching their head.

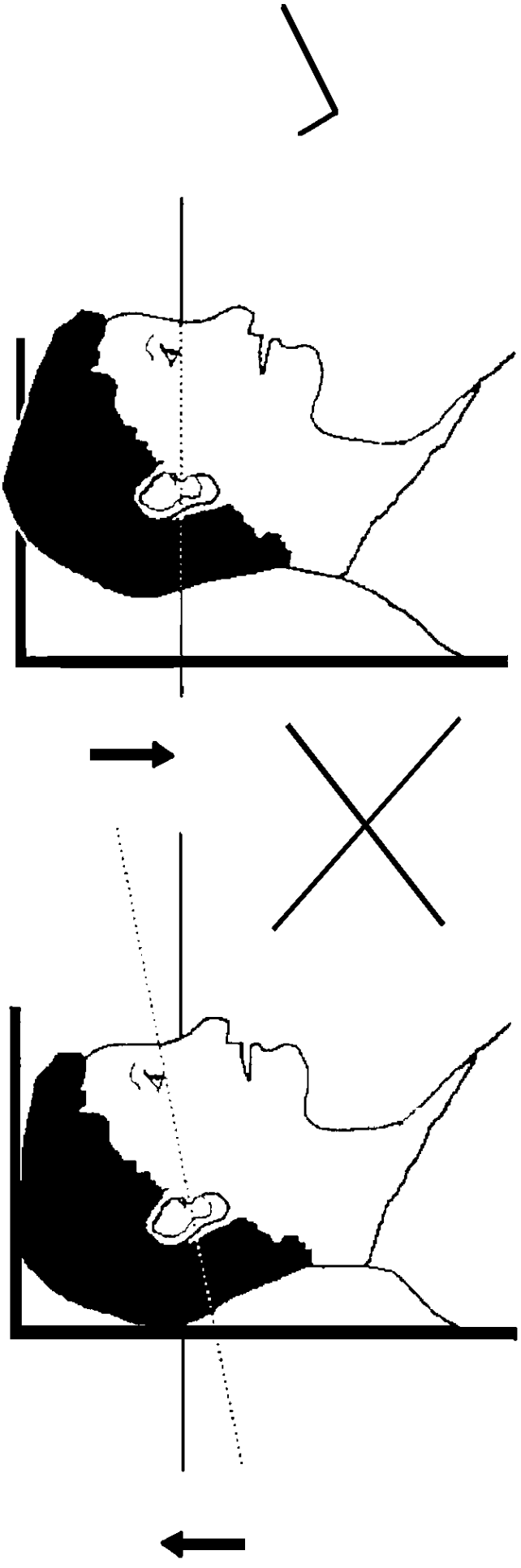
6 Ask the participant to step forwards. If the measurement has been done correctly the participant will be able to step off the stadiometer without ducking their head. Make sure that the head plate does not move when the participant does this.

7 Look at the bottom edge of the head plate cuff. There is a green arrowhead pointing to the measuring scale. Take the reading from this point and record the participant's height in centimetres and millimetres that is in the form 123.4, at the question Height. You may at this time record the participant's height onto their Measurement Record Card and at the question MbookHt you will be asked to check that you have done so. At that point the computer will display the recorded height in both centimetres and in feet and inches. At RelHiteB you will be asked to code whether the measurement you obtained was reliable or unreliable.

8 Height must be recorded in centimetres and millimetres, e.g. 176.5 cm. If a measurement falls between two millimetres, it should be recorded to the nearest even millimetre. E.g., if participant's height is between 176.4 and 176.5 cm, you should round it down to 176.4. Likewise, if a participant's height is between 176.5 and 176.6 cm, you should round it up to 176.6 cm.

9 Push the head plate high enough to avoid any member of the household hitting their head against it when getting ready to be measured.

FRANKFORT PLANE



Child protocol (aged 2-15)

The protocol for measuring children differs slightly to that for adults. You must get the co-operation of an adult household member. You will need their assistance in order to carry out the protocol, and children are much more likely to be co-operative themselves if another household member is involved in the measurement. If possible measure children last so that they can see what is going on before they are measured themselves.

Children's bodies are much more elastic than those of adults. Unlike adults they will need your help in order to stretch to their fullest height. This is done by stretching them. This is essential in order to get an accurate measurement. It causes no pain and simply helps support the child while they stretch to their tallest height.

It is important that you practice these measurement techniques on any young children among your family or friends. The more practice you get before going into the field the better your technique will be.

1. In addition to removing their shoes, children should remove their socks as well. This is not because the socks affect the measurement. It is so that you can make sure that children don't lift their heels off of the base plate. (See 3 below).

2. Assemble the stadiometer and raise the head plate to allow sufficient room for the child to stand underneath it.

3. The child should stand with their feet flat on the centre of the base plate, feet together and heels against the rod. The child's back should be as straight as possible, preferably against the rod, and their arms hanging loosely by their sides. They should be facing forwards.

4. Place the measuring arm just above the child's head.

5. Move the child's head so that the Frankfort Plane is in a horizontal position (see diagram). This position is as important when measuring children as it is when measuring adults if the measurements are to be accurate. To make sure that the Frankfort Plane is horizontal, you can use the Frankfort Plane Card to line up the bottom of the eye socket with the flap of skin on the ear. The Frankfort Plane is horizontal when the card is parallel to the stadiometer arm.

6. Cup the child's head in your hands, placing the heels of your palms either side of the chin, with your thumbs just in front of the ears, and your fingers going round towards the back of the neck. (See diagram).

7. Firmly but gently, apply upward pressure lifting the child's head upwards towards the stadiometer headplate and thus stretching the child to their maximum height. Avoid jerky movements, perform the procedure smoothly and take care not to tilt the head at an angle: you must keep it in the Frankfort plane. Explain what you are doing and tell the child that you want them to stand up straight and tall but not to move their head or stand on their tip-toes.

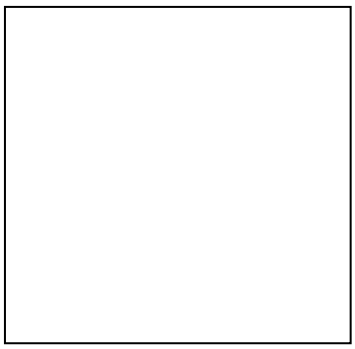
8. Ask the household member who is helping you to lower the headplate down gently onto the child's head. Make sure that the plate touches the skull and that it is not pressing down too hard.

9. Still holding the child's head, relieve traction and allow the child to stand relaxed. If the measurement has been done properly the child should be able to step off the stadiometer without ducking their head. Make sure that the child does not knock the head plate as they step off.

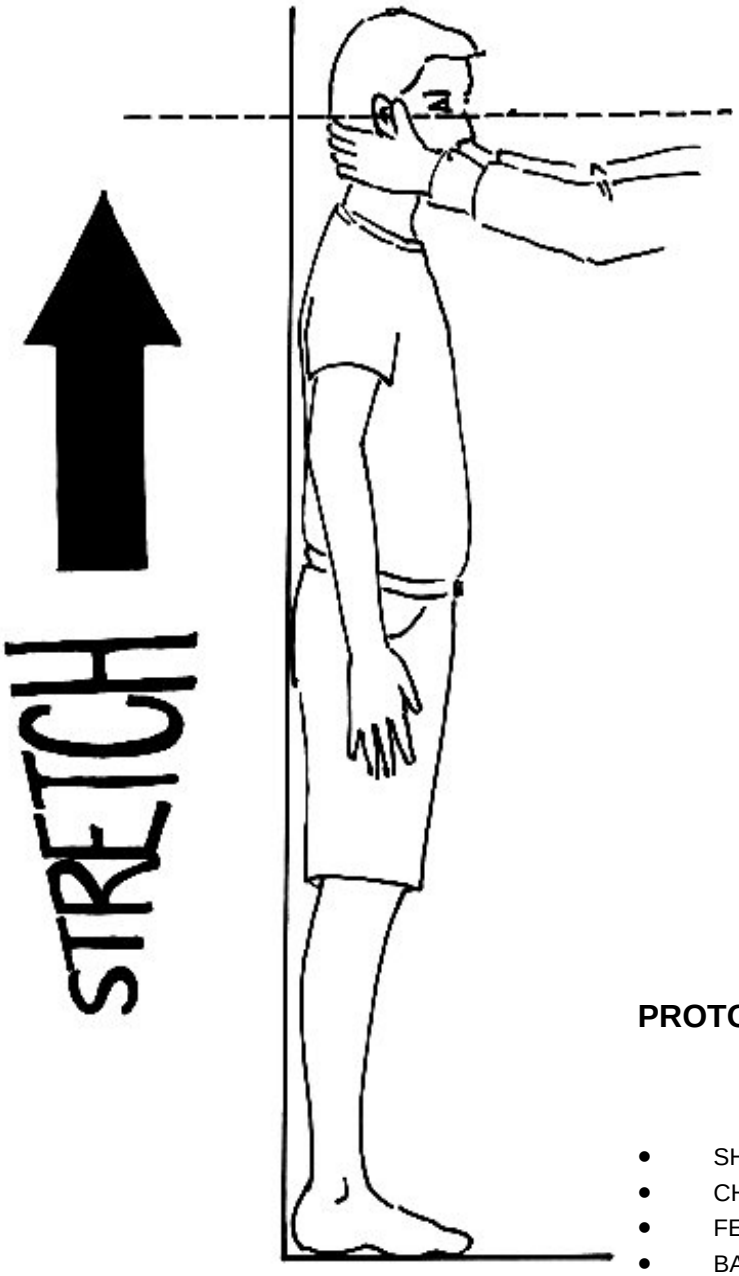
10. Read the height value in metric units to the nearest millimetre and enter the reading into the computer at the question “Height.” At the question “MbookHt” you will be asked to check that you have entered the child's height onto their Measurement Record Card. At that point the computer will display the recorded height in both centimetres and in feet and inches.

11. Push the head plate high enough to avoid any member of the household hitting their head against it when getting ready to be measured.

REMEMBER YOU ARE <u>NOT</u> TAKING A HEIGHT MEASUREMENT FOR CHILDREN UNDER 2 YEARS OLD.



Cup the child's head in your hands, placing the heels of your palms either side of the chin, with your thumbs just in front of the ears, and your fingers going round towards the back of the neck.



HORIZONTAL

APPLY GENTLE UPWARDS PRESSURE

PROTOCOL

- SHOES OFF
- CHILDREN – SOCKS OFF
- FEET TO THE BACK
- BACK STRAIGHT
- HANDS BY THE SIDE
- FRANKFORT PLANE
- LOOK AT A FIXED POINT
- CHILDREN – STRETCH & BREATHE IN

- ADULTS - BREATHE IN
- LOWER HEADPLATE
- BREATHE OUT
- STEP OFF
- READ MEASUREMENT

Additional points all participants

1. If the participant cannot stand upright with their back against the stadiometer and have their heels against the rod (e.g. those with protruding bottoms) then give priority to standing upright.

2. If the participant has a hair style which stands well above the top of their head, (or is wearing a turban), bring the headplate down until it touches the hair/turban. With some hairstyles you can compress the hair to touch the head. If you can not lower the headplate to touch the head, and think that this will lead to an unreliable measure, record this at question *RelHite.* If it is a hairstyle that can be altered, e.g. a bun, if possible ask the participant to change/undo it.

3. If the participant is tall, it can be difficult to line up the Frankfort Plane in the way described. When you think that the plane is horizontal, take one step back to check from a short distance that this is the case.

PLEASE NOTE: the child head stretch on NDNS is the same as used on HSE but different to that used on Child of the New Century. Please use the NDNS/HSE stretch when measuring children for NDNS interviews.

Height refused, not attempted or attempted but not obtained

At *RespHts* you are asked to code whether the measurement was taken, refused, attempted but not obtained or not attempted. If for any reason you cannot get a height measurement, enter the appropriate code at this question and you will automatically be routed to the relevant follow up questions (*ResNHi* and *NoHtBC*) which will allow you to say why no measurement was obtained.

20 APPENDIX E: Weight measurement protocol

The equipment

All interviewers working on NDNS will be issued with Seca 877 scales.

- These scales are accurate up to 200kg (31½ stone).

IMPORTANT

Although the scales are only accurate up to 200kg, we would like you to attempt to measure the weight of ALL participants. If the scales show a figure greater than 200kg, record the weight in CAPI as usual. This figure will then be automatically coded as inaccurate by CAPI.

- These scales display the weight in a window on the scales.
- The Seca 877 is switched on by pressing the surface of the scales (e.g. with your foot). There is no switch to turn the scales off, they turn off automatically.
- The scales take 6 x 1.5v AA batteries.
- The scales have a fixed battery which cannot be removed.

When you are storing the scales or sending them through the post please make sure you remove the battery to stop the scales turning themselves on.

It should not be necessary to have to replace the batteries, but always ensure that you have some spare batteries with you in case this happens. If you need to change the battery, please buy one and claim for it. The batteries used are commonly available.

The battery compartment is on the bottom of the scales. When you receive your scales you will need to reconnect the battery. Before going out to work, reconnect the battery and check that the scales work. If they do not, check that the battery is connected properly and try new batteries. If they do still not work, report the fault to your FPM/Regional Manager or directly to Brentwood.

The reading is only in metric units, but as for height, the computer provides a conversion. If the participant would like to know their weight in stones and pounds you will be able to tell them when the computer has done the calculation. You also have a conversion chart on the back of the coding booklet.

The protocol

1. Turn the display on by using the appropriate method for the scales. The readout should display 888.8 momentarily. If this is not displayed check the batteries, if this is not the cause you will need to report the problem to the National Centre at Brentwood. While the scales read 888.8 do not attempt to weigh anyone.
2. Ask the participant to remove shoes, heavy outer garments such as jackets and cardigans, heavy jewellery, loose change and keys. If necessary, turn the scales on again. Wait for a display of 0.0 before the participant stands on the scales.
3. Ask the participant to stand with their feet together in the centre and their heels against the back edge of the scales. Arms should be hanging loosely at their sides and head facing forward. Ensure that they keep looking ahead - it may be

tempting for the participant to look down at their weight reading. Ask them not to do this and assure them that you will tell them their weight afterwards if they want to know.

4. The posture of the participant is important. If they stand to one side, look down, or do not otherwise have their weight evenly spread, it can affect the reading.

5. The scales will take a short while to stabilise and will read 'C' until they have done so. (The Seca 870 displays alternate flashing lines in the display window. With the Tanita scales the weight will flash on and off when stabilised). If the participant moves excessively while the scales are stabilising you may get a false reading. If you think this is the case reweigh, but first ensure that you have erased the memory.

6. The scales have been calibrated in kilograms and 100 gram units (0.1 kg). Record the reading into the computer at the question XWt1 before the participant steps off the scales. At question MBookWt you will be asked to check that you have entered the participant's weight into their Measurement Record Card. At that point the computer will display the measured weight in both kilos and in stones and pounds.

Weighing Children

You must get the co-operation of an adult household member. This will help the child to relax and children, especially small children are much more likely to be co-operative themselves if an adult known to them is involved in the procedure.

Children wearing nappies should be wearing a dry disposable. If the nappy is wet, please ask the parent to change it for a dry one and explain that the wetness of the nappy will affect the weight measurement.

In most cases it will be possible to measure children's weight following the protocol set out for adults. However, if accurate readings are to be obtained, it is very important that participants stand still. Ask the child to stand perfectly still - “Be a statue.” For very young children who are unable to stand unaided or small children who find this difficult you will need to alter the protocol and first weigh an adult then weigh that adult holding the child as follows:-

1. Code as “Weight obtained (child held by adult)” at *RespWts*

2. Weigh the adult as normal following the protocol as set out above. Enter this weight into the computer at *WtAd1*.

3. Weigh the adult and child together and enter this into the computer at *WtChA1.*

The computer will then calculate the weight of the child and you will be asked to check that you have recorded the weight onto the child's Measurement Record Card at *MBookWt*. Again the computer will give the weight in both kilos and in stones and pounds.

Weight refused, not attempted or attempted but not obtained

At RespWts you are asked to code whether the measurement was taken, refused, attempted but not obtained or not attempted. If for any reason you cannot get a height measurement, enter the appropriate code at this question and you will automatically be routed to the relevant follow up questions (ResNWt and NoWtBC) which will allow you to say why no measurement was obtained.

National Diet and Nutrition Survey (NDNS)

Nurse Project Instructions P8255

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1 Study Overview

1.1 Background

The National Diet and Nutrition Survey Rolling Programme (NDNS RP) is a survey of the food consumption, nutrient intakes and nutritional status of people aged 1.5 years and older living in private households. The survey is carried out in all four countries of the United Kingdom (UK) and is designed to be representative of the UK population.

NatCen, in partnership with Medical Research Council Human Nutrition Research (MRC HNR) have been carrying out the NDNS RP since its inception in 2008/09. The study is jointly funded by Public Health England (PHE), an executive agency of the Department of Health, and the UK Food Standards Agency (FSA).

Fieldwork in Northern Ireland is carried out by the Northern Ireland Statistics and Research Agency (NISRA). Haematological and biochemical analyses of blood samples are carried out at MRC HNR and Addenbrooke's Hospital NHS Trust, Cambridge. Expert input on the analysis of physical activity data will be provided by the University of Exeter.

1.2 NDNS in a nutshell

NDNS is a UK wide study that aims to measure people's nutritional health. It involves adults and young people (aged 18 months and older). NDNS has two stages; the interviewer stage and the nurse stage. Pregnant and breastfeeding women are excluded from every stage of NDNS because of their special nutritional needs.

There are 3 main interviewer visits to each household covering face-to-face interviews and self-completion questionnaires, a 4-day food diary, a spot urine sample and height & weight measurements.

The nurse visits the household approximately 2 to 3 months after the interviewer visit. The nurse will usually make 2 visits to each household taking physical measurements (waist & hip, demi-span, blood pressure and infant length) and collecting a blood sample.

1.3 Website

We have a website specifically dedicated to NDNS, which provides information about what taking part in NDNS involves. It also explains why we need NDNS and what the data produced is used for. We have only provided the basic information about what taking part involves as we want to leave the finer details to be explained by you. The website can be found at:

www.nationaldiet.co.uk

The website address is also on advance letters. Please take time to familiarise yourself with the site and direct participants or potential participants towards it.

1.4 NDNS report publications

The UK, Scotland and Northern Ireland reports for Years 1 to 4 (2008/09 – 2011/12) were published on PHE's website in 2014-2015 and are available on the NDNS website; www.nationaldiet.co.uk

A report on folate intakes was published in March 2015.

There are a number of reports that are due to be published throughout 2015;

The Wales Years 2 to 5 combined report is due to be published in Spring/Early Summer 2015.

Key findings from Years 5/6 combined are due to be published in Summer 2015.

See laminate (included in your work pack) to find out more information on reports in the UK, Scotland and Northern Ireland.

1.5 NDNS Impact

NDNS data provides crucial evidence for major health campaigns and policy making. Some examples of these are the Public Health Responsibility Deal and the Change4Life campaign.

Public Health Responsibility Deal

The Responsibility Deal challenges businesses and other organisations to lead the way in positively shaping and creating an environment that supports people to make informed, balanced choices and help them live healthier lives.

Organisations sign up to the Responsibility Deal and commit to taking action to improve public health. These actions come from pledges that are issued by the Department of Health.

Examples of these pledges include;

- Reducing the amount of salt in foods
- Eliminating artificial trans-fat from foods
- **Out of Home Calorie Labelling** providing calorie information for customers on menus and menu boards.

More information on the Responsibility Deal can be found here: http://responsibilitydeal.dh.gov.uk/.

Change4Life

The Change4Life campaign is a commitment for individuals, families and communities to live healthier lives. Their aim is to educate people on healthy eating and how to stay active, providing useful tips such as how to get your 5-a-day, how to reduce salt and how to cut back on fat. Their slogan, *Eat Well, Move More, Live Longer'* encourages people to adopt simple behaviours that will help them to be healthier.

1.6 Media coverage

NDNS provides the main representative data source for diet and nutrient intake for the UK population. Below are a couple of quotes from the press, but keep your eyes open for more media coverage.

2 New since Year 7

We have made a few changes to various protocols for the new contract, which started in year 6.

Folate levels

For year 8, we will be supplying participants with their folate levels for the first time. We had always measured levels of folate from the blood samples provided by participants, but this is the first time that this information will be made available to participants.

Removal of TWSS at interviewer stage

During the middle of fieldwork in year 7 we removed the tracer water sub study (TWSS) at interviewer stage. TWSS will not feature at any stage in Year 8.

Re-contact letter

In year 7 we introduced a 're-contact letter' to be used if nurses are finding particular difficulty contacting a participant. You can send a maximum of 2 per participant. See section 9.1 for more information on re-contact letters.

Gift cards

For year 8, nurses will no longer receive a float of gift cards. This is to avoid nurses carrying more than the necessary amount of gift cards with them on visits. Instead, you will need to contact the incentives team **(IncentiveTeam@natcen.ac.uk)** if you anticipate needing gift cards. For more information on this, see section 14.14

Briefings

For year 8, the specifications for briefings have changed. If you have worked on the year 7 study you will be able to self-brief. If you haven't worked on NDNS in year 7 you will need to attend a face to face briefing.

Homeworks

The Nurse Centre will now be marking briefing homework which will be communicated back to the nurse for their professional portfolio.

Accreditations for nurse measurements

During year 6, we ran accreditations for demi span and waist and hip measurements, which lasted 2 years. This means that you will be invited to attend a short re-accreditation session to cover your work in year 8 and year 9.

3 Planning and organising your time

3.1 Contact list

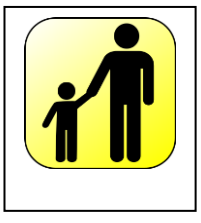
Contact list		
Project No:	**P 8255**	
Operations:	**NatCen Freephone for Participants only:**	0800 652 4572
	Nurse Centre: Email: nurseunit:natcen.ac.uk	01277 690135 01277 690061
	For ordering further voucher cards: Email: IncentiveTeam@natcen.ac.uk	
	For Equipment (including work pack and stationary requests/ returns): Email : Equipment@natcen.ac.uk	
Survey Doctor	**Dr Sumantra Ray- NDNS Lead Clinician / Survey Doctor:**	
	Office	01223 437624
	Mobile (Out of Hours)	07990 626671
	Yvette Edwards (Assistant)	01223 437676
	Sarah Gibbings (Assistant)	01223 437611

3.2 NDNS Fieldwork dates

Fieldwork dates					
Quarter	**Month**	**Interviewer deadline**	**Nurse fieldwork start day**	**Check picked up assignment** (start day + 1 working day)	**Nurse deadline**
Q1	**804: APR**	Thu 14 May 2015	Fri 10 Jul 2015	Mon 13 Jul 2015	Mon 24 Aug 2015
	805: MAY	Mon 15 Jun 2015	Mon 10 Aug 2015	Tue 11 Aug 2015	Tue 22 Sep 2015
	806: JUN	Tue 14 Jul 2015	Tue 8 Sep 2015	Wed 9 Sep 2015	Wed 21 Oct 2015
Q2	**807: JUL**	Wed 14 Aug 2015 4	Thu 8 Oct 2015	Fri 9 Oct 2015	Sun 22 Nov 2015
	808: AUG	Mon 15 Sep 2015	Mon 9 Nov 2015	Tue 10 Nov 2015	Wed 13 Jan 2016
	809: SEP	Tue 14 Oct 2015	Wed 9 Dec 2015	Thu 10 Dec 2015	Wed 27 Jan 2016
Q3	**810: OCT**	Wed 12 Nov 2015	Thu 7 Jan 2016	Fri 8 Jan 2016	Sun 21 Feb 2016
	811: NOV	Tue 16 Dec 2015	Mon 8 Feb 2016	Tue 9 Feb 2016	Wed 16 Mar 2016
	812: DEC	Tue 20 Jan 2016	Tue 15 Mar 2016	Wed 16 Mar 2016	Sun 08 May 2016
Q4	**801: JAN**	Mon 16 Feb 2016	Tue 19 Apr 2016	Wed 20 Apr 2016	Tue 07 Jun 2016
	802: FEB	Tue 16 Mar 2016	Wed 11 May 2016	Thu 12 May 2016	Wed 29 Jun 2016
	803: MAR	Wed 14 Apr 2016	Thu 9 Jun 2016	Fri 10 Jun 2016	Thu 28 July 2016

4 Summary of survey design

4.1 Sampling



In year 8 a total of 4,424 addresses have been drawn from 158 points across each country of the United Kingdom. This sample will include boost addresses in Wales and Northern Ireland, with the fieldwork being carried out in Northern Ireland by NISRA (Scotland is included in the core UK sample but there is not an additional boost in Scotland).

Addresses are issued to interviewers on a monthly basis over the year. Each interviewer assignment contains 28 addresses.

Basic Addresses: For addresses 1 - 10, one adult (aged 19+) and one child or young person (aged 1.5 years-18 years) is selected at random. In Catering Units with no such children, just one adult will be selected.

Young Person Boost Addresses: The remaining 18 addresses (addresses 11-28) are for a "young person" boost – here, the interviewer will select one person aged between 18months-18years and *no* adults; and any households containing people aged 19+ only (i.e. no-one aged 18months-18years) are screened out.

For selected participants there are two main parts to the survey, an interviewer-administered first stage (Stage 1), and a visit by a nurse (Stage 2). Co-operation is entirely voluntary at each stage.

Please note that pregnant and breastfeeding women are excluded from taking part in any stage. CAPI includes a check question.

4.2 Nurse assignments

You will be provided with full details of participants at each address in your sample. This will consist of all participants who agreed to be contacted by a nurse or were unsure about being contacted by a nurse at the interviewer stage and are therefore eligible for a nurse visit. To be eligible a participant must have been interviewed by the interviewer AND must have provided 3-4 days of diary data.

Please note that:

- People who have not provided 3-4 days of diary data are not eligible to see the nurse. This is because we do not have enough nutritional information with which to correlate the findings of the nurse measurements.
- You won't receive any information about unproductive households or households where no-one agreed to be contacted by the nurse. **Age is set at the interviewer visit**. This means that if a participant has had a birthday since they were visited by the interviewer, you will conduct measurements for the age they were *before* that birthday. CAPI will prompt you accordingly.

4.3 Child birthdays between interviewer & nurse visit

- The age of the participant is 'frozen' at the time the interviewer has made her/his visit and administered the household questionnaire.
- The age that is shown on the participant information sheet is the age you must use.
- Even if an individual has had a birthday which moves them into a category where they would have had a particular measurement you do **not** do that particular test. For example, if a participant was 3 years old at interview but becomes 4 years by your

visit, do not measure their blood pressure even though (s)he is 4 years old when you see him/her. If participants query this or ask you to perform the measurement/test you must explain to them that you are not able to because the age of the individual is based on the age at interview. The computer will automatically calculate which measurements you should take in this situation.

- The exception to this rule is **blood-taking responsibility for children**. For this, the age of the individual will be based on age at the blood visit. Therefore, if a child is 10 at the interviewer visit but has turned 11 by the time you see them, you should take the blood from the child. Likewise, if you are an 'extended role' nurse visiting a child who was 5 at the interviewer visit but has turned 6 by the time you see them, you should take blood from the child. With regards to the blood monovette pack, you should use the relevant pack for the age the participant was at the interviewer visit. (See section 14.4 for more detail)

5 Fieldwork Overview

5.1 Interviewer stage

Interviewer fieldwork is issued in 12 monthly waves (April 2015 – March 2016) and will run until April 2016. Interviewers make 3 main visits:

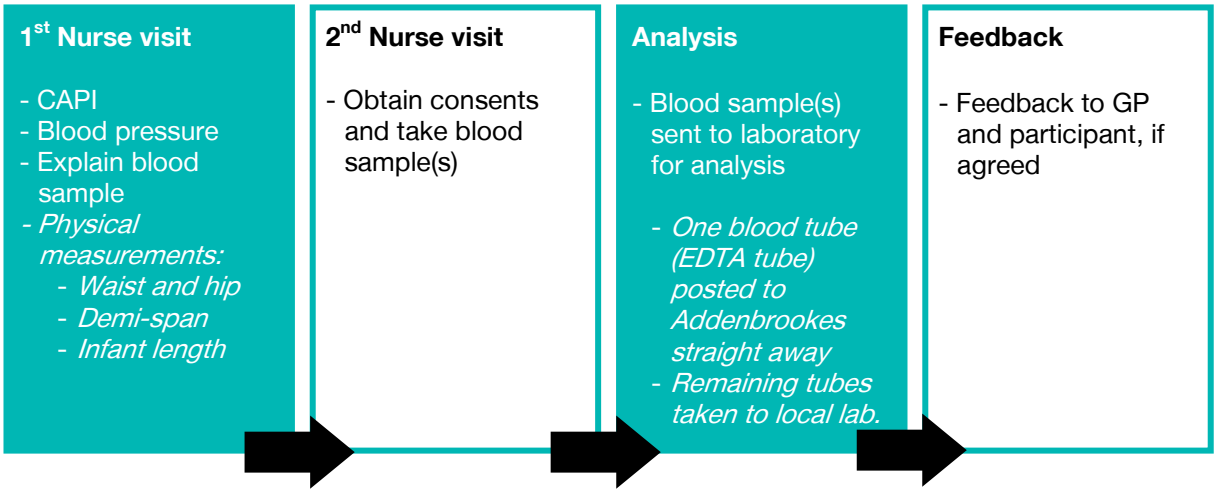
5.2 Nurse stage

- The second stage of the survey is carried out approximately 8 weeks after the end of interviewer fieldwork; therefore you will already know your sample size (i.e. the number of participants to visit) at the start of the fieldwork period.
- Participants who agree a nurse can contact them will be sent a £5 gift card as a token of appreciation for the agreement. This will be sent from the office, with a nurse stage advance letter, prior to the nurse fieldwork start date.
- Participants can seek reassurance by visiting our website www.nationaldiet.co.uk, using the NatCen freephone number 0800 652 4572, or emailing NDNS@natcen.ac.uk. All these details are found on the advance letter.
- CAPI will prompt you to collect details of any prescribed medications before taking, with agreement, the following physical measurements:
    - Infant length (1.5 years to 2 years).

- Waist and hip circumferences (ages 11 and over).
- Demi-span (ages 65+, and ages 16-64 where standing height is not obtained during the interviewer stage).
- Blood pressure (ages 4 and over).

See section 5.3 for more information on age limits and measurements.

- Nurses aim to take blood samples from all participants, 18 months and older. Where the NatCen nurse does not have recent experience in paediatric phlebotomy, paediatric phlebotomists have been recruited to take blood from those aged 1.5-10 years. The NatCen nurse will then accompany the phlebotomist to the participant's home (see Section 14 for further details of the blood visit).
- Some nurses have been trained to take blood from children aged 6 years and over. For these 'extended role' nurses, a paediatric phlebotomist will only be required to take blood from children aged 1.5–5 years.



- Before the nurse carries out any measurements, the participant will be given and asked to read, a leaflet that describes the measurements and their purpose. Before the blood samples are taken, agreement will be obtained in writing.
- Blood **can only** be taken from the antecubital fossa of either arm, which is generally less painful than the hand; two attempts (one on each arm) are allowed in **adults and children**. With the participant's permission, blood pressure readings and clinically relevant blood results will be sent to their GP. This information will also be sent to the participant, if they so wish.

5.3 Nurse content summary

Nurse visit	18-23 mths	2-3	4-10	11-12	14-15	16-64	65+
Infant length measurements	●						
Prescribed medicines	●	●	●	●	●	●	●
Blood pressure			●	●	●	●	●
Waist and hip circumference				●	●	●	●
BMI						●	●
Demi-span						●	●
Non-fasting blood sample	●	●					
Fasting Blood Sample (include venepuncture check list) [b]			●	●	●	●	●

[a] Only to be taken where valid weight measurement but not valid height measurement was collected (19-64 years)).
[b] Diabetics can provide a non-fasting sample, if not willing to fast.

For more information on nurse measurements and samples, see Appendix A.

6 Paperwork

6.1 Nurse sample cover sheet

At the start of each assignment you will be given:

- A list of addresses where at least one participant has agreed to be contacted by a nurse in the point you are covering.
- A nurse sample cover sheet which tells you the postcode sector or area in which you will be working and its point number. There is room on the sample cover sheet to record your own progress. This is useful for when your nurse team leader / nurse field performance manager calls, so that you have the details of your workload and planned appointments in one place.

6.2 Nurse record forms (NRFs)

You will receive a Nurse Record Form (NRF) for each household in your assignment.

The NRFs will arrive from the office, in the work pack, with an address label stuck at the top of page 1.

6.3 Participant information sheet

The participant information sheet is separated into a number of sections. The first section will provide you with the following information:

- Household serial number
- The household's telephone number, if known
- Address
- Date of first interview (with the interviewer)
- Name of interviewer

The second section will provide you with the following information about Participant 1 and/ or Participant 2:

- Participant serial number
- Whether each participant answered 'yes' or 'unsure' when asked for agreement to be contacted by the nurse. This will help you to gauge how to pitch your initial contact with each participant
- Participant name
- Parent(s) name (for participants under the age of 16)
- Participant age
- Participant date of birth
- Sex of participant

We encourage interviewers to provide as much information as possible on the information sheet including:

- Detail relating to the location of the household within the address
- Unusual circumstances – e.g. best times to call, information about the household occupants etc.
- Other information that might be of relevance to you

Please note: Any sensitive information will be phoned through from the office rather than being included on the participant information sheet.

Serial Numbers

Each individual participant's section on the participant info sheets will show a serial number. The person number is the additional number at the end of each serial number. The person number is a one-digit number assigned by the interviewers to each person in a household. Only selected and eligible people are given a person number.

Rules are:

Person number 1 = selected participant aged 19+

Person number 2 = selected participant aged 1.5 yrs to 18 yrs

It's really important that the correct serial number for a particular person is used on all documents and blood tubes for that participant. It is vital that the information the interviewer collects about someone is matched to the information you collect about him or her. If the wrong serial numbers are entered on documents or on the samples, data from one person will be matched with that of someone else.

7 What do participants know about your visit?

7.1 The interviewer introduction

The interviewer introduces your visit at the end of their interview by reading out the following:

"We would like you to help us with the second stage of this study. This is a visit by a qualified nurse to collect some medical information and, if you agree, carry out some measurements. The nurse would like to come round in a couple of months and explain some more about what is involved and answer any questions you have. May I get him/her to contact you?"

Participants have three options at this question: **'Yes', 'Unsure' and 'No'**. All participants who answered **'yes' or 'unsure'** will be included in your sample. The participant information sheets will indicate whether a participant answered 'yes' or 'unsure' so you can alter your introductions appropriately.

Interviewers provide the following information to potential questions about the nurse visit:

- It is an integral part of the survey - the information the nurse collects will make the survey even more valuable.
- The nurse is highly qualified. They have all had extensive experience, working in hospitals, health centres etc. and have also been specially trained for this survey.
- If the participant wants, he/she will be given the results of the measurements carried out by the nurse, including the results of any blood pressure (age 4 years and over). If he/she likes, this information will also be sent to their GP.
- Participants are not committing themselves in advance to agreeing to everything the nurse wants to do. The nurse will ask separately for

permission to do each test - so the participant can decide at the time if he/she does not want to help with a particular one.

- A Multi-Centre Research Ethics Committee has approved this study.

At the end of the interview each participant is given a "Nurse visit information" (stage 2) leaflet by the interviewer which describes the purpose of your visit. You will have a separate version of the leaflet, which explains the measurements and samples in more detail. This should be given to the participant to read when you arrive for your appointment. You should then explain in detail the measurements and samples involved in your visit (N.B. there are different nurse leaflets for different age groups).

Interviewers do **not** generate nurse documents (such as the NRF). NRFs, Participant Information Sheets and feed-forward data will be generated centrally, from the office. You will not receive any NNVs (No Nurse Visit sheets) on this survey – your sample will be set in advance of your fieldwork start date so all addresses you receive will definitely contain at least one participant who has agreed to see you / has said they are unsure about a nurse contacting.

There will be no formal liaison between you and the interviewer but please feel free to contact the interviewer or the office if you wish to talk through any information in person. Likewise, the interviewer will be provided with your details in case he/she wishes to contact.

7.2 The Nurse advance letters

All participants who said 'yes' or 'unsure' when asked if a nurse could contact will be sent a nurse advance letter from the office a week before fieldwork. The letter will remind participants about the nurse visit and will include the £5 token of appreciation (in the form of a gift card). The office will also record the **nurse name on the letter so the participant will know who to expect**. When contacting participants, you should remind them about the advance letter as they may have forgotten. Examples of the nurse advance letters are supplied during briefings and included in your work packs.

8 Achieving high response rates

In most cases participants will be looking forward to your visit. Having completed the interview and the diary they have already invested time in our survey, and most will be willing to complete the second stage. In addition, they will have had a break from the first part of the survey so will hopefully be ready to take part in the next stage. However, some participants may need persuading – especially those participants who said they were 'unsure' about being contacted by a nurse. Please think carefully about what to say to participants, and make sure you know whether they said 'yes' or 'unsure' before making contact, so that you can pitch your introductions appropriately.

8.1 The importance of high response

Our target response rate for year 8 is: **85%**

Past experience shows that achieving high nurse response rates requires continuous hard effort. A high response rate at both stages of the survey is crucial if the data collected are to be worthwhile. Otherwise, we run the risk of getting findings that are biased and unrepresentative, as people who do not take part are likely to have different characteristics from those who do. Keeping participant co-operation through to this important second stage of the survey is therefore vital to its success.

9 Contacting participants

9.1 Number of 'attempts to contact' you must make

You must make at least **7 telephone contact attempts per household.** Each of these attempts should be at different times of the day and on different days of the week, including evenings and weekends.

Personal visits are preferable to making telephone calls. However, we recognize that it is not always possible to make as many personal visits as you might like (e.g. if you live a long way from a participant's home). Like with telephone calls, each of these visits must be at different times of the day and on different days of the week, including evenings and weekends. You should make up to **4 personal visits per household**. It may be helpful to fit these in is when you are in the area undertaking perhaps the first visits for a couple of addresses. You could then plan to drop round at the others to make contact even if you haven't phoned them first.

The telephone contact attempts and personal visits should be interspersed to maximise chance of contact.

You are asked to keep a full account of each contact attempt you make at a household on page 1 of the **Nurse Record Form**. Note the exact time (using the 24-hour clock) and date you made contact. In the notes section keep a record of the outcome of each call and visit. Label your notes with the call number.

Throughout the period of the field work you will be expected to update the contact situation for each address on the point, with your nurse team leader / nurse field performance manager. If you fail to make contact your nurse team leader / nurse field performance manager is the only person who can authorise coding out as an unproductive. However, we know that you will often succeed in contacting participants quickly and early into the field work progress and that you will pull out all the stops to get participants that are difficult to contact.

Summary of Contact Expectations:

- Within the first 3 weeks of the field work period:
    - contact participants by phone or personal visit
    - make at least 7 phone calls (on each of the telephone contact numbers given on the participant contact sheet). You should also try texting the participant if there is a mobile phone contact number available – see below for approved style of text message.
    - make at least 4 personal visits to the door of an address if there is no response to telephone contact. Intersperse your phone calls (as above) with personal visits.
    - during week 3 - send one nurse re-contact letter with nurse name and telephone contact number.
- Weeks 3 – 6 of the field work period:
    - continue to take opportunity to make personal visits when you are in the area conducting other fieldwork on the point (or even if you are in the area when working on another project e.g. HSE).
    - Try texting the participant again:
        - *Message for (insert participant name). I am trying to contact you regarding the National Diet and Nutrition Study. Please let me know by text or phone message when you might be free to talk to me. Regards. (Insert your name) – Survey Nurse.*
    - If you are no longer travelling to the area because the point of work was small, your work is finished, or the point is considered 'out of area', you should contact the original interviewer to see if they are currently working in or near the area. If they are, they could carry out a personal call informing the participant that you wish to make contact. If you are able to give a couple of appointment dates and times, then the interviewer may be able

to make an appointment for you and then confirm the details with you. The original interviewer contact number is listed on the participant details sheet.

- During week 5 - send a second (and final) nurse re-contact letter with nurse name and telephone contact number. You may wish to highlight the freephone number for them to see clearly.

9.2 Making appointments

A personal visit to arrange an appointment is preferable because it is easier for participants to refuse over the telephone than face-to-face. However we realise this won't always be possible, so if the household has provided one or more telephone numbers (this will be provided on the participant information sheet) you could try to make an appointment over the telephone using each contact number. You can then arrange an appointment date that is convenient to you both.

Remember to be clear in your mind whether a participant has said 'yes' to a nurse contacting them or that they were 'unsure'. This is essential so that you can tailor your doorstep approach.

Key points to cover in your introduction:

- Who you are working for – NatCen Social Research (in collaboration with Human Nutrition Research (HNR).
- Who the survey is for - for the government (it has been commissioned by Public Health England and the Food Standards Agency)
- Why the survey is being carried out (see Section 1)
- What you are going to do (see Section 5)
- How the participant was selected - it was the address that was selected. Addresses in this area were selected from the Postcode Address File. This is a publicly available list of addresses to which the Post Office delivers mail. The addresses have been picked at random from areas across the country in order to get a good representation of the groups in which we are interested. Once an address is selected, we cannot replace it with another address. Otherwise we would no longer have a proper sample of the population.
- The confidential nature of the survey – individual information is not released to anyone outside the research team.
- How much time you need – this varies a bit but it is best to allow around 30 minutes for each person plus another 15 minutes per household (to put equipment away etc.)

9.3 Broken appointments

If someone is out when you arrive for an appointment, make every effort to re-contact the person and fix another appointment. Start by leaving a **Broken Appointment**

Card at the house saying that you will call back when you are next in the area. Add a personal note and the mobile telephone number you are using for NatCen work to the card. You should also telephone them while still at the address in case they are delayed getting home for your appointment.

10 Carrying out the interview

10.1 Feed-forward data

Information recorded by the interviewer is transmitted back to the office by the interviewer. On the first date of your fieldwork period, the relevant information from the interview is available as feed-forward data to load onto your laptop.

IMPORTANT

- The person number assigned to someone **by the interviewer** is the number that **must be used on every document and every blood tube for that person**.

IMPORTANT

- Connect to the host machine at the start of your assignment to pick up your work.
- Before you go to a household check that the feed-forward data **for each participant** is on your laptop, by entering the household serial number through Working at Home – View and Amend – select project slot – enter each serial number in turn. If the interviewer's information has been successfully transferred, the computer will show you the information about the members of that household, and you can go ahead with that household.
- If you cannot access the feed-forward data because of a technical problem you will need to contact the help desk for assistance on 01277 690200 .

10.2 The nurse interview documents

The nurse questionnaire is on your computer (CAPI). As well as the computer schedule, you will use other documents during the interview itself. The CAPI program will prompt you when to use certain information leaflets and sections of the consent form.

Nurse interview documents include:

- the Nurse visit information leaflets
- the office consent booklet
- the personal consent booklet
- the Ametop® information leaflet
- the Cryogesic® information leaflet
- the 'why give blood?' leaflet

- measurement record card

Immediately before you start to carry out measurements on a participant, complete the first half of page 1 of both consent booklets while still in the company of the participant. Never do this before your visit to the household (you need to check that the details recorded are correct).

10.3 Organising the interview

Make sure you fully understand the differences in the protocols for children and adults.

When you arrive at the household, check whether any of the people you have come to see have eaten, smoked, drunk alcohol or done any vigorous exercise in the last 30 minutes. This could affect their measurements. If someone has done any of these things, arrange to see the other member of the household (if there is one) first in order to give time for the effects to wear off. Similarly if someone in the household wants to eat, smoke or drink alcohol in the near future (e.g. one person is going out and wants a snack before they leave) then try to measure that person first.

10.4 The Stage 2 leaflet

The interviewer will give the participant a Stage 2 leaflet or "nurse visit information leaflet" at the interview stage. This will tell participants about the nurse visit and content before you call. After you have explained what you are going to do and the order in which you wish to see the participants, you should ask participants if they have read their copy of the interviewer Stage 2 leaflet. Remember to also give participants 'The Nurse Visit' leaflets which provide participants with more detailed information than the interviewer versions. Participants **must** read the **nurse version** of the leaflet before you start doing any measurements. It describes what you will be doing and advises them about information being sent to their GP. This will give them something to do whilst you are sorting yourself out, so make sure to allow them time to read it. Be prepared to answer any questions they may have at this point.

Note: there are 3 versions of 'The Nurse Visit' leaflet: one version for those aged 11+ (including adults), one leaflet for children aged 10 years and under and one version for parents/guardians of children with specific information about their child's participation.

11 The consent booklet

11.1 Completing the consent booklet

Complete an office consent booklet for **all** individuals who have a nurse visit.

The consent booklet contains the forms the participant/parent of participant has to sign to give written consent for:

- A sample of blood to be taken.
- Clinically relevant results from the blood sample to be sent to the participant and/or their GP.
- Storing of the blood sample.
- Blood pressure results to be sent to their GP (child (4+) or adult).
- BMI measurements to be sent to their GP (16+).
- Clinically relevant blood results not being sent to participant **NOR** their GP

Consent booklet format

There are two consent booklets: a participant copy and an office copy.

The procedure for obtaining consent is the same for both booklets. The participant must:

- **initial** beside each procedure they give consent to
- print and sign their name at the end of the consent booklet. As soon as they have initialled for one consent, ask them to sign, just in case they don't agree to any further samples or measurements.

Always make sure participants **initial AND sign**. It is the initials and signature in the office consent booklet that are most important. Without these there is no consent and we cannot use the measurements and samples obtained.

You must ensure that initials and signatures are obtained in **BOTH** copies and that the personal consent booklet is left with the participant at the end of the visit. This is their legal record of what they have consented to.

You must also ensure that you affix label NCON (1) on the front of the office consent booklet, and affix label OFFDESP (2) to the Office Despatch Note (last page of office consent booklet).

The office consent booklet must be filled out for **every** participant regardless of whether measurements requiring consents are to be taken. This is because it provides an important check in the office of who has been seen by a field nurse. Every piece of information on the front is important. It will form the basis of the BP and blood result

letters which are sent to GPs. You are asked to record the date of birth again. This is an important identity check, along with your nurse number and the date of interview.

Please note that we will not send results letters if the participant has not given consent. However, for children under the age of 16, if consent has not been given to feedback blood results to the parents or the GP, AND if consent has not been given for the survey doctor to be able to contact them in the case of a clinically relevant result, you would NOT be able to take a blood sample from that child. This is to protect the safety of the child and ensure that consent remains intact. For example, if blood were taken from the child and the result was clinically relevant, we would be legally obliged to inform the GP and parent. Therefore, if parents do not wish to receive clinically relevant results, we must not take blood from the participant.

Complete Items 1 to 5 at the start of the interview. Items 6 to 9 are completed during the rest of the interview, and you will be prompted to do so by CAPI.

Fill in the full name, complete address **and** telephone number of the GP on every consent booklet for a household, even when both members have the same GP. Each individual is treated separately once the booklets reach the office.

Throughout your visit you will need to record the outcome of the participant's consent for the following samples or measurements:

8.

SUMMARY OF CONSENTS - RING CODE FOR EACH ITEM	**YES**	**NO**
a) Read and understood information sheets	01	02
b) Understand right to withdraw	03	04
c) Blood pressure to **GP**	05	06
d) Body Mass Index (BMI) to **GP**	07	08
e) Sample of blood to be taken	09	10
f) Blood sample for storage	11	12
g) Blood sample result to **participant**	14	14
h) Blood sample result to **GP**	15	16
i) **Does not** wish to receive results or have them sent to GP	17	18
j) Agrees survey doctor can contact to discuss results if necessary – Children aged 1.5-15 years	19	20

By the end of all nurse visits, every participant should have **ten** codes ringed at Item 8 (either a 'yes' or a 'no' for each of items a-j).

Note: for item d) code 08 for all children aged under 16yrs as this is not applicable for this age group.

The last few pages of the office consent booklet are despatch notes for blood samples. These are to be sent to Addenbrookes Hospital and the local field laboratory. These despatch notes are tear off sheets to go with the blood samples to the respective labs. There is also an office despatch record (on the back page) for you to record blood details for the office. Again, it is essential that the information on these despatch notes is accurate. The Addenbrookes research analysis request forms are carbonised three times so you will only need to fill in the top copy – please make sure you do this in **black biro** and press hard enough so that the information transfers properly to the two other forms. **All three** copies need to be completed and labelled accurately and sent back to Addenbrookes (inside the postal packs).

11.2 Age relevant consent forms

Within the consent booklet, there are four age-relevant consent forms you will need to be familiar with:

1. Adult consent form for participants aged 16 years and over.
2. Parental/Guardian consent form for participants aged 4 – 15 years.
3. Child assent form for participants aged 5-15 years
4. Parental/Guardian consent form for participants aged 1.5 - 3 years.

- Participants **must** initial each statement that they agree to
- Participants and nurses should **both** sign and date the form

Leave the participant consent booklet with the participant, as this is their legal record of what they have consented to.

11.3 Participant signatures

Use a black pen when completing the booklets, and ensure that signatures are always in pen, not pencil. Each participant must **initial** each box if they have consented to the measurement or sample to be taken. It is very important they initial not tick. The participant must also sign and print their name on each consent form. Do not erase any of the personal information. If necessary, cross out errors and rewrite so that any corrections can be seen.

Without signed and initialled consents we cannot use the samples.

12 Obtaining consent to interview minors

The rules to follow depend on whether the minor is aged 16/17 years or is between 1.5 and 15 years of age. **Never break any of these rules**:

16/17 year olds: You need to get consent from the participant but you do not need parental consent to take samples from someone of this age. If the participant lives with their parent(s), out of courtesy advise the parents what you will be doing.

1.5 to 15 year olds: For children aged 15 and under, you will know from what is recorded on the participant information sheet who the parents or guardians are; these are the people from whom you need to get permission before you interview or measure a child.

The term 'parent' means the child or young person's natural or adoptive parent. All other people who claim parental status have been classified on the participant information sheet as having legal parental responsibility.

It is only the person(s) listed on the participant information sheet as being a parent/having legal parental responsibility that can give verbal consent to interview and verbal/written consent to measure someone aged 1.5 to 15 years. So, if for example, a grandparent, other relative or childminder is looking after the child participant when you call (and is acting in 'loco parentis' while providing child care) they cannot give consent to interview or for any of the measurements.

The agreement of the child or young persons should of course also be sought. Written consent is required from the parent/legal guardian to take blood, have blood pressure results and clinically relevant blood results to themselves and to their child's GP or store blood.

If disagreement arises between parents and/or parent and child about whether or not to co-operate, always respect the wishes of the non-co-operator. This is especially important where blood samples in children are concerned.

- For any participants aged 1.5 - 15 years you MUST obtain consent from their parent or legal guardian on the child consent form. This is essential – without signed consent for each participant from their parent or legal guardian, we cannot use their data.
- There is also a child assent form to go along with the parental consent form. This should be completed for children aged 5 - 15 years.
- For children of all ages 1.5 - 15 you should **always** ensure that a parent/person with legal responsibility for the child (named on the participant information sheet) is present during your interview. This is to protect both the child and you. You will also require their presence in order to obtain written consents during the interview.

- Participants should read the consent form before signing. They must initial each statement they agree to, and sign and date the bottom of the form. Nurses must also sign and date the bottom of each form.
- In the case of children who cannot sign their assent, provided they do not appear to verbally disagree with the procedure, the written assent can be provided by the parent/guardian only.

13 Nurse protocols

For several of the measurements you will take on NDNS you should refer to your NatCen Nurse Surveys protocols manual:

- Infant length measurement (aged 18- 23 months)
- Blood pressure (aged 4+)
- Waist and hip measurement (aged 11+)
- Demi-span (aged 65+ or 16-64 is height was not taken during interviewer stage)
- Fasting blood sample (aged 4+)
- Non-fasting blood sample (aged 1.5 to under 4 years)
- Use of Ametop HRP
- Use of Cryogesic HRP
- Venepuncture CPG

Further information is provided in the following chapters about the blood samples, for NDNS specifically. Information is also provided about the despatch of these samples.

14 Blood sampling protocol

14.1 Introduction

Blood sample donation and subsequent correct sample distribution is a very important part of NDNS. One of the main objectives of the NDNS rolling programme is to measure indicators of blood function, nutrition and other measures of health to relate these to dietary and social data.

The blood will be analysed for a large number of analytes including haematology measures (white blood cell count, haemoglobin, platelets etc.), serum lipids (cholesterol, triglycerides), markers of inflammatory status and markers of mineral and vitamin status.

For the purposes of NDNS, the samples will not be tested for any viruses, such as HIV, or for bacterial infections, nor will they be used for genetic testing.

14.2 Eligibility criteria

Participants aged 4 years and over may only give a fasting blood sample. Participants aged less than 4 years may give a non-fasting sample.

Obtaining blood samples from diabetics:

Most diabetics can provide fasting blood samples, but there are some precautions to take into account (outlined below). The preference is to obtain a fasting sample, if possible. You will provide reassurance about this, but if the participant remains anxious, a non-fasting sample can be taken.

CAPI will take you through the relevant questions. When in CAPI you can press the F9 key for more information.

Acceptable procedures according to medication:

- Participants on oral hypoglycaemic medication should be able to fast without complications
- Participants on a combination of night time insulin and daytime tablets should also be able to fast unless they are known to have low blood sugar levels first thing in the morning. If they do have low blood sugar in the morning, they could still fast but should reduce their night-time insulin by a small amount and have breakfast as soon as possible after the blood is taken.
- Participants on insulin alone can also provide a fasting sample, but should be given special consideration. They should postpone their morning insulin and should be seen as early in the day as possible.

In every case, diabetics should have breakfast as soon as possible after blood is taken.

Note that the option of providing a non-fasting sample is only open to diabetics and participants under the age of 4 years. Blood should not be taken from participants who are willing to provide a sample but are not prepared to fast.

14.3 Overview of blood collection

A fasting blood sample will be obtained from those aged 4 years and above. Those aged less than 4 years will not be asked to fast but CAPI includes questions about whether the child has had something to eat or drink that morning, to ascertain whether it is a fasting or non-fasting sample. However, fasting participants should be encouraged to drink plenty of water.

A maximum of two attempts at blood taking, one on each arm, are permitted with both adults and children.

The volume of blood taken will vary according to the age of the participant, as follows:

Age	Volume	No. of blood tubes to be filled
Adult 16+yrs	34.9 mL	7
Child 7-15yrs	21.5 mL	5
Child 1.5-6yrs	11.6 mL	3

The volume differs to ensure that we abide by guidelines for taking blood from children for research purposes. To keep children's blood sample volume as low as possible, some analytes will not be measured in younger children.

Please see Appendix B for a list of the analytes that will be measured.

14.4 Who should take the sample?

Age group	Timing appointments	Considerations
Age 18mth – 5 years	♦ Appointment to be scheduled ideally before 10am but certainly before midday, Monday – Thursday only.	♦ For these participants, nurses will need to be accompanied by a **paediatric phlebotomist**.
Aged 6 – 10 years	♦ Appointment to be scheduled ideally before 10 am but certainly before midday, Monday - Thursday only.	♦ For participants aged 6-10years, nurses will need to be accompanied by a **paediatric phlebotomist or an extended role nurse.**
Age 11 years and over	♦ Appointment to be scheduled ideally before 10 am but certainly before midday, Monday - Thursday only	♦ For those aged 11 years and over **nurses** can take the blood sample

Please note that if the child has turned 11 since the interviewer visit and is 11 years when you are gaining agreement for blood sampling, you, the nurse, should take the blood from this child. Likewise, if the child has turned 6 since the interviewer visit, if you're an extended role nurse you should take the blood from this child. This is the **only** scenario where you should base age on actual, current age rather than the age set at the interviewer visit. CAPI will prompt you to arrange to take blood if the child has turned 11 years since the interviewer stage.

With regards to the blood monovette pack, you should use the relevant pack for the age the participant was at the interviewer visit.

14.5 Where are samples taken to?

The first drawn (EDTA) blood tube will be posted to Addenbrooke's Hospital in Cambridge for analysis of routine analytes, the remaining blood tubes will be taken to a local field laboratory where samples will be centrifuged and aliquots of blood, serum, plasma and red blood cells will be frozen for temporary storage.

Note: should the first EDTA tube (i.e. the first of the draw) fail to fill, use a spare second EDTA to replace this one before drawing the rest. Make sure your spare tubes are handy.

14.6 Taking blood from children

NDNS nurses will be taking blood samples from all willing participants aged 11 years and over. Extended role nurses can take bloods from those aged 6-10 years; a paediatric phlebotomist will take bloods from those aged 1.5 to 5 years. It is important to make the child feel as comfortable and as at ease as possible. Smiling, making eye contact and speaking so that the child can understand easily are ways to facilitate this. Also, ask the child for permission to do something rather than insisting or telling. This can encourage a sense of control in the child and minimises fear.

Precautionary Restraint (A.K.A. Cuddle Restraint)

If the parent/guardian is willing (note this is optional), they can help you to gently restrain the child to reduce any accidents due to pulling away at the pin prick or panicked movements. Ask the child to sit on the parent's lap. The child should be sitting so that their legs are between the parent's legs. The child should have their arm wrapped around the parent's back and vice versa for the parent. This exposes the chosen sampling arm to the nurse while restraining the child's other arm and legs.

Since year 6 we have ethical approval for up to two attempts at taking a child's blood, one on each arm if required. The second venepuncture attempt should only take place if the parent is comfortable with the procedure and the child is not distressed in any way.

14.7 Scheduling appointments

Due to restrictions on when laboratories can process samples and the fact that the vast majority of participants will be providing fasting samples, **blood sampling can only take place on Monday-Thursday mornings**. We appreciate that these restrictions mean you will need to make a second or even third visit to a household to collect blood samples (e.g. you may have to make one evening visit to collect all the measurements except the blood sample then another morning visit to take the blood sample(s)). In order to minimise the number of visits, if a household contains two

participants you should ideally schedule appointments for when both participants are available at the same time.

When a household contains a participant aged 1.5-10 years, you also need to schedule the blood taking appointment to fit in with the availability of your extended role nurse (if this isn't you) or paediatric phlebotomist.

14.8 Liaison with the extended role nurse or paediatric phlebotomist

Blood from young children, aged 10 years or younger, will be taken from someone with the necessary and relevant phlebotomy skills. If this is not you, you will be allocated an extended role nurse (for children aged 6-10) or a paediatric phlebotomist (for children aged 1.5- 5), who will accompany you on visits to take blood from young children.

The earlier you know whether you have a child aged 1.5- 10 years, the better. This means both you and the phlebotomist or extended role nurse, as well as the office, can be better prepared to deal with this. As soon as you know you will be visiting an address with a child aged 1.5- 10 years, you should call:

The Nurse Centre of Excellence: 01277 690061 or email nurseunit@natcen.ac.uk

The Nurse Centre of Excellence has a list of paediatric phlebotomists and extended role nurses who have been recruited and trained for NDNS. They will be able to tell you the name, phone number and address of the best placed phlebotomist or extended role nurse.

You should then call the phlebotomist or extended role nurse to make them aware that you potentially have an address where there might be some work for them to do. At this initial contact, you should ascertain the phlebotomist's general availability during the fieldwork period (e.g. any days when the phlebotomist is on holiday or otherwise engaged). This will help when arranging blood-taking visits.

When you have an agreed time and date, please let the Nurse Centre of Excellence know so they have a record of the visit taking place and can deal with the relevant paperwork.

Important points when working with a phlebotomist or extended role nurse:

- The NDNS nurse is responsible for:
  - Providing and taking all equipment, including tubes, labels and needles to the participant's address.
  - Obtaining written consent and making sure signed consents are obtained in the consent booklet.
  - Entering information into the laptop and must follow the usual blood taking block in the CAPI.
  - All labelling, despatch and delivery of samples.
- The phlebotomist or extended role nurse will be asked to complete and sign a paper version of the venepuncture checklist. NDNS nurses will need to enter this information into the CAPI and should post the paper version to the office.

In essence – the phlebotomist or extended role nurse will take the blood sample only – the NDNS nurse does everything else.

14.9 Liaison with the local field laboratory

Once you have scheduled an appointment with the participant to take a blood sample, inform your local laboratory of the date and time. This is to ensure that the field laboratory will be ready and able to accept the sample for processing. If for any exceptional reason they can't, you may need to rearrange your appointment.

You are encouraged to contact the allocated field laboratory at the beginning of your assignment to introduce yourself and discuss your workload. This is a good opportunity for the field laboratory to tell you if there are any particular days they cannot accept samples and you can discuss any additional details that could help you deliver the samples quickly and with ease e.g. parking details, road closures or building works that might affect sample delivery.

You will receive a field laboratory information sheet in your work pack prior to the start of the assignment detailing contact names, telephone numbers and availability.

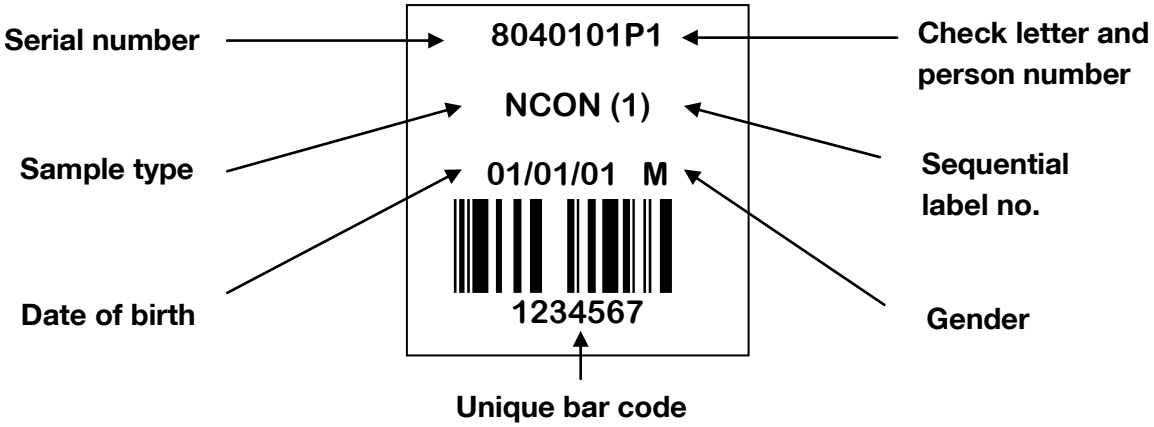
Remember, blood samples need to be delivered to the local laboratory within 2 hours of venepuncture. Therefore, you should not take any more than 2 samples per morning if you cannot deliver the samples to the field laboratory within the allocated time.

14.10 Labels

You will be provided with a set of labels for labelling blood tubes and documents. You will receive a set of labels for each participant that has agreed or said they are unsure about a nurse visit. All possible labels are pre-printed for a particular participant. This means that you will receive labels that will not be used if the participant does not provide a blood sample. These can be disposed of.

On each label there will be:

- The serial number, followed by a check letter and the person number
- The sample type
- The sequential label number
- The participants' date of birth
- The participants' gender
- A unique barcode and number (for HNR's use)



Please ensure you have the correct labels for the participant you are going to see before you leave your home. It is important to check the date of birth and gender on the labels match the participant's. This should be done at visit 1. If the date of birth or gender is incorrect, contact the office immediately for advice.

CAPI will guide you through which labels are to be used for each participant, and which should be affixed to which tube or sent onto the laboratory. The table in section 14.11 also outlines which label should be used for each blood tube.

It is recommended that where labels will not be used that you cross through the top three lines of each label. This will help to reduce the likelihood of a label being used by mistake. When crossing through the label it is best to leave the barcode intact, in case of an error, in which case the label may still be used.

Also, please note that it is your responsibility to label blood monovette tubes for all participants, even when blood is being taken from young children by a paediatric phlebotomist.

14.11 Blood tubes

Blood will be collected using the Sarstedt Monovette blood collection system. The following table details the type of blood tubes that must be collected for each age group, the destination for each tube and which label should be used. It also shows the priority order in which the tubes should be taken:

Blood Tube:	Goes to:	Label:
Participants aged 16+ years		
1. 2.6mL EDTA (red top) **2.** 9.0mL Serum (white top) **3.** 7.5mL Li Hep TM (orange top) **4.** 7.5mL Li Hep TM (orange top) **5.** 1.2mL Fluoride (yellow top) **6.** 4.5mL Li Hep (orange top) **7.** 2.6mL EDTA (red top)	Addenbrooke's Field Lab Field Lab Field Lab Field Lab Field Lab Field Lab	EN1 (3) SEN1 (4) LHN1 (5) LHN2 (6) FN1 (7) LHN3 (8) EN2 (9)
Participants aged 7-15 years		
1. 2.6mL EDTA (red top) **2.** 7.5mL Serum (white top) **3.** 7.5mL Li Hep TM (orange top) **4.** 2.7mL Li Hep (orange top) **5.** 1.2mL Fluoride (yellow top)	Addenbrooke's Field Lab Field Lab Field Lab Field Lab	EN1 (3) SEN1 (4) LHN1 (5) LHN2 (6) FN1 (7)
Participants aged 1.5 to 6 years		
1. 2.6mL EDTA (red top) **2.** 4.5mL Serum (white top) **3.** 4.5mL Li Hep (orange top)	Addenbrooke's Field Lab Field Lab	EN1 (3) SEN1 (4) LHN1 (5)

Note: should the first EDTA tube (i.e. the first of the draw) fail to fill, use a spare second EDTA to replace this one **before** drawing the rest. Make sure your spare tubes are handy for this reason.

14.12 Blood consent

Written consents are needed for the following:

- Giving a blood sample
- Notifying GP of clinically relevant blood results
- Providing clinically relevant blood results to the participant (or parent/guardian of child participants)
- Storage of blood sample.

There are four variants of the blood sampling consent forms in the consent booklets:

- Adult consent form (16+ years)
- Parental/guardian consent for child (4-15 years)
- Child assent form (5-15 years)
- Parental/guardian consent for child (1.5-3 years)

The appropriate blood consent or assent forms must be signed at the visit at which blood is taken, **before** blood is taken.

The different sections of the consent forms should be pointed out to the participant and the form should be given to the participant to read. After the participant (parent/guardian) has read the consent form please encourage him/her to ask any questions they may have with regards to the procedure. Once they are content to sign, please ensure the participant (or parent/guardian) **initials** all those boxes (procedures) they would like to consent to. Children aged 5-15 years should complete the assent form where able.

You must check that all appropriate boxes are **initialled** and signatures collected. If a participant is aged 1.5-15 years, you must make sure that you obtain the signature of their parent or the person who has parental responsibility.

If the participant (or parent/guardian of a child participant) does not wish to receive a report of their (or their child's) blood results nor do they want results to be sent to the GP, they must provide written consent to the statement in the grey box at the bottom of the consent form. If this box is not initialled or consent is not obtained then you should NOT proceed with the blood sample. This is to ensure that they understand that if there are any findings outside the normal range, we will not be able to notify their GP or anyone else as we do not have their permission to do so. For children, it is an ethical requirement for us to be able to inform someone of any clinically relevant blood results that may fall outside of the normal range.

Always return consent forms to the office, even if no blood sample has been obtained.

Summary of Consent Processes for Child Participants:

- Parent agrees to feedback, and to GP – **YES** can take sample
- Parent agrees to feedback, but not GP – **YES** can take sample
- Parent refuses feedback, but agrees to GP – **YES** can take sample
- Parent refuses feedback, and refuses copy to GP, but agrees survey doctor can contact them if necessary – **YES** can take sample
- Parent refuses feedback, and refuses copy to GP, and refuses allowing survey doctor to contact them – **NO** - **DO NOT** proceed with taking sample

14.13 Labelling and despatch

It is very important that the correct labels are used for each participant. If incorrect serial numbers/labels are used there is a risk of matching the blood results to the wrong participant. The participant's GP could therefore be sent the wrong results, possibly leading to unnecessary worry or a problem not being picked up.

Despatching blood tubes to Addenbrooke's

1. Most blood tubes (Sarstedt Monovettes®) will be taken by you to the local field laboratory for the blood to be processed, but one will need to be sent in the post to Addenbrooke's Hospital, Cambridge. **It is absolutely crucial that tubes are delivered to the correct destination.**

2. The blood tube to be posted to Addenbrooke's is usually first tube filled - the 2.6 mL EDTA blood tube (red top) with the label EN1 (3). It will be the same blood tube for all participants, regardless of age.

3. The office consent booklet contains 3 carbonised copies of the Addenbrooke's research analysis request form (Research Analysis Request -952), **all** of which **must** be sent with the EDTA blood tube posted to Addenbrooke's.

4. You should clearly and legibly complete the following information in the **top section** of the first copy of the Addenbrooke's research analysis request form (the rest of the form will be completed by the laboratory):
   - The participant's date of birth.
   - Whether the participant is male or female.
   - Whether the participant provided a fasting or non-fasting blood sample.
   - The date the sample was taken.
   - The time the sample was taken.
   - Whether a full or partial sample was obtained for the EDTA tube.

The Addenbrooke's research analysis request forms are carbonised, but please ensure that the information you have written has transferred through to each of the three copies.

5. You should then affix the following labels onto the three copies of the Addenbrooke's research analysis request form:
   - **FIRST COPY:** Affix serial number label **Adx1 (10)** in the specified box.
   - **SECOND COPY:** Affix serial number label **Adx2 (11)** in the specified box.
   - **THIRD COPY:** Affix serial number label **Adx3 (12)** in the specified box.

6. Labels FOL1 (23) and FOL2 (24) are used by the Addenbrooke's laboratory staff for labelling blood sub-sample tubes. These 2 labels should be cut from the END of the label strip, attached to the 3 carbonised copies of the Addenbrooke's research analysis request form with a paperclip and enclosed with the blood sample tube sent to Addenbrooke's.

7. The labelled red-topped EDTA tube should be placed in the green-topped rigid noax tube with absorbent lining. The top of the EDTA tube should be towards the lid of the Noax tube and then placed inside the video box-style postal container.

8. Include the labelled and completed Addenbrooke's research analysis request form and labels FOL1 (23) and FOL 2 (24) in the video box-style postal container and place the whole box into the pre-addressed envelope (white).

9. The postal pack containing the blood tube should be posted on the way to the local laboratory. Be sure to check that the post box has a same day collection.

Despatching the blood samples to the field laboratory

10. The remaining blood tubes must be taken by you to reach the local field laboratory **within 2 hours of Venipuncture taking place**. The number of blood tubes to be taken to the local laboratory depends on the age of the participant and is summarised in the table below.

11. The office consent booklet contains three different types of field laboratory despatch note, one for adults 16+ (with Pink checklist box), 7-15 year olds (with Green checklist box) and 1.5-6 year olds (with Blue checklist box). One of these forms should be delivered to the local field laboratory along with the appropriate age group samples.

12. You should label the appropriate field lab despatch note for the age of your participant, using label FL1 (13 on the front and label FL2 (14) on the back, clearly and legibly complete all parts of the nurse section. The remainder of the form will be completed by the local field laboratory staff.

13. After the blood samples have been taken and when transporting them to the field laboratory it is important that they are kept in the yellow secondary container inside the carrying box provided. You should also have 2 cold packs in the carrying box to keep the samples cool during transit.

14. The blood tubes for the participant should be put back in to the plastic bag they came in and placed in the yellow secondary container so they stay upright during transportation. The plastic bag has a document pouch where the field laboratory despatch note and field laboratory labels can be placed and there is also space on the label on the plastic bag for you to write the name of your field laboratory contact. If two participants (from the same or different households) have given blood samples in a morning, their samples can be transported together in the cool box; in this case it is particularly important that the samples are labelled and bagged correctly.

15. Upon arriving at the field laboratory reception, ask for your main contact and hand the **blood tubes, field laboratory despatch note, microtube pack and field laboratory labels** (labels 15-22 on the label strip) over to them. If you forget to give the laboratory any of the items listed above, you will be asked by the office to go back to the lab as they do not have any spares.

Please remember to fill in the time of delivery on the field laboratory despatch note before handing it over to the laboratory staff.

You must also complete a Field Lab Delivery Receipt and obtain the name and signature of the person accepting the blood samples from you. This receipt must then be returned to the Nurse Centre (see Appendix C).

14.14 Blood sampling token of appreciation

Participants of all ages will receive a **£20 gift card** as a thank you for providing a blood sample or for allowing at least one attempt at providing a blood sample. Remember this should **not** be presented as 'payment' but as a token of appreciation. You will need to activate the gift card in the household and leave it with the participant.

You will need to request gift cards from the incentives team (IncentiveTeam@natcen.ac.uk). This is to prevent nurses carrying excessive and unnecessary amounts of gift cards.

- If you have left over gift cards, you can use them in this study as long as they are valid for at least **6 months** prior to the expiry date. They are not of any monetary value until activated by Love2shop upon receipt of your transmission.
- If you anticipate needing more gift cards, contact the incentives team in Brentwood (IncentiveTeam@natcen.ac.uk), who will arrange for you to be sent some more. Do this as soon as you have done your selections so that the cards will reach you before your final visit to the address.

The CAPI program will automatically prompt you to enter the last **8 digits** of the gift card number that is shown on the front of the card, for each participant.

When prompted by CAPI you should write the relevant price on one of the white sticky dot provided and stick on the card, give to your participant and inform them that the card will be activated and live to use after approximately 48 hours. Please note that this is dependent on you transmitting the case promptly and may take up to 72 hours if the case is transmitted on a Friday.

There is no need to get the participant to sign a receipt.

NISRA nurses will not provide gift cards, instead providing promissory notes as done in previous years.

14.15 Cancellation of blood sampling appointments – what to do in CAPI

If a personal visit has been made for a blood sampling appointment, which then doesn't proceed due to the participant failing to fast (if eligible to fast), then **only** one further reappointment for the blood sample may be made. You will need to code appropriately into CAPI so that the programme will provide a further blood sampling schedule (i.e. Nurse Schedule 3) to use on the rescheduled visit.

If a participant agrees to give a blood sample, but the appointment is subsequently cancelled for whatever reason (**and not rearranged),** you **must** do the following to ensure the case is signed off properly:

1. Using View/Amend, enter the CAPI program for the relevant address.
2. Using the parallel blocks, select either schedule 2 or schedule 3 (depending on what other visits you have already made to the household).
3. Confirm the date given by CAPI.
4. At SumV2/SumV3, enter code 1 – that you are going to 'Take blood sample only'.
5. Go through the usual blood eligibility questions, answering 'No' at each one.
6. Code 'No' at TBSWill.
7. At TRefBSC, code the relevant reason for the blood sampling appointment not taking place – e.g. if the participant says they've changed their mind because they no longer have time, code 8 'Too busy'; if the participant is under the age of 11 and it wasn't possible to arrange for a paediatric phlebotomist to take the sample, code 6 'No paediatric phlebotomist available'.
8. Circle the relevant codes on the office consent booklet, as specified at TBSStop.
9. Press 1+enter at ThankV2/ThankV3.
10. If there is no more work to do at the address, complete the Admin block as normal and transmit back to the office.

Please note, the above instructions should be used if you have an appointment JUST to take blood. If you are in any doubt about what to do when a blood taking appointment is cancelled (and **not** rearranged), please contact the office.

It is equally important to let your local field laboratory know when an appointment has been rearranged or cancelled. Even if a participant agrees to give blood but, for any reason, the blood sample could not be obtained on the day, please let your contact at the field laboratory know immediately so they are not waiting to process your sample. This should be done when you are out of the house, having finished that visit.

15 Return of work

15.1 CAPI Admin

Recording the outcome of your attempts to interview and measure

When completing CAPI admin, once the household is complete, the CAPI Schedule should code the individual person code and household code appropriate to how the CAPI schedules have been completed during the interviews. However – you will need to decide which is the appropriate unproductive code to use as per the rules below:

Some rules:

- Use code 810 if you went through the whole schedule with the participant and completed all the relevant questions. This code applies even if the participant refused any of the measurements.
- If someone breaks an appointment and you never manage to make contact with them again, ring code 850, not code 820.
- A proxy refusal (840) is the situation where someone refuses on behalf of someone else - for example, a husband who says he will not allow his wife to be seen by a nurse. Obviously you should do your best to try and see the person yourself but sometimes this is not possible.
- Codes 860-880 should be used only if the participant is unavailable for interview for these reasons throughout the whole of your fieldwork period. If they are likely to return, and be fit to be seen, during that time, then try again later.

You cannot code someone as a non-contact without team leader/ nurse field performance manager approval.

15.2 Returning office consent booklets

If you are measuring both participants in a household at one time, post the Office Consent Forms back to the office as soon as possible, but only after completing the CAPI admin and transmitting the schedules back through connecting to the host. Transmit the nurse schedules on the same day you complete the last visit to the household.

If you do need to make more than one visit to the household and there is a gap between visits, keep all the work to be returned together for that household. But post it back as soon as you have completed your task there. Referral back to GPs and participants, in the event of any serious abnormalities, can be seriously delayed if work is not returned in time.

Before returning work, check that you have all the documents you should have and that they are properly completed and serial numbered. Check that they match with

your NRF entries. You should return an Office Consent Booklet for each person with an Outcome Code of 810.

- **Please send ALL office consent booklets back to the office by recorded delivery.** It is essential to send them back by recorded delivery – it is very important that we keep such confidential information safe. In addition, it would be very disappointing not to be able to use blood samples that you have worked so hard to get, just because we don't receive the consent booklet. Your fees will cover up to **4** visits to the post office **Do not entrust other people to post your envelopes - always post them yourself.**
- Claim reimbursement of the Recorded Delivery fee via the Special Claims Facility on your CAPI laptop.

15.3 Returning documents and equipment

As soon as you have finished an assignment, please return all left over documents and equipment to the office in Brentwood so that we can re-use them for other work packs. This is particularly important for postal packs (plastic video boxes), and for blood monovettes which are very expensive and have a use-by date so it is much better if we can re-use them for subsequent work packs, where at all possible.

APPENDIX A: SUMMARY OF NURSE MEASUREMENTS & SAMPLES

Measure	What the measurement is testing	Consent forms	Exclusion criteria	Eligibility criteria	Equipment
Infant length	Measure of infant height	None	None	Infants aged 18 months - 2 years	Rollameter baby measure mat. Infant Frankfort place card. Kitchen roll.
Blood pressure	High blood pressure risk factor for cardiovascular disease	Sending blood pressure readings to GP	Pregnant women (should have been screened out early on)	Aged 4 and over	OMRON HEM blood pressure monitor. Child/Small adult cuff (17-22cm). Standard adult cuff (22-32). Large adult cuff (32-42cm). AC adapter.
Waist & hip	Measure of distribution of body fat. Important indicator of CVD risk	None	If participant: • is chair bound • has a colostomy / ileostomy • is pregnant (should have been screened out early on)	Aged 11 and over	Insertion tape (with metal buckle at one end if used).
Demi-span	Proxy measure of participant's height	None	If participant is unable to straighten either arm	• All participants 65+ • Participants 16-64 if interviewer obtained valid weight but not valid height	Thin retractable demi-span tape with hook at one end. Skin marker pen.

Fasting Blood sample	For example: Total cholesterol HDL cholesterol Glycated haemoglobin (see Appendix B for full list of analytes)	• Taking blood sample • Storing blood for future analysis • Sending clinically relevant blood results to GP • Sending clinically relevant blood results to participant	If participant: • has a clotting or bleeding disorder • is taking anticoagulant drugs • has ever had a fit (<16) • has had a fit in the last 5 years (16+) • is not willing to give written consent • is aged 4 and over, not diabetic and not willing to fast.	Aged 4 and over	Blood collection materials – see Nurse Protocols Manual + CPG

Non-Fasting Blood sample	For example: Total cholesterol HDL cholesterol Glycated haemoglobin (see Appendix B for full list of analytes)	• Taking blood sample • Storing blood for future analysis • Sending clinically relevant blood results to GP • Sending clinically relevant blood results to participant	If participant: • has a clotting or bleeding disorder • is taking anticoagulant drugs • has ever had a fit (<16) • has had a fit in the last 5 years (16+) • is not willing to give written consent	• Aged 1.5-3 • Aged 4+, diabetic and not willing to fast	Blood collection materials – see Nurse Protocols Manual + CPG

APPENDIX B: BLOOD ANALYTES

The list below shows the analytes that the blood samples will be analysed for.

Analyte	What it measures
Total, LDL and HDL cholesterol (fasting)	Total cholesterol and LDL cholesterol are being measured because raised levels are associated with higher risks of heart attacks, while HDL cholesterol has a protective role.
Triglycerides (fasting)	Together with total and HDL cholesterol, triglycerides provide a lipid (fat) profile which can give information on the risk of cardiovascular disease.
Glucose (fasting)	A fasting blood glucose level is a marker of diabetes risk.
Glycated Haemoglobin	Glycated haemoglobin is a measure of the participant's glycaemic status. High levels are indicative of diabetes.
Haemoglobin and ferritin	Haemoglobin and ferritin are being measured because they are indicators of iron status. Frequently, an inadequate iron supply can imply a more general nutritional problem.
C-reactive protein	The level of C-reactive protein in the blood gives information on inflammatory activity in the body, and it is also associated with risk of heart disease.
Plasma Creatinine	Creatinine is a waste product of protein metabolism and is used in the assessment of kidney function. An abnormally high level of creatinine is seen in individuals with kidney insufficiency and failure.
White blood cells	White blood cells are made by bone marrow and help the body fight infection and other diseases. There are many different types of white blood cells all performing different functions.
Folic acid (folate)	Folic acid is a B vitamin. It is used in our bodies to make new cells and helps prevent birth defects of the brain or spine.
Vitamin B_{12} (cyanocobalamin)	Vitamin B_{12} is required to make new cells as well as for normal blood formation and function. It is also needed for the normal structure and function of nerves. Dietary intake is exclusively from animal sources e.g. eggs, milk, meat and fortified foods.
Vitamin B_1 (Thiamin)	Vitamin B_1 is required for energy production and carbohydrate metabolism. It is also involved in the normal function of the nervous system and the heart.
Vitamin B_2 (Riboflavin)	Vitamin B_2 is needed for the release of energy from fats, carbohydrates and protein and the production of red blood cells. It is also needed for the normal structure and function of mucous membranes and skin.
Vitamin B_6 (Pyridoxine)	Vitamin B_6 is essential for the metabolism of protein. It is also involved in iron metabolism and transport.
Vitamin A and carotenoids	Vitamin A is essential to the normal structure and function of the skin and mucous membranes (*e.g.* lining the digestive system and lungs). It is also required for cell differentiation and therefore for normal growth and

	development, and for normal vision and for the immune system. Some carotenoids have provitamin A activity. Others don't but most carotenoids act as antioxidants to protect cells against oxidative damage.
Vitamin C	Vitamin C is required for normal structure and function of skin, cartilage and bone as it is involved in the production of collagen - the protein in connective tissue. It is therefore involved in the healing process. It is also involved in the normal structure and function of blood vessels and neurological function. Vitamin C also contributes to the absorption of iron from some food sources, in particular plant foods.
Vitamin D	Vitamin D is formed by the action of ultra violet rays (sun shine) on the skin and this is the most important source for the majority of people as few foods contain significant amounts of vitamin D, e.g. oily fish, eggs and meat. Vitamin D is converted into another (active) form in the liver and then undergoes further changes in the kidney. In this form it works as a hormone in controlling the amount of calcium absorbed by the intestine. It is also essential for the absorption of phosphorus and for normal bone mineralization and structure. Vitamin D is also involved in the process of cell division in many other body tissues.
Vitamin E	Vitamin E is a group of compounds called tocopherols, of which alpha tocopherol is the most active. It acts as an antioxidant and is required to protect cells against oxidative damage by free radicals, for example oxidation of the lipids in the cell membranes.
Minerals Se and Zn	Selenium is a component of some of the enzymes which protect the body against damage due to oxidation (free radical mediated damage). It is also necessary for the use of iodine in thyroid hormone production and for immune system function. Zinc is present in many enzymes and is essential for cell division and, therefore, for growth and tissue repair. It is also necessary for normal reproductive development. Zinc is also required for the functioning of the immune system and in the structure and function of the skin and, therefore, in wound healing.
Fatty acids	The profile of fatty acids in fasting plasma is an indicator of whether the individual's dietary fat comes mainly from meat, dairy products, fish etc. This can contribute information about long-term dietary habits.

APPENDIX C: FIELD LAB DELIVERY RECEIPT

NDNS Year 7 – Field Lab Sample Delivery Receipt***			
Sample Serial Number:		**No. of blood tubes in sample pack:**	
Sample Serial Number:		**No. of blood tubes in sample pack:**	
Sample Serial Number:		**No. of blood tubes in sample pack:**	
Sample Serial Number:		**No. of blood tubes in sample pack:**	

Nurse Name:		**Nurse ID:**	
Date delivered to Field lab:		**Time delivered to Field lab:**	
Name of Field lab:			
Name of Lab representative receiving Sample:		**Lab Representative Signature:**	

**** Nurse – please ensure this form is completed; with samples signed for on delivery to the Field Lab. Then return this completed form to the NatCen Nurse Centre, Brentwood Office. If you have any comments / information you wish to make NatCen / HNR aware of regarding the Field Lab please comment below.*

Nurse Comments for Office / HNR *(continue overleaf if required):*

NatCen
Social Research

National Diet and Nutrition Survey
(Year 8 – P1255)

NatCen Social Research

Editor's Code Book – Interviewer CAPI

April 2015

More information about the coding?

These instructions contain information about the coding task. However, if you need further information or clarification, please contact:

Nina Sal in the **research team** on
020 7549 7004

Natalie Maplethorpe in the **research team** on
020 7549 8523

Coral Lawson in the **Data Team** on
01277 690093

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4 LONGSTANDING ILLNESS CODEFRAME 18

1 Introduction

This document details the editing to be applied to CAPI questionnaires on National Diet and Nutrition Survey. Problems should be referred to the research team.

General Points:

1. A FACTSHEET is provided to aid editing of the CAPI questionnaires. It contains household information and information for each individual session. The majority of questions which need to be coded are printed on the FACTSHEET. Coding decisions should be recorded alongside the appropriate questions or at the end of the FACTSHEET, if the question has not been printed.

2. All soft checks that were triggered by the interviewer and which have not been resolved will trigger again in the edit program. Where appropriate these should be investigated. If no editing action can be taken to resolve these checks, they should be cancelled by the editor.

3. "Other" answers in CAPI will be backcoded to the original question where possible. Other answers can be transferred electronically and so don't require listing.

4. Some questions where editing is required were asked of both Respondent 1 (adult) and Respondent 2 (child). Where this occurs, these instructions will indicate whether the CAPI page number refers to the questionnaire for Respondent 1 (R1) or the questionnaire for Respondent 2 (R2).

5. For your information, the primary grouping for this study is the Catering Unit (CU). It is "a group of people who eat food that is bought and prepared for them (largely) as a group". In addition, the Main Food Provider (MFP) is interviewed in order to obtain CU-level information. The MFP is "the person in the Catering Unit with the main responsibility for shopping and preparing food".

Where problems arise that do not appear in these editing instructions, please contact the research team for advice.

2 Factsheet Definition for CAPI editing

The tables below show the variables that will appear on the factsheet for editing. Variables which are just a simple backcode into a previous variable are not shaded but the code frames are provided in these instructions. Variables for which there is more detail in these instructions about how to code, are shaded.

Household Qure

XNatOth	Back code into NatIDG	National identity	Page 8
EthOth	Back code into EthGrp	Ethnic group	Page 9
soc2010	Code as standard	Occupational coding	
sic2007	Code as standard	Industry type coding	

Indiv Qure – CAPI 1

NbotL7	Code to L7NCodEq	Brand of bottled lager (7 days)	Page 13
SbotL7	Code to L7SCodEq	Brand of bottled lager (7 days)	Page 13
OthL7TA,B,C		Other alcoholic drinks (7 days)	Page 12
CutMatt	Code to CutIll	Restrictive illness or injury	Page 11

Indiv Qure – Measures

OHiNRel	Back code into HiNRel	Unreliable height measurement	Page 15
NoHitCO	Back code into NoHtBC	Reasons for refusing height	Page 15
NoWatCO	Back code into NoWtBC	Reasons for refusing weight	Page 15

Indiv Qure – Child Physical Activity

OSpEx2	Back code into NSOSpEx2	Other physical activity (weekday)	Page 16
OSpEx2	Back code into WEOSpEx2	Other physical activity (weekend)	Page 16

3 Additional CAPI edits

3.1 Proxy interviews

Aged 2-10	Proxy interviews are allowed for children aged 2-10. See height/weight measurements section for more details of edits for **NoHtBC** and **NoWtBC**.
Aged 18mths to 2 years	Proxy interviews are carried out for infants aged 18 months – 2 years. See length/weight measurements section for more details of edits for **NoAttL** and **NoWtBC**.

3.2 Age/Date of birth

Children aged less than one year are recorded as '0'.

If Age/Date of birth missing in household grid, check whether it was collected in the nurse visit. Add DoB and age at Individual Questionnaire Interview Date to the Household Grid if available from Nurse Schedule.

Date of birth in nurse visit should be checked against the consent booklet and any discrepancies resolved.

All "age" nurse checks will be flagged in the edit if they do not make sense according to the respondent's date of birth as at the interview. Any discrepancies will need to be resolved. Send a list of all cases where this happens to the researchers, please note age and 'consent status' of other individuals in the household. A decision will be taken by the researcher on a case by case basis.

3.3 National identity

XNatOth Other national identity. To be coded back to **NatIDG.**

Inspect answer at XNatOth and if Cornish, back code to English (code 1 in the code frame below). Do not back code any other answers.

1 English
2 Scottish
3 Welsh
4 Northern Irish
5 British

If the case is from a NI point then back code to **NatIDN.**

For Northern Ireland batches the code frame will include the following extra codes (these will appear on route for NI points only)

1 British
2 Irish
3 Ulster
4 Northern Irish
5 English
6 Scottish
7 Welsh

3.4 Other ethnic groups – NATCEN edit

EthOth Other ethnic group. To be coded back to **EthGrp**, following rules listed below.

1. White-British
Include English, Scottish, Welsh, Northern Irish and Cornish.

2. Irish
Include Southern Irish, Irish.

3. Gypsy or Irish Traveller
Include Gypsy/Romany.

4. Any other white background
Include Cypriot, Former USSR, Baltic States, Former Yugoslavia, Other European, White South African, American, Australian, New Zealander, Mixed White

5. Mixed – White and Black Caribbean

6. Mixed – White and Black African

7. Mixed – White and Asian

8. Any other mixed background

9. Asian or Asian British - Indian
Include Punjabi

10. Asian and Asian British – Pakistani
Include Kashmiri

11. Asian and Asian British – Bangladeshi

12. Any other Asian/Asian British background
Include East African Asian, Sri Lankan, Tamil, Sinhalese, Caribbean Asian, Nepalese, Mixed Asian (i.e. mixture of descriptions in the Asian section).
Code Chinese as 14 (see below).

13. Black or Black British – Caribbean
Include Caribbean and West Indian islands (and also Guyana).
Do not include Puerto Rican, Dominican and Cuban, which are Latin American

14. Black or Black British – African
Include Nigerian, Somali, Kenyan, Black South African, Other Black African countries

15. Any other Black/Black British background
Include Black American, Mixed Black

16. Chinese
Include Hong Kong

17. Arab

18. Any other
The following ethnic groups **SHOULD NOT** be coded back to the categories above but should remain as "other": Japanese, Vietnamese, Filipino, Malaysian, Aborigine, Afghani, Burmese, Fijian, Inuit, Maori, Native American Indian, Thai, Tongan, Samoan, Iranian, Israeli, Jewish, Kurdish, Latin American (Cuban, Puerto Rican, Dominican, Hispanic), South American (incl. Central American), Moroccan, Other North African, Iraqi, Lebanese, Yemeni, Other Middle Eastern, Mauritian, Seychellois, Maldivian, St Helena.

3.5 Other ethnic groups – NORTHERN IRELAND edit

Other Other ethnic group. To be coded back to **EthGrpNI**.

If you are editing a Northern Ireland case and 'Other ethnic group' has been recorded, please contact Stuart Bennett [Stuart.Bennett@dfpni.gov.uk] from NISRA with the details of the 'other ethnic group' and ask him which code he would like it to be back coded into in EthGrpNI from the following options:

1. **White**
2. **Irish traveler**
3. **Mixed**
4. **Indian**
5. **Pakistani**
6. **Bangladeshi**
7. **Other Asian**
8. **Black Caribbean**
9. **Black African**
10. **Other Black**
11. **Chinese**
12. **Other ethnic group**

3.6 Restrictive illness or injury

CutMatt Illness or injury over the past 2 weeks. To be coded into new variable **CutIll**.

Respondents are asked if they have had an illness or injury over the past 2 weeks that has caused them to cut down on any activities that they usually do around the house. Their response should be coded using the codeframe in section 4. If there is more than one separate illness or injury listed in CutMatt, code first mentioned illness

Code 41 Unclassifiable (no other codable complaint)

Exclusive code - this should only be used when the whole response is too vague to be coded into one of codes 01-40. This includes unspecific conditions like old age, war wounds etc. (see codeframe for examples).

Code 42 Complaint no longer present

Exclusive code - again it should be used only when the response given is **only** about a condition that no longer affects the respondent.

Illnesses which cannot be coded using the Longstanding Illness Codeframe or the ICD need to be sent to the Research team in London. Code 98 here for now, which will tell us that this is being investigated.

3.7 Other alcoholic drinks

OthL7TA/OthL7TB/ OthL7TC Other alcoholic drinks need to be coded into specific alcohol types

Exclude all low/non-alcoholic drinks. Home made drinks should be coded into the appropriate category. If unsure of the % alcohol volume, look up the drink on the internet.

Normal beer (NBrL7):
Include: Export, Heavy, Black & Tan, Barley Wine, Diabetic Beer, Home Brew Lager, Lager and Lime, Home Brew Beer, Gold Label, Pomagne, Stout, Scrumpy
Exclude: Ginger Beer. Non-alcoholic lagers - Barbican, Kaliber, Bottles/cans of shandy. Beer, Lager or Cider with >6% alcohol by volume (code as 'strong'). Angostura Bitter (code as spirits)

Strong beer (SBrL7):
Include: Diamond White/Blush/Zest, K, Special Brew Lager, Tennents Super
Exclude: Beer etc. with less than 6% alcohol by volume (code as 'normal strength'). Angostura Bitter (code as spirits).

Spirits (SpirL7):
Include: Angostura Bitter, Cocktails, Egg Flip, Snowball, Bacardi, Bailey's, Pernod, Gin, Sloe Gin, Pimms, Bourbon, Whisky Mac, Schnapps, Liqueurs, Bluemoon, Vodka, Rum, Southern Comfort, Grappa, Tia Maria, Ouzo/Aniseed, Strega, Cherry Brandy, Arak, Irish Velvet, Brandy, 150 proof Moonshine, Gaelic Coffee, Advocaat, Tequila, Armagnac, Clan Dew, Campari, Malibu, Taboo, Pochene (Irish Moonshine), Jell-O shots/shooters, Vodka Jelly, After Shock.

Sherry (ShryL7):
Include: Vermouth, Port, Cinzano, Dubonnet, Bianco, Rocardo, Noilly Prat, Stones Ginger Wine, Home made Sherry, Tonic wine, Sanatogen, Scotsmac and similar British wines fortified with spirits, Port and Lemon, Madeira.

Wine (WineL7):
Include: Punch, Mead, Moussec, Concorde, Champagne, Babycham, Saki, Cherry B, Calypso Orange Perry, Home made wine, Thunder bird.
Exclude: Non-alcoholic wines such as Eisberg

Alcopops/pre mixed alcoholic drinks (PopsL7):
Include: Bacardi Breezer, Metz, Smirnoff Ice, Archers Aqua, Baileys Glide, Crabbies, MudShake, Red Square, Vodka Reef, Shotts, Tvx, VK Vodka kick, Vodkat Classic, WKD ('Wicked'), Alcoholic Irn Bru, Thickhead, Woody's, any mention of 'alcoholic lemonade, cola, orangeade, cream soda' etc. or any 'Ready to Drink' beverage.

Coding "other" alcoholic drinks variables:
All "other" alcoholic drinks should be recoded back into one of the six drink categories noted above (**OthL7TA**, **OthL7TB**, **OthL7TC** to question **DrnkType**).

If the appropriate drinks category is **not already** coded, then information on amount should be edited into that category's variables and data in the "other drinks" category deleted.

If the category of the "other" alcoholic drink is the same as already coded, then the **amounts** drunk should be added together.

After recoding "other" alcoholic drinks, you should remove "other" alcoholic drink types at **DrnkType** and the variables **OthL7TA**, **OthL7TB**, and **OthL7TC** should longer appear on route. Details of coding decisions should be recorded on the FACTSHEET.
Responses recorded at variables **OthL7QA**, **OthL7QB** and **OthL7QC** should be recoded to the relevant variables: **NBrL7**, **NBrL7Q[1-4], SBrL7, SBrL7Q[1-4], SpirL7, ShryL7, WineL7, PopsL7, PopsL7Q[1-2]**.

3.8 Coding of beer bottle sizes

NBotL7/ SBotL7 The brand of beer/lager/stout/cider drunk in bottles (**NBotL7** and **SBotL7**) need to be coded into **L7NcodEq** and **L7ScodEq**.

If respondents drink beer, lager, stout or cider in bottles they are asked to specify the make of drink in **NBotL7** and **SBotL7**. These need to be coded into **L7NcodEq** and **L7ScodEq** using the bottled lager/cider/beer codeframe and conversion table on the next page.

For beers or ciders where it is not clear as to the size of bottle, please use the internet to clarify.

Bottled beers or ciders for which an amount cannot be identified should be coded to 0.00 of a pint, so that these brands can be listed electronically. The exceptions to this are

- 'French beer' which should be coded 0.44 (250ml)
- Interviewer has indicated that the bottle is "large" code to 0.77 of a pint (440ml)
- If no brand name given, or no usual type code to 0.58 of a pint (330ml)
- Where two or more bottle sizes are shown in the codeframe, code as 0.58 unless bottle size is specifically stated (either as small or large, or in ml)
- Where more than one type of bottle is drunk, code to the volume of the first mentioned bottle.

3.9 Bottled lager/cider/beer codeframe

Abbot Ale	0.58
Amstel	0.58
Asahi	0.58
Banks (Mild only)	0.97
Banks Old Ale (nips)	0.32
Bass (pint bottle)	1.00
Becks	0.48 or 0.58
Bishops Finger	0.88
Black Sheep Ale	0.88
Boddingtons (Export draught only)	0.58
Bombardier	0.88
Brahma	0.58
Brandenburg	0.58
Budvar	0.88
Budweiser/Bud Ice	0.58
Bulmers/Magners	0.58, 0.88 or 1.00
Carling	0.48
Carlsberg	0.58
Castle	0.58
Cobra	0.58
Coors	0.58
Corona	0.58
Crest Lager (Export)	0.44
Diamond (Blush, White or Zest)	0.48
Dragon (Stout)	0.50
Elephant (Lager)	0.48 or 0.58
ESB (Fuller's ESB)	0.88
Export 33	0.44
Foster's (Unspecified)	0.77
Foster's Export	0.77
Foster's Ice	0.58
Frosty Jack Cider	0.88
Fuller's (London Pride)	0.97
Grolsch	0.58 or 0.77
Guinness Extra Stout	0.58
Guinness Original	0.58 or 0.88
Heineken (Export)	0.58
Hoegaarden (bier blonde)	0.58
Holsten Pils (bottle)	0.58
Home made	0.58
Ice Dragon	0.48
John Smiths	0.77
K. Cider	0.48
Kanterbrau	0.58
Kingfisher	0.58
Kirin	0.58 or 0.88
Kronenbourg (1664)	0.44 or 0.58
Labatts	0.58
Labatt's Ice	0.58
Leffe	0.58 or 0.77
London Pride	0.97
Lowenbrau	0.58
Mackeson	0.88
Marston's Pedigree	0.88
McEwans 80 or 90 shilling	0.97
Merrydowns	0.58
Michelob	0.58
Miller (Draught not Pils)	0.58
Molson	0.58
Murphys	0.88
Newcastle Brown Ale	0.97
Olde English	0.88
Old Peculiar	0.88
Old Speckled Hen	0.88
Oranjeboom	0.58
Peroni lager (Nastro Azzuri)	0.58
Pils (unspecified)	0.58
Pivovar Czech Lager	0.88
Red Rock	0.58
Red Stripe	0.58
Rolling Rock	0.58
Royal Dutch	0.58
Ruddles	0.58
Sam Smiths (Old Brewery Strong Ale)	0.97
San Miguel	0.58
Scrumpy Jack	0.58
Singha beer	0.58
Skol	0.58
Sol	0.58
Spitfire	0.88
Stella Artois (dry or regular)	0.44, 0.48 or 0.58
Stinger	0.58
Strongbow (Blackthorn)	0.48 or 0.58
Thatchers cider	0.88
Theakstons	0.97
Tiger beer	0.58
Tsingtao	0.58
Vault	0.58
Victoria Bitter	0.58
Wadworth Export	0.88
Woodpecker	0.48

Conversion Table

mls	pints	mls	pints	mls	pints
180	0.32	330	0.58	750	1.32
200	0.35	440	0.77	1000 (1 litre)	1.76
250	0.44	500	0.88	1500 (1.5 litres)	2.64
275	0.48	550	0.97	2000 (2 litres)	3.52
284	0.50	568	1.00	3000 (3 litres)	5.28

3.10 Height and Weight

If you get an Interviewer Check (Active Signal) at variable **Height1, Height2** or **Height3** and the decimal is .0 (e.g. 15.0), suppress this warning to continue moving through the Edit.

OHiNRel	Other reason for unreliable height measurement. To be coded back to **HiNRel**.
NoHitCO	Other reason for not obtaining height measurement. To be coded back at **NoHtBC**.
NoWatCO	Other reason for not obtaining weight measurement. To be coded back at **NoWtBC**.
OthNLth	Other reason for not obtaining length measurement. To be coded back at **NoAttL**.

Checks for height/length and weight in the edit program reject extremely unusual heights and weights as a safeguard against very unlikely results. Contact research staff if the height or weight check is activated.

For children aged 4-12 who are away from home during field period an interview will have been attempted with his/her parents. Variables **NoHtBC/NoWtBC** should be coded 1 - "Child away from home during the field period". Editors should check that where notes indicate that a child is absent during the field period that code 1 has been used in the above variables.

****Note** that code 1 can only be used if the child is known to be away from home for the whole of the fieldwork period. It should not be used for those cases where a child is not available at the time measurements are conducted (e.g. child got bored and went outside to play). These should be left as "Other". If child is "ill", recode to Code 8 'ill or in pain'.

Veiled refusals at **NoHitCO/NoWatCO** (where respondent has not given a reason for not having height/weight taken but has effectively terminated the interview: e.g. 'too busy', 'had to go out', 'not convenient' etc.) should be recoded to Code 2 'Height/Weight refused' at **RespHts**/**Respwts**, and the reason for refusal coded at **ResNHi**/**ResNWt**.

3.11 Child Physical Activity

OSpEx2 Other activities to be coded back into **NSOSpEx2 (weekday) and WEOSpEx2 (weekend)**

Participants are asked what type of physical activity they have undertaken during the week at **NSOSpEx2** and the weekend at **WEOSpEx2.**

Inspect the answer at other and attempt to code back into the codeframe provided at **NSOSpEx2** and **WEOSpEx2**.

3.12 Physical activity codeframe

Type of Physical Activity	Code		
XXX NOT LISTED/DONT KNOW	999	Darts	55
Cycling	1	Diving	56
Exercise bike	2	Dog training	57
Swimming (continuous laps)	3	Drumming (in a group)	58
Swimming (leisurely, splashing about, paddling in river/lake/pool)	4	Rambling	59
Running (including on a treadmill)	5	Fell walking	60
Jogging (including on a treadmill)	6	Cross country walking	61
Weight training	7	Fencing	62
Rowing machine	8	Field athletics	63
Stepping machine	9	Fishing	64
Home exercises (e.g. push-ups, press-ups, chin-ups, abdominals, back exercises)	10	Fly fishing	65
Floor exercise (e.g. push-ups, press-ups, chin-ups, abdominals, back exercises)	11	Fives	66
Aerobics	12	Gymnastics	67
Step-aerobics	13	Hang gliding	68
Football (casual or training)	14	Parachuting	69
Rugby (casual or training)	15	Hitting punch sack	70
Football (game)	16	Hockey	71
Rugby (game)	17	Ice skating	72
Basketball (training)	18	Ice dancing	73
Handball (training)	19	Juggling	74
Netball (training)	20	Lacrosse	75
Basketball (game)	21	Motor sports (Motor-cross, go-karting, jet-skiing)	76
Handball (game)	22	Orienteering	77
Netball (game)	23	Polo	78
Tennis	24	Power boat (driving)	79
Badminton	25	Racketball	80
Squash	26	Roller skating	81
Cricket	27	Roller blading	82
Dancing (including taking lessons or nightclub)	28	Rowing (not including machine)	83
Martial Arts	29	Sailing (including dinghy)	84
Water skiing	30	Scuba diving	85
Downhill snow skiing	31	Subaqua (underwater) diving	86
Snowboarding	32	Shooting	87
Dry slope skiing	33	Skateboarding	88
Golf (NOT mini-gold, or golf using a power cart)	34	Skipping	89
Pilates	35	Skittles	90
Bowls (including outdoor, crown, green, Petanque)	36	Snooker	91
Horse Riding	37	Snorkelling	92
Abseiling	38	Sumo wrestling	93
Parasailing	39	Surfing	94
Adventure playground	40	Swing ball	95
Aqua Aerobics	41	Table tennis	96

American football	42	Tai Chi	97
Archery	43	Tenpin bowling	98
Assault course	44	Territorial Army Training	99
Back packing	45	Toning table/bed	100
Baseball	46	Trampolining	101
Softball	47	Volley ball	102
Rounders	48	Water-polo	103
Battle re-enactment	49	Wind surfing	104
Canoeing	50	Wrestling	105
Circuit training	51	Yoga	106
Climbing	52	Other light exercise (such as mini-trampoline, harness racing, Alexander Technique)	995
Croquet	53	Other moderate exercise (such as tug of war, running/playing with children)	996
Curling	54	Other - Unknown energy level	997

4 Longstanding illness codeframe

01 Cancer (neoplasm) including lumps, masses, tumours and growths and benign (non-malignant) lumps and cysts

Acoustic neuroma
After effect of cancer (nes)
All tumours, growths, masses, lumps and cysts whether malignant or benign e.g. tumour on brain, growth in bowel, growth on spinal cord, lump in breast
Cancers sited in any part of the body or system e.g. Lung, breast, stomach
Colostomy caused by cancer
Cyst on eye, cyst in kidney.
General arthroma
Hereditary cancer
Hodgkin's disease
Hysterectomy for cancer of womb
Inch. leukaemia (cancer of the blood)
Lymphoma
Mastectomy (nes)
Neurofibromatosis
Part of intestines removed (cancer)
Pituitary gland removed (cancer)
Rodent ulcers
Sarcomas, carcinomas
Skin cancer, bone cancer
Wilms tumour

Endocrine/nutritional/metabolic diseases

02 Diabetes

Incl. Hyperglycaemia

03 Other endocrine/metabolic

Addison's disease
Beckwith - Wiedemann syndrome
Coeliac disease
Cushing's syndrome
Cystic fibrosis
Gilbert's syndrome
Hormone deficiency, deficiency of growth hormone, dwarfism
Hypercalcemia
Hypopotassaemia, lack of potassium
Malacia
Myxoedema (nes)
Obesity/overweight
Phenylketonuria
Rickets
Too much cholesterol in blood
Underactive/overactive thyroid, goitre
Water/fluid retention
Wilson's disease

Thyroid trouble and tiredness - code 03 only
Overactive thyroid and swelling in neck - code 03 only.

Mental, behavioural and personality disorders

04 Mental illness/anxiety/depression/nerves (nes)

Alcoholism, recovered not cured alcoholic
Angelman Syndrome
Anorexia nervosa
Anxiety, panic attacks
Asperger Syndrome
Autism/Autistic
Bipolar Affective Disorder
Catalepsy
Concussion syndrome
Depression
Drug addict
Dyslexia
Hyperactive child.
Nerves (nes)
Nervous breakdown, neurasthenia, nervous trouble
Phobias
Schizophrenia, manic depressive
Senile dementia, forgetfulness, gets confused
Speech impediment, stammer
Stress

Alzheimer's disease, degenerative brain disease = code 08

05 Mental handicap

Incl. Down's syndrome, Mongol
Mentally retarded, subnormal

Nervous system (central and peripheral including brain) - Not mental illness

06 Epilepsy/fits/convulsions
Grand mal
Petit mal
Jacksonian fit
Lennox-Gastaut syndrome
blackouts
febrile convulsions
fit (nes)

07 Migraine/headaches

08 Other problems of nervous system
Abscess on brain
Alzheimer's disease
Bell's palsy
Brain damage resulting from infection (e.g. meningitis, encephalitis) or injury
Carpal tunnel syndrome
Cerebral palsy (spastic)
Degenerative brain disease
Fibromyalgia
Friedreich's Ataxia
Guillain-Barre syndrome
Huntington's chorea
Hydrocephalus, microcephaly, fluid on brain
Injury to spine resulting in paralysis
Metachromatic leucodystrophy
Motor neurone disease
Multiple Sclerosis (MS), disseminated sclerosis
Muscular dystrophy
Myalgic encephalomyelitis (ME)
Myasthenia gravis
Myotonic dystrophy
Neuralgia, neuritis
Numbness/loss of feeling in fingers, hand, leg etc.
Paraplegia (paralysis of lower limbs)
Parkinson's disease (paralysis agitans)
Partially paralysed (nes)
Physically handicapped - spasticity of all limbs
Pins and needles in arm
Post viral syndrome (ME)
Removal of nerve in arm
Restless legs
Sciatica
Shingles
Spina bifida
Syringomyelia
Trapped nerve
Trigeminal neuralgia
Teraplegia

Eye complaints

09 Cataract/poor eye sight/blindness
Incl. operation for cataracts, now need glasses
Bad eyesight, restricted vision, partially sighted
Bad eyesight/nearly blind because of cataracts
Blind in one eye, loss of one eye
Blindness caused by diabetes
Blurred vision
Detached/scarred retina
Hardening of lens
Lens implants in both eyes
Short sighted, long sighted, myopia
Trouble with eyes (nes), eyes not good (nes)
Tunnel vision

10 Other eye complaints
Astigmatism
Buphthalmos
Colour blind
Double vision
Dry eye syndrome, trouble with tear ducts, watery eyes
Eye infection, conjunctivitis
Eyes are light sensitive
Floater in eye
Glaucoma
Haemorrhage behind eye
Injury to eye
Iritis
Keratoconus
Night blindness
Retinitis pigmentosa
Scarred cornea, corneal ulcers
Squint, lazy eye
Sty on eye

Ear complaints

11 Poor hearing/deafness
Conductive/nerve/noise induced deafness
Deaf mute/deaf and dumb
Heard of hearing, slightly deaf
Otosclerosis
Poor hearing after mastoid operation

12 Tinnitus/noises in the ear
Incl. pulsing in the ear

13 Meniere's disease/ear complaints causing balance problems
Labryrinthitis,
loss of balance - inner ear
Vertigo

14 Other ear complaints
Incl. otitis media - glue ear
Disorders of Eustachian tube
Perforated ear drum (nes)
Middle/inner ear problems
Mastoiditis
Ear trouble (nes),
Ear problem (wax)
Ear aches and discharges
Ear infection

Complaints of heart, blood vessels and circulatory system

15 Stroke/cerebral haemorrhage/cerebral thrombosis
Incl. stroke victim - partially paralysed and speech difficulty
Hemiplegia, apoplexy, cerebral embolism,
Cerebro - vascular accident

16 Heart attack/angina
Incl. coronary thrombosis, myocardial infarction

17 Hypertension/high blood pressure/blood pressure (nes)

18 Other heart problems
Aortic/mitral valve stenosis,
Aortic/mitral valve regurgitation
Aorta replacement
Atrial Septal Defect (ASD)
Cardiac asthma
Cardiac diffusion
Cardiac problems, heart trouble (nes)
Dizziness, giddiness, balance problems (nes)
Hardening of arteries in heart
Heart disease, heart complaint
Heart failure
Heart murmur, palpitations
Hole in the heart
Ischaemic heart disease
Pacemaker
Pains in chest (nes)
Pericarditis
St Vitus dance
Tachycardia, sick sinus syndrome
Tired heart
Valvular heart disease
Weak heart because of rheumatic fever
Wolff - Parkinson - White syndrome

Balance problems due to ear complaint = code 13

19 Piles/haemorrhoids incl. Varicose Veins in anus.

20 Varicose veins/phlebitis in lower extremities
Incl. various ulcers, varicose eczema

21 Other blood vessels/embolic
Arteriosclerosis, hardening of arteries (nes)
Arterial thrombosis
Artificial arteries (nes)
Blocked arteries in leg
Blood clots (nes)
Hand Arm Vibration Syndrome (White Finger)
Hypersensitive to the cold
Intermittent claudication
Low blood pressure/hypertension
Poor circulation
Pulmonary embolism
Raynaud's disease
Swollen legs and feet
Telangiectasia (nes)
Thrombosis (nes)
Varicose veins in Oesophagus
Wright's syndrome

NB Haemorrhage behind eye = code 10

Complaints of respiratory system

22 Bronchitis/emphysema
Bronchiectasis
Chronic bronchitis

23 Asthma
Bronchial asthma, allergic asthma
Asthma - allergy to house dust/grass/cat fur

NB *Exclude cardiac asthma - code 18*

24 Hayfever
Allergic rhinitis

25 Other respiratory complaints
Abscess on larynx
Adenoid problems, nasal polyps
Allergy to dust/cat fur
Bad chest (nes), weak chest - wheezy
Breathlessness
Bronchial trouble, chest trouble (nes)
Catarrh
Chest infections, get a lot of colds
Churg-Strauss syndrome
Chronic Obstructive Pulmonary Disease (COPD)
Coughing fits
Croup
Damaged lung (nes), lost lower lobe of left lung
Fibrosis of lung
Furred up airways, collapsed lung
Lung complaint (nes), lung problems (nes)
Lung damage by viral pneumonia
Paralysis of vocal cords
Pigeon fancier's lung
Pneumoconiosis, byssinosis, asbestosis and other industrial, respiratory disease
Recurrent pleurisy
Rhinitis (nes)
Sinus trouble, sinusitis
Sore throat, pharyngitis
Throat infection
Throat trouble (nes), throat irritation
Tonsillitis
Ulcer on lung, fluid on lung

TB (pulmonary tuberculosis) - code 37
Cystic fibrosis - code 03
Skin allergy - code 39
Food allergy - code 27
Allergy (nes) - code 41
Pilonidal sinus - code 39
Sick sinus syndrome - code 18
Whooping cough - code 37

If complaint is breathlessness with the cause also stated, code the cause:
breathlessness as a result of anaemia (code 38)
breathlessness due to hole in heart (code 18)
breathlessness due to angina (code 16)

Complaints of the digestive system

26 Stomach ulcer/ulcer (nes)/abdominal hernia/rupture

Double/inguinal/diaphragm/hiatus/umbilical hernia
Gastric/duodenal/peptic ulcer
Hernia (nes), rupture (nes)
Ulcer (nes)

27 Other digestive complaints (stomach, liver, pancreas, bile ducts, small intestine - duodenum, jejunum and ileum)

Cirrhosis of the liver, liver problems
Food allergies
Ileostomy
Indigestion, heart burn, dyspepsia
Inflamed duodenum
Liver disease, biliary artesia
Nervous stomach, acid stomach
Pancreas problems
Stomach trouble (nes), abdominal trouble (nes)
Stone in gallbladder, gallbladder problems
Throat trouble - difficulty in swallowing
Weakness in intestines

28 Complaints of bowel/colon (large intestine, caecum, bowel, colon, rectum)

Colitis, colon trouble, ulcerative colitis
Coeliac
Colostomy (nes)
Crohn's disease
Diverticulitis
Enteritis
Faecal incontinence/encopresis.
Frequent diarrhoea, constipation
Grumbling appendix
Hirschsprung's disease
Irritable bowel, inflammation of bowel
Polyp on bowel
Spastic colon

Exclude piles - code 19
Cancer of stomach/bowel - code 01

29 Complaints of teeth/mouth/tongue

Cleft palate, hare lip
Impacted wisdom tooth, gingivitis
No sense of taste
Ulcers on tongue, mouth ulcers

Complaints of genito-urinary system

30 Kidney complaints

Chronic renal failure
Horseshoe kidney, cystic kidney
Kidney trouble, tube damage, stone in the kidney
Nephritis, pyelonephritis
Nephrotic syndrome
Only one kidney, double kidney on right side
Renal TB
Uraemia

31 Urinary tract infection

Cystitis, urine infection

32 Other bladder problems/incontinence

Bed wetting, enuresis
Bladder restriction
Water trouble (nes)
Weak bladder, bladder complaint (nes)

Prostate trouble - code 33

33 Reproductive system disorders

Abscess on breast, mastitis, cracked nipple
Amenorrhea
Damaged testicles
Endometriosis
Gynaecological problems
Hysterectomy (nes)
Impotence, infertility
Menopause
Pelvic inflammatory disease/PID (female)
Period problems, flooding, pre-menstrual tension/syndrome
Prolapse (nes) if female
Prolapsed womb
Prostrate gland trouble
Turner's syndrome
Vaginitis, vulvitis, dysmenorrhoea

Musculo-skeletal - complaints of bones/joints /muscles

34 Arthritis/rheumatism/fibrositis

Arthritis as result of broken limb
Arthritis/rheumatism in any part of the body
Gout (*previously code 03*)
Osteoarthritis, rheumatoid arthritis, polymyalgia rheumatica
Polyarteritis Nodosa (*previously code 21*)
Psoriasis arthritis (also code psoriasis)
Rheumatic symptoms
Still's disease

35 Back problems/slipped disc/spine/neck

Back trouble, lower back problems, back ache
Curvature of spine
Damage, fracture or injury to back/spine/neck
Disc trouble
Lumbago, inflammation of spinal joint
Prolapsed invertebral discs
Schuermann's disease
Spondylitis, spondylosis
Worn discs in spine - affects legs

Exclude if damage/injury to spine results in paralysis - code 08
Sciatica or trapped nerve in spine - code 08

36 Other problems of bones/joints/muscles

Absence or loss of limb e.g. lost leg in war, finger amputated, born without arms
Aching arm, stiff arm, sore arm muscle
Bad shoulder, bad leg, collapsed knee cap, knee cap removed
Brittle bones, osteoporosis
Bursitis, housemaid's knee, tennis elbow
Cartilage problems
Chondrodystrophia
Chondromalacia
Cramp in hand
Deformity of limbs e.g. club foot, claw-hand, malformed jaw
Delayed healing of bones or badly set fractures
Deviated septum
Dislocations e.g. dislocation of hip, clicky hip, dislocated knee/finger
Disseminated lupus
Dupuytren's contraction
Fibromyalgia
Flat feet, bunions,
Fracture, damage or injury to extremities, ribs, collarbone, pelvis, skull, e.g. knee injury, broken leg, gun shot wounds in leg/shoulder, can't hold arm out flat - broke it as a child, broken nose
Frozen shoulder
Hip infection, TB hip
Hip replacement (nes)
Legs won't go, difficulty in walking
Marfan Syndrome
Osteomyelitis
Paget's disease
Perthe's disease
Physically handicapped (nes)
Pierre Robin syndrome
Schlatter's disease
Sever's disease
Stiff joints, joint pains, contraction of sinews, muscle wastage
Strained leg muscles, pain in thigh muscles
Systemic sclerosis, myotonia (nes)
Tenosynovitis
Torn muscle in leg, torn ligaments, tendonitis
Walk with limp as a result of polio, polio (nes), after affects of polio (nes)
Weak legs, leg trouble, pain in legs

Muscular dystrophy - code 08

37 Infectious and parasitic disease

AIDS, AIDS carrier, HIV positive (*previously code 03*)
Athlete's foot, fungal infection of nail
Brucellosis
Chicken Pox
Glandular fever
Malaria
Pulmonary tuberculosis (TB)
Ringworm
Schistosomiasis
Tetanus
Thrush, candida
Toxoplasmosis (nes)
Tuberculosis of abdomen
Typhoid fever
Venereal diseases
Viral hepatitis
Whooping cough

After effect of Poliomyelitis, meningitis, encephalitis - code to site/system
Ear/throat infections etc. - code to site

38 Disorders of blood and blood forming organs and immunity disorders

Anaemia, pernicious anaemia
Blood condition (nes), blood deficiency
Haemophilia
Idiopathic Thrombochopenic Purpura (ITP)
Immunodeficiences
Polycthaemia (blood thickening), blood to thick
Purpura (nes)
Removal of spleen
Sarcoidosis (*previously code 37*)
Sickle cell anaemia/disease
Thalassaemia
Thrombocythenia
Vonwillebrand disease

Leukaemia - code 01

39 Skin complaints

abscess in groin
acne
birth mark
burned arm (nes)
Bowen's disease
carbuncles, boils, warts, verruca
cellulitis (nes)
chilblains
corns, calluses
dermatitis
Eczema
epidermolysis, bulosa
impetigo
ingrown toenails
pilonidal sinusitis
Psoriasis, psoriasis arthritis (also code arthritis)
skin allergies, leaf rash, angio-oedema
skin rashes and irritations
skin ulcer, ulcer on limb (nes)

Rodent ulcer - code 01
Varicose ulcer, varicose eczema - code 20

40 Other complaints

adhesions
dumb, no speech
fainting
hair falling out, alopecia
insomnia
no sense of smell
nose bleeds
sleepwalking
travel sickness

Deaf and dumb - code 11 only

41 Unclassifiable (no other codable complaint)

after affects of meningitis (nes)
allergy (nes), allergic reaction to some drugs (nes)
electrical treatment on cheek (nes)
embarrassing itch (nes)
Forester's disease (nes)
general infirmity
generally run down (nes)
glass in head - too near temple to be removed (nes)
had meningitis - left me susceptible to other things (nes)
internal bleeding (nes)
ipinotaligia
old age/weak with old age
swollen glands (nes)
tiredness (nes)
war wound (nes), road accident injury (nes)
weight loss (nes)

42 Complaint no longer present

Only use this code if it is actually stated that the complaint no longer affects the informant.

Exclude if complaint kept under control by medication - code to site/system.

99 Not Answered/Refusal

NatCen
Social Research

National Diet and Nutrition Survey
(Year 8 – P8255)

National Centre for Social Research

Editor's Code Book – Nurse CAPI

September 2015

More information about the coding?

These instructions contain information about the coding task. However, if you need further information or clarification, please contact:

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01277 690093

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1. Introduction

This document details the editing to be applied to CAPI questionnaires on the National Diet and Nutrition Survey. Problems should be referred to the research team.

General Points:

1. A FACTSHEET is provided to aid editing of the CAPI questionnaires. It contains household information and information for each individual session. The majority of questions which need to be coded are printed on the FACTSHEET. Coding decisions should be recorded alongside the appropriate questions or at the end of the FACTSHEET, if the question has not been printed.

2. All soft checks that were triggered by the nurse and which have not been resolved will trigger again in the edit program. Where appropriate these should be investigated. If no editing action can be taken to resolve these checks, they should be cancelled by the editor.

3. "Other" answers in CAPI will be backcoded to the original question where possible. Other answers can be transferred electronically and so don't require listing.

Where problems arise that do not appear in these editing instructions, please contact the research team for advice.

2. Factsheet Definition for CAPI editing

The tables below show the variables that will appear on the factsheet for editing. Variables which are just a simple backcode into a previous variable are not shaded but the code frames are provided in these instructions. Variables for which there is more detail in these instructions about how to code, are shaded.

CAPI variable	Variable to back code to	Description of coding	Location of CAPI variable
MedBl	N/A	Drug coding	CAPI page 6
OthNLth	Back code to NoAttL	Reason for no infant length measurement	CAPI page 4
OthWH	Back code to WHPNABM	Other reasons for not attempting waist-hip measurements	CAPI page 23
OthNBP	Back code to NAttBPD	Other reason not obtained blood pressure	CAPI page 16
OthDifBP	Back code to DifBPC	Other reason difficulty obtaining BP	CAPI page 16
OthRefC	Back code to GPRefC	Other reasons refusing to allow BP measurements to be sent to GP	CAPI page 16
OthAttM	Back code to NotAttM	Other reason why no demi-span measured	CAPI page 20
OthRefBS	Back code to RefBSC	Other reasons for refusing blood sample	CAPI page 25
OthSam	Back code to SenSac	Other reasons for not wanting blood sample results sent to GP	CAPI page 28
VpOther	Back code to VpProb	Other abnormality noted after 5 minutes (blood sampling)	CAPI page 36
OthBDif	Back code to SamDifC	Other problems taking blood sample	CAPI page 38
OthNoBSM	Back code to NoBSM	Other reasons why blood sample not taken	CAPI page 38
ChAssNO	N/A	Other reasons why child assent not been given	CAPI page xx

3. Drug Coding

MEDBI

All drugs are to be coded to the six digit BNF using the Coding Prescribed Medicine booklet or the BNF (Number 61 March 2011). The nurse should have completed this during her visit, but some drugs may have been hard to find. In these cases the nurse will have coded 999999. Coders should attempt to solve these queries but if drug is not found, send the query to the Research team in London. If no decision can be made after querying with the researchers use code 999996.

Some drug sections that have only two section numbers in the BNF (eg 4.10 and 2.12) have been divided into two or three groups, to separate the types of drugs. Where this is the case, all of the drugs listed under the relevant sections in the BNF are listed in this booklet.

Lipid-lowering drugs, formerly coded as 02.12.00
Statins……..02.12.01
Other lipid-lowering drugs…….02.12.02

Some have been split into two or three constituent sections, using the BNF sub-section numbers (eg : 2.5.5.1, 2.5.5.2, 2.5.5.3). Where this is the case, all of the drugs listed under the relevant sections in the BNF are listed in this booklet.

Antihypertensives formerly coded as 02.05.05
Angiotensin-converting enzyme (ACE) inhibitors…….02.05.51
Angiotensin II receptor antagonists……02.05.52
Renin inhibitors……..02.05.53

Antidiabetic drugs formerly coded as 06.01.02
Sulphonylureas……06.01.21
Biguanides (e.g. Metformin)……..06.01.22
Others……06.01.23

Use the drug coding booklet for a list of codes.

Any drugs coded 14.**.** or 15.**.** by the nurse should fail the first edit for manual checking. The only possible codes under 14 are 14.04.00 and 14.05.00; these are uncommon. Check that they are correctly used. It is unlikely that anything is prescribed under 15 but just possible. Note that there are a number of fairly common drugs listed in this section which are also listed under other sections. They are almost certainly being used for the purposes for which they are listed in other sections and should be recoded unless the nurse has indicated as anaesthetic use. For example, Diazepam is prescribed as a sleeping drug (04.01.02) but it is also used as an anaesthetic. Unless the nurse has recorded this as being used as an anaesthetic, recode to 04.01.02. If in doubt, query with researchers.

Drugs which cannot be coded using the BNF need to be sent to the Research team in London

4. CAPI codeframes

OthNLth	Reason for no infant length measurement. To be back coded to **NoAttL**.

1	Child asleep
2	Child too frightened or upset
3	Child too shy
4	Child would not lie still

Checks for length in the edit program reject extremely unusual measurements as a safeguard against very unlikely results. Contact research staff if the length check is activated.

OthWH	Other reasons for not attempting waist-hip measurements. To be back coded to **WHPNABM**.

1	Respondent is chairbound
2	Respondent is confined to bed
3	Respondent is too stooped
4	Respondent did not understand the procedure

OthNBP	Other reason not obtained blood pressure. To be back coded to **NAttBPD2.**

0	Problems with PC
1	Respondent upset/anxious/nervous
2	'Error 844' reading
3	Too shy *(respondents aged 15 and under only)*
4	Child would not sit still long enough *(respondents aged 15 and under only)*
5	Other
6	Problems with Cuff fitting/painful
7	Problems with Omron readings (zeros, no readings)

OthDifBP	Other reason difficulty obtaining BP. To be back coded to **DifBPC.**

1	No problems taking blood pressure
2	Reading taken on left arm because right arm not suitable
3	Respondent was upset/anxious/nervous
4	Other
5	Problems with cuff fitting/painful
6	Problems with Omron readings (zeros, no readings)

OthRefC	Other reasons refusing to allow BP measurements to be sent to GP. To be back coded to **GPRefC.**

1	Hardly/Never sees GP
2	GP knows respondent's BP level
3	Does not want to bother GP

OthAttM	Other reason why no demi-span measured. To be back coded to **NotAttM.**

1	Cannot straighten arms
2	Respondent confined to bed
3	Respondent too stooped
4	Respondent did not understand the procedure

OthRefBS	Other reasons for refusing blood sample. To be back coded to **RefBSC.**

1	Previous difficulties with venepuncture
2	Dislike/fear of needles
3	Respondent recently had blood test/health check
4	Refused because of current illness
5	Worried about HIV or AIDS
6	No paediatric phlebotomist available
7	Parent doesn't agree with it/thinks child too young
8	Too busy
9	Time constraints (i.e. appointment timings not convenient)

OthSam	Other reasons for not wanting blood sample results sent to GP. To be back coded to **SenSac.**

1	Hardly/never sees GP
2	GP recently took blood sample
3	Does not want to bother GP

VpOther	Other abnormalities noted after 5 minutes (blood sampling). To be back coded to **VpProb.**

1	Sensory deficit
2	Haematoma
3	Swelling

OthBDif	Other problems taking blood sample. To be back coded to **SamDifC.**

1	No problem
2	Incomplete sample
3	Collapsing/poor veins
4	Second attempt necessary
5	Some blood obtained, but respondent felt faint/fainted
6	Unable to use tourniquet

OthNoBSM	Other reasons why blood sample not taken. To be back coded to **NoBSC.**

1	No suitable or no palpable vein/collapsed veins
2	Respondent was too anxious/nervous
3	Respondent felt faint/fainted

ChAssNO	Other reasons why child assent not been given.

1	Seen as unnecessary by parent/legal guardian
2	Child did not understand process
3	Child not interested in process

National Diet and Nutrition Survey

Rolling Programme 2008 – 2016

Food Coding & Editing Instructions

V6.0 17/02/2016

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2.Introduction

2.1 NDNS Diet coding

Interviewers for the National Diet and Nutrition Survey (NDNS) provide all respondents with a food diary. In this diary they are asked to record all food and drink items they consume for four days. During these four days the interviewer visits the respondent to ensure a good level of detail is provided in the diary. In many cases the interviewer will probe for further details on foods/portion sizes and write further information in the diary using a green pen. The diaries are then sent to the diet coders at HNR.

Diet coding is the process of entering this information into the database known as DINO (Diets In Nutrients Out). Each food recorded is assigned two codes, a food number and a portion size. These codes are linked to the NDNS nutrient composition database that contains the nutritional information for over 6000 foods (in 2008).

In some cases queries are created when coding, as there is not enough information in the diary to select a code. This could be due to a lack of detail or ambiguous information. There are a number of standardised procedures used to solve queries, a process known as editing. Once diaries are coded, edited and fully complete the food and nutrient intakes can be calculated and the data analysed in a number of different ways.

2.2 Food Diaries

Three types of diary are used in the study:

- Adults (16yrs+) – available in A5 and A4 versions
- Child (4-15yrs)
- Toddler (1.5-3yrs)

Each of these diaries has been designed to take into account factors specific to the age of the respondent filling in the diary.

2.3 Extra documents attached to diary

You should **always** receive;

- NDNS Diary evaluation form (*green*)

Diary evaluation forms do not always arrive at HNR at the same time the corresponding diaries. They should be matched to the diaries once both have arrived, but if you are coding a diary that does not have an evaluation form, the form may be found in the box, which holds items sent separately to the diaries. If a batch of diaries has most of its evaluation forms missing, the interviewer can be reminded to fill them in when they receive feedback – please let the NDNS Research Assistant know when you send feedback.

You **may** also receive;

1. Plastic zip bag for packaging
2. Carer forms (*blue*)
3. Extra diary pages
4. School menus

2.4 Batches and filing

When diaries arrive in the office, they should be batched by point number (so that diaries belonging to the same interviewer are together). There are approximately 5 diaries per batch and batches should then be filed chronologically, that is by month and, within each month, by interviewer point. Once they are coded, diaries can be filed numerically (by subject ID).

3.Getting started

3.1 HELP function

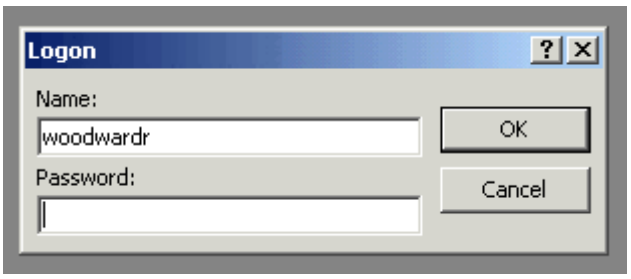
The NDNS help file has information on how to use DINO, some of which is in this user guide. Another way to access this file is to press **F1** at any time in DINO. It is useful to familiarise yourself familiar with this information so spend some time looking through it.

3.2 Accessing DINO

To open DINO click the ***Open NDNS.mdb*** shortcut as shown below. This can be found on your desktop.

3.3 Coding database

Click on ***NDNS Coding database*** and enter your DINO username and password.



You will come to the main switchboard screen. You will be using two options on this screen:

1. Dietary coding
2. Subjects/Diary assessment

3.4 Subject/Diary assessment - Subjects

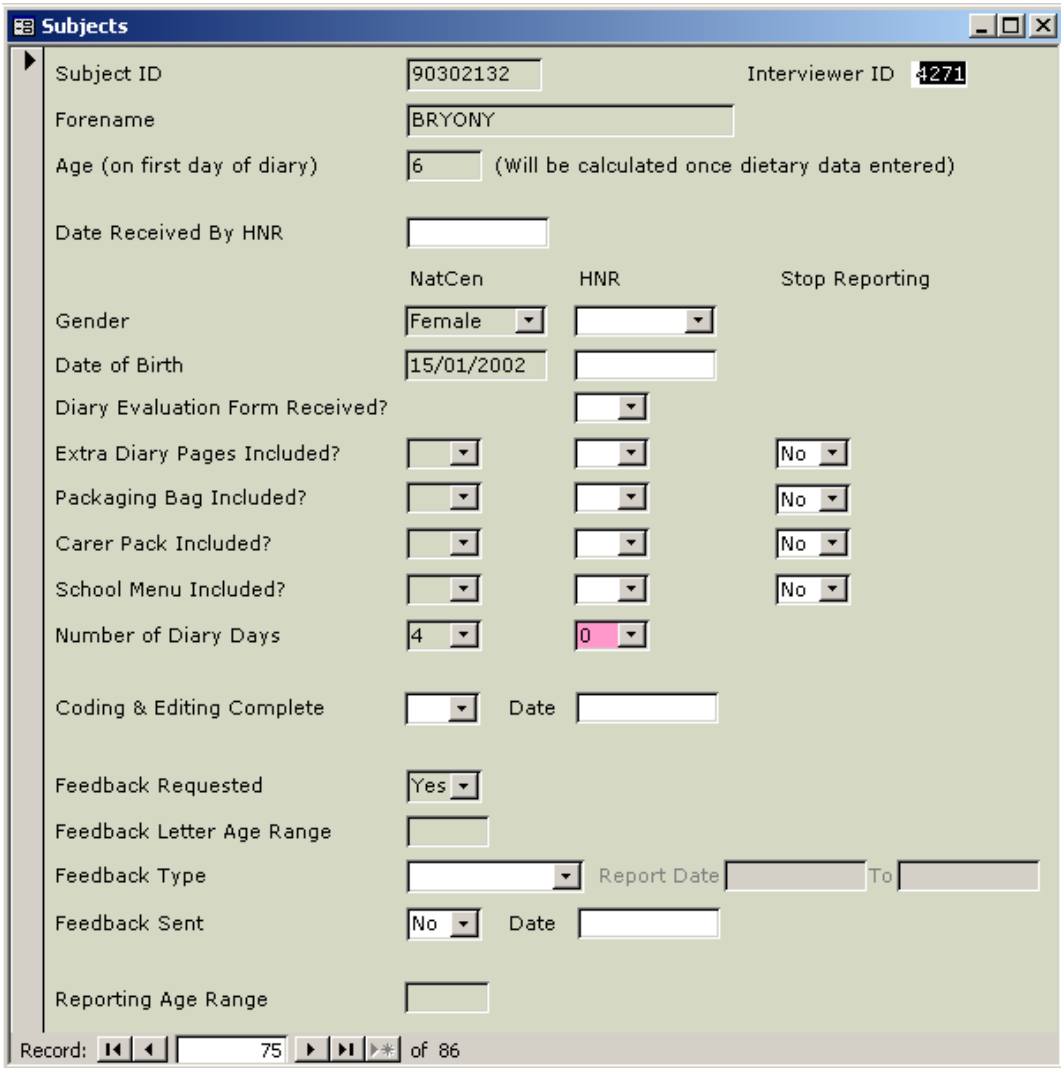
All diaries need to be logged into DINO when they arrive at HNR. We also need to record when we code, edit and complete diaries. Use the ***subjects*** form to do this.

3.4.1 Logging incoming diaries

If the NDNS Research Scientist or Research Assistant asks you to log diaries you will need to read this section (3.4.1). To log the diaries when they come into HNR select ***Subject/Diary Assessment*** then ***subjects***. Place the cursor in the ***Subject Id*** box and click the binoculars tab at the top of the page ( ). Type the 8-digit subject ID into the ***Find what*** field and click ***Find next***. The following details for the corresponding respondent should appear:

- Forename
- Gender
- Date of birth

- *Some of the feedback questions will also be populated*



Check this information matches the details on the diary then complete the form by entering:

- Date received at HNR
- Gender
- Date of birth
- Diary evaluation form received (green coloured form)
- Extra diary pages included (open the diary to check if they are stapled into the diary)
- Packaging included
- Carer pack included (only applicable for respondents aged 12 years and under)
- School menu included (only applicable for respondents aged 16 and under)

You will notice the gender and date of birth are already populated in the form, and you have to enter them again. This checks the details are correct and that you are logging the diary on the appropriate form in DINO. On some occasions there may be a discrepancy between the subject ID, gender or date of birth recorded on the diary and in DINO. The interviewer may have made a mistake when writing the respondents date of birth on the diary, or you may be logging the diary on the wrong subject ID in DINO. Use your judgement to work out why the discrepancy has occurred. If you think it is a mistake by the interviewer, and there is only a small difference between the date of birth on the diary and that in DINO, default to the date of birth in DINO and record this on the diary. If there is a large discrepancy between the date of birth on the diary and that in DINO, record the date of birth as it appears on the diary and this will be investigated further. The box in the form will appear in pink to highlight the conflicting information.

For other fields (items received in addition to the diary) code whether an item is received or not, even if it conflicts with the NatCen field. Items may arrive separately (the field can be updated) or may not be received.

If an evaluation form or packaging bag is received before the diary, it can be marked as received for the subject by selecting yes for the appropriate item (do not enter the date received – this relates only to the diary). It should then be placed in the box holding items sent separately to the diary. When the diary arrives, this prompts you to get the form/bag from the box and store it with the diary.

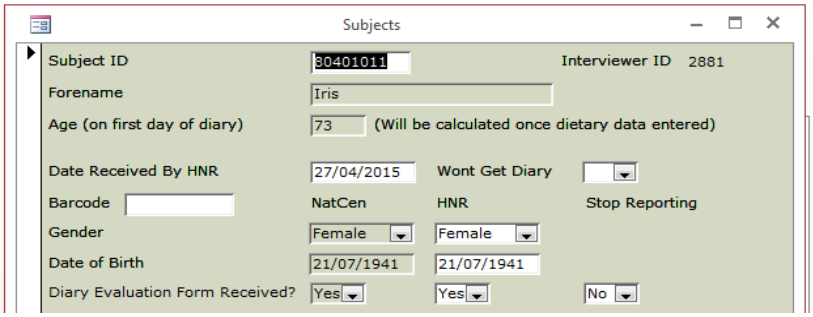
If there are two respondents in a household who have provided a diary and they both have 'Yes' marked for packaging bag on the CAPI input, but only one bag has been sent, check whether the packaging bag is shared for the respondents. Sometimes it is marked on the bag '1&2'; otherwise you can check if the foods for which labels were provided are present in both diaries. If the bag is shared, both 'Yes' should be selected for both respondents.

When logging, the number of days coded does not need to be completed. However if the "number of diary days" field says 1 or 2, please look through the diary to see if this is correct. If the respondent has completed less than three days, the "not received at HNR" field (next to the "date received by HNR") should be changed to 'Yes'. Some of the fields on the Subjects page will become populated. These diaries should not be coded and should be given to the NDNS Research Scientist/Assistant to send them back to Brentwood.

Diaries can then be batched (as described in section 2.4).

3.4.2 Bar coding incoming diaries

- There is barcode number box in the subjects form.



- For year 8 the barcode numbers consist of a batch of 1500 numbers running from 3701 to 5200.
- If any extra barcode number are required contact either Joanna Staines or Sarah Casey so that more can be ordered from ScanView.
- Keep note of any damaged or unused barcodes and let the research assistant know which they are.
- When logging the diaries a bar code number needs to be placed onto the diary and this barcode number needs to be entered into the barcode box on DINO, shown above, for the corresponding subject number.
- Each diary is to have two matching barcodes placed in it.
- Ensuring the plastic cover is not in the way place one bar code on the front cover in the middle of the box marked "National Diet and Nutrition Survey – Food and Drink Diary". The box may be coloured orange, blue or white.
- A matching barcode should be placed inside the diary. Where it is placed depends on the diary.

- For diaries that have a page saying "Day 1" before any handwritten diary entries the barcode should be placed at the top right hand side of this page.
- For diaries that do not have a page saying "Day 1" before the handwritten diary entries, place the second bar code a whole page before the first diary recording page to make sure that no writing has the possibility of being covered by the barcode.
- The diaries are then filed away as normal.

3.4.4 Taking diaries for coding

Diaries should be taken in their batches. Around five diaries will be batched together and taking a whole batch will ensure that you code both diaries in a household, if there was more than one respondent.

When you first go into the respondent details, the number of diary days will already been in the system. This number is based on the interviewer's assessment of the number of days. To be included in the final analysis, a respondent needs to have completed 3 or more diary days. If the number of days in the system is **2 or less**, the diary should not have got through to the coding stage, but check that this is the case and if so, select the matching number of diary days from the drop down menu and then write on the front of the diary UNPRODUCTIVE. You do not have to code this diary, give it to the NDNS Research Scientist/Assistant to send them back to Brentwood.

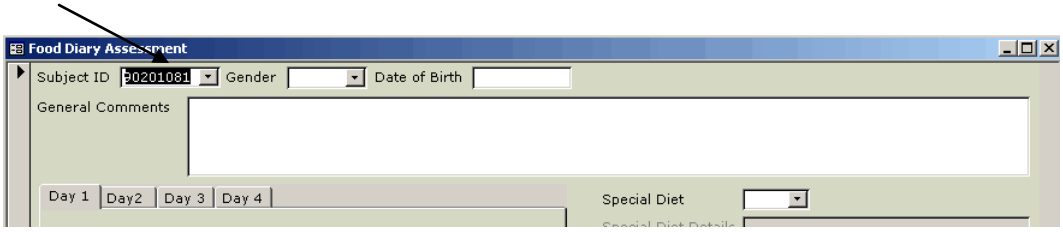
If the number of days in the system is **3 or 4**, then this diary should be coded. Once a diary has been coded, go back to the ***subjects*** form and select the number of diary days coded from the drop down menu and enter the date you completed coding on the ***subjects*** form. In some cases, we may decide that we cannot use a diary day because, for example, there is too much missing information. Therefore, the number of days coded may not match the number of days in the system.

3.4.5 Logging completed diaries

When all queries are resolved and editing is fully complete, go back to the ***subjects*** form, go to Coding and Editing Complete and select yes from the drop down box and enter the date.

3.5 Diary questions

When a batch of diaries has been logged and is ready to be coded open the ***diary questions*** form. Create a new record (), then select the respondent ID number from the drop down list found under Subject ID.



Enter the gender and date of birth then complete the form using the diary questions at the end of each day and the diary evaluation form.

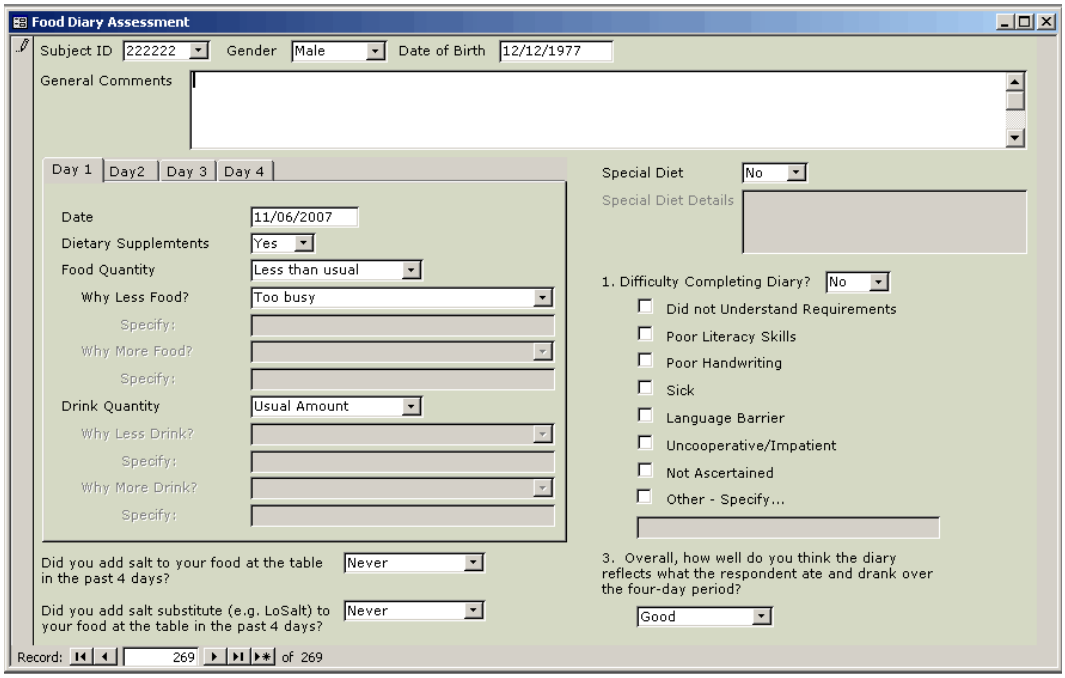
Day 1 enter:

- The date of the first diary day
- Whether the respondent had any dietary supplements
- Whether the respondent ate more or less than usual and the reason
- Whether the respondent drank more than usual, less than usual and the reason why
- Salt use (found at the back of the food diary)
- Whether the respondent is on a special diet or not and any corresponding details (found at the back of the food diary)
- Interviewer feedback (from the peach coloured NDNS diary evaluation form – see section 3.6)

Day 2 to Day 4 (change days using the tabs under the General Comments box):

- The date of each diary day
- Whether the respondent had any dietary supplements
- Whether the respondent ate and drank, more or less than usual

It is easiest to enter the diary questions from all the diaries in a batch in one go.



3.6 General comments

In the ***general comments*** box enter the interviewers comments from the NDNS Diary evaluation form. This box can also be used to enter your own comments should you have any. You may want to comment on the overall quality of the diary or if you notice anything especially unusual. State either interviewer or coder in brackets after each comment e.g. "the respondent drank 6 pints of milkshake each day" (interviewer).

General comments about the quality of the batch of diaries should be added to the DAA feedback spreadsheet (\\Elsie\ndns_data\NDNS20XX\NDNS Dietary Data\Briefings and Interviewer info\Pre-point feedback\DAA Interviewer Feedback). They will feed comments back to the interviewers, which should lead to continual improvements in dietary data received. You will be sent a template detailing the information needed.

NB: Please do no record names on the ***Diary Questions*** form. If a name has been mentioned, change it to 'the participant'

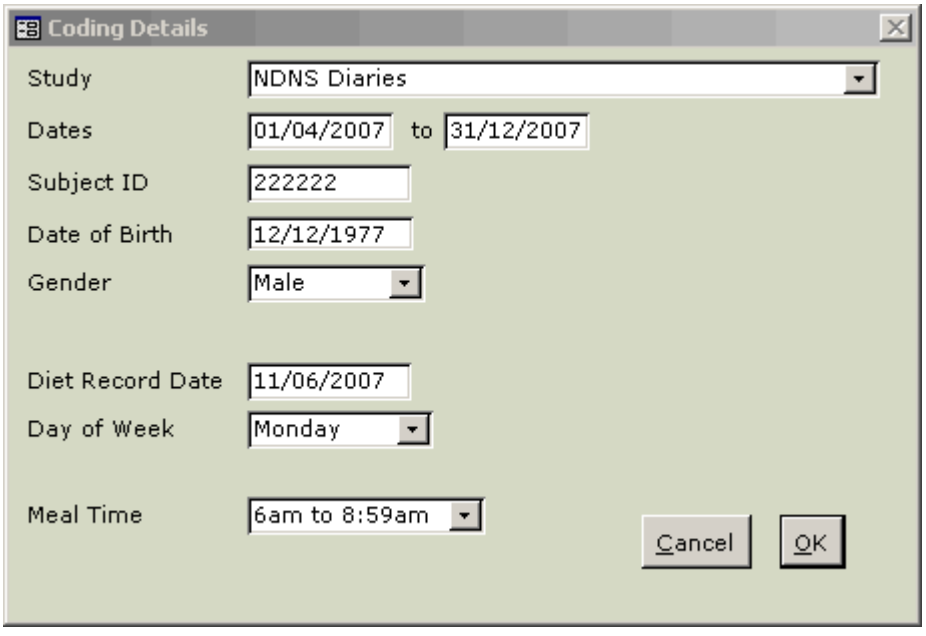
4.Using DINO to code a food diary

General instructions on how to use DINO to code diet records can be found in the HELP function as described on page 9. Below are additional, specific instructions for NDNS.

On the main menu select **Dietary coding**, **Code Diet Record** then **NDNS Diaries** from the drop down menu. Using the drop down list in the Study Title box, select **NDNS Diaries** then **Open Coding Form**.

4.1 Coding Details

Enter the subject ID, date of birth and gender as before. Then from the first day of the diary enter the default details i.e. date, day of the week and the time slot of the first recorded meal.



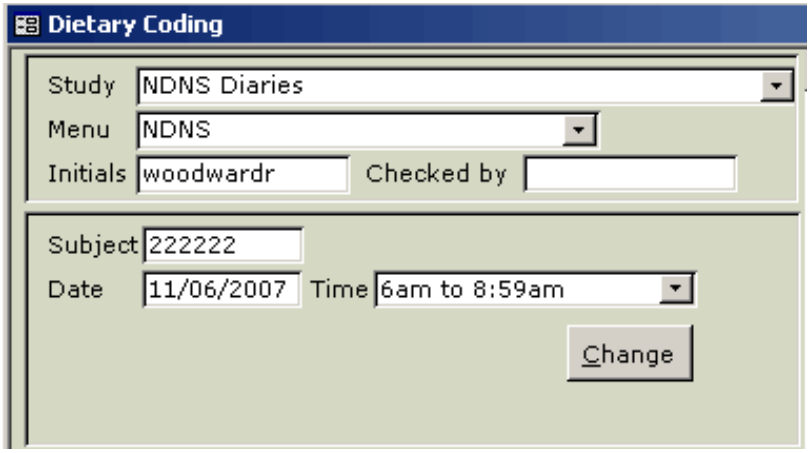
All fields on this form are mandatory. Once the form has been completed click OK. The form will then 'look' at the appropriate subject to ensure that the subject ID is valid by checking the corresponding Gender and Date of Birth. If either of these fields do not match a message is

displayed. The form will also check that the Diet Record Date matches the Day of Week. Again a message will be displayed if they do not agree. These tests have been devised to help prevent accidental typing errors.

4.2 Dietary Coding screen

4.2.1 Default data

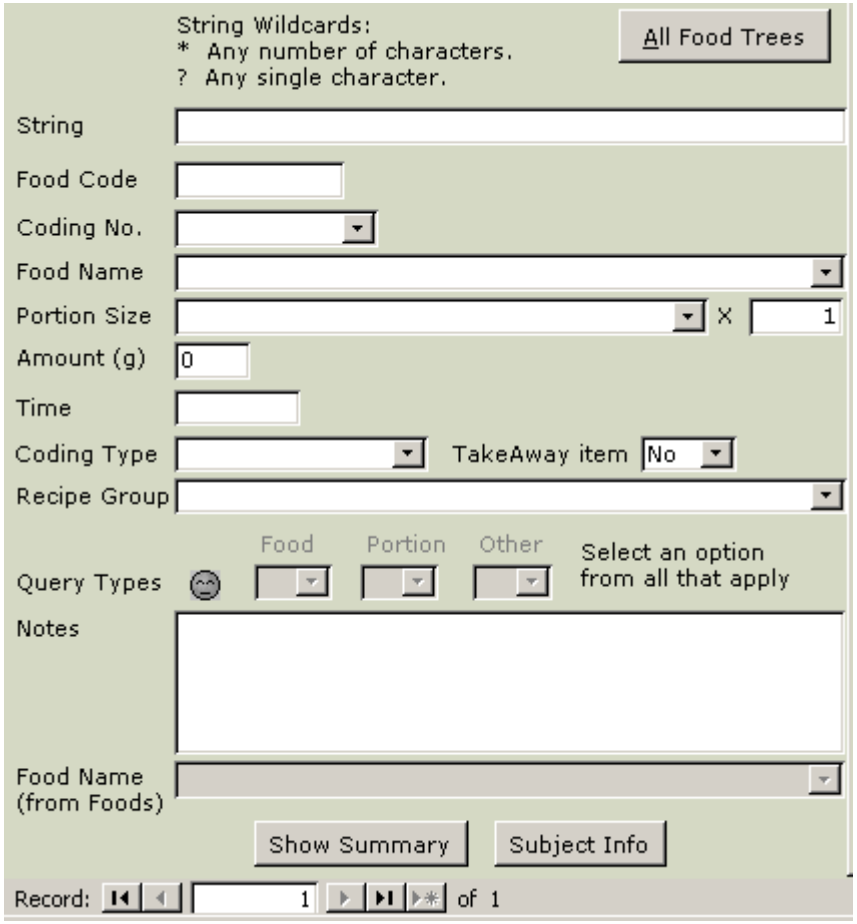
The top left hand side of the screen displays the default data for the subject. This is the information entered on the previous two forms.



4.2.2 Additional data

The bottom left hand frame contains fields for;

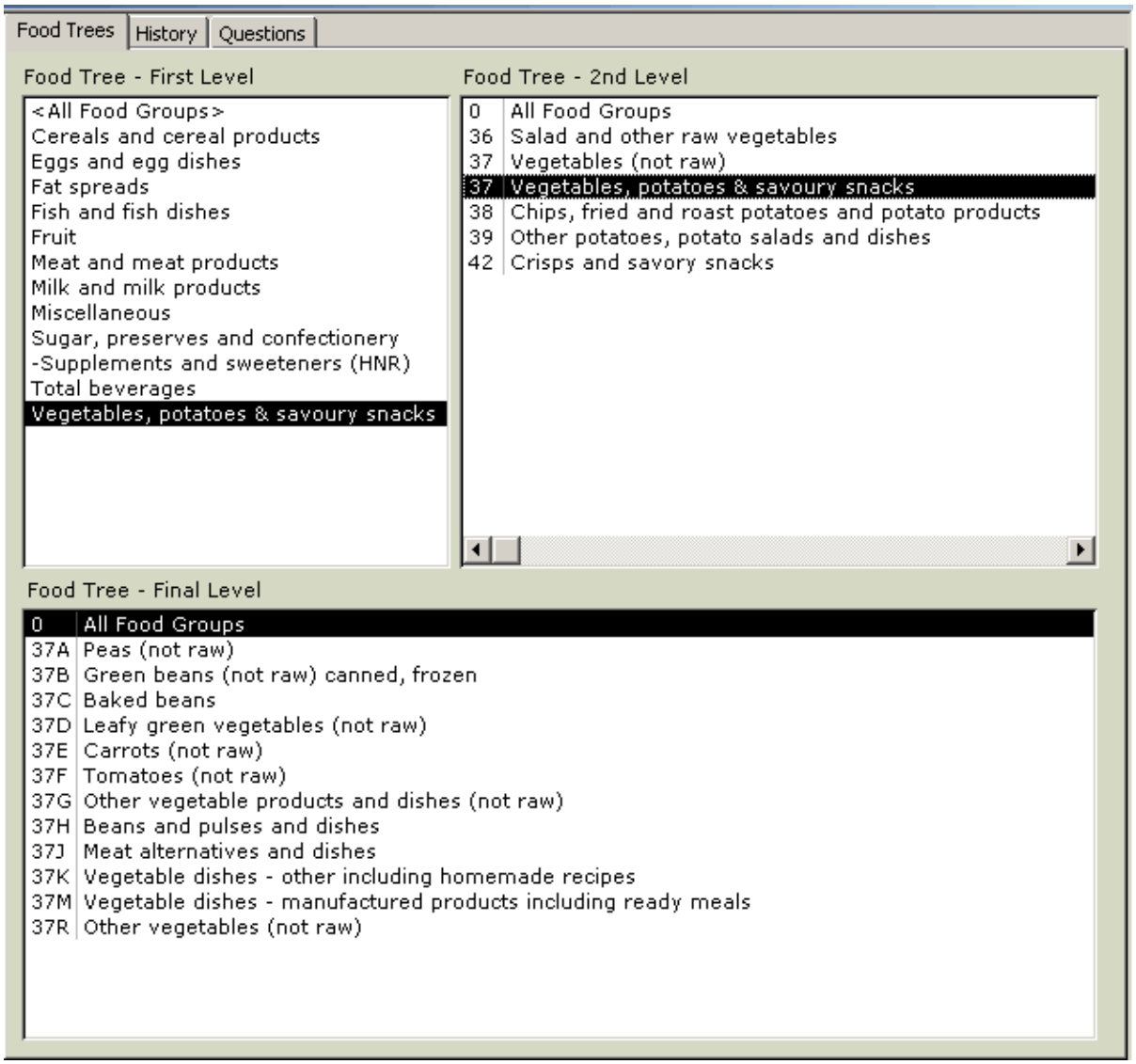
- Food codes and portion sizes
- Consumption time
- Coding type – To save frequently consumed items
- Takeaway item? – To flag food if eaten as part of a takeaway
- Recipe group – For manually entered recipes
- Query type – For classifying queries by type
- Notes – For information on queries
- Flagging icon – Use this to highlight queries
- Food name – This is the name linked to the coding number



On the right hand side of the screen you will see tabs for **Food trees**, **History**, and **Questions**.

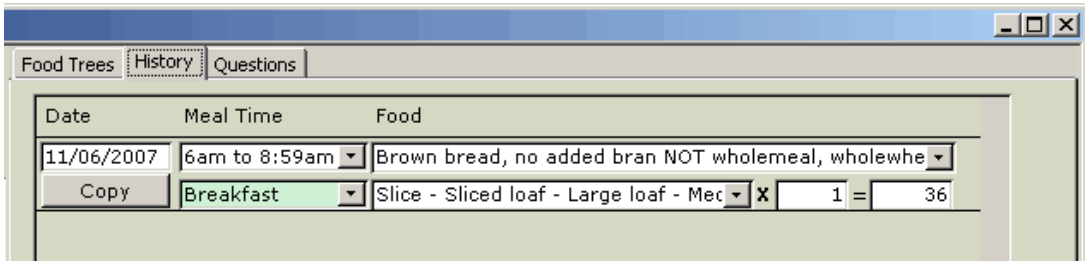
4.2.3 Food trees

Food trees can be used to help find the appropriate food name. When a branch is selected, only foods in that group will appear in the food name list. This function has advantages over using the string when you are not sure which way round words will need to be in the string to find the food you are looking for



4.2.4 History

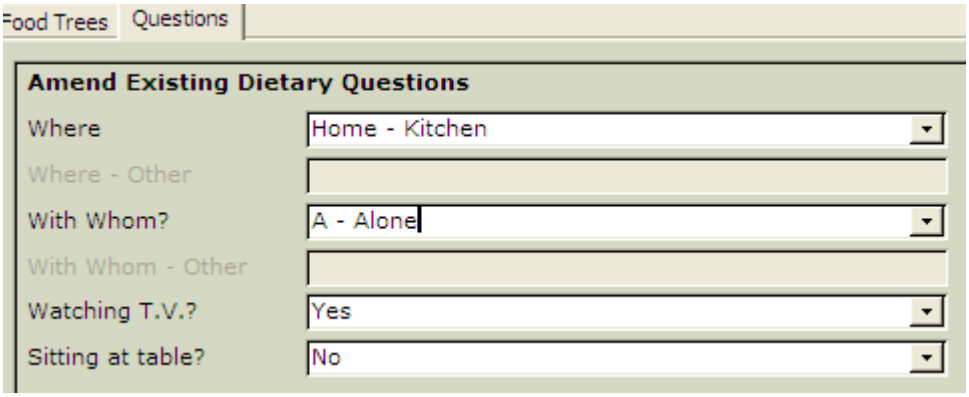
Frequently consumed foods such as tea, coffee or breakfast items can be saved and copied into new food records. To save a food allocate a group from the coding type list e.g. tea/coffee, it will then appear in the history list. Click on 'copy' to copy this information into the new food record.



As you would do if you were entering foods by string, you will need to open a new record before pressing copy. The same food code and portion code will be entered.

4.2.5 Questions

For each food a code needs to be allocated describing **where** the food was consumed, **with whom**, if the respondent was **watching TV** and whether they were **sitting at a table**.



The table opposite shows the categories for coding where and with whom.

WHERE	WITH WHOM
Home - kitchen	A - Alone
Home - living room	B- Partner
Home - dining room	C- Partner&children
Home - bedroom	D - Child/Children
Home - garden	E- Family (incl relatives)
Home - other	F - Friends
Home - unspecified	
Friend's or Relative's house	G - Family & Friends
Restaurant, pub, night club	H- Parent(s)/Carer
Coffee shop, shop, deli, sandwich bar	I - Siblings
Fast food outlet	J - Parent(s)/Carer&Siblings
School canteen - Food from home	K - Carer & other children
School canteen - Bought food	L - Work colleagues
School canteen - other	M - Flatmate
School playground	N - Other
School classroom	O - Not specified
School other	P - Others - General Public
Work canteen - Food from home	Q - Others - Known to Respondent
Work canteen - Bought food	
Work canteen - other	
Work desk	
Work other	
Nursery/Kindergarten	
Carer's home	
Sports club, Sports leisure venue	
Street	
Bus, car, train	
Other place	
Outside other	
Not at home - unspecified	
Unspecified	
Place of worship	
Holiday accommodation	
Leisure activities, shopping, tourist attractions, cinema, places of interest	
Public Hall/Function Room	
Community Centre/Day Centre/Drop in	

As the same where and with whom options are given for all studies in PNR, consistency in selecting options is important. Here are a few examples/clarifications:

Where

- You will notice that the **where** code options for school canteen and work canteen distinguish between **food from home** and **bought food**. **Bought food** refers to food purchased at school/work or an alternative venue e.g. the local sandwich shop. **Food from home** refers to homemade foods e.g. homemade salad.
- **Fast food outlets** are distinguished from restaurants by the use of cutlery e.g. Pizza Hut is a restaurant as they provide cutlery whereas KFC is a fast food outlet as they don't.
- The distinction between the **Restaurant, pub, nightclub** option and the **Coffee shop, shop, deli, sandwich bar** option is that in the former alcohol would be available.
- **Leisure activities, shopping, tourist attractions, cinema, places of interest** this would also include Hairdressers, hobbies, car dealers etc. Sports activities should be coded under **Sports club, sports leisure venue**.
- **Other Place** should be used for Hospital, Nursing home, Garage/service station & Parties where the party place is unspecified.
- **Community Centre/Day Centre/Drop in** should be used to capture community meals (more common in older respondents).
- After school club should be coded as **School- Other**
- **Bus, car, train** should only be coded when being used as a mode of transport. If the respondent works as a taxi driver or a trucker, **Work other** should be used.
- **Sports club, sports leisure venue** should only be used if the respondent is participating in a sport/activity – **Outside other** or **Other place** can be used if they are a spectator; **Restaurant...** or **Coffee shop...** can be used if they are eating a meal at, for example, a gym or sports centre.
- If a respondents states that they were sitting at the table at home with their family, but they do not specify which room they were in check the other days to see if the room has been recorded elsewhere.
- If a child respondent's parents live apart, eating in the sampled household only should be coded as **Home**. Eating at the other parent's house should be coded as **Friend's or Relative's house**. The

information in the Subject's tab on the coding page may give an indication of whether they live with their mother or father.

- Sitting room should be coded as **Home – Living room**.
- If a respondent states 'front room' or 'back room' you can make a judgement on whether it is their **Living room** or **Dining room** based on whether they have a TV or a table in that room. If no information is given or it is unclear, code as **Home - other**
- If the respondent has not stated where they are but you are confident that they were at home then code as **Home – unspecified.** For example, a toddler having a cup of milk at 8pm and their dinner earlier had been at home. Likewise, if the place has not been stated but you think they were NOT at home then code as **Not at home – unspecified**. For example, an adult is drinking pub measures and says that they drank more because they were 'on a girls' night out', then you can assume that they were not at home even if you are unable to say exactly where they were. If it is unclear either way, code as **Unspecified**.

With whom

- For **with whom**, **E – Family (incl relatives)** refers to unspecified family or wider family e.g. grandparents, aunts.
- For adult respondents who eat with their parents or siblings, with whom should be coded as **E – Family**, rather than H or I; this would be the same for respondents who eat with their grown-up children.
- A 'carer' is defined as an adult who is taking charge of a child (or other adult). 'Carer' would be used for a childminder/babysitter, but not for a teacher or a nursery nurse – for young children at nursery, the place option selected would capture that the child would not be eating unsupervised.
- The code **H – Parent(s)/Carer** or **K – Carer & other children**, however, should not be used if a relative e.g. grandmother or older sibling is taking care of the child – this should be coded as **E – Family** or **I – Sibling**.

- If the respondent is at work, go by their definition of who they eat with (**Friend** or **Colleague**) for deciding what to code for with whom. Clients should be coded under **Colleague**.
- If a respondent under the age of 18 years states they ate with their girlfriend or boyfriend, this should be coded as **Friend**. For a respondent aged 18 years or over, **Partner** should be coded.

Table/TV

- Respondents should only record information about watching TV/sitting at the table not any other activities like listening to the radio/sitting on the sofa/playing on the computer. If they provide this details, but do not say about TV/table tell the Research Assistant in the interviewer feedback you send.
- Do not assume from other details you give that the respondent is or is not watching TV/sitting at the table e.g. just because they are on the sofa does not mean they are not eating with a table pulled up in front of them. If unsure, code as **unspecified**.
- Any table with a primary function for consuming food at (e.g. kitchen table/dining table/restaurant table) should be coded as **Yes** for at table.
- Any table with a primary use other than consuming food at (e.g. desk/ coffee table) should **not** be coded as at the table.
- If a respondent states they ate at their **Work desk** the option for table should be coded as **No** – the place option selected will capture that they were eating at their desk.

If any of this information is not recorded in the diary please select the relevant **not specified** code. If in doubt ask the Research Assistant or Dietary Assessment coordinator or code as **not specified**. However, people often record less detail towards the end of the diary – you may be able to work out some of the missing information from the first days.

Get into the practice of filling in these questions before searching for a new food name. The last codes selected will remain populated until manually changed or until the **Change** button is clicked.

4.2.6 Navigating through records

To move into a new food record use the arrow buttons on the bottom left hand side. These buttons can be used to navigate through the food records entered in that one session. If you have made a mistake (e.g. forgotten to change the television code) or wish to delete a record, you can go back to change the records you have entered using the arrow buttons.

First record

Previous record

Next record

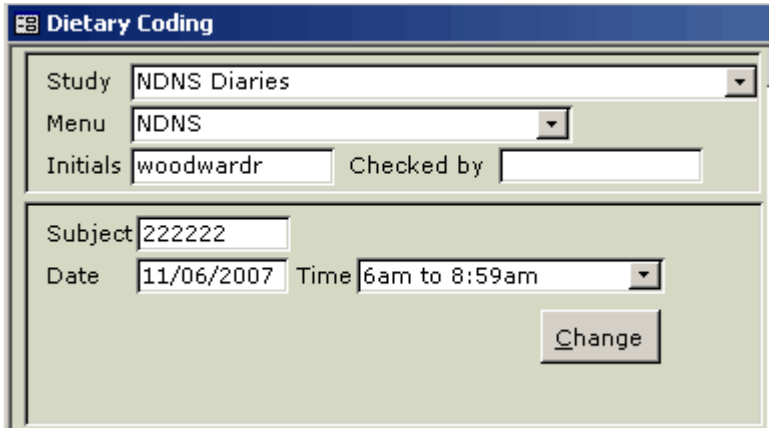
Last record

New record

However, you can only navigate between the records entered in that one session. Exit out of the **Dietary Coding** screen and open it again and you are given a blank sheet. To amend or delete previously coded data, use **review coding**.

4.3 Changing default details

Use the **Change** button to move onto a new time slot, day or subject ID. Don't try and change the details within the coding form itself e.g. to select a new meal time always click the ***Change*** button and amend details in the form the appears, do not select from the drop down list.



5.Coding foods

5.1 Food name

If you are familiar with a food name you can enter the text directly into the **food name** field. If you are unsure of a food name use the **string** field and **food trees** to limit the number of foods in the list.

5.2 String

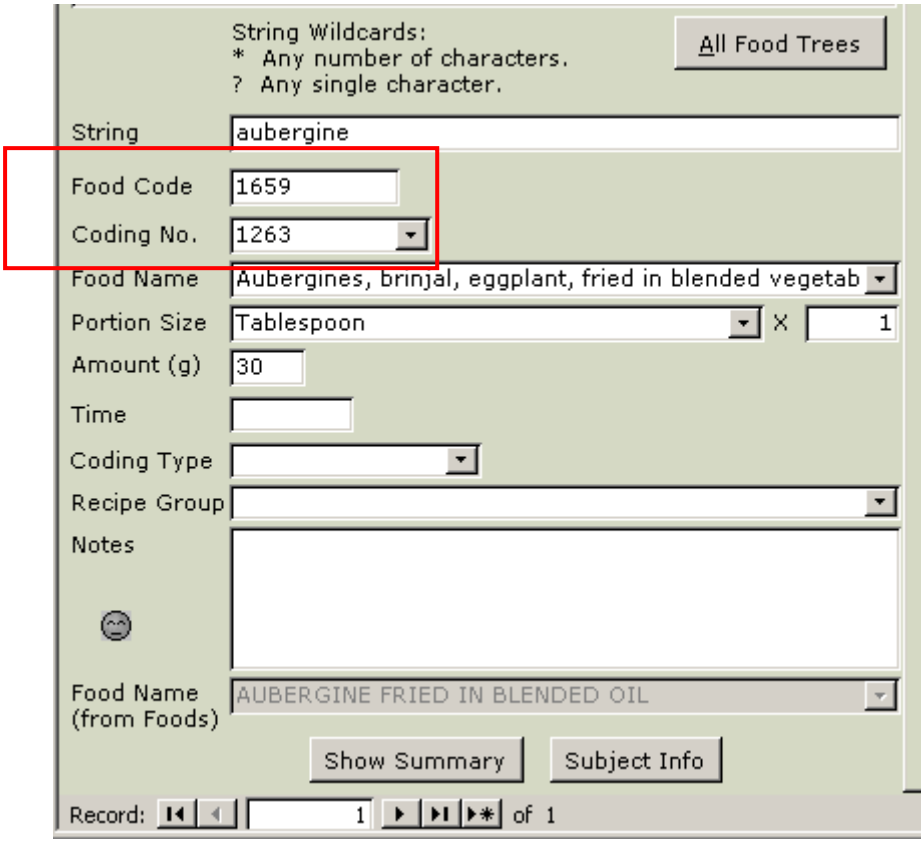
This field is used to limit the foods in the food name field. Type text into this box and only food names containing that text will appear in the food name box e.g. type *bread* and only foods with bread in the name with appear in the food name field.

The text you enter may contain 'wildcards'. Wildcards are used to substitute for unknown characters. '?' will ignore one character e.g. 'coca?cola' will find 'coca cola' and coca-cola'. '*' will ignore any characters e.g. 'corn*flakes' would find 'Cornflakes' and 'Corn Flakes', 'bacon*boiled' would find 'Bacon Collar, Lean only, boiled' and 'Bacon, collar joint, lean and fat, boiled'.

5.3 Coding number and food codes

Each food held within DINO is assigned to a food code and also a coding number, which are different (see the red box below). For example, aubergine fried in blended vegetable oil has a food code of 1659, but the coding number is 1263.

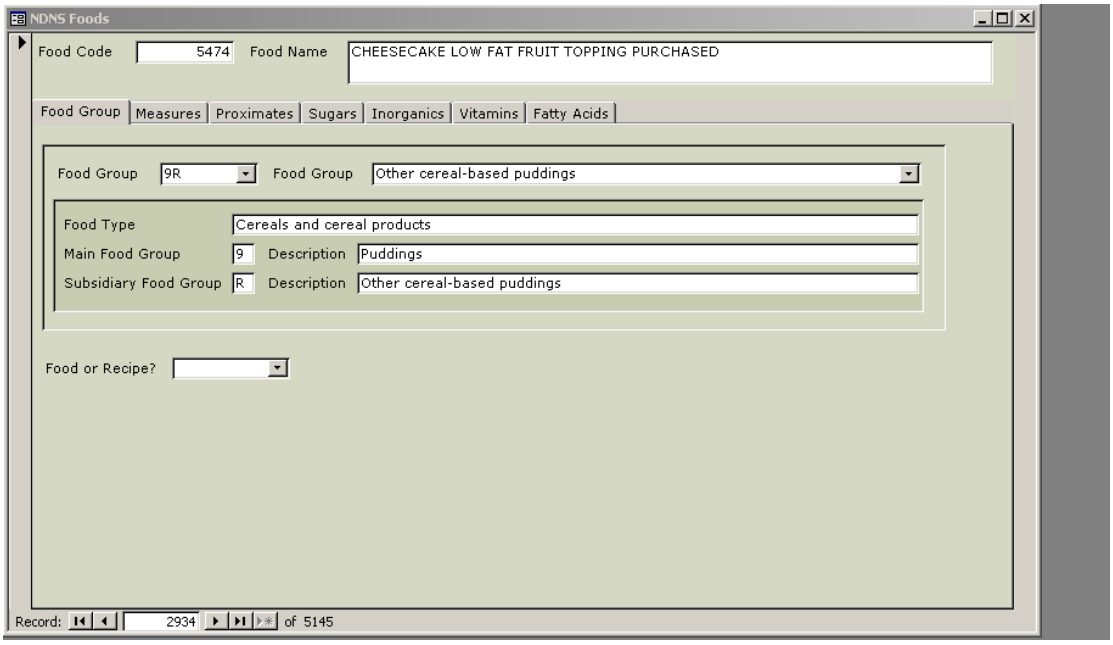
Once you are familiar with some of the more common foods on DINO and know their respective food code you may wish to enter this number directly, which will save you needing to search using the string field or food trees. *NB Foods should not be coded directly using the coding number.*



5.4 Food trees

See section 4.2.3.

If you are unsure which group a food is under then make sure you are searching under the first level in the food tree. Otherwise you can look up the food by going to the main menu and selecting **Food Tables, Foods**.



Place the cursor in the Food Name box and click on ( )**.** Make sure you select "Any part of field" under Match.

5.5 Portion sizes

The portion sizes shown will only be those applicable to the food selected in Food Name. If you have a weight in grams or volume in mililitres, select 'grams' or 'mls' from the drop down list. Then use the 'X' field to enter the number of grams or millilitres (if millilitres is not an option and you are coding a liquid, select 1g and flag this entry). Portion sizes can also be described using the pictures in the adult diary. These will be recorded as 1-10 with A, B or C. 1-10 being the different picture numbers; A, B and C small, medium and large respectively.

5.6 Children's and Toddler's portion sizes

You will notice that not many foods in the database have a corresponding child or toddler portion size. This is because we encourage respondents to record foods in household measures e.g. 2 tbsp of mashed potato or 1 tsp of ice cream. However in some cases the respondent will not record a portion size, or may record "small, medium or large". A spreadsheet is available to help you code these called "NDNS_Kids_portionsizes (v4)" and is found in the Coding folder (\\Elsie\ndns_data\NDNS20XX\NDNS Dietary Data\Coding\Coding documents\Portion sizes).

The worksheets in this spreadsheet are categorised into age groups 1-3, 4-6, 7-10, 11-14 and 15-18. These sheets provide average portion sizes for a range of commonly consumed foods e.g. an eight yr portion of chicken curry is 148g. If small or large portion sizes are recorded DO NOT multiply the kids average portion by 0.75 or 1.5.

If a parent has recorded "small/large plate/bowl/cup" please code the KPS (do not adjust using 0.75 or 1.5).

If the adult food photographs have been used correctly in a children's diary (e.g. 4A recorded for a chip portion), please select the

corresponding portion from DINO. If the adult photographs have been used incorrectly (e.g. 5B for peas), please use the KPS.

See sections 7.2 and 7.4 for information on how to deal with a portion size query.

5.7 Time

Enter the time of each eating occasion in 24hr or 12hr format e.g. 18.00 or 6pm. The recording period for a diary day is from 6am to 5.59am the next day. Therefore if a food is recorded at 3am on day one you would not code this food, however if food was recorded at 3am on day 5 (the night of day 4) you would code this food.

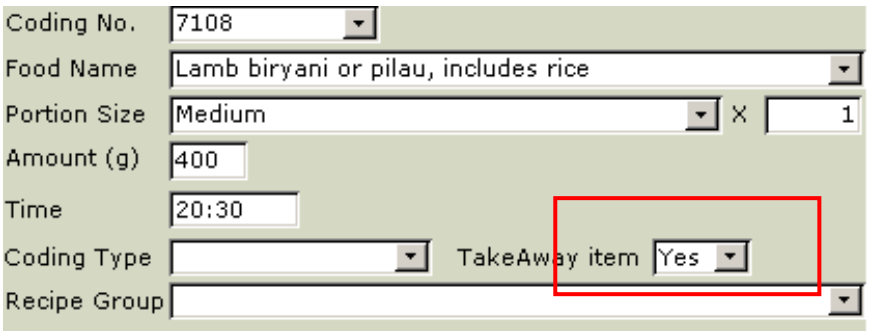
Each food diary should cover four 24-hour periods.

5.8 Coding Type

To save time searching for foods you can save frequently consumed food and portion size codes by allocating them to a coding type e.g. if a respondents drinks tea throughout the day assign each component i.e. tea, milk and sugar to the tea/coffee coding group and it will appear in the history list. You can then copy each of these items into the food record each time you code the tea saving time searching for the separate ingredients again.

5.9 Takeaways

If a food is eaten as part of a takeaway, you should select 'Yes' for Takeaway Item.



Food eaten in a fast food joint (anywhere you don't get crockery or cutlery!!) is still classed as a takeaway even if it is eaten in the establishment e.g. McDonalds, KFC, Burger King. If in doubt, flag & query.

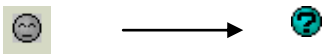
5.10 Recipe group

Recipe groups are allocated to homemade dishes, toddler foods and manufactured items. These groups link together the component ingredients of mixed dishes and classify them as a single item. Each ingredient in a homemade recipe should be allocated a homemade recipe group (see section 6.4 for guidance) e.g. when coding individual ingredients for a homemade Spaghetti Bolognese you would allocate each item to the 'other beef and veal – homemade recipe' group.

Occasionally manufactured foods will be recorded in diaries that are not in the database. As discussed in section 7 you will need to query these items. The food composition coordinator will decide whether the new food should be added to the database, or whether the composite ingredients should be coded as separate items. In the latter case you will need to allocate each ingredient to the appropriate recipe group e.g. 'commercial toddler foods' or 'manufactured chicken products including ready meals'. If the appropriate recipe group isn't available raise a query and it can be added.

5.11 Flagging a record

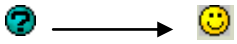
There are many reasons for flagging a record: if you are unsure of the food you have selected, have coded an unknown food (when there is no appropriate food match) or the portion size is missing. To flag a record you click the grey sleepy face (see section 7 also).



It is important that we monitor the reasons why entries are being flagged so after raising a flag you should select a query type from the adjacent

boxes. Multiple types can be selected but only one from each category: Food (query relates to food), Portion (query relates to portion) and Other.

Even if you resolve a query whilst you are in the record and therefore don't need to flag it, it is helpful for monitoring if you still allocate a query type. So raise a flag as you would normally, allocate the query type and then click on the blue question mark to highlight the query as complete.



5.12 NDNS Food rules

You have a separate document that gives instructions on how to code certain foods such as tea, coffee, squash, bread and other commonly consumed items.

5.13 Deleting foods

See section 8.2

When a diary is coded remember to record the date and the number of diary days in the subjects form under the subjects/assessment tab.

6. Weight changes on cooking and calculating recipes

6.1 Weight changes on cooking

Occasionally respondents record portion sizes in uncooked measurements e.g. 25g dry white rice (boiled) or 8oz rump steak (grilled). The cooked weights of these foods need calculating before the food can be coded. Refer to McCance and Widdowson 6th Edition (pg 431-435) for estimated weight changes on cooking. e.g.

25g dry white rice
% weight change boiled = +177
(25 X 1.77) + 25 = **69.25g white rice boiled**

Or

8oz steak (227g)
% weight change grilled = -28
(0.28 X 227) = 64g
227g (raw) – 64g (cooking loss) = **163g rump steak grilled**

These calculations are also used to deduce the raw weight of a cooked ingredient e.g. chicken used in a recipe. The FSA 'Food portion sizes' book only provides the weight of cooked chicken breasts so the raw weight would need calculating to enter chicken breasts in a recipe e.g.

4 medium sized chicken breasts cooked = (130g X 4 = 520)
% weight change casseroled = -25 (so cooked weight is 75% of raw)
130g= 0.75x raw weight, or raw weight = (cooked weight /percent remaining after cooking) x100.
(130g/75) x100=173.3g. 173.3g x4 =693g
=693g raw chicken breast (173.3g per breast)

6.2 Calculating recipes

When home-made dishes are eaten respondents are asked to record the recipes in the space provided after each diary day. If sufficient details are recorded (including a full list of ingredients, each with an amount) you can calculate the proportion of the recipe that the respondent ate and enter the individual ingredients into DINO as described below. If inadequate details are provided you will need to flag the recipe and raise a query (see section 6.5).

If the respondent eats the whole recipe you simply enter a cooked food code for each ingredient and calculate a weight loss for any meat/fish, or a weight gain for any cereal products (e.g. rice, pasta, lentils). Link the ingredients together by allocating a recipe group to each food (see section 6.4). If a respondent eats half or a quarter of the recipe, then again, code each item using cooked codes and calculate weight gains or losses where appropriate. Then each ingredient can be divided by 2 or 4 respectively.

Recipe: Chicken risotto	
Ingredients	**Amount**
onions	1 medium
chicken breast	2 medium
butter	20g
rice	300g
stock	600g
parsley	tbsp

When a respondent describes the amount of the recipe eaten as a weight or in tablespoons we do not know what proportion of the dish this is i.e. we know how much a tablespoon of cooked chicken risotto weighs but not how much of each ingredient of the recipe is in that tablespoon. This is when you would use the ***recipe calculator*** in DINO. It calculates the proportion (amount/g) of each ingredient that the respondent has eaten.

Go into Dietary Coding screen and click on ***recipe calculator***. Move onto a new recipe record in the same way you would a new food record by clicking on the arrow on the bottom left side:

- Enter the recipe name in the top box
- Enter the subject ID
- Enter the ingredients listed in the diary into the first column
- Enter the amounts in the 'weight' column in grams. Always enter the raw weight in this column, except where dry ingredients are used:

In the example below the raw weight of chicken was calculated from the cooked weights in the FSA portion size book (section 6.1)

As rice is a dry ingredient the cooked weight was entered after deducting the amount of water absorbed on cooking from the stock in the recipe [300g rice absorbs 531g stock on cooking (weight gain factor +177), leaving 69g stock from 600g in the original recipe].

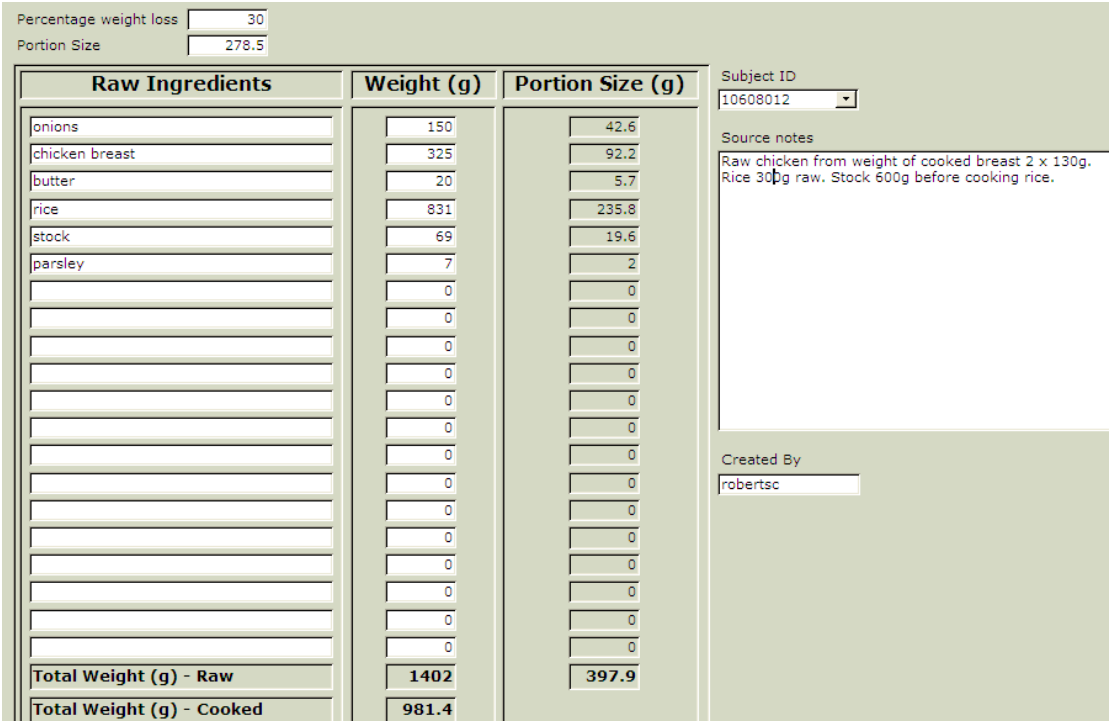
Make any notes on further calculations in the source notes box

Water, stock and tinned tomatoes are the most common types of liquids used in recipes so deduct water absorbed on cooking dry ingredients from these

If more than 100mls of liquid are used in a recipe you will need to calculate the weight of this volume in grams. Do this by multiplying the volume with the specific gravity from the FSA 'food portion sizes book' e.g. 200mls condensed milk = 232g (specific gravity 1.16)

- Use the McCance and Widdowson supplements to find an estimated weight loss for the whole recipe. If the recipe for the dish you are calculating is not available, use the weight loss from a similar dish as a substitute. Take into account the cooking method used along with the proportions and types of liquid; and the amounts of meat and vegetables used when selecting an alternative. Record which recipe you use in the source notes (risotto example shows recipe 198 from the meat dishes supplement)
- Enter this figure into the percentage weight loss box
- Enter the portion size as recorded by the respondent as a weight in grams in the box below. You may need to use DINO or the FSA 'food portion sizes' book to find this weight

- The weight of each of the component ingredients will be automatically calculated in the 'portion size' column.
- Save the recipe.
- You then need to code each ingredient in DINO in the usual way remembering to always select a cooked code and allocate it to a recipe group (see section 6.3 for a list of cooked codes).
- Where ingredients are present in very small amounts e.g. herbs, spices, salt, the final portion weight may be less than 0.01g. This would be calculated as 0 by DINO so it is important that these ingredients are entered as 0.01g so that they show up as an ingredient.



NOTE: The method described above results in an overestimation of the total weight (g) of food consumed. However it gives us a 'best fit' in terms of nutrient content and is more reliable for disaggregating vegetables, meat etc. For further description on recipe calculation refer to NDNS homemade recipe data handling v2.0.doc in: \\Elsie\ndns_data\NDNS2009\NDNS Dietary Data\Databank meetings.

6.3 Cooked food codes

When entering recipes in DINO always select codes for cooked ingredients. The following list gives examples of some cooked codes in the database:

Batter with losses
Chicken Flesh with losses
Cod, Haddock with losses
Egg after baking/boiling
Egg and crumb after frying losses
Flour, plain after baking
Flour, self raising after baking
Flour, strong bread with cooking losses
Flour, brown with cooking losses
Flour, wholemeal with cooking losses
Lemon juice, 50% vit C loss
Liver, calves with frying losses
Liver, lambs with frying losses
Milk, whole after boiling
Milk, semi-skimmed after boiling
Milk, skimmed after boiling
Oatmeal with cooking losses
Oats with losses on boiling
Onion with frying losses
Pizza base with losses
Plaice with losses
Potatoes, old with frying losses
Potatoes, new with frying losses
Rice white with losses
Tomato puree with losses
2682 Wine or sherry after cooking in stews

6.4 Recipe grouping - Rules

Each food in the recipe should be assigned to the appropriate recipe group. All homemade dishes will fall into the homemade categories.

Recipes are generally grouped according to their main ingredient e.g. Chicken risotto is a rice dish as the main component is rice. However, there are some exceptions to this e.g. Cottage pie is likely to contain more potato than beef mince but it is classified as a meat dish. Record the recipe group you have chosen in the worksheet titled 'Recipe groups' in the 'Recipes.xls' spreadsheet, found in the 'Coding documents' folder. You will also need to record the subject ID, date of recipe, name of recipe and your initials. If you are unsure which recipe group to choose just ask or flag the entry as a query. Check the recipe spreadsheet for other recipes that have been classified into a group to maintain consistency in groupings. The Food Composition Coordinator will check recipe groups at regular intervals to ensure consistency in coding.

Remember that the same recipe group must also be assigned to each ingredient in the recipe as you enter it into DINO.

6.5 Recipe query

If inadequate details are provided to calculate the recipe enter 9490 in the coding number, select **'recipe food'** from the drop down list and **'not defined'** for the portion size. Flag the entry and the recipe will be dealt with at the query meetings.

7.Queries

Most queries can be classified into one of four categories;

- Missing food code in DINO
- Missing portion code in DINO
- Insufficient information to code food
- Insufficient information to code portion size

7.1 Missing food code in DINO

Foods will appear in diaries that don't have a corresponding food code in DINO. They may be new products, or existing foods that we haven't come across before. Enter 9489 in the food number, select 'unknown food' for Food Name, 'not defined' for portion size and flag this entry. Collect as much information about the product as you can from the Internet, or any other sources available, and pass it on to the food composition coordinator.

Record the details of the query on your personal query spreadsheet and a decision will be made to either add the new food to the database, or use an existing food in the database as a substitute.

7.2 Missing Portion codes in DINO

Occasionally respondents will record portion sizes in the diaries that we don't have in DINO. Before you raise a query it is worth checking to see if you will find it in the 'FSA portion sizes' book or the 'Portion sizes_weights and measures.xls' spreadsheet; this is saved in the coding documents folder. If you can't find the portion size here enter 1 gram as the weight and flag this entry. Record all the necessary details in the query spreadsheet. The food composition co-ordinator will review the query and if necessary weigh the food and add the portion size to the database. If at any time you calculate a portion size that you think may be used again e.g. the raw weight of a cooked piece of meat, record it in the 'Portion

sizes_weights and measures.xls' spreadsheet. If you think it would be useful to have the portion size in DINO raise a query.

7.3 Insufficient information to code a food

Sometimes you will not have sufficient detail on the diary page to be able to code a food accurately. The first thing to do is see if the food features on another dietary day and whether relevant information has been recorded there. If not, other sources of information are:

- **Subject information** – click on the subject information in the bottom left hand side of the screen. This brings up details of how some foods are prepared in the household, as well as household structure and ethnic group.
- **General questions about food/drink** – At the back of each diary the respondent provides information on frequently consumed items in their kitchen e.g. bread, squash, oil etc. You may need to refer to the details collected on the relevant pages when allocating food codes for these particular foods. For Toddler diary only there are also some questions about the frequency of eating outside the home.
- **Food labels/wrappers –** Respondents are asked to collect wrappers from unusual foods and ready meals. They will be in a plastic bag labelled with the respondents subject ID.
- **Default foods** – Default codes are available for frequently consumed foods. They should only be selected when a food is recorded without enough detail to pick an alternative code e.g. someone may record gravy without stating whether the gravy is thickened, or has had the fat skimmed off. You should only use a default if there is nothing else on the diary that can help inform a more accurate decision and in conjunction with the points made in the rest of this section. There is no need to raise a query if you use a default unless you have any doubts about your decision.
- **Food rules spreadsheet –** Food rules are created when new foods can't be entered into the database. If a food is not in the database, or you are unsure how to code it, it is worth checking the foods rules spreadsheet for further information. Food rules are often created for

composite foods such as sandwiches. The food rules spreadsheet can be found in the queries folder.

- **Catering questionnaire –** When school meals are recorded with insufficient detail to select the appropriate codes we can contact the school to obtain more information i.e. on recipes or type of oil used etc. If this type of query is added to the query spreadsheet the survey nutritionist will send a *'catering questionnaire'* to the school to obtain further information.

7.4 Insufficient information to code portion size

If a portion size is missing in the food diary and packaging has not been sent in, an estimate can be made using the following methods (in order of preference of use):

Adults:

- If item consumed on another day base on this size
- Base size on usual portion size for this particular respondent e.g. if the respondent tends to have small portions, code a small portion
- Use average portion size from FSA Food Portion Sizes book
- Use medium portion size from DINO

It is important to try and maintain consistency of data input, record in the notes section on DINO the reason for choosing portion size.

Children:

- If item consumed on another day base on this size
- Base size on usual portion size for this particular respondent e.g. if the respondent tends to have small portions, code a small portion.
- Refer to NDNS Kids_portion_sizes spreadsheet and use an average portion for their age group.

Toddlers:

- If item is consumed on another day base on this size

- Base size on usual portion size for this particular respondent e.g. if respondent tends to have small portions, code a small portion
- Refer to NDNS_Kids_portion_sizes spreadsheet, worksheet ages 1-3
- Refer to toddler food rules worksheet and use rules to estimate a portion size based on adults portion sizes

School meals:

- If item is consumed on another day base on this size
- For primary school children (4-11) use the infant and junior school meals spreadsheet in NDNS_Kids_portionsizes depending on the age.
- For secondary school children (11-18) use the secondary school meals spreadsheet in NDNS_Kids_portionsizes.
- For children at nursery use the nursery column in the nursery school meals spreadsheet in NDNS_Kids_portionsizes.
- NB: as there is an overlap for children aged 11, please check with the NDNS research scientist as to whether they are at primary or secondary school.

Further Information

In the coding documents file you will find spreadsheets containing portion sizes for supermarket foods, branded goods, fast food and restaurant items. Refer to these when such items are specified in the diary.

7.5 Query spreadsheet

All queries that can't be solved using the information provided above will be added to a query spreadsheet. Each Dietary Assessment Assistant has their own personal query spreadsheet and you should use this to record your queries. Add your queries for each week to the master copy by Friday so that they can be reviewed by the research assistant on a Monday.

To add a query to the spreadsheet enter:

- ***Day of query*** – Based on the actual diary day number: either 1, 2, 3 or 4.
- ***Time of query*** – The time at which the food/drink was consumed.

- ***Respondents age*** – The age stated on the coding form.
- ***Subject ID*** – Of the diary the query is from
- ***Query initials*** – Your initials
- ***Food*** – Describe the name of the food the query applies to including brand name and portion size if stated in the diary e.g. Tesco Healthy Living 0% Fat Cottage Cheese 150g eaten. Record this in exactly the same way it is written in the diary.
- ***Query*** – Describe the query e.g. 'Food is not in database, what is this?' Or 'Website does not list proportions, shop to split code'. Record as many details as you can about the query. Other members of staff should understand the query by reading the information in this column (without looking at the diary) in order to either resolve the query or edit it in your absence. You may also want to record what other items the queried food was eaten with.
- ***Shop*** – Put label/packaging or printout/downloaded in this column if the packaging has been provided or you have found the information on the internet, otherwise put a Y in this column to indicate that someone will need to visit a store to shop for the item.
- ***Resolution*** – The research assistant will update this column once the query has been solved. You will need to complete the query based on the information provided here e.g. new code added 11258 Cottage cheese, no fat, fat free, tesco, Longley farm virtually fat free etc. (you would then code the food using the new code 11258). There may be a note to remind you to link the foods to a recipe group (see section 6.4). When a resolution is confirmed the food composition coordinator will complete the remaining information and highlight the query in green or a temporary resolution will be highlighted in blue. This indicates that the query can be resolved in DINO.
- ***Food code*** – if a food code is allocated to the resolution which will help with editing, the research assistant will enter it here. You can then enter this straight into the food code field on the dietary coding screen.
- ***Coding number*** – if a substitute food can be used, the research assistant will enter the corresponding coding number in here

- ***New food rule? (Y/N)*** – This denotes whether you need to add a new food rule to the spreadsheet
- ***New food code needed*** – The research assistant uses this to highlight any new codes that need creating or updating
- ***Date of resolution*** – When the query is solved a date will be entered here and initialled that indicates you can complete this diary
- ***Edit date and initials*** – Add the date you edit the diary and your initials to indicate the query has been actioned.

The headings marked here in italics are for completion by the research assistant once the query has been resolved. Only edit queries in DINO that have been highlighted in green by the research assistant.

When all queries are complete and a diary is fully edited remember to select 'yes', diary is complete on the subjects form and enter the date.

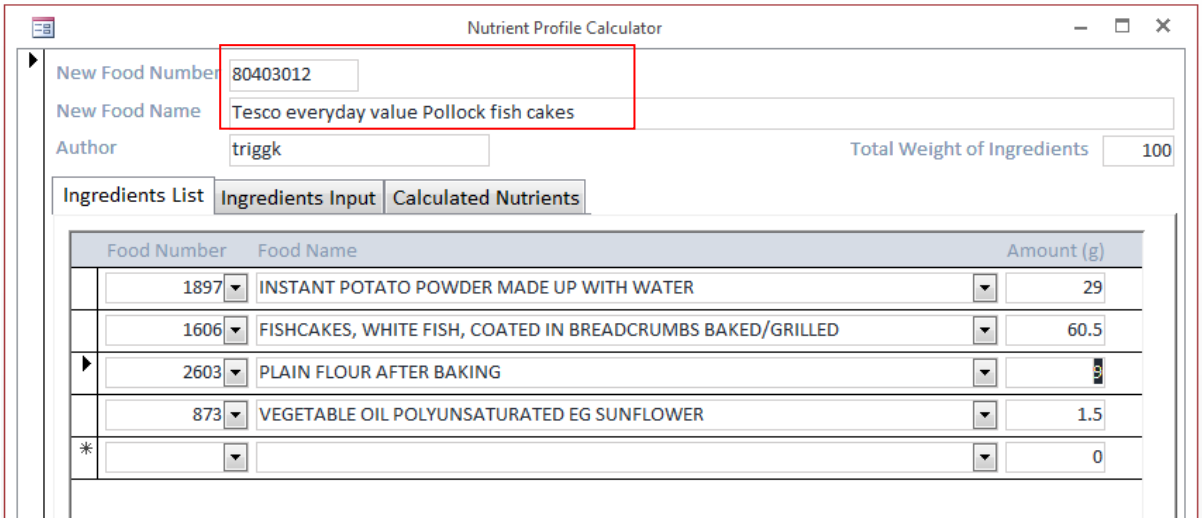
7.6 Proportions and Proportions calculator

The research assistant will highlight what proportions need to be done by writing 'Proportions' in the resolution section on the query spreadsheet.

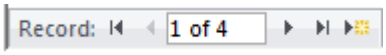
In DINO select 'Food Tables' then 'Nutrient Profile Calculator'.

In the new food number box the subject number will need to be entered. **Note:** If you have more than 1 proportion for the same subject number add 1, 2 or 3 to the end of the subject number depending on how many proportions you have to do (e.g 8040312**1**, 8040312**2**, etc).

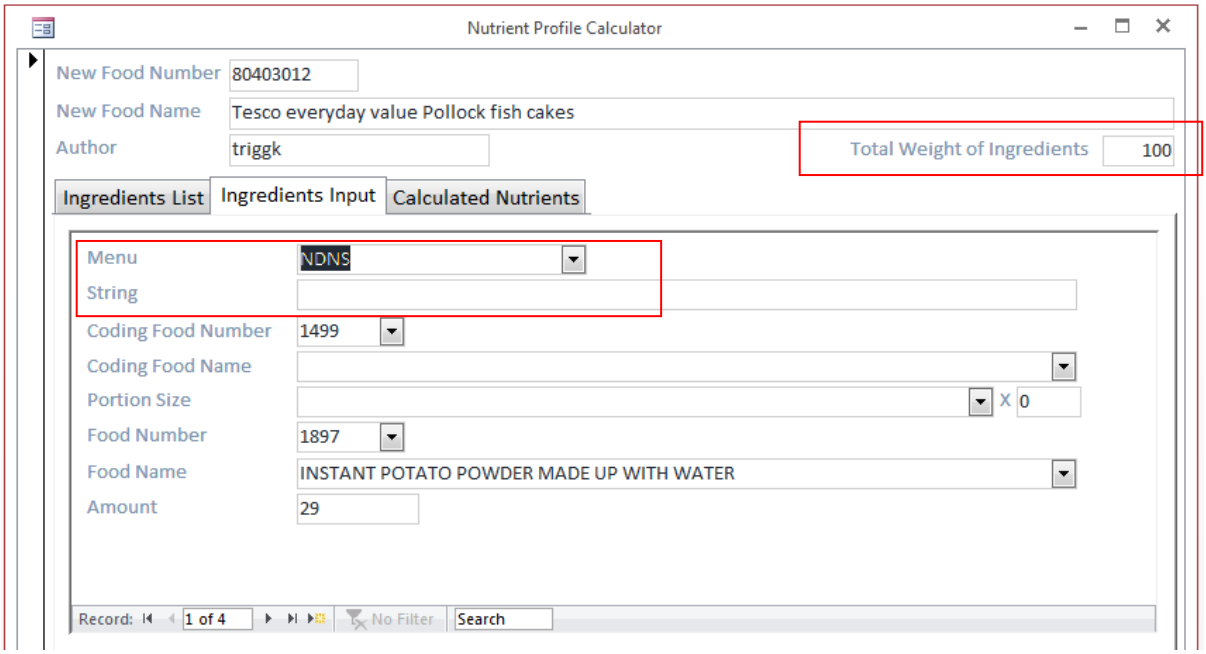
In the new food box type the name of the product name in full including pack and portion size.



To input the ingredients either use the ingredients list or ingredients input tab. If you know the food number of the foods you would like to include then enter this in the food number column on the ingredients list tab. Alternatively use the ingredients input tab bymaking sure that the NDNS menu is selected and then using the string to search for items the same as you would when coding. Use the arrows to insert another ingredient

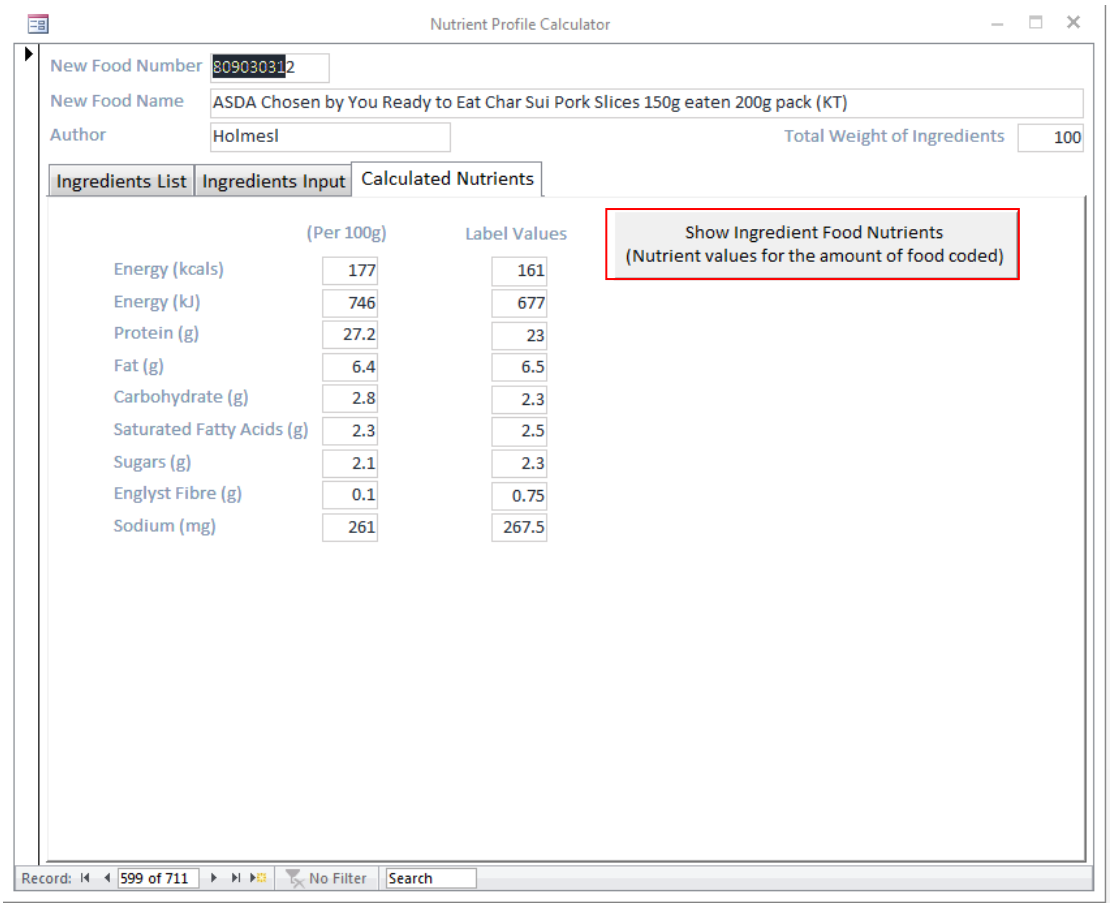


. Add in the amount of each ingredient required based on percentages. The total amount of ingredients should add upto 100.



If you wish to amend the percentage of an ingredient you can do this by either directly entering it in the amount box on the ingredients list tab or on the ingredients input tab.

If you now click on the calculated nutrients tab you can then enter the nutritional information of the product.



When entering in the nutritional information of the product enter the carbohydrates as monosaccharide equivalents;

- Sugar value x 1.05 – enter into sugar column
- Starch value x 1.1 (starch = CHO – Sugar values)
- Total CHO as monosaccharide = the sum of converted sugar value and converted starch value – enter into CHO column.

Convert Fibre to NSP. Label data for fibre is assumed to be AOAC.

- Multiply fibre by 0.75.

Salt must be entered as sodium in mg

- (Salt x 0.3934) x 1000

There is also a spread sheet that you can use to work out these values that can be found in O:\Projects\NDNS\NDNS_Data\NDNS2015\NDNS Dietary Data\Queries – sodium and monosaccharide calculations.

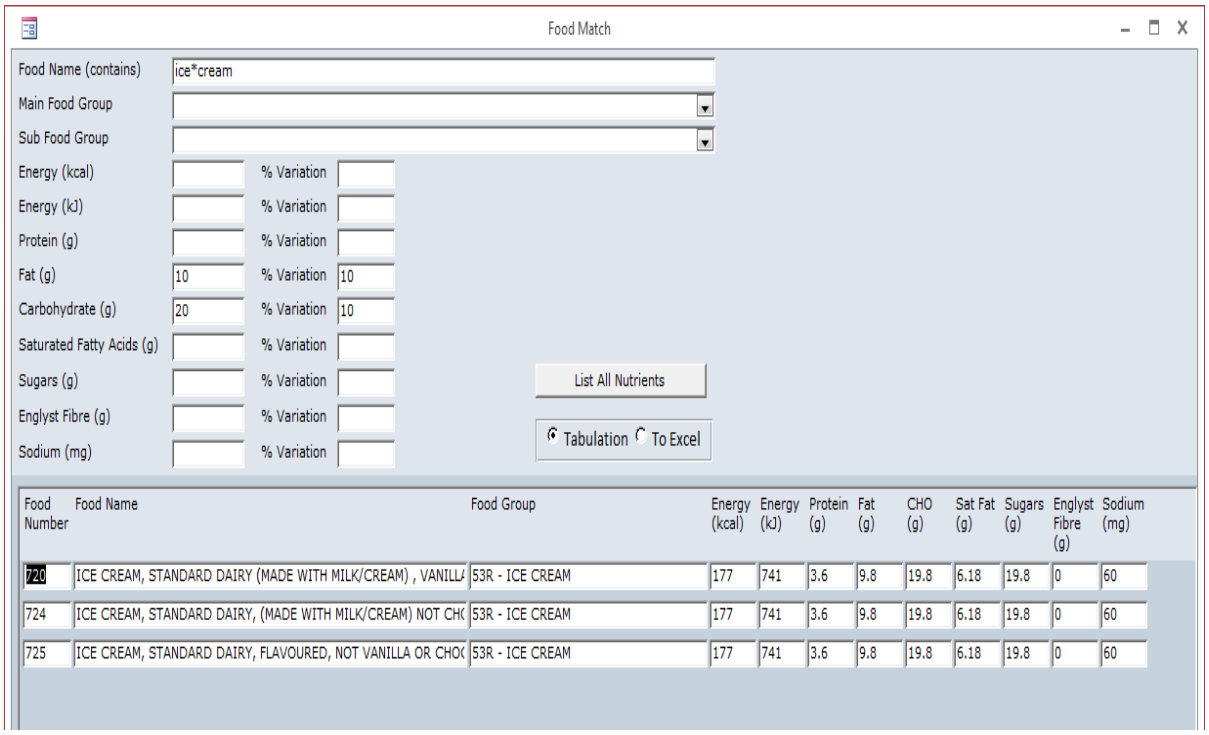
You can compare the ingredient values per 100g against the product nutritional information and adjust the ingredients as required.

Note: On the calculated nutrients tab you will notice there are 2 show ingredients food nutrient boxes. If you click on the **Nutrient values per 100g of new food** box this will bring up a table that will show you how much and which foods are providing which nutrients for the new food you are creating. If you click on **Nutrient values per 100g of ingredient** box this will bring up a table that shows you the nutrient values per 100g of each ingredient entered into the nutrient profile calculater.

7.7 Food Matching

When trying to match a food or drink item to an existing code on DINO there is a food matching tool.

In DINO select 'Food Tables' then 'Food Matching'.



You can search for items based on product name, main food group, sub food group or by individual nutrients. For example type in the food name you require e.g. ice*cream and press enter. This will bring up a list of items containing this food name.

Each nutrient value of interest can be entered individually and a percentage variable can also be added to include a greater range of products in which to match enabling you to find the best match on DINO.

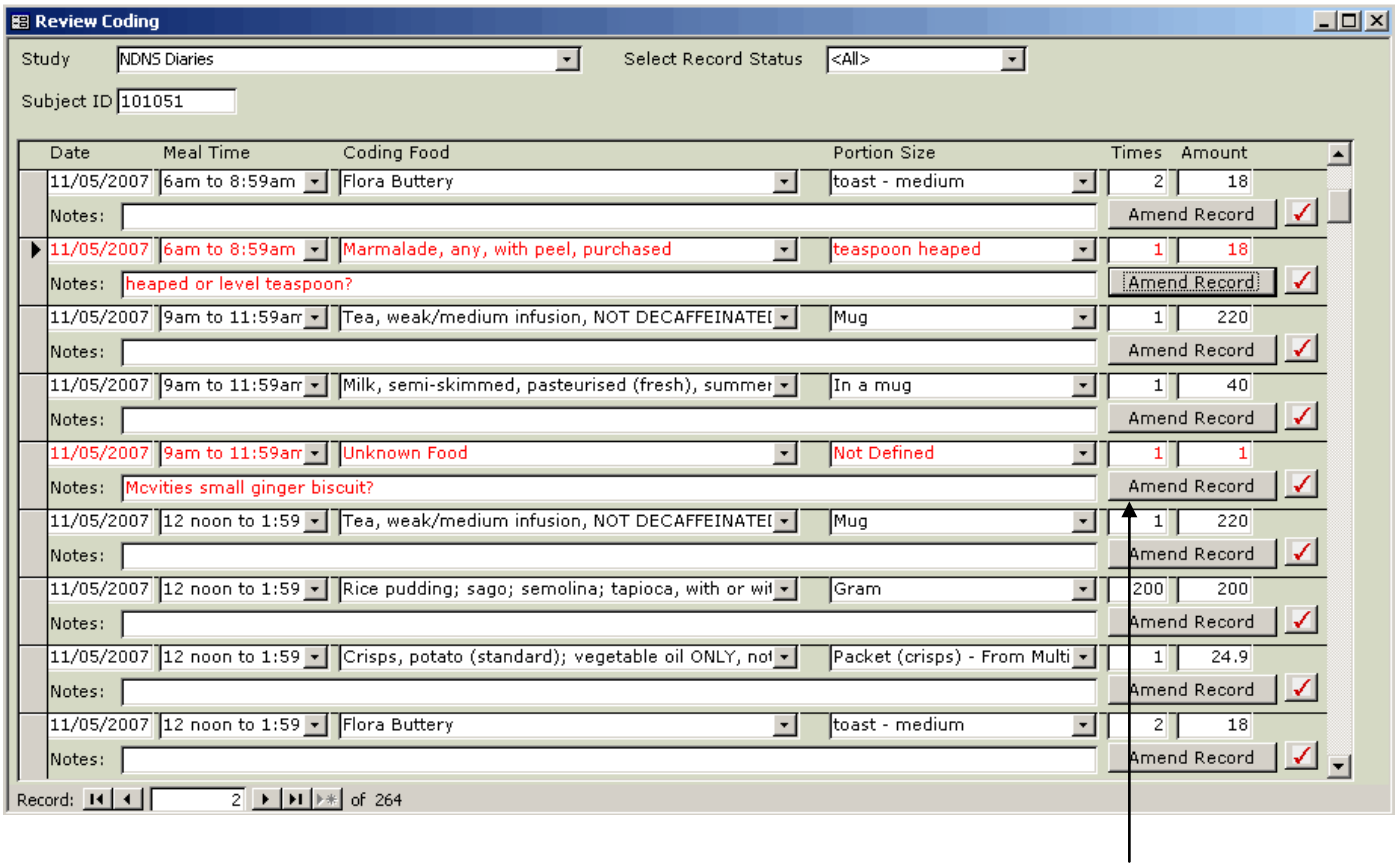
When entering carbohydrate and sugar values remember to enter the monosaccharide equivalents, convert fibre to NSP and salt to sodium. The equations for this can be found in section 7.6.

If the match is not within the 10% threshold for all nutrients of an existing code the item in question will need to be queried.

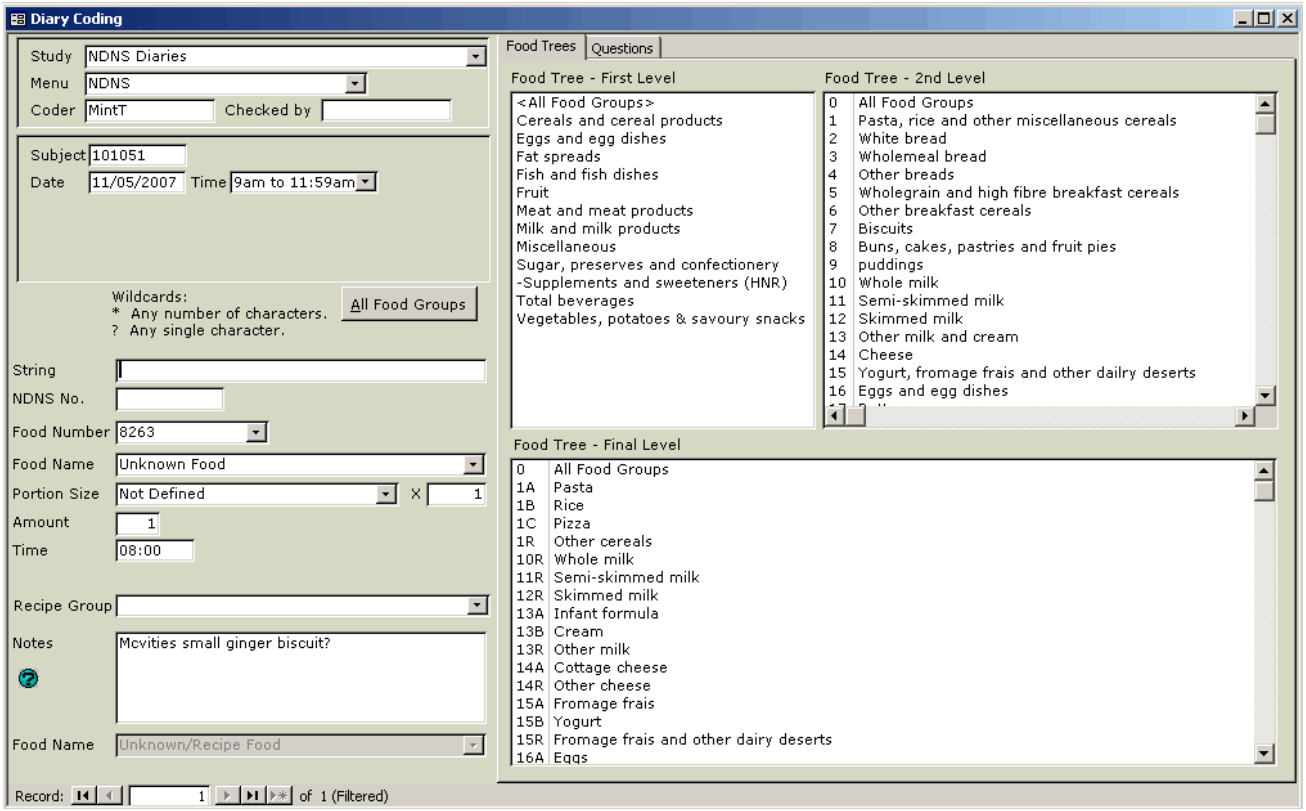
8.Editing

8.1 Dealing with resolved queries

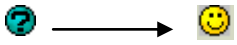
Once the Food Composition Coordinator has resolved a query, you will need to go back in to DINO and clear the flagged entry. To re-visit these queries, use ***review coding*** on the ***dietary coding*** screen. To find the appropriate food record select **NDNS diary** and search for the subject ID using the binoculars tab ( ). Any queries that have been flagged will appear in red as shown below.



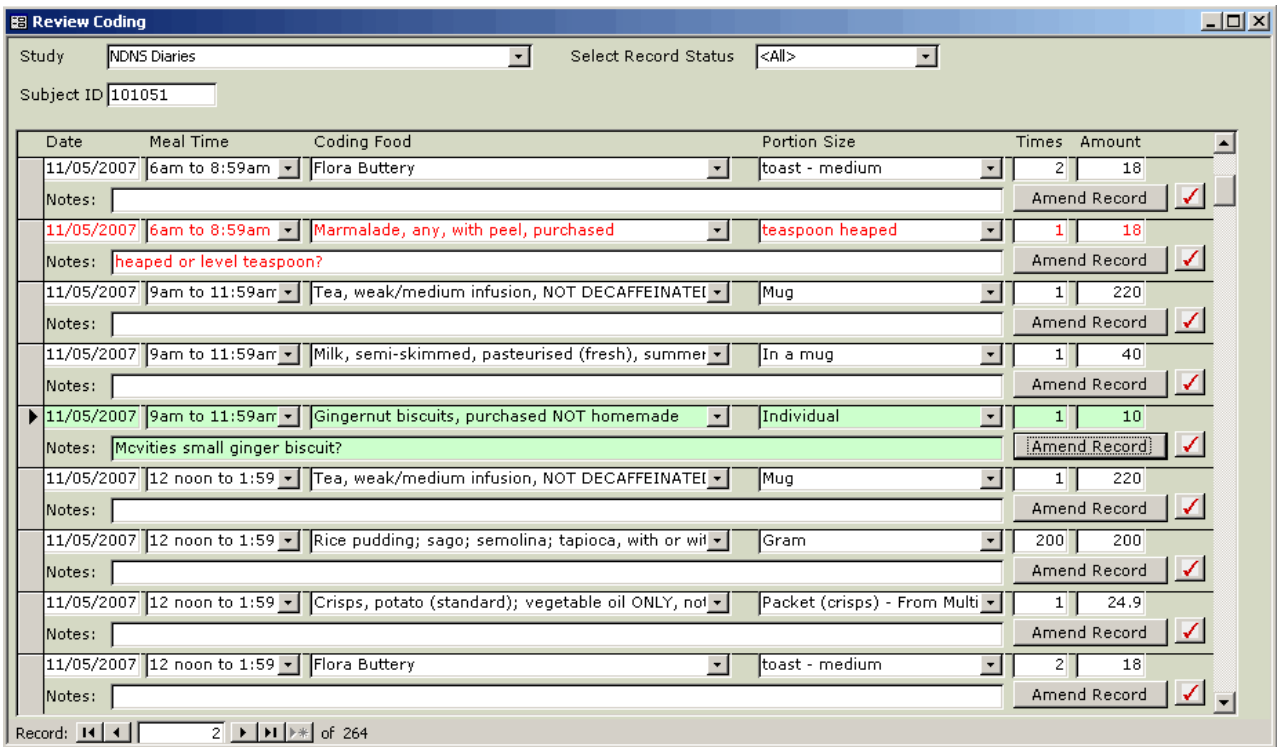
You can see two queries on this form, marmalade and an unknown food described as a McVities small ginger biscuit. Click on **amend record** to amend the query and the dietary coding screen will open.



Select the appropriate food and portion size code to complete the query as recommended in the query sheet then click the blue question mark to highlight the query as complete.



If the Food Composition Coordinator has instructed that a recipe should be entered, remember to link the foods together using a recipe group.



You will notice the query becomes highlighted in green; this indicates it has been completed.

Remember to record the date the query was completed, with your initials, in the query spreadsheet. Highlight the row in grey.

When all queries in a diary have been resolved, go into the Subjects form under Subjects/diary assessment and change coding and editing complete to 'Yes' and enter the date the diary was completed.

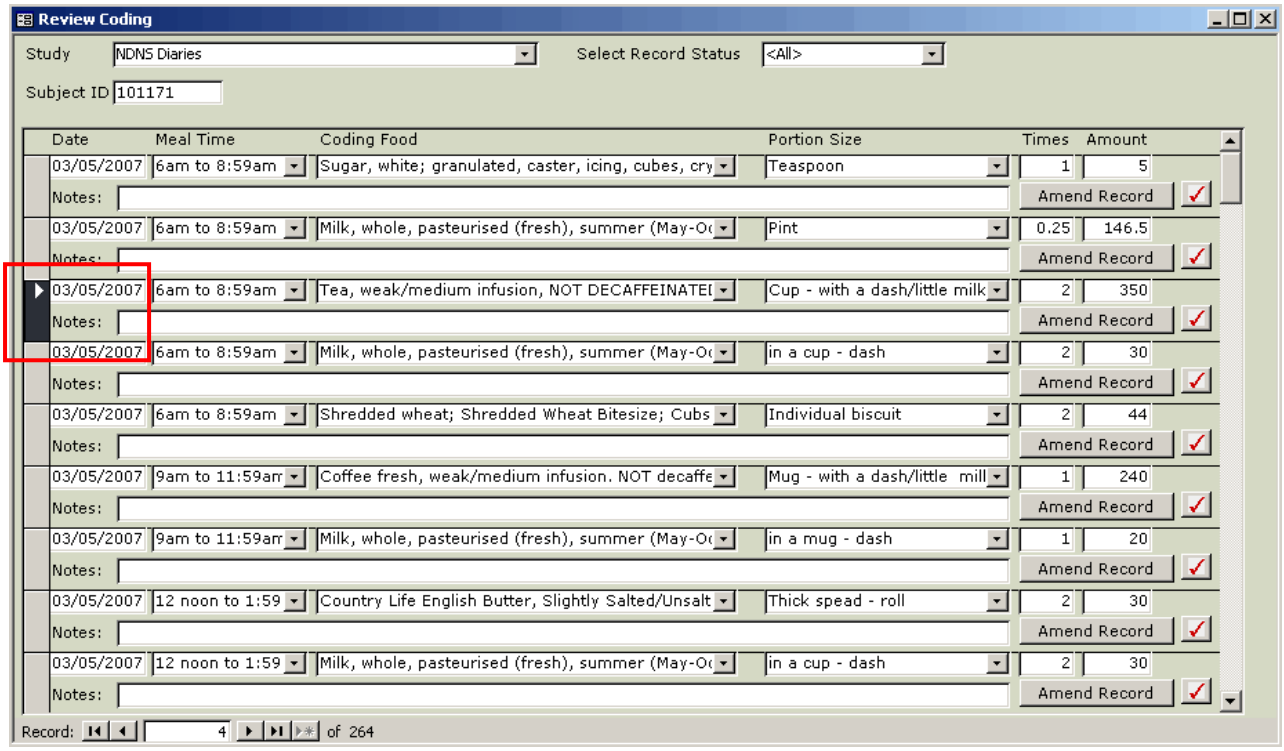
Sometimes there will be a number of people editing at the same time or the Food Composition Coordinator may need to be editing the query spreadsheet. If this is the case, open it as a 'read only' file and make a note of the queries you have edited in the diaries. When the query spreadsheet is available remember to go back in and indicate which you completed.

Please consider the number of people who need to use this document – as soon as you have finished with the spreadsheet or if you leave your desk, close the sheet so someone else can use it.

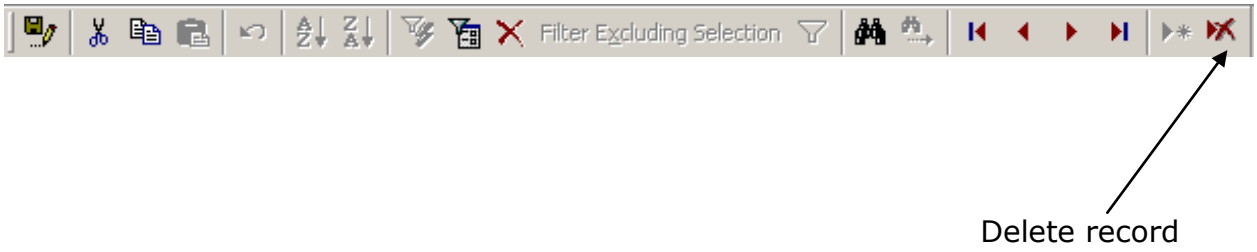
8.2 Deleting records

Review coding can be used to delete any records entered in error.

Select the record you wish to delete, as shown in the diagram below.



Select the *'delete record'* tab from the toolbar at the top of the screen to permanently delete the entry.



NatCen Social Research

Northern Ireland Statistics & Research Agency

MRC Human Nutrition Research

NATIONAL DIET AND NUTRITION SURVEY

Food and Drink Diary
Instructions

NATIONAL DIET AND NUTRITION SURVEY

Food and Drink Diary Instructions

Instructions……..2-3

Diary examples……4-27

Examples and advice on food descriptions……28-34

Pictures for food portion size guidance……35-38

- ***Breakfast cereals***
- ***Rice***
- ***Spaghetti***
- ***Chips***
- ***Broccoli or cauliflower***
- ***Stew or curry***
- ***Battered fish***
- ***Quiche/Pie***
- ***Cheese***
- ***Sponge cake***

Drink volume guidance……39-40

Pictures for spoon size……41-42

If you have any queries about how to complete the diary please contact a member of the NDNS Team at NatCen on freephone **0800 652 4572** between 8.30am-5.30pm.

PLEASE READ THROUGH THESE PAGES BEFORE STARTING YOUR DIARY

We would like you to keep this diary of <u>everything you eat and drink</u> over 4 days. Please include all food consumed at home and outside the home e.g. work, college or restaurants. It is very important that you do not change what you normally eat and drink just because you are keeping this record. Please keep to your usual food habits.

<u>Day and Date</u>
Please write down the day and date at the top of the page each time you start a new day of recording.

<u>Time Slots</u>
Please note the time of each eating occasion into the space provided.

<u>Where and with whom?</u>
For each eating occasion, please tell us what **room or part of the house** you were in when you ate, e.g. kitchen, living room, if you ate at your work canteen, a restaurant, fast food chain or your car, write that location down. We would also like to know **who you share your meals with**, e.g. whether you ate alone or with others. If you ate with others please describe their relationship to you e.g. partner, children, colleagues, or friends. We would also like to know **when you ate at a table** and **when you were watching television whilst eating**. For those occasions where you were **not** at a table or watching TV please write 'Not at table' or 'No TV' rather than leaving it blank.

<u>What do you eat?</u>
Please describe the food you eat in as much detail as possible. Be as specific as you can. Pages 28 - 34 will help with the sort of detail we need, like **cooking methods** (fried, grilled, baked etc) and any **additions** (fats, sugar/sweeteners, sauces, pepper etc).

- **<u>Homemade dishes</u>**
  If you have eaten any **homemade dishes** e.g. chicken casserole, please record the name of the recipe, ingredients with amounts (including water or other fluids) for the whole recipe, the number of people the recipe serves, and the cooking method. Write this down in the recipe section at the end of the record day. Record how much of the whole recipe you have eaten in the portion size column (see examples on pages 4 - 27).

- **<u>Take-aways and eating out</u>**
  If you have eaten **take-aways** or **made up dishes not prepared at home** such as at a restaurant or a friend's house, please record as much detail about the ingredients as you can e.g. vegetable curry containing chickpeas, aubergine, onion and tomato.

<u>Brand name</u>
Please note the **brand name** (if known). Most packed foods will list a brand name, e.g. Bird's eye, Hovis, or Supermarket own brands.

- ***Labels/Wrappers***
  Labels are an important source of information for us. It helps us a great deal if you enclose, in the plastic bag provided, labels from all **ready meals,** labels from **foods of lesser known brands** and also from any **supplements** you take.

Portion sizes

Examples for how to describe the **quantity** or **portion size** you had of a particular food or drink are shown on pages 28 - 34.

For foods, quantity can be described using:

- **household measures**, e.g. 1 teaspoon (tsp) of sugar, 2 thick slices of bread, 4 dessertspoons (dsp) of peas, ½ cup of gravy. Be careful when describing amounts in spoons that you are referring to the correct spoon size. Compare the spoons you use with the life size pictures at the back of this booklet.
- **weights from labels**, e.g. 4oz steak, 420g tin of baked beans, 125g pot of yoghurt
- **number of items**, e.g. 4 fish fingers, 2 pieces of chicken nuggets, 1 regular size jam filled doughnut
- **picture examples** for specific foods on pages 35 – 38 (for adults only).

For drinks, quantity can be described using:

- the **size of glass, cup etc** (e.g. large glass) or the **volume** (e.g. 300ml). Examples of typical drinks containers are on 39 – 40.
- **volumes from labels** (e.g. 330ml can of fizzy drink).

We would like to know the **amount that was actually eaten** which means taking **leftovers** into account. You can do this in two ways:

1. Record what was served and note what was not eaten e.g. 3 dsp of peas, only 2 dsp eaten; 1 large sausage roll, ate only ½
2. Only record the amount actually eaten i.e. 2 dsp of peas; ½ a large sausage roll

Was it a typical day?

After each day of recording you will be prompted to tell us whether this was a typical day or whether there were any reasons why you ate and drank more or less than usual. We have provided a list of commonly forgotten food and drink to help jog your memory at the end of each day for anything you may have forgotten to record.

Supplements

At the end of each recording day there is a section for providing information about any supplements you took. Brand name, full name of supplement, strength and the amount taken should be recorded.

When to fill in the diary

Please record your eating as you go, **not from memory** at the end of the day. Use written notes on a pad if you forget to take your diary with you. Each diary day covers a 24hr period, so please include any food or drinks that you may have had during the night. Remember to include foods and drinks between meals (snacks) including water.

Overleaf you can see examples of 4 days that have been filled in by different people. These examples show you how we would like you to record your food and drink, for example a ready meal and a homemade dish.

It only takes a few minutes for each eating occasion!

Thank you for your time – we really appreciate it!

Day: *Thurs*		**Date:** *31st March*		
Time	**Where? With Whom? TV on? At table?**	**Food/Drink description & preparation**	**Brand Name**	**Portion size or quantity <u>eaten</u>**
How to describe what you had and how much you had can be found on pages 28-34				
		6am to 9am		
6.30 am *7.30 am*	*Kitchen Alone No TV Not at table* *Kitchen Partner TV on At table*	*Filter coffee, decaffeinated milk (fresh, semi-skimmed) Sugar white* *Filter coffee with milk and sugar Cornflakes Milk (fresh, semi-skimmed) Toast, granary medium sliced Light spread Marmalade*	*Douwe Egberts Silverspoon* *As above Tesco's own Hovis Flora Hartleys*	*Mug A little 1 level tsp* *As above 1b drowned 1 slice med spread 1 heaped tsp*
		9am to 12 noon		
10.15 am *11 am*	*Office desk Alone No TV Not at table* *Office desk Alone No TV Not at table*	*Instant coffee, not decaffeinated Milk (fresh, whole) Sugar brown* *Digestive biscuit – chocolate coated on one side*	*Unknown brand* *McVities*	*Mug A little 1 level tsp* *2*

Time	Where? With Whom? TV on? At table?	Food/Drink description & preparation	Brand Name	Portion size or quantity <u>eaten</u>
		12 noon to 2pm		
12.30 pm	*Tea room at work* *Colleagues* *No TV* *At table*	*Ham salad sandwich from home* *Bread, wholemeal, thick sliced* *Light spread* *Low fat Mayonnaise* *Smoked ham thinly sliced* *Lettuce, iceberg* *Cucumber with skin* *Unsweetened orange juice from canteen* *Apple with skin from home, Braeburn*	*Tesco's own* *Flora* *Hellmans* *Tesco's own* *Tropicana*	 *2 slices* *thin spread on 1 slice* *2 teaspoons* *2 slices* *1 leaf* *4 thin slices* *250ml carton* *medium size, core left*
		2pm to 5pm		
3 pm	*Meeting room at work* *With supervisor* *No TV* *Not at table*	*Tea, decaffeinated* *Milk (fresh, whole)* *Jaffa cake – mini variety*	*Twinings* *Tesco's own* *McVities*	*Mug* *Some* *6*

Time	Where? With Whom? TV on? At table?	Food/Drink description & preparation	Brand Name	Portion size or quantity <u>eaten</u>
		5pm to 8pm		
6.30 pm *8 pm*	*Pub* *Partner* *TV on* *At table* *Dining room* *Family* *No TV* *At table*	*Gin* *Tonic water diet* *Lager 3.8% alcohol* *Salted peanuts* *Spaghetti, wholemeal* *Bolognese sauce (see recipe)* *Courgettes (fried in butter)* *Tinned peaches in juice (juice drained)* *Single cream UHT* *Orange squash No Added Sugar*	*Gordon's* *Schweppes* *Draught, Carlsberg* *KP* *Tesco's own* *Prince's* *Sainsbury's own cream* *Sainsbury's own*	*Single measure* *1/2 small glass* *1 pint* *1 handful* *3b* *6 tablespoons* *4 tablespoons* *3 halves* *1 tablespoon* *200ml glass, 1 part squash, 3 parts tap water*
		8pm to 10pm		
9 pm	*Sitting room* *Alone* *TV on* *Not at table*	*Grapes, green, seedless* *Chocolates, chocolate creams* *Potato crisps, Prawn Cocktail*	 *Bendicks* *Walkers*	*15* *2* *25g bag (from multipack)*
		10pm to 6am		
10.30 pm	*Bed room* *Partner* *No TV* *Not at table*	*Camomile tea* *(no milk or sugar)*	*Twinings*	*1 mug*

- Was the amount of **food** that you had today about what you usually have, less than usual, or more than usual?

Usual ☒

Less than usual ☐ **More** than usual ☐

If your intake was not usual, please explain why: _____

- Was the amount you had to **drink** today, including water, tea, coffee and soft drinks [and alcohol], about what you usually have, less than usual, or more than usual?

Usual ☐

Less than usual ☒ **More** than usual ☐

If your intake was not usual, please explain why: *Too busy at work to stop for a drink*

- Did you **finish all the food and drink** that you recorded in the diary today?

Yes ☒

No ☐

If no, please **go back to the diary and make a note of any leftovers**

- There are some foods that people often forget

  - o Coffee, tea, soft drinks, water
  - o Alcoholic drinks
  - o Milk
  - o Biscuits, cakes, sweets, chocolate, other confectionary
  - o Crisps/nuts/other snacks
  - o Sauce, dressing

If you have forgotten to record any food or drink today, please go back and **add them to the diary**.

- Did you take any **vitamins, minerals or other food supplements** today?

Yes ☐ No ☒

If yes, **please describe the supplements you took below**

Brand	Name (in full) including strength	Number of pills, capsules, teaspoons

Please record on the next pages details of any recipes or (if not already described) ingredients of made up dishes or take-away dishes.

Write in recipes or ingredients of made up dishes or take-away dishes			
NAME OF DISH: *Bolognese sauce*		***SERVES:*** *4*	
Ingredients	***Amount***	***Ingredients***	***Amount***
Don't forget to include any oil or water/stock used!!			
Co-op low fat beef mince	*500g*	*mixed herbs*	*1 dessertspoon*
garlic	*3 cloves*	*Lea & Perrins worcester sauce from Tesco*	*dash*
onion	*1 medium*		
sweet red pepper	*1 medium*		
Napoli chopped tomatoes from Tesco	*400g tin*		
Tesco tomato puree	*1 tablespoon*		
Tesco olive oil	*1 tablespoon*		

Brief description of cooking method

Fry onion & garlic in oil, add mince and fry till brown.

Add pepper, tomatoes, puree, Worcester sauce & herbs. Simmer for 30 mins

Day: *Friday*		**Date:** *28.09.2007*		
Time	**Where? With Whom? At table? TV on?**	**Food/Drink description & preparation**	**Brand Name**	**Portion size or quantity <u>eaten</u>**
How to describe what you had and how much you had can be found on pages 28-34				
		6am to 9am		
8.00 am	*Café take away – eating on my way to work* *Alone*	*Cappuccino, no sugar* *Blueberry muffin, regular not low fat*	*Starbucks* *Starbucks*	*Medium size* *One*
8.45 am	*Office desk* *Alone* *No TV* *Not at table*	*Tap water*		*300 ml glass*
		9am to 12 noon		
10 am	*Office desk* *Alone* *No TV* *Not at table*	*Banana* *Black tea* *Semi-skimmed milk, no sugar*	 *Typhoo* *Asda*	*One, medium size* *Large Mug* *A lot*

Time	Where? With Whom? At table? TV on?	Food/Drink description & preparation	Brand Name	Portion size or quantity <u>eaten</u>
		12 noon to 2pm		
1 pm	*Work tea room* *With colleague* *No TV* *At table*	*Crayfish sandwich* *multiseed bread, wholemeal, medium cut,* *crayfish in lemon mayonnaise, no other spread* *rocket leaves* *Apple & Raspberry fruit drink*	*M&S pre-packed Sandwich* *J2O*	*2 slices* *Medium filling* *6 to 8* *1 bottle, 275ml*
		2pm to 5pm		
4.30 pm	*Friend's House* *Lounge* *With Friend* *Not at table* *TV on*	*Coffee, instant* *Semi-skimmed milk* *Fairy Cake, homemade, see recipe*	*Kenco*	*Medium mug* *A lot* *1 cake*

Time slot	Where? With Whom? At table? TV on?	Food/Drink description & preparation	Brand Name	Portion size or quantity <u>eaten</u>
		5pm to 8pm		
7.30 pm	*Kitchen/Diner* *With boyfriend* *At table* *No TV*	*Chicken in creamy mushroom and white wine sauce for 2, oven* *White rice, boiled* *Wine 13% alcohol*	*Sainsbury's, 370g (wrapper collected)* *Easy cook, Italian, Sainsbury's* *Sauvignon Blanc, New Zealand*	*½ pack* *2C* *1 small glass, 125ml*
		8pm to 10pm		
9.15 pm	*Sitting Room* *With boyfriend* *Not at table* *TV on*	*Squash, apple & blackcurrant, no added sugar,* *Crisps*	*Sainsbury's* *Pringles, sour cream and chives*	*1 average glass, 200ml* *5*
		10pm to 6am		
11.30 pm	*Bedroom* *Alone* *Not at table* *TV on*	*Water*	*tap*	*1 medium glass*

- Was the amount of **food** that you had today about what you usually have, less than usual, or more than usual?

Usual ☒

Less than usual ☐ **More** than usual ☐

If your intake was not usual, please explain why: _____

- Was the amount you had to **drink** today, including water, tea, coffee and soft drinks [and alcohol], about what you usually have, less than usual, or more than usual?

Usual ☒

Less than usual ☐ **More** than usual ☐

If your intake was not usual, please explain why: _____

- Did you **finish all the food and drink** that you recorded in the diary today?

Yes ☒

No ☐

If no, please **go back to the diary and make a note of any leftovers**

- There are some foods that people often forget

  - o Coffee, tea, soft drinks, water
  - o Alcoholic drinks
  - o Milk
  - o Biscuits, cakes, sweets, chocolate, other confectionary
  - o Crisps/nuts/other snacks
  - o Sauce, dressing

If you have forgotten to record any food or drink today, please go back and **add them to the diary**.

- Did you take any **vitamins, minerals or other food supplements** today?

Yes ☒ No ☐

If yes, **please describe the supplements you took below**

Brand	Name (in full) including strength	Number of pills, capsules, teaspoons
Holland & Barrett	*Evening Primrose Oil – 1000mg*	*1 capsule*
Holland & Barrett	*Super EPA fish oil – 1000mg*	*1 capsule*

Please record on the next pages details of any recipes or (if not already described) ingredients of made up dishes or take-away dishes.

Write in recipes or ingredients of made up dishes or take-away dishes			
NAME OF DISH: *Fairy Cakes*		***SERVES:*** *makes 20 cakes*	
Ingredients	***Amount***	***Ingredients***	***Amount***
Don't forget to include any oil or water/stock used!!			
Tate & Lyle caster sugar	*175g*	*Silver Spoon icing sugar*	*140g*
Anchor butter, unsalted	*175g*	*Yellow food colouring*	*3 drops*
eggs	*3*	*water*	*2 tablespoons*
Homepride self-raising flour	*175g*		
Baking powder	*1 teaspoon*		
		Made by friend so am unsure of shops	

Brief description of cooking method

Mix together and bake for 15 min.

Mix icing sugar with water and add colouring. Approx. 1 teaspoon of icing on each cake

Day: *Monday*		**Date:** *11 June 2007*		
Time	**Where? With whom? TV on? Table?**	**Food/Drink description & preparation**	**Brand Name**	**Portion size or quantity <u>eaten</u>**
How to describe what you had and how much you had can be found on pages 28-34				
6am to 9am				
7am	*Dining Room Wife TV on At table*	*Porridge Made with semi-skimmed milk Honey Orange Juice, 100% juice*	*Quaker Sainsbury's Sainsbury's Tropicana*	*30g sachet 200ml milk 2 tsp 1/4 pint*
9am to 12 noon				
10am	*Work desk Colleagues No TV Not at table*	*Coffee, white, with sugar (bean to cup) Bourbon biscuits*	*Vending machine Tesco*	*Regular size vending cup 2 biscuits*

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand Name	Portion size or quantity <u>eaten</u>
		12 noon to 2pm		
1pm	*Work Restaurant* *Colleagues* *At table* *No TV*	*Pepperoni pizza with peppers and olives – thin crust* *Salad –* *Tomatoes* *Cucumber* *Lettuce (iceberg)* *Carrots* *Thousand Island Dressing* *Coca-cola, standard*	*Made in work restaurant* *Tesco*	*9 inch, ate 1/3* *4 cherry* *About 6 slices* *About 4 leaves* *About 10 slices* *1 tbsp* *330ml can*
		2pm to 5pm		
3pm	*Work desk* *Alone* *No TV* *Not at table*	*Bottle of water* *Banana*	*Evian*	*500ml bottle* *1 large*

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand Name	Portion size or quantity <u>eaten</u>
		5pm to 8pm		
7pm	*Indian Restaurant* *Wife and Friends* *No TV* *At table*	*Papadum* *Mango Chutney* *Cucumber Raita* *Chicken Tikka* *Prawn Bhuna* *Niramish (Vegetable side dish, including okra, tomato)* *Pilau Rice* *Keema Nan* *Onion Bhaji* *Beer 4.6% alcohol* *Water*	 *Corona*	*1 and half* *About 4 teasp* *About 4 teasp* *1 chicken breast* *3 serving spoons* *1/2 of dish (about 4 table spoons)* *1 dish* *1/2 of a large size nan* *1 large bhaji* *3 bottles* *2 med glasses*
		8pm to 10pm		
9pm	*Pub* *Wife and Friends* *TV on* *At table*	*Beer, draught, 3.8% alcohol* *Salt and Vinegar Crisps, Crinkle cut*	*Carlsberg* *McCoys*	*2 pints* *1 handful*
		10pm to 6am		

- Was the amount of **food** that you had today about what you usually have, less than usual, or more than usual?

Usual ☒

Less than usual ☐ **More** than usual ☐

If your intake was not usual, please explain why: _____

- Was the amount you had to **drink** today, including water, tea, coffee and soft drinks [and alcohol], about what you usually have, less than usual, or more than usual?

Usual ☒

Less than usual ☐ **More** than usual ☐

If your intake was not usual, please explain why: _____

- Did you **finish all the food and drink** that you recorded in the diary today?

Yes ☒

No ☐

If no, please **go back to the diary and make a note of any leftovers**

- There are some foods that people often forget

  - o Coffee, tea, soft drinks, water
  - o Alcoholic drinks
  - o Milk
  - o Biscuits, cakes, sweets, chocolate, other confectionary
  - o Crisps/nuts/other snacks
  - o Sauce, dressing

If you have forgotten to record any food or drink today, please go back and **add them to the diary**.

- Did you take any **vitamins, minerals or other food supplements** today?

Yes ☒ No ☐

If yes, **please describe the supplements you took below**

Brand	Name (in full) including strength	Number of pills, capsules, teaspoons
Holland & Barrett	*Evening Primrose Oil – 1000mg*	*1 capsule*
Holland & Barrett	*Super EPA fish oil – 1000mg*	*1 capsule*

Please record on the next pages details of any recipes or (if not already described) ingredients of made up dishes or take-away dishes.

Write in recipes or ingredients of made up dishes or take-away dishes			
NAME OF DISH:		***SERVES:***	
Ingredients	***Amount***	***Ingredients***	***Amount***
Don't forget to include any oil or water/stock used!!			
Brief description of cooking method			

Day: *Friday*		**Date:** *7 Sept 2007*		
Time	**Where? With whom? TV on? Table?**	**Food/Drink description & preparation**	**Brand**	**Portion size or quantity <u>eaten</u>**
How to describe what you had and how much you had can be found on pages 28-34				
		6am to 9am		
7.30 am	*Dining room Friends No TV At table*	*Cooked breakfast: Pork sausages, fried in sunflower oil Unsmoked streaky bacon, grilled, fat eaten Mushrooms, fried Baked beans Hash browns, oven baked Tomato, grilled Orange juice Tea Whole milk White Sugar*	 *Walls Tesco Heinz Birds Eye Tropicana Twinings Sainsbury's Silverspoon*	 *2 regular size 2 rashers 6 2 tbsp 2 1, medium Small glass 1 mug Dash 2 heaped teasp*
		9am to 12 noon		
10am	*Work desk Alone No TV Not at table*	*White coffee, no sugar*	*Vending machine*	*1 cup*

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand	Portion size or quantity <u>eaten</u>
		12 noon to 2pm		
1pm	*Work canteen* *Colleagues* *No TV* *At table*	*Soup – minestrone* *White bread, thick slices from large loaf* *Butter, salted*	*Don't know* *Don't know* *Lakeland Dairies*	*1 soup bowl* *2 slices* *2 portion packs*
		2pm to 5pm		
3pm	*Work desk* *Alone* *No TV* *Not at table*	*White coffee* *Chocolate digestives (half coated)*	*Vending machine* *McVities*	*1 cup* *2*

Time	Where? With whom? TV on? Table?	Food/Drink description & preparation	Brand	Portion size or quantity <u>eaten</u>
		5pm to 8pm		
8pm	*Friend's house* *Friends (birthday party)* *Not at table* *No TV*	*Buffet:* *Cheese and tomato pizza* *Potato salad* *4 Sandwiches (all with spread):* *Tuna, sweetcorn and mayo on white bread* *Wafer thin ham & cucumber on wholemeal bread* *Smoked salmon and cream cheese on wholemeal bread* *Cheddar Cheese and pickle on white bread* *Quiche Lorraine* *Water biscuits* *Cheddar cheese* *Pickle* *Beer, 5% alcohol, canned*	 *Don't know* *Don't know* *Carr's* *Branston's* *Heineken*	 *1/6 of 9in pizza* *1 tbsp* *See recipe section* *1/8 quiche* *4* *4 thick slices* *2 tsp* *2 pints*
		8pm to 10pm		
9pm	*Friend's house* *Friends* *TV on* *Not at table*	*Beer, 5% alcohol, canned* *Salted peanuts*	*Heineken* *KP*	*2 pints* *2 handfuls*
		10pm to 6am		
11pm	*Living room* *Alone* *TV on* *Not at table*	*Dry white wine, 13.5% alcohol*	*Jacob's Creek*	*1 small glass*

- Was the amount of **food** that you had today about what you usually have, less than usual, or more than usual?

Usual ☒

Less than usual ☐ **More** than usual ☐

If your intake was not usual, please explain why: _____

- Was the amount you had to **drink** today, including water, tea, coffee and soft drinks [and alcohol], about what you usually have, less than usual, or more than usual?

Usual ☒

Less than usual ☐ **More** than usual ☐

If your intake was not usual, please explain why: _____

- Did you **finish all the food and drink** that you recorded in the diary today?

Yes ☒

No ☐

If no, please **go back to the diary and make a note of any leftovers**

- There are some foods that people often forget

  - Coffee, tea, soft drinks, water
  - Alcoholic drinks
  - Milk
  - Biscuits, cakes, sweets, chocolate, other confectionary
  - Crisps/nuts/other snacks
  - Sauce, dressing

If you have forgotten to record any food or drink today, please go back and **add them to the diary**.

- Did you take any **vitamins, minerals or other food supplements** today?

  Yes ☒ No ☐

  If yes, **please describe the supplements you took below**

Brand	Name (in full) including strength	Number of pills, capsules, teaspoons
Holland & Barrett	*Evening Primrose Oil – 1000mg*	*1 capsule*
Holland & Barrett	*Super EPA fish oil – 1000mg*	*1 capsule*

Please record on the next pages details of any recipes or (if not already described) ingredients of made up dishes or take-away dishes.

Write in recipes or ingredients of made up dishes or take-away dishes			
NAME OF DISH: *Buffet sandwiches*		***SERVES:*** *1*	
Ingredients	***Amount***	***Ingredients***	***Amount***
Don't forget to include any oil or water/stock used!!			
Thick sliced white bread	*2 slices*	*Cream cheese*	*2 tsp*
Thick sliced wholemeal bread	*2 slices*	*Cheddar cheese*	*2 slices*
Unknown spread	*Medium spread on all slices*	*Pickle*	*2 tsp*
Tuna, sweetcorn & Mayo	*1 tbsp*		
Wafer thin ham	*1 slice*		
Cucumber	*2 slices*		
Smoked salmon	*1 slice*		
Brief description of cooking method			

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this book

Food/Drink	***Description & Preparation***	***Portion size or quantity***
Bacon	Back, middle, streaky; smoked or un-smoked; fat eaten; dry-fried or fried in oil/fat (type used) or grilled rashers	Number of rashers
Baked beans	Standard, reduced salt or reduced sugar	Spoons, weight of tin
Beefburger (hamburger)	Home-made (ingredients), from a packet or take-away; fried (type of oil/fat), microwaved or grilled; economy; with or without bread roll, with or without salad e.g. lettuce, tomato	Large or small, ounces or in grams if info on package
Beer	What sort e.g. stout, bitter, lager; draught, canned, bottled; % alcohol or low-alcohol or home-made	Number of pints or half pints, size of can or bottle
Biscuits	What sort e.g. cheese, wafer, crispbread, sweet, chocolate (fully or half coated), shortbread, home-made	Number, size (standard or mini variety)
Bread (see also sandwiches)	Wholemeal, granary, white or brown; currant, fruit, malt; large or small loaf; sliced or unsliced loaf	Number of slices; thick, medium or thin slices
Bread rolls	Wholemeal, white or brown; alone or with filling; crusty or soft	Size, number of rolls
Breakfast cereal (see also porridge)	What sort e.g. Kellogg's cornflakes; any added fruit and/or nuts; Muesli – with added fruit, no added sugar/salt variety	Spoons or picture 1
Buns and pastries	What sort e.g. iced, currant or plain, jam, custard, fruit, cream; type of pastry; homemade or bought	Size, number
Butter, margarine & fat spreads	Give full product name	Thick/average/thin spread; spoons
Cake	What sort: fruit (rich), sponge, fresh cream, iced, chocolate coated; type of filling e.g. buttercream, jam	Individual or size of slice, packet weight, picture 10

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this book

Food/Drink	***Description & Preparation***	***Portion size or quantity***
Cereal bars	What sort; with fruit/nuts, coated with chocolate/yoghurt; fortified with vitamins/minerals	Weight/size of bar; from multipack
Cheese	Type e.g. cheddar, cream, cottage, soft; low fat	Picture 9, or number of slices, number of spoons
Chips	Fresh, frozen, oven, microwave, take-away (where from); thick/straight/crinkle/fine cut; type of oil/fat used for cooking	Picture 4, number of spoons, number of chips
Chocolate(s)	What sort e.g. plain, milk, white, fancy, diabetic; type of filling;	Weight/size of bar
Coffee	With milk (see section on milk); half milk/half water; all milk; ground/filter, instant; decaffeinated. If café/takeaway, was it cappuccino, latte etc	Cups or mugs, size of takeaway e.g. small. medium
Cook-in sauces	What sort; pasta, Indian, Chinese, Mexican; tomato, white or cheese based; does meat or veg come in sauce; jar or can	Spoons, size of can or jar
Cream	Single, whipped, double or clotted; dairy or non-dairy; low-fat; fresh, UHT/Longlife; imitation cream e.g. Elmlea	Spoons
Crisps	What sort e.g. potato, corn, wheat, maize, vegetable etc; low-fat or low-salt; premium variety e.g. Kettle chips, Walker's Sensations	Packet weight, standard or from multipack
Custard	Pouring custard or egg custard; made with powder and milk/sugar, instant, ready to serve (tinned or carton); low fat, sugar free	Spoons
Egg	Boiled, poached, fried, scrambled, omelette (with or without filling); type of oil/fat, milk added	Number of eggs, large, medium or small
Fish (including canned)	What sort e.g. cod, tuna; fried (type of oil/fat), grilled, poached (water or milk) or steamed; with batter or breadcrumbs; canned in oil, brine or tomato sauce	Size of can or spoons (for canned fish) or picture 7 for battered fish

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this book

Food/Drink	***Description & Preparation***	***Portion size or quantity***
Fish cakes & fish fingers	Type of fish; plain or battered or in breadcrumbs; fried, grilled, baked or microwaved; economy	Size, number, packet weight
Fruit - fresh	What sort; eaten with or without skin	Small, medium or large
Fruit - stewed/canned	What sort; sweetened or unsweetened; in fruit juice or syrup; juice or syrup eaten	Spoons, weight of can
Fruit – juice (pure)	What sort e.g. apple, orange; sweetened or unsweetened; pasteurised or UHT/Longlife; freshly squeezed; added vitamins/minerals, omega 3	Glass (size or volume) or carton size
Hot chocolate, cocoa malted drinks etc	Type; standard/low calorie/lite; instant; all water / half milk half water / all milk (see section on milk); any sugar added	Cup or mug plus how much powder e.g. teaspoons, weight on packet
Ice cream	Flavour; dairy or non-dairy alternatives e.g. soya; luxury/premium	Spoons/ scoops
Jam, honey	What sort; low-sugar/diabetic; shop bought/brand or homemade	Spoons, heaped or level, or thin or thick spread
Marmalade	Type; low-sugar; thick cut; shop bought/brand or homemade	Spoons, heaped or level, or thin or thick spread
Meat (see also bacon, burgers & sausages)	What sort; cut of meat e.g. chop, breast, minced; lean or fatty; fat removed or eaten; skin removed or eaten; how cooked; with or without gravy	Large/small/medium, spoons, or picture 6 for stew portion, slices

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this book

Food/Drink	***Description & Preparation***	***Portion size or quantity***
Milk	What sort; whole, semi-skimmed, skimmed or 1% fat; fresh, sterilized, UHT, dried; soya milk (sweetened/unsweetened), goats' milk, rice milk, oat milk; flavoured; fortified with added vitamins and/or minerals. Formula milks for toddlers	Pints, glass (size or volume) or cup. On cereal:*damp/average/ drowned*. In tea/coffee: *a little/some/a lot.* Formula: *proportion of formula to water*
Milkshake	Fresh or long life/UHT; dairy or non-dairy alternative e.g. soya; if powder, made up with whole, semi-skimmed, skimmed milk; flavour; fortified with vitamins and/or minerals	Glass (size or volume) cups or volume on bottle/carton
Nuts	What sort; dry roasted, ordinary salted, honey roasted; unsalted	Packet weight, handful
Pie (sweet or savoury)	What sort/filling; one pastry crust or two; type of pastry	Individual or slice, or picture 8
Pizza	Thin base/deep pan or French bread; topping e.g. meat, fish, veg; stuffed crust	Individual, slice, fraction of large pizza e.g. ¼
Porridge	Made with oats or cornmeal or instant oat cereal; made with milk and/or water; added sugar, honey, syrup or salt; with milk or cream	Bowls, spoons
Potatoes (see also chips)	Old or new; baked, boiled, roast (type of oil/fat); skin eaten; mashed (with butter/spread and with or without milk); fried/chips (type of oil/fat); instant; any additions e.g. butter	Mash – spoons, number of half or whole potatoes, small or large potatoes
Pudding	What sort; e.g. steamed sponge; with fruit; mousse; instant desserts; milk puddings	Spoons, picture 10 for slice of sponge
Rice	What sort; e.g. basmati, easy cook, long or short grain; white or brown; boiled or fried (type of oil/fat)	Spoons or picture 2

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this book

Food/Drink	***Description & Preparation***	***Portion size or quantity***
Salad	Ingredients; if with dressing what sort (oil and vinegar, mayonnaise)	Amount of each component
Sandwiches and rolls	Type of bread/roll (see Bread & Rolls); butter or margarine; type of filling; including salad, mayonnaise, pickle etc. If shop-bought, where from?	Number of rolls or slices of bread; amount of butter/margarine (on both slices?); amount of filling
Sauce – cold (including mayonnaise)	Tomato ketchup, brown sauce, soy sauce, salad cream, mayonnaise; low fat;	Spoons
Sauce – hot (see also cook-in sauces)	What sort; savoury or sweet; thick or thin; for gravy - made with granules, stock cube, dripping or meat juices	Spoons
Sausages	What sort; e.g. beef, pork; fried (type of oil/fat) or grilled; low fat	Large or small, number
Sausage rolls	Type of pastry	Size - jumbo, standard, mini
Scone	Fruit, sweet, plain, cheese; type of flour; homemade	Small, medium or large
Savoury snacks - in packet	What sort: e.g. Cheddars, cheese straws, Twiglets, Pretzels	Size (standard or mini variety), packet weight
Smoothies	If homemade give recipe. If shop-bought, what does it contain e.g. fruit, milk/yoghurt, fruit juice	Glass or bottle (size or volume)
Soft drinks – squash/ concentrate/cordial	Flavour; no added sugar/low calorie/sugar free; “high” juice; fortified with added vitamins and/or minerals	Glass (size or volume)
Soft drinks – carbonated/fizzy	Flavour; diet/low-calorie; canned or bottled; cola – caffeine free	Glass, can or bottle (size or volume)

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this book

Food/Drink	***Description & Preparation***	***Portion size or quantity***
Soft drinks – ready to drink	Flavour; no added sugar/low calorie/sugar free; real fruit juice? If so, how much?; fortified with added vitamins and/or minerals	Glass, carton or bottle (size or volume)
Soup	What sort; cream or clear; fresh/chilled, canned, instant or vending machine. If home-made, give recipe	Spoons, bowl or mug
Spaghetti, other pasta	What sort; fresh/chilled or dried; white, wholemeal; canned in sauce; type of filling if ravioli, cannelloni etc	Spoons (or how much dry pasta) or picture 3
Toddler foods	Food in jars: description and ingredients (e.g. vegetable risotto, fruit puree); Dry Foods: description (e.g. baby rice, cauliflower cheese); made up with milk and/or water	Size of jar or packet, spoons for powdered foods (volume of water/milk used to mix with cereal or powder)
Spirits	What sort: e.g. whisky, gin, vodka, rum	Measures as in pub
Sugar	Added to cereals, tea, coffee, fruit, etc; what sort; e.g. white, brown, demerara	Heaped or level teaspoons
Sweets	What sort: e.g. toffees, boiled sweets, diabetic, sugar-free	Number, packet weight
Tea	With/without milk (see section on milk); decaffeinated, herb	Mugs or cups
Vegetables (not including potatoes)	What sort; how cooked/raw; additions e.g. butter, other fat or sauce	Spoons, number of florets or sprouts, weight from tins or packet
Wine, sherry, port	White, red; sweet, dry; % alcohol or low-alcohol	Glass (size or volume)
Yoghurt (inc drinking yoghurt), fromage frais	What sort: e.g. natural/plain or flavoured; creamy, Greek, low-fat, very low fat/diet, soya; with fruit pieces or fruit flavoured; twinpot; fortified with added vitamins and/or minerals; longlife/UHT; probiotic	Pot size or spoons

Spoon size does matter!!!! When describing amounts check the spoons you use with the life size pictures at the back of this book

Food/Drink	***Description & Preparation***	***Portion size or quantity***
Home-made dishes	Please say what the dish is called (record recipe or details of dish if you can in the section provided) and how many persons it serves	Spoons – heaped or level, number, size, or proportion of recipe e.g. ½ of recipe
Ready-made meals	Full description of product; does it contain any accompaniments e.g. rice, vegetables, sauces; chilled or frozen; microwaved, oven cooked, boil-in-the-bag; low fat, healthy eating range. Enclose label and ingredients list if possible in your plastic bag	Packet weight (if didn't eat whole packet describe portion consumed)
Take-away food or food eaten out	Please say what the dish is called and give main ingredients if you can. Give name of a chain restaurant e.g. McDonalds	Spoons, portion size e.g. small/medium/large

Use the pictures to help you indicate the size of the portion you have eaten.
Write on the food record the picture number and size A, B or C nearest to your own helping.

Remember that the pictures are much smaller than life size.
The actual size of the dinner plate is 10 inches (25cm), the side plate, 7 inches (18cm), and the bowl, 6.3 inches (16cm).

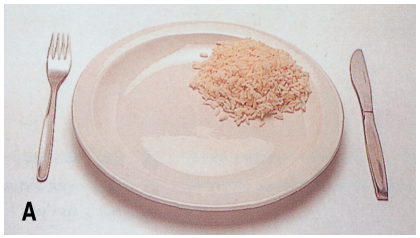
The tables on pages 28 - 34 also give examples of foods that you might eat and how much information is required about them.

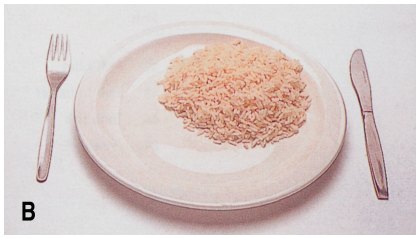
Please note, these photographs should not be used to describe children's portions – please use household measures

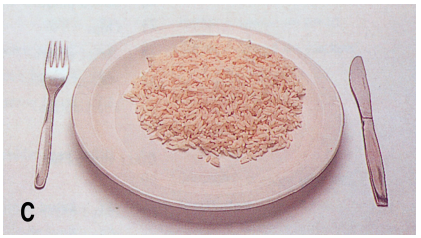
1. Breakfast cereals

Please note, these photographs should not be used to describe children's portions – please use household measures

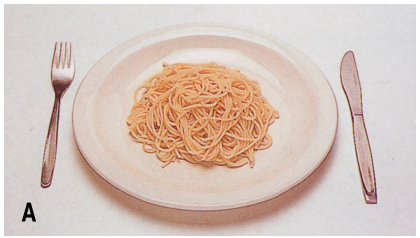
2. Rice

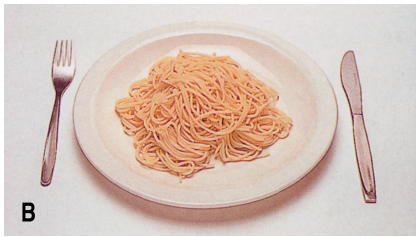


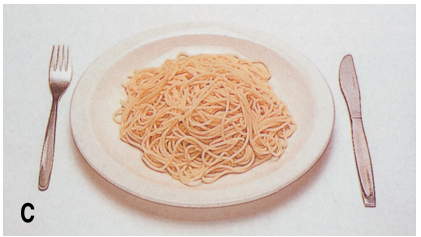




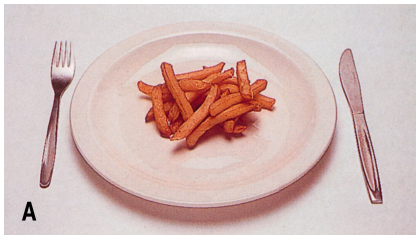
3. Spaghetti

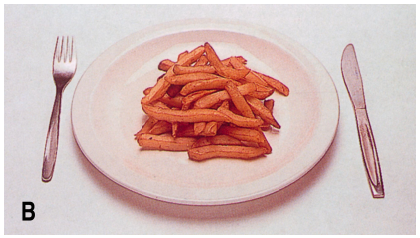






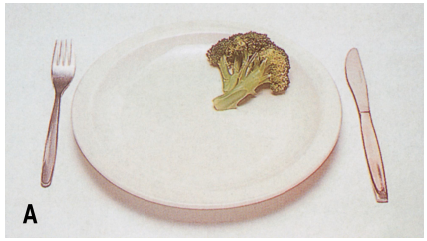
4. Chips



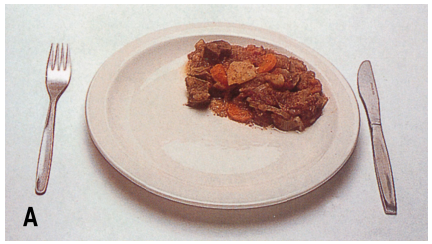


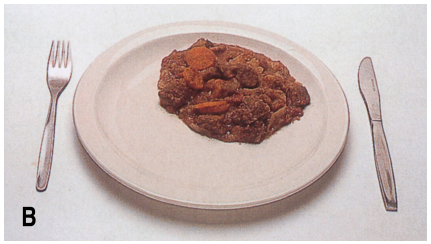
Please note, these photographs should not be used to describe children's portions – please use household measures

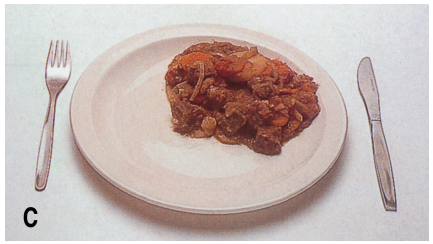
5. Broccoli or cauliflower



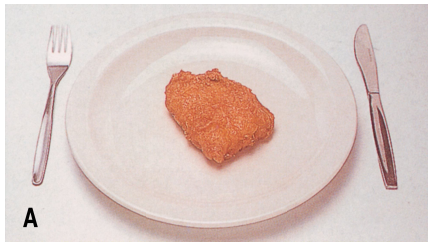
6. Stew or curry

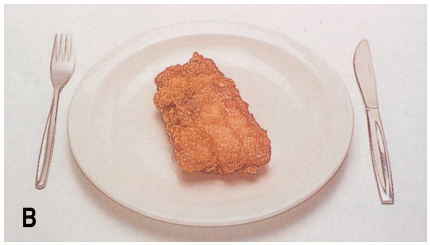


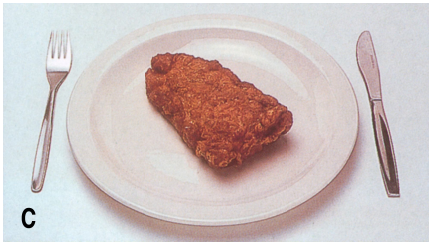




7. Battered fish

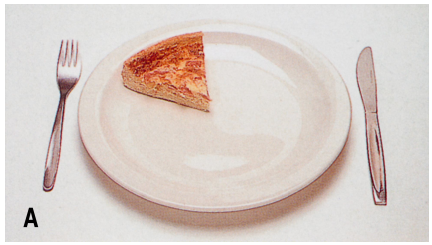


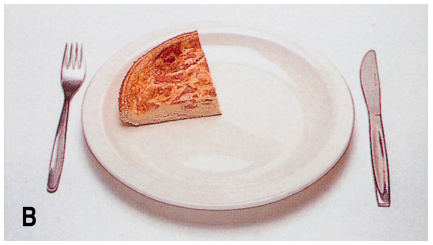


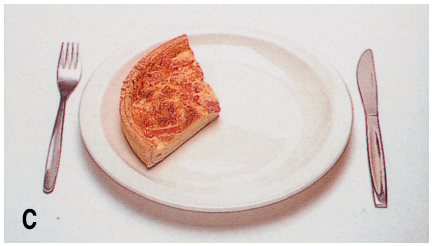


Please note, these photographs should not be used to describe children's portions – please use household measures

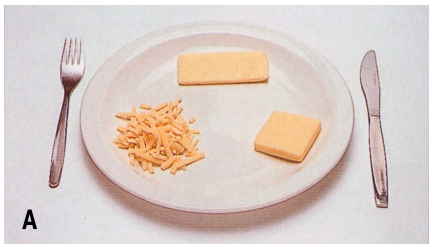
8. Quiche / Pie

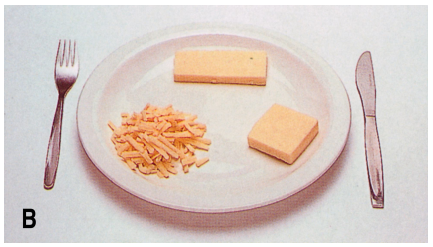


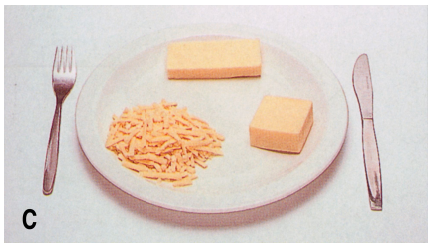




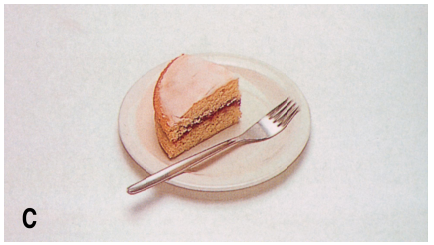
9. Cheese







10. Sponge cake

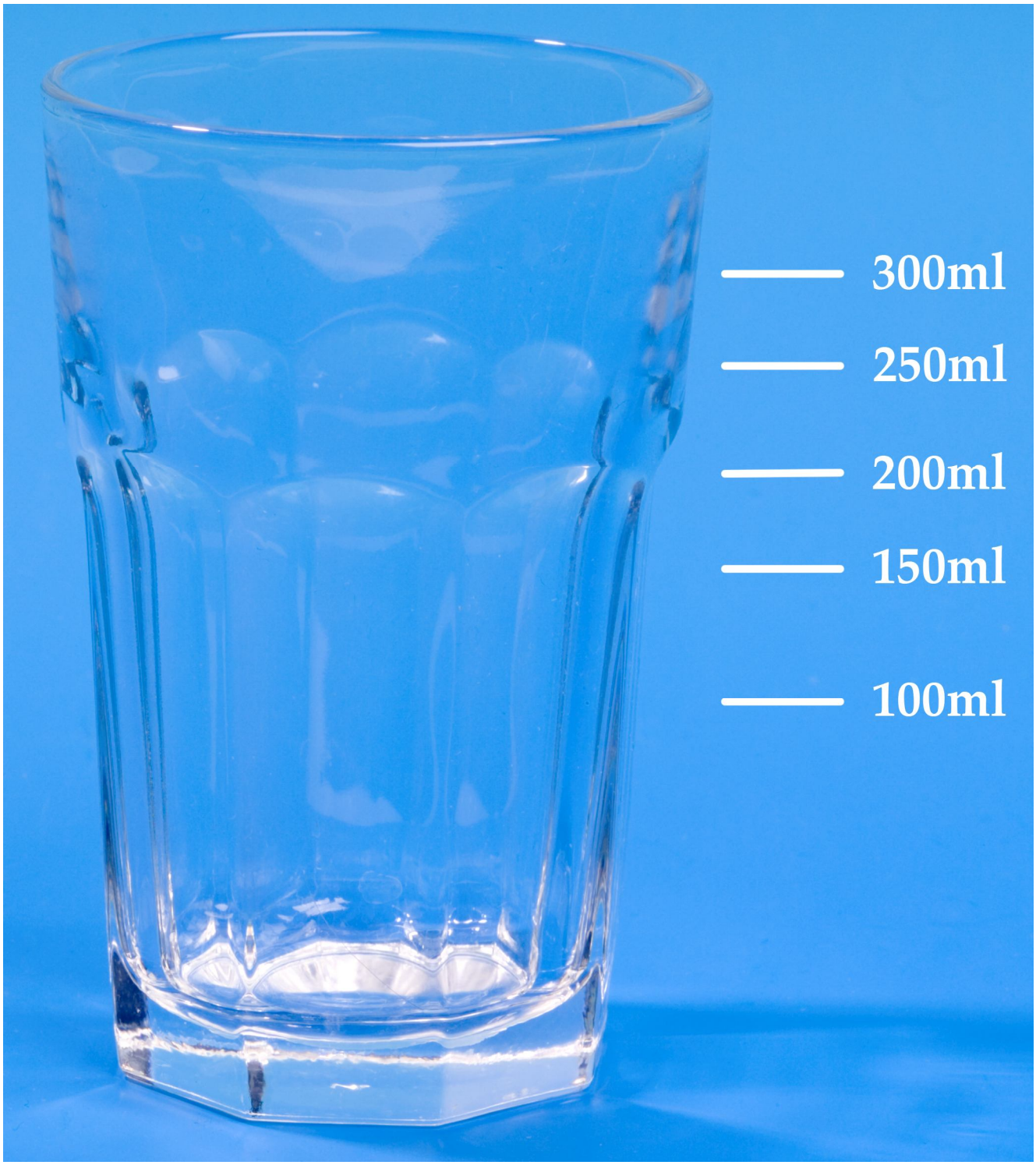


Typical quantities of drinks in various containers measured in millilitres (ml)

	Small glass	Average glass	Large glass	Vending cup	Cup	Mug
Soft drinks	**150**	**200**	**300**			
Wine	**125**	**175**	**250**			
Hot drinks				**170**	**190**	**260**

Glasses come in different shapes and sizes. On the next page is a life size glass showing approximate volumes. You can use this picture as a guide for estimating how much volume of drink the glass holds you are drinking from.

Life Size Glass



[Spoon PDF]

[Spoon PDF]

Acknowledgements

Thanks for permission to use pictures from:

Nelson, M., Atkinson, M.
& Meyer, J. (1997).
A Photographic Atlas of Food Portion Sizes.
London, MAFF Publications.

NatCen
Social Research that works for society

MRC Human Nutrition Research

National Diet and Nutrition Survey.

Interviewer Diary Assessment Schedule

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1 DIARY DOCUMENTS

You will need the following documents **for each participant**:

- Adult diary (ages 16+), child diary (ages 4 - 15) or toddler diary (ages 1½ - 3 to be completed by parent/carer)
- Separate instructions booklet (one per household)
- Plastic bag for food labels. Each bag will contain a double-sided card with instructions on what information on packaging is helpful.
- Reminder card
- Extra diary pages (2 double-sided sheets) (adult or toddler diary only)
- (IF PARTICIPANT IS A YOUNG CHILD OR TODDLER) One carer pack containing one carer letter, four double sided food and drink recording sheets and a zip lock bag

Instruction booklet

Please provide participants with an instruction booklet (one per household). The instruction booklet contains the same instructions as in the diary. It is aimed to make filling out the diary easier by providing all the instructions, description prompts, and photos in a separate booklet, saving the participants from having to flick back and forth in the diary. Remind children not to use the adult photographs in the instruction booklet as these are based on adult portion sizes (see section 2.1.7).

Although the instruction booklet is based on the adult diary (it contains the same instructions, example diary days and food pictures as the adult diary) it is still a useful reference tool regardless of whether an adult, child or toddler diary is being completed. In addition, it contains relevant description prompts for all ages.

Plastic bag for food labels

These are for participants to collect labels, in particular, ready meals and seasonal foods. Each bag contains a double-sided card with instructions on what information on packaging is helpful. Participants are asked to wash all labels/packaging that has come into contact with food. You should label plastic bags with the participant's serial number. Please do not send glass jars back with the diary, instead aim to remove the label from the container.

Reminder card

When handing over the diary please complete the details on the front cover of the diary including the date of the day they should start recording. You should also write this date on the Reminder Card and ask them to put this somewhere prominent such as on their fridge door, bedroom mirror etc. It may also help the participant if you write in the day and dates of the diary days allocated by CAPI in the diary itself.

Extra pages

You also have extra pages to give to participants filling out the adult or toddler diaries. These are to use if they run out of space in the main diary. Please point out to participants that they need to enter the day and date on any extra pages they use. Before returning any used extra pages, you must enter the serial number at the top in case they become separated from the main diary.

Carer pack

The pack consists of (in a plastic zipper bag):

- 1 x carer letter.
- 4 x carer food and drink recording sheets (one for each diary day)

Young children and toddlers might have meals where the person keeping the diary on their behalf is not present e.g. at child-minders, nursery, relative or friend's house. Ideally we want 'out-of-home' carer(s) to fill in the diary or, as an alternative, they can fill in a **carer food and drink recording sheet,** which is a simpler form for recording key details about what the child ate whilst in their care.

In households where a parent is going to be completing the diary for their child, you should check whether it is likely that someone else will be feeding their child over the four-day diary recording period. If yes, explain that we would like 'out-of-home' carer(s) to record what was eaten while the child was in their care. The parent/primary carer should show the 'out-of-home' carer(s) the **carer letter** and then give them either the diary or one of the **carer food and drink recording sheets**. It is easier and safer if they are all kept in the plastic zipper bag. When the parent collects their child they should pick up the diary or **carer food and drink recording sheet**. They do not need to transcribe information recorded on the **carer food and drink recording sheet** into the diary but they must keep any loose sheets safe until you collect them.

Before returning any used carer recording sheets, you must enter the serial number at the top in case they become separated from the main diary.

2 PLACING THE DIARY

It is important that when you leave the household, the participant(s) feels confident with what is expected of them and is aware of the information in the diary that will help them record what they have eaten as accurately as possible.

You will need to give them key instructions as to how to complete the diary. Remember for toddlers and younger children, a parent/carer will be doing the recording on their behalf.

The diary should include **all food and drinks** (including water) consumed throughout the **day and night**, including snacks, and food and drink consumed away from the home.

It is important that the participant(s) do **not** change what they normally eat just because they are keeping a diary. The **dietary feedback** we give them is based on what they have recorded. So it is important they give us as much information as they can, then this feedback will be representative of what they actually ate.

They should write down everything **at the time of eating** rather than from memory later. This means taking the diary with them when they go out. If they do forget the diary then they should make notes while they are out and transfer them to the diary later.

Although there are age specific diaries, all are very similar in terms of how the information is collected. They all start with instructions for the participant, followed by some example diary days and then a section for helping them describe the food and drink they had and how much. This is followed by the main diary itself that the participant fills in and finally there are some questions on their usual eating habits to be completed at the end of the recording period. Please familiarise yourself with the important components of the food diary in order to explain these to your participants when placing the diaries. Use the **examples** within the diaries themselves to demonstrate what information is needed. These can be found on:

- PAGE 4-15 OF ADULT DIARY
- PAGE 4-13 OF CHILD DIARY
- PAGE 4-15 OF TODDLER DIARY

2.1 How to fill in the diary

2.1.1 Day and Date

This should be filled in either by you at the first visit when you place the diary or by the participant as they go along. Please make sure that this is the correct day and date for the recording period.

2.1.2 Time Slots

For easy use each day is divided into sections, from the first thing in the morning to late evening and through the night. Participants should note the time of each eating occasion in the column provided.

2.1.3 Where and with whom, at table and TV on?

For each eating occasion, participants need to tell us what **room or part of the house they were in** e.g. kitchen or living room. If they ate at a work canteen, a restaurant, fast food chain or car, that location should be written down. We would also like to know **who they share their meals with**, e.g. whether they ate alone or with others. If they ate with others they should describe the relationship e.g. partner, children, colleagues (not just record names). We would also like to know **if they ate at a table** and **whether they were watching television whilst eating**. For those occasions where they were not at a table or watching TV they should write 'Not at table' or 'No TV' rather than leaving it blank. All this information is useful in two ways: 1) it helps us decide how to code certain foods depending on where they were eaten such as school lunches or food eaten in restaurants; 2) it tells us about the environment in which people are eating so that we can look at how that might influence what people chose to eat and how much. Explain to your participants why we collect this detail as a way of encouraging them to record it for each eating occasion.

2.1.4 Food/Drink description and preparation

Participants need to record as much detail as they can about the type of food and drink they consumed including how it was prepared. There are prompts for most foods in the diary (listed mainly in alphabetical order) which tell participants the sort of detail needed. For example, if a participant has squash to drink, they can look up squash under soft drinks and it tells them what they need to record. The **prompts** can be found on:

PAGE 23-28 OF ADULT DIARY (23-29 for A4 DIARY)

PAGE 20-25 OF CHILD DIARY

PAGE 23-28 OF TODDLER DIARY

Participants should also record as much detail as possible about takeaways or other made-up dishes not prepared at home such as those eaten in restaurants or at a friend's house.

2.1.5 Recipes

There are special pages for any homemade recipes e.g. shepherd's pie, vegetable lasagne, apple crumble and participants should list the ingredients, the amount of each ingredient (including water or other fluids), how many people the recipe was for, how much of the recipe the participant ate, a brief cooking method and, if anything was fried, did they use oil, what type and how much. If a recipe was cooked by another person, if possible the participants should get all the recipe details from whoever cooked the dish.

2.1.6 Brand name

Wherever possible we ask that participant's record brand names as this is very helpful for coding. **Please note it is the brand name we want not the supermarket where the product was bought**.

2.1.7 Portion sizes

It is important that we do not guess at how much a participant is eating. Therefore, we need the participant to describe the amount consumed using **household measures** e.g. one teaspoon (tsp) of sugar, two thick slices of bread, 4 tablespoons (tbsp) of peas, ½ cup of gravy or **weights from packaging** e.g. 420g tin of baked beans, 125g pot of yoghurt, 330ml can of fizzy drink.

Participants should be careful when describing amounts in spoons and make sure that they are referring to the correct spoon size. They should compare the spoon they are using with the life size pictures in the front of the diary.

FOR PARTICIPANTS COMPLETING ADULT DIARY ONLY

Only if the participants are 16 and over can they describe the amount of certain foods using the picture examples on **pages 29-32 (30-33 in A4 Adult Diary)** e.g. 4B, 6A, 9C.

The picture examples can only be used to describe foods stated in the adjacent label. For example any type of breakfast cereal can be described using pictures 1A, 1B and 1C. However pictures 2A, 2B and 2C can only be used to describe rice." Make sure the respondent states the picture number as well as the portion. If the respondent has used: A, B or C to describe portion sizes for other food items not included in the picture portions please probe for an appropriate household measure or portion/wrapper weight.

For drinks, quantity can be described using: the **size of glass, cup etc** (e.g. large glass) or the **volume** (e.g. 300ml). In the adult and child diaries there is a picture of a life size glass and some other guidance on volumes. This is to ensure consistency when participants are describing, for example, a small glass. They should refer to the table and life size glass so that their 'small glass' is the same volume as ours!

PAGE 33-34 OF ADULT DIARY (34-35 in A4 DIARY)

PAGE 26 OF CHILD DIARY

There is also space for the participant to **record the volume of their usual drinking cup/mug/glass/bottle** at the end of the diary. Please encourage participants to measure their cup using a measuring jug and help them if necessary. This will allow us to be more accurate with drink volumes.

For **composite foods** participants need to list individual components. Composite foods consist of more than one food, consumed together but not cooked together, that can be split into their component parts. Examples of composite foods are salads or sandwiches but they also apply to drinks such as gin and tonic, tea with milk and sugar. So a sandwich would be split into bread, spread and filling(s) and the amount of each component recorded separately. For example:

Sandwich:	bread	2 thin slices
	butter	thin spread on both slices
	ham	1 medium slice
	tomato	½ medium slice

Splitting foods up like this means we get accurate portion sizes no matter how small the amount i.e. half a teaspoon of sugar in tea or a slice of cucumber in a sandwich.

2.1.8 Questions on that day's food and drink intake

These need to be filled out by participants at the end of each diary day to indicate whether the day's consumption of food and drink was typical, and provide reasons if it was more or less than their usual intake.

2.1.9 Leftovers

There is a prompt for participants to check that the amounts they have recorded in the diary reflect what was actually eaten and that they have taken into account any leftovers. This is particularly important with toddlers and young children or other proxies.

2.1.10 Dietary supplements

If participants have taken supplements, they need to record them in the table provided including brand, type and strength of the supplement, and how many taken. It is also helpful if they can provide any packaging.

2.1.11 Forgotten food/drink checklist

A list of commonly forgotten food and drink items has been listed at the end of each diary day. Please encourage participants to think about what they have consumed, and whether they need to go back to the diary page to add anything in.

2.1.12 Child and toddler diaries

The child and toddler diaries are very similar to the adult diary. However, because children, particularly young children and toddlers, eat differently from adults there are some points that should be considered when placing and checking these diaries.

Portion sizes and leftovers

There are no food pictures in the child and toddler diaries. This is because the photographs have been validated for adults only. For toddlers, the portion sizes depicted in the food pictures are not usually relevant to the foods or amounts that toddlers consume. Therefore, children and parent/carers are encouraged to describe foods using household measures or weights from packaging instead of using the photographs from the adult diary.

Children tend to leave leftovers more often than adults and with very young children a lot of what is served ends up on the floor. In particular, parent/carers should be reminded that the portion size they record is the amount eaten, not the amount served.

Recipes

If a child/toddler eats a homemade dish and the recipe has already been recorded in the adult diary, it does not need to be recorded again in the child or toddler diary. The child or parent/carer can just write “see adult diary” in the recipe box. However, they still need to record **how much** of the recipe the child ate.

2.1.13 Food eaten away from home

Participants are asked to record food and drink consumed **at home and away from home** e.g. restaurant, friend’s house and school. Therefore, they are expected to take the diary with them when they are away from home. For young children this may mean another adult such as a child minder or nursery teacher completing the diary for the child. In that case, they should be given a carer pack (see section 1). If a participant forgets to take the diary out with them, they should make notes and transfer these into their diary as soon as possible.

We understand that it is difficult for participants to collect the same level of detail for foods eaten outside the home. They should, however, try and record as much information as possible, describing what is in dishes rather than just giving the name. For example, if they have a vegetable curry in a restaurant, they should describe what vegetables were in it and whether it was a tomato based sauce or a creamy sauce.

2.2 Practise makes perfect!

The best way of ensuring your participant(s) have understood the instructions and are sufficiently familiar with the tools available to them, is to get them to practise whilst you are still there to offer assistance and advice.

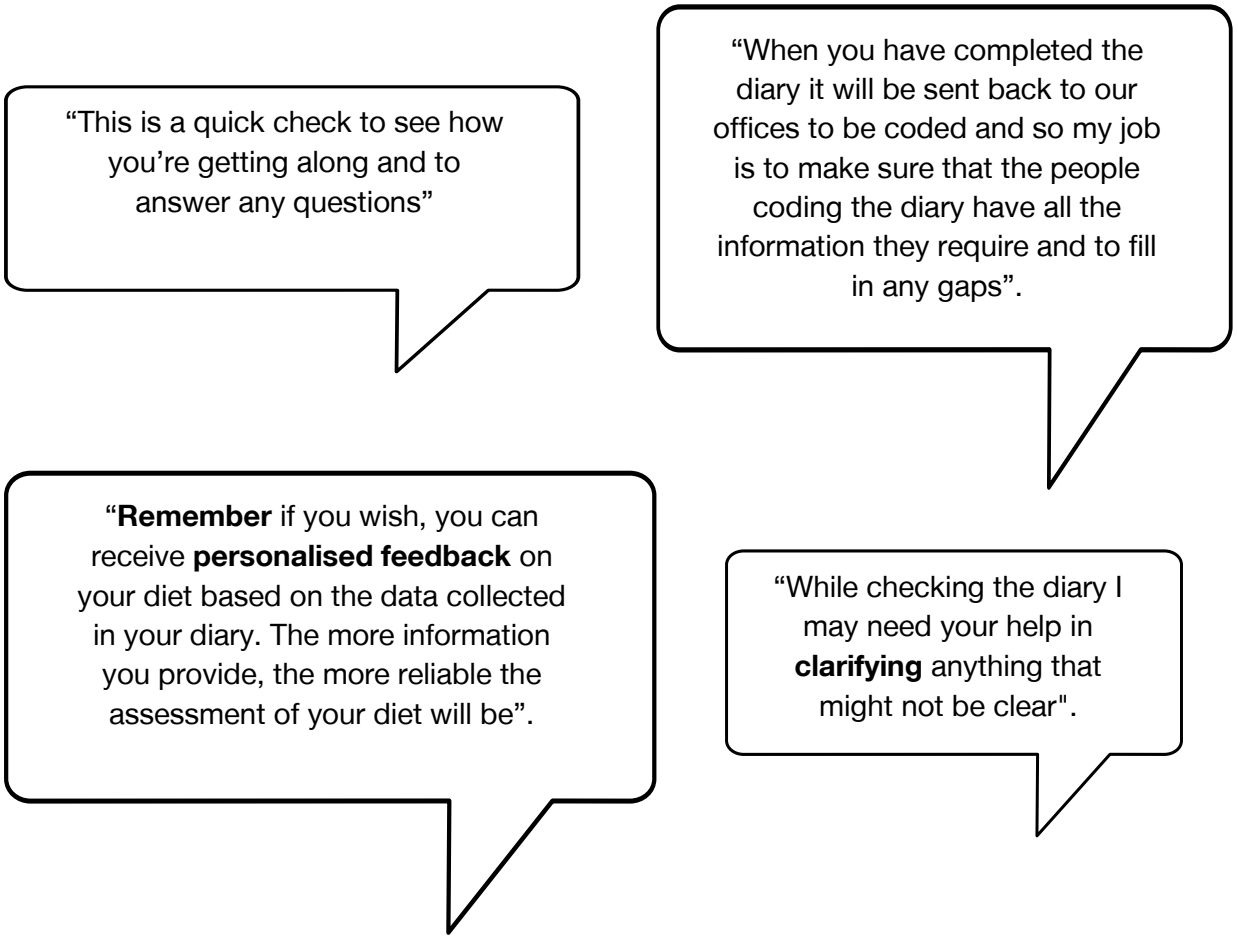
Using the practice pages in the front of the diary (pg 16 adult and toddler diary and pg 14 in child diary), ask the participant(s) to recall a recent eating occasion (a couple of food items will suffice). If a parent is going to be completing the diary for their child, they should recall a recent eating occasion for their child. Show them how you would record those food items in the diary making sure you put them in the correct time slot and fill in the details such as where and with whom. Refer to the food description pages, demonstrating how these ensure you have recorded enough detail about the food. If appropriate, refer to the photos of portion sizes, the life size glass and the life size spoons.

Then ask your participant(s) to recall a different recent eating occasion and, this time, have them record the information on the practice page. Some participants will need to record more practice items than others, depending on how you feel they are coping. Some adult participants, especially those with impaired vision, may struggle so offer them the larger A4 version of the adult diary. Others may prefer to use the A4 diary for other reasons. Remember you will be returning to the household on the second day of recording so if you have concerns about a participant's ability, you will have another chance to go over things and check what they have done so far. It is also beneficial to go through a recipe with them on the practice pages even if a recipe was not on the eating occasion described above, to make sure they understand what detail is required.

2.3 Check-up visit

This visit is an opportunity to provide encouragement and support and to point out things the participant may be omitting, thereby improving recording for the remaining days. You should review what they have recorded so far. Try to go through the diary with adult participants and children aged over 12 on their own. We appreciate that this might not be possible (given practical considerations as well as other issues such as cultural constraints) so do not enforce this as a rule. Obviously, where a participant is not sure of the full details of the food he/she ate it will be necessary to refer to someone else in the house for clarification such as the MFP.

Remain neutral when reviewing the diary, as participants may be defensive about what they have recorded. In order to maximise co-operation and improve future recording, we suggest you make the following points to the participant when reviewing their diary:



2.4 Reminder phone call

If there is a gap of seven days or more between the diary placement and start date (first date of diary recording), please arrange a mutually convenient time with the participant when they are at home for you to make a reminder phone call (one or two days before the start date). When you call, run through everything on the reminder phone call list (see Section 5), referring the participant to the corresponding pages in their diary when necessary.

3 REVIEWING THE DIARY

We want the diary to be as complete and accurate as possible. Missing information should be collected while you are still at the participant's home because this increases the chance of filling in any gaps. If you are visiting the participant after 1 or 2 days of recording, this is an opportunity to point out things they may be omitting, and therefore improve recording for the remaining days. Please use a **green pen** when you write on the diaries so that we can see where you have needed to probe for additional information or made changes.

3.1 What to focus on when checking the diary

3.1.1 Descriptions of food and drink

Have sufficient details been recorded? Be as specific as you can. Use the prompts in the **instruction book** (pages 28-34) to check. Use **Section 4: Food and drink description prompts** of this booklet to probe the participant for missing information, like cooking methods (fried, grilled, baked etc) and check for any additions (fats, sugar/sweeteners, sauces, pepper etc). Also refer to the commonly forgotten food list in Section 4. Check with the participant that they have considered this list and any other food/drink that they may have forgotten and fill the gaps if necessary. If the participant has consumed squash, how was it made? e.g. 1 part squash to 4 parts water and was it no added sugar, single or double concentrated.

For foods eaten away from the home and takeaways, have details been recorded of what these dishes contain, either in the diary itself or on the recipe pages? Make sure the participant has given you the name of the outlet where the food was purchased.

3.1.2 Portion sizes

Does each food and drink item have a corresponding portion size? Make sure the participant has also filled in the amount of their usual drinking vessel in the section provided. Make sure you double check that leftovers have been taken into account. This is particularly important with children and elderly participants. If the MFP or carer has completed the diary, check portion sizes with the participant.

If the participant is aged under 16 years, the food photo atlas must be used when reviewing portion sizes (see section 3.2)

3.1.3 Homemade recipes

If the participant has consumed any homemade dishes, have details been recorded on the relevant pages along with the cooking method? Probe for ingredients they might have forgotten e.g. water for boiling/stewing and the amount of liquid used, oil for frying, type and how much they have used during cooking, milk or spread for mashing, herbs, spices. Has the participant recorded the amount of the recipe they ate?

3.1.4 Missing meals and snacks

Are there empty time slots? Ask the participant to confirm whether they ate or drank anything during that time. If a participant has a hot drink between 10pm and 6am for 3 days and then that time slot is blank on Day 4, it alerts you to the possibility that they forgot to record the drink. Try and fill in any gaps with the participant. ***Do not try and fill in entire missing days retrospectively.*** If they have genuinely not eaten anything in that time period, write this into the diary i.e. "Nothing eaten or nothing taken" so that it is clear that you have confirmed this. If the participant is unwell, make sure this is recorded in the question at the end of each diary day.

Note: if time allows, try and fill in any missing **Where/With whom/At Table/TV on**. Encourage participants to record this as they go along.

3.1.5 After each diary day don't forget to check they have filled in the following sections….

- **Typical day?**
- **Leftovers?**
- **Dietary supplements?**

REMEMBER TO SEND IN YOUR FIRST COMPLETED DIARY AS SOON AS YOU HAVE COLLECTED IT!

After collecting the diary don't forget to complete a **diary evaluation** and return it with the diary.

3.2 Other points when checking the diary

3.2.1 Regional and ethnic foods

A participant may eat a regional food or use a local term for a food that others might not be familiar with e.g. stovies, empire biscuits. Please ask the participant for a description that will help clearly identify the food especially if the food can be prepared in a variety of ways, as is the case for stovies. When collecting information about ethnic foods it is important to obtain as much information as possible about a food/recipe that is 'uncommon'.

3.2.2 Meals on Wheels

Participants should give a description of the components of the meal (for example mashed potato, carrots and chicken breast etc.) and, if possible, retain the packaging. Councils employ private catering companies to provide meals on wheels so try and obtain the name and telephone number of the catering company that provided the meals. You should be able to get this information from the participant, as they will usually be given a menu with the company name, logo etc. on it.

3.2.3 School meals

For young children, there may be very little detail given for meals provided by their school. Often parents have weekly menus of school lunches provided by the school. If this is available, you can use it either to prompt the child for missing detail or clarify the name or content of a dish. If the parents/carers do not have a copy of the school menu, ask if they could get one from the child's school. You can then use the school menu on your pick up visit when checking the diary. Please return the school menu along with the diary if possible.

When using a school menu to prompt the child for missing detail of a school meal, please remember to cover the following points:

- Find out the name of the dish by referring to the date and day of the diary and matching it with the correct weekly cycle and day of the school meal
- Find out whether anything else that was on the day's menu was eaten e.g. rice, garlic bread, salad, side vegetables etc.
- Get more information on the type of foods in the dish e.g. type of vegetable, dressing on the salad, boiled or roast potatoes etc.
- Ask about portion size of the foods consumed
- Find out if pudding was eaten and what was in it, e.g. type of fruit in fruit crumble, served with yogurt, custard, or ice cream etc.

Please note that items listed on the school menu may change due to what's available, therefore, record what the child has described.

Please also be aware that children who have packed lunches rather than school meals may swap foods and therefore record foods that their parents might question. For example, a child may have recorded that she had a carton of Ribena and when you ask about it, her parent might say that she did not give a Ribena to the child. In these cases, you should leave in what the child has written in order to encourage the child to record what they actually ate rather than what their parent gave them.

3.3 Using the food photo atlas

To improve accuracy in estimating portion sizes for children under 16, there are 3 separate photo atlases that should be used when reviewing their diaries: a pre-school atlas for 18 months to 4 years, a primary school atlas for 4 to 11 years and a secondary school atlas for 11 to 15 years.

Most of the foods that appear in the atlases are shown as a series of 7 photos of the food served and 7 photos of leftovers.

When reviewing the diary, if you come across a food that appears in the atlas, you should show the photos in the age-appropriate atlas to the participant. As there is overlap between the ages, base your selection of atlas on the school stage that the participant is at (i.e. primary, secondary, etc.). If this is not clear, for example, if the participant is completing the diary during the school summer holidays, select the atlas for the younger age group. For example, if a 4 year old is between pre-school and primary, use the pre-school atlas. If an 11 year old is between primary and secondary school, use the primary atlas.

Ask them to select a photo of the amount served, write the code in the diary and then ask them to select a photo for any leftovers and write down that code.

- For children of secondary school age; ask the child themselves to select the photo.
- For children aged 9-11; the child's parent/carer should select the portion with some contribution from the child.
- For children aged 8 and under; the child's parent/carer should select the portion.

Please note: The parent/carer can only select photos if they were present at the time of eating. If they were not present, and the child is aged under 9, do not use the atlas for that particular food.

Equivalent Food List

In some cases the photos can be used to estimate amounts for other foods in addition to the actual foods in each photograph. These other foods are listed on a separate card called the Equivalent Foods List that can be found at the back of each atlas. Please make sure that you have the Equivalent Foods List to hand. As a rule, do not refer to any photos if a food is not listed on this card, however if you need to make a judgement call, it is always better to use the atlas and have a photo selected, than not to use it.

All of the photos were taken with the food displayed on a 9 inch diameter plate or 7.2 inch diameter bowl. At the back of each atlas is a life size photo of the plate and bowl and these should be shown to the child or parent before they select any photos and referred to throughout the review. The photo may be a different size to the plate/bowl used by the young person, but should be used to help put the atlas photographs into perspective.

* IMPORTANT *

The atlas is only to be used when reviewing the diary. Participants must still record how much they ate at the time of eating either in household measures or weights from labels.
It does not matter how accurately participants have recorded what they ate; if the food is listed on the Equivalent Food List you should show them the photos in the atlas.
Do not overwrite what the respondent has originally recorded. The photo codes are in addition to what the respondent has written. Remember, it does not matter how accurately participants have recorded their portion sizes, it is always necessary to use the atlas with children aged under 16.

HOW TO USE THE PHOTO ATLAS

The majority of foods in the atlas are displayed as 7 '**as served'** portions on one page and 7 **'leftover'** portions on the following page. Each photo is labeled with a unique code. Ask the respondent to select a photo which is closest to the amount served and write down the corresponding code.

Time	Where? With whom? TV on? Table?	What	Brand Name	Amount eaten
How to describe what you had and how much you had can be found on pages 12-17				
6am to 9am				
07.00	Kitchen Alone NO TV At table.	Rice Krispies.	Tesco own	Medium bowl RKris21

If the portion served was larger or smaller than any of the portions displayed they can describe the portion in terms of multiples or fractions of a photograph. If it is smaller than any of the 'as served' photos they can use a 'leftover' photo.

Time	Where? With whom? TV on? Table?	What	Brand Name	Amount eaten
How to describe what you had and how much you had can be found on pages 12-17				
6am to 9am				
07.00	Kitchen Alone NO TV	Rice Krispies.	Tesco own	Medium bowl RKris21x2

If they did not consume all that was served, the respondent should estimate the amount leftover using one of the 'leftover' photos. Write down the corresponding code preceded by a minus sign.

Time	Where? With whom? TV on? Table?	What	Brand Name	Amount eaten
How to describe what you had and how much you had can be found on pages 12-17				
6am to 9am				
07.00	Kitchen Alone NO TV At table.	Rice Krispies.	Tesco own	Medium bowl Rkris21- Rkris30

Note: some of the codes are very similar so please ensure that you write them clearly and accurately

While most of the photos show a single serving of a food item on a plate or bowl, such as a plate of pasta or a bowl of cornflakes, there are exceptions. For example, the photos of carrots and cheese show three servings on a plate. It is the same amount but shown in three different ways (cheese can be served sliced, grated or cubed).

The breakfast cereal photos are without milk, so please ensure participants think about the cereal portion served before milk was added to it

4 FOOD AND DRINK DESCRIPTION PROMPTS

General information required

- Type of food or drink
- How was it bought – fresh, canned, frozen, dehydrated etc?
- Was it home-made – if so – what was in it? Don't forget to check that any recipes are recorded on the Recipe Pages.
- How was it cooked – boiled, grilled, fried etc?
- If it was cooked in fat, or fat was used in pastry or cakes or any other dish, what sort of fat or oil was used?
- If it was a dried / dehydrated product, was it reconstituted using water, milk or both?
- Was the item coated before cooking – if so – was it flour, batter, egg, breadcrumbs etc?
- Was it unsweetened, sweetened with sugar/honey, or artificially sweetened?
- Was it low fat / low calorie?

Remember to use neutral prompts to gather the above information and to prompt for foods that may be eaten in combination e.g. dressing on salad, jam on toast.

Commonly forgotten food and drink list

- Tea, coffee, soft drinks, water.
- Alcoholic drinks
- Milk
- Biscuits, cakes, sweets, chocolates, other confectionary
- Crisps, nuts, other snacks
- Sauces, dressings

SCHOOL LUNCHES

Often parents will have been given weekly menus by the school and you can use this either to prompt the child for missing detail or clarify the name or content of a dish.

Ask if you can keep the menu or make a photocopy and return it with the diary.

5 REMINDER LIST FOR PHONE CALL TO PARTICIPANTS

What you should cover:

- Remind participants about the voucher
- Remind participants about the dietary feedback
- Run through main points of completing diary as outlined below

Food/Drink description and preparation

- Participants need to record as much detail as they can.
- There are prompts for most foods in the diary and instruction booklet [refer participant to pages 28-34 of the instruction booklet].
- **Cooking methods** (fried, grilled, baked etc) should be recorded.
- Any **additions** (sugar/sweeteners, sauces, pepper etc) should be recorded.
- Participants should record as much detail as possible about dishes not prepared at home such as in takeaways or restaurants.

Brand name

- Please note we want brand names, not the supermarket where products were bought

Portion sizes

- Use household measures or weights from packaging.
- For some foods portion sizes are next to their food description prompts [as above].
- Participants should refer to the life-size spoons and glass.
- Adults only can use photos of foods.
- Composite foods such as salads or sandwiches should be split into their component parts and the amount of each component recorded separately.

Recipes

- Participants should use the special pages for any homemade recipes.
- They should list the ingredients, the amount of each ingredient (including water or other fluids), basic cooking method, how many people the recipe serves and how much of the recipe the participant ate.
- If necessary participants should get all the recipe details from whoever cooked the dish.

Leftovers

- Participants need to record any leftovers. The 'quantity eaten' column should be what they actually consumed, not the portion served.

Food labels/packaging

- Encourage participants to collect all food labels.
- Ready meals and seasonal foods packaging are particularly useful.

Remind participants about the instructions and examples at the front of the diary.

NDNS P2751

Interviewer Measurements

PROTOCOL FOR TAKING HEIGHT MEASUREMENT

A. THE EQUIPMENT

You are provided with a portable stadiometer. It is a collapsible device with a sliding head plate, a base plate and three connecting rods marked with a measuring scale.

Please take great care of this equipment. It is delicate and expensive. Particular care needs to be paid when assembling and dismantling the stadiometer and when carrying repacking it in the box provided.

- Do not bend the head or base plate
- Do not bend the rods
- Do not drop it and be careful not to knock the corners of the rods or base plate pin
- Assemble and dismantle the stadiometer slowly and carefully

The stadiometer will be sent to you in a special cardboard box. Always store the stadiometer in the box when it is not in use and always pack the stadiometer carefully in the box whenever you are sending it on by courier. Inside the box with the stadiometer is a special bag that you should use for carrying the stadiometer around when you are out on assignment.

If you have any problems with your stadiometer, report these to Brentwood immediately. Do not attempt measurements with a stadiometer that is broken or damaged.

The rods
There are three rods marked with a measuring scale divided into centimetres and then further subdivided into millimetres. (If you are not familiar with the metric system note that there are ten millimetres in a centimetre and that one hundred centimetres make a metre). The rods are made of aluminium and you must avoid putting any kind of pressure on them which could cause them to bend. Be very careful not to damage the corners of the rods as this will prevent them from fitting together properly and will lead to a loss of accuracy in the measurements.

The base plate
Be careful not damage the corners of the base plate as this could lead to a loss of accuracy in the measurements.

Protruding from the base plate (see diagram overleaf) is a pin onto which you attach the rods in order to assemble the stadiometer. Damage to the corners of this pin may mean that the rods do not stand at the correct angle to the base plate when the stadiometer is assembled and the measurements could be affected.

The head plate
There are two parts to the head plate; the blade and the cuff. The blade is the part that rests on the respondent's head while the measurement is taken and the cuff is the part of the head plate that slips over the measurement rods and slides up and down the rods. The whole unit is made of plastic and will snap if subjected to excessive pressure. Grasp the head plate by the cuff whenever you are moving the headplate up or down the rods, this will prevent any unnecessary pressure being applied to the blade which may cause it to break.

Assembling the stadiometer
You will receive your stadiometer with the three rods banded together and the head plate

attached to the pin so that the blade lies flat against on the base plate. Do not remove the head plate from this pin.

Note that the pin on the base plate and the rods are numbered to guide you through the stages of assembly. (There is also a number engraved onto the side of the rods, this is the serial number of the stadiometer). The stages are as follows:

1. Lie the base plate flat on the floor area where you are to conduct the measurements.

2. Take the rod marked number 2. Making sure the yellow measuring scale is on the right hand side of the rod as look at the stadiometer face on, place rod 2 onto the base plate pin. It should fit snugly without you having to use force.

3. Take the rod marked number 3. Again make sure that the yellow measuring scale connects with the scale on rod 2 and that the numbers run on from one another. (If they do not check that you have the correct rod). Put this rod onto rod number 2 in the same way you put rod 2 onto the base plate pin.

4. Take the remaining rod and put it onto rod 3.

Dismantling the stadiometer
Follow these rules:-

1. Before you begin to dismantle the stadiometer you must remember to lower the head plate to its lowest position, so that the blade is lying flat against the base plate

2. Remove one rod at a time

B. THE PROTOCOL - ADULTS (16+)

1. Ask the respondent to remove their shoes in order to obtain a measurement that is as accurate as possible.

2. Assemble the stadiometer and raise the headplate to allow sufficient room for the respondent to stand underneath it. Double check that you have assembled the stadiometer correctly.

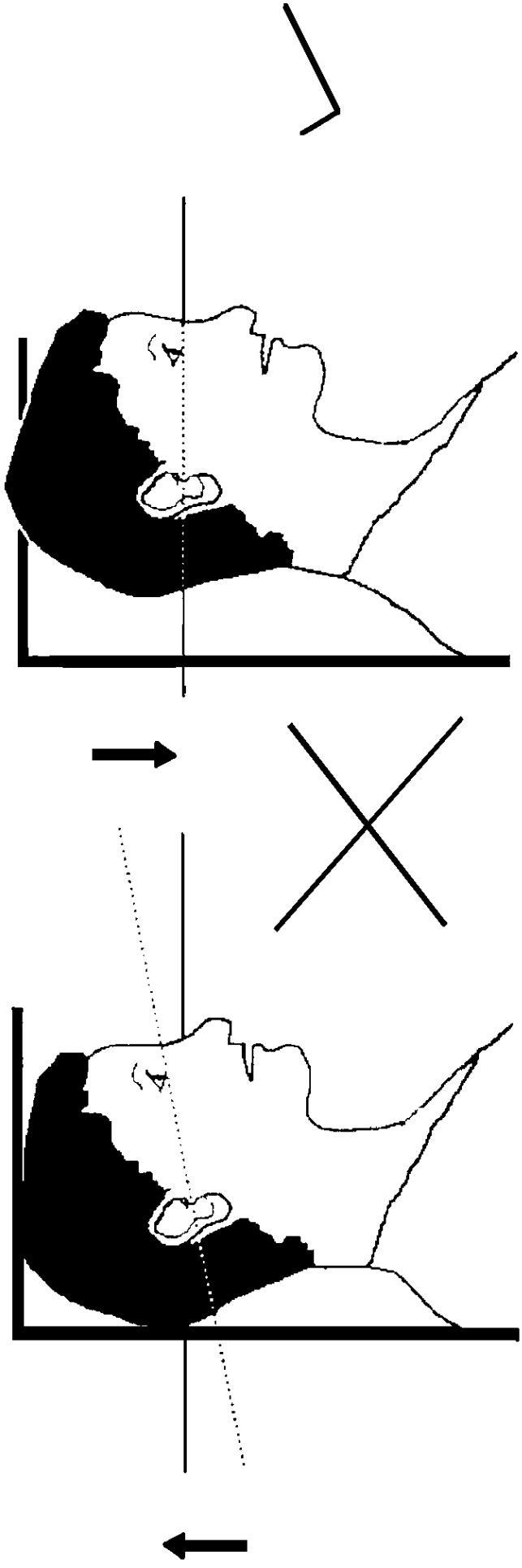
3. The respondent should stand with their feet flat on the centre of the base plate, feet together and heels against the rod. The respondent's back should be as straight as possible, preferably against the rod but NOT leaning on it. They should have their arms hanging loosely by their sides. They should be facing forwards.

4. Move the respondent's head so that the Frankfort Plane is in a horizontal position (i.e. parallel to the floor). The Frankfort Plane is an imaginary line passing through the external ear canal and across the top of the lower bone of the eye socket, immediately under the eye (see diagram). This position is important if an accurate reading is to be obtained. An additional check is to ensure that the measuring arm rests on the crown of the head, i.e. the top back half. To make sure that the Frankfort Plane is horizontal, you can use the Frankfort Plane Card to line up the bottom of the eye socket with the flap of skin on the ear. The Frankfort Plane is horizontal when the card is parallel to the stadiometer arm.

5. Instruct the respondent to keep their eyes focused on a point straight ahead, to breath in

deeply and to stretch to their fullest height. If after stretching up the respondent's head is no longer horizontal, repeat the procedure. It can be difficult to determine whether the stadiometer headplate is resting on the respondent's head. If so, ask the respondent to tell you when s/he feels it touching their head.

FRANKFORT PLANE – ADULTS



6. Ask the respondent to step forwards. If the measurement has been done correctly the respondent will be able to step off the stadiometer without ducking their head. Make sure that the head plate does not move when the respondent does this.

7. Look at the bottom edge of the head plate cuff. There is a green arrowhead pointing to the measuring scale. Take the reading from this point and record the respondent's height in centimetres and millimetres, that is in the form 123**.**4, at the question *Height*. You may at this time record the respondent's height onto their Measurement Record Card and at the question *MbookHt* you will be asked to check that you have done so. At that point the computer will display the recorded height in both centimetres and in feet and inches. At *RelHiteB* you will be asked to code whether the measurement you obtained was reliable or unreliable.

8. Height must be recorded in centimetres and millimetres, e.g. 176.5 cms. If a measurement falls between two **millimetres,** it should be recorded to the **nearest even millimetre.** E.g., if respondent's height is between 176.4 and 176.5 cms, you should round it down to 176.4. Likewise, if a respondent's height is between 176.5 and 176.6 cms, you should round it up to 176.6 cms.

9. Push the head plate high enough to avoid any member of the household hitting their head against it when getting ready to be measured.

C. THE PROTOCOL - CHILDREN (2-15)

The protocol for measuring children differs slightly to that for adults. You must get the co-operation of an adult household member. You will need their assistance in order to carry out the protocol, and children are much more likely to be co-operative themselves if another household member is involved in the measurement. If possible measure children last so that they can see what is going on before they are measured themselves.

Children's bodies are much more elastic than those of adults. Unlike adults they will need your help in order to stretch to their fullest height. This is done by stretching them. This is essential in order to get an accurate measurement. It causes no pain and simply helps support the child while they stretch to their tallest height.

It is important that you practice these measurement techniques on any young children among your family or friends. The more practice you get before going into the field the better your technique will be.

1. In addition to removing their shoes, children should remove their socks as well. This is not because the socks affect the measurement. It is so that you can make sure that children don't lift their heels off of the base plate. (See 3 below).

2. Assemble the stadiometer and raise the head plate to allow sufficient room for the child to stand underneath it.

3. The child should stand with their feet flat on the centre of the base plate, feet together and heels against the rod. The child's back should be as straight as possible, preferably against the rod, and their arms hanging loosely by their sides. They should be facing forwards.

4. Place the measuring arm just above the child's head.

5. Move the child's head so that the Frankfort Plane is in a horizontal position (see diagram). This position is as important when measuring children as it is when measuring adults if the measurements are to be accurate. To make sure that the Frankfort Plane is horizontal, you can use the Frankfort Plane Card to line up the bottom of the eye socket with the flap of skin on the ear. The Frankfort Plane is horizontal when the card is parallel to the stadiometer arm.

6. Cup the child's head in your hands, placing the heels of your palms either side of the chin, with your thumbs just in front of the ears, and your fingers going round towards the back of the neck. (See diagram).

7. Firmly but gently, apply upward pressure lifting the child's head upwards towards the stadiometer headplate and thus stretching the child to their maximum height. Avoid jerky movements, perform the procedure smoothly and take care not to tilt the head at an angle: you must keep it in the Frankfort plane. Explain what you are doing and tell the child that you want them to stand up straight and tall but not to move their head or stand on their tip-toes.

8. Ask the household member who is helping you to lower the headplate down gently onto the child's head. Make sure that the plate touches the skull and that it is not pressing down too hard.

9. Still holding the child's head, relieve traction and allow the child to stand relaxed. If the measurement has been done properly the child should be able to step off the stadiometer without ducking their head. Make sure that the child does not knock the head plate as they step off.

10. Read the height value in metric units to the nearest millimetre and enter the reading into the computer at the question “Height.” At the question “MbookHt” you will be asked to check that you have entered the child's height onto their Measurement Record Card. At that point the computer will display the recorded height in both centimetres and in feet and inches.

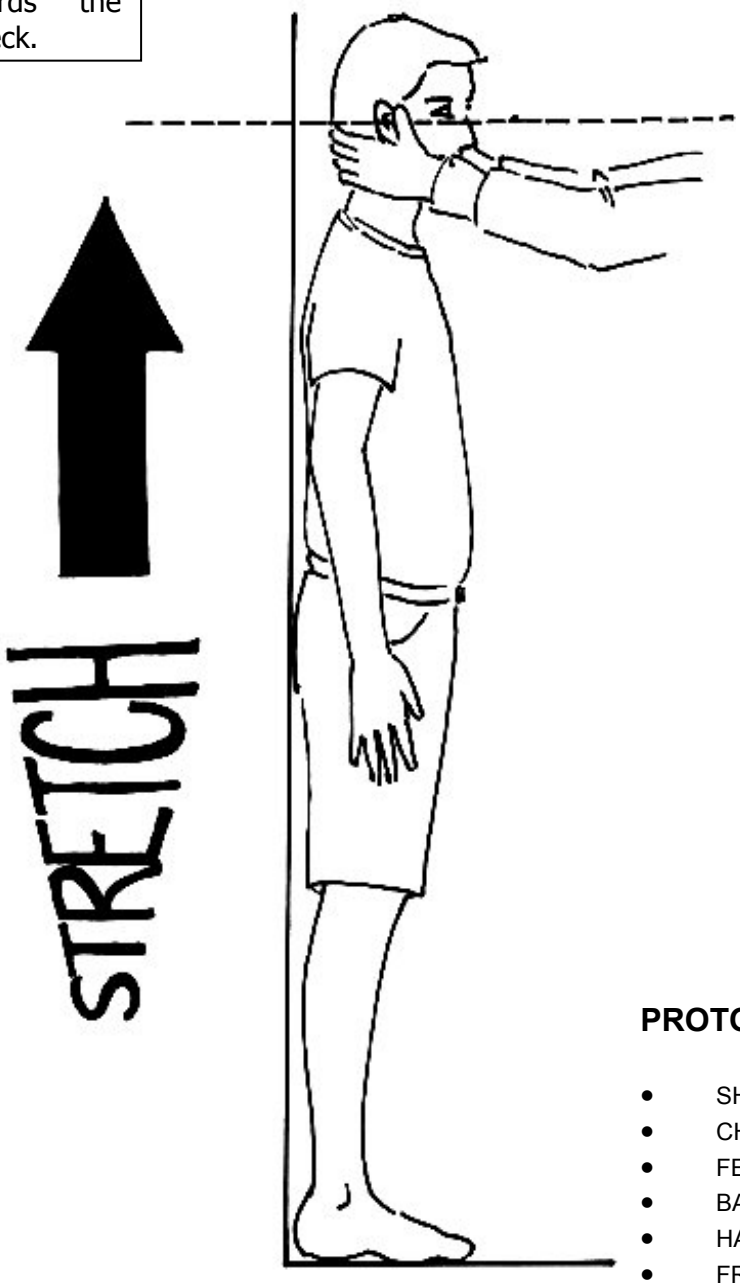
11. Push the head plate high enough to avoid any member of the household hitting their head against it when getting ready to be measured.

REMEMBER YOU ARE <u>NOT</u> TAKING A HEIGHT MEASUREMENT FOR CHILDREN UNDER 2 YEARS OLD.

D. HEIGHT REFUSED, NOT ATTEMPTED OR ATTEMPTED BUT NOT OBTAINED

At *RespHts* you are asked to code whether the measurement was taken, refused, attempted but not obtained or not attempted. If for any reason you cannot get a height measurement, enter the appropriate code at this question and you will automatically be routed to the relevant follow up questions (*ResNHi* and *NoHtBC*) which will allow you to say why no measurement was obtained.

Cup the child's head in your hands, placing the heels of your palms either side of the chin, with your thumbs just in front of the ears, and your fingers going round towards the back of the neck.



PROTOCOL

- SHOES OFF
- CHILDREN – SOCKS OFF
- FEET TO THE BACK
- BACK STRAIGHT
- HANDS BY THE SIDE
- FRANKFORT PLANE
- LOOK AT A FIXED POINT
- CHILDREN – STRETCH & BREATHE IN
- ADULTS - BREATHE IN
- LOWER HEADPLATE
- BREATHE OUT
- STEP OFF
- READ MEASUREMENT

E. ADDITIONAL POINTS - ALL RESPONDENTS

1. If the respondent cannot stand upright with their back against the stadiometer and have their heels against the rod (e.g. those with protruding bottoms) then give priority to standing upright.
2. If the respondent has a hair style which stands well above the top of their head, (or is wearing a turban), bring the headplate down until it touches the hair/turban. With some hairstyles you can compress the hair to touch the head. If you can not lower the headplate to touch the head, and think that this will lead to an unreliable measure, record this at question *RelHite.* If it is a hairstyle that can be altered, e.g. a bun, if possible ask the respondent to change/undo it.

3. If the respondent is tall, it can be difficult to line up the Frankfort Plane in the way described. When you think that the plane is horizontal, take one step back to check from a short distance that this is the case.

PLEASE NOTE: the child head stretch on NDNS is the same as used on HSE but different to that used on Child of the New Century. Please use the NDNS/HSE stretch when measuring children for NDNS interviews.

PROTOCOL FOR TAKING WEIGHT MEASUREMENTS

A. THE EQUIPMENT

There are several different types of scales used on NDNS. They differ in the type of power supply they use, where the weight is displayed and the way the scales are turned on. Before starting any interviewing check which scales you have been given and that you know how they operate. The most common types are:

Soehnle Scales

- These scales display the weight in a window on the scales.
- The Soehnle scales are turned on by pressing the top of the scale (e.g. with your foot). There is no switch to turn the scales off, they turn off automatically.
- The scales take 1 x 9v rectangular MN1604 6LR61 batteries.

Seca 850

- These scales display the weight in a window on the scales.
- The Seca 850 is switched on by pressing the top of the scales (e.g. with your foot). There is no switch to turn the scales off, they turn off automatically.
- The scales take 4 x 1.5v AA batteries/1 x 9v rectangular MN1604 6LR61.

Seca 870

- These scales display the weight in a window on the scales.
- The Seca 870 is switched on by briefly covering the solar cell (for no more than one second). The solar cell is on the right hand side of the weight display panel. **NB** You may experience difficulties switching the scales on if there is insufficient light for the solar cell. Make sure that the room is well lit.
- The scales have an fixed battery which cannot be removed.

Tanita THD-305

- These scales display the weight in a window on the scales.
- The Tanita is switched on by pressing the button on the bottom right hand corner of the scales. The scales will automatically switch off after a few seconds.
- The scales take 4 x 1.5v AA batteries.

When you are storing the scales or sending them through the post please make sure you remove the battery to stop the scales turning themselves on.
(This does not apply to the Seca 870 scales)

Batteries (Soehnle, Seca 850 and Tanita)
It should not be necessary to have to replace the batteries, but always ensure that you have some spare batteries with you in case this happens. If you need to change the battery, please buy one and claim for it. The batteries used are commonly available.

The battery compartment is on the bottom of the scales. When you receive your scales you will need to reconnect the battery. Before going out to work, reconnect the battery and check that the scales work. If they do not, check that the battery is connected properly and try new batteries. If they do still not work, report the fault to your Area Manager/NDNS Manager or directly to Brentwood.

The reading is only in metric units, but as for height, the computer provides a conversion. If the respondent would like to know their weight in stones and pounds you will be able to tell them when the computer has done the calculation. You also have a conversion chart on the back of the coding booklet.

WARNING
The scales have an inbuilt memory which stores the weight for 10 minutes. If during this time you weigh another object that differs in weight by less than 500 grams (about 1lb), the stored weight will be displayed and not the weight that is being measured. This means that if you weigh someone else during this time, you could be given the wrong reading for the second person.

So if you get an identical reading for a second person, make sure that the memory has been cleared. Clear the memory from the last reading by weighing an object that is more than 500 grams lighter (i.e. a pile of books, your briefcase or even the stadiometer). You will then get the correct weight when you weigh the second respondent.

You will only need to clear the memory in this way if:

a) You have to have a second or subsequent attempt at measuring the same person

b) Two respondents appear to be of a very similar weight

c) Your reading for a respondent in a household is identical to the reading for another respondent in the household whom you have just weighed.

If you have any problems with your scales, report these to Brentwood immediately. Do not attempt measurements with scales that are broken or damaged.

B. THE PROTOCOL

1. Turn the display on by using the appropriate method for the scales. The readout should display 888.8 (1888 for the Seca 870) momentarily. If this is not displayed check the batteries, if this is not the cause you will need to report the problem to the *National Centre* at Brentwood. While the scales read 888.8 do not attempt to weigh anyone.

2. Ask the respondent to remove shoes, heavy outer garments such as jackets and cardigans, heavy jewellery, loose change and keys.

3. If necessary, turn the scales on again. Wait for a display of 0.0 before the respondent stands on the scales.

4. Ask the respondent to stand with their feet together in the centre and their heels against the back edge of the scales. Arms should be hanging loosely at their sides and head facing forward. Ensure that they keep looking ahead - it may be tempting for the respondent to look down at their weight reading. Ask them not to do this and assure them that you will tell them their weight afterwards if they want to know.

   The posture of the respondent is important. If they stand to one side, look down, or do not otherwise have their weight evenly spread, it can affect the reading.

5. The scales will take a short while to stabilise and will read 'C' until they have done so. (The Seca 870 displays alternate flashing lines in the display window. With the Tanita scales the weight will flash on and off when stabilised). If the respondent moves excessively while the scales are stabilising you may get a false reading. If you think this is the case reweigh, but first ensure that you have erased the memory.

6. The scales have been calibrated in kilograms and 100 gram units (0.1 kg). Record the reading into the computer at the question *XWt1* before the respondent steps off the scales. At question *MBookWt* you will be asked to check that you have entered the respondent's weight into their Measurement Record Card. At that point the computer will display the measured weight in both kilos and in stones and pounds.

WARNING
The maximum weight registering accurately on the scales is 130kg (20½ stone). (The Seca 870 can weigh up to a maximum of 150kg or 23 ½ stone). If you think the respondent exceeds this limit code them as “Weight not attempted” at *RespWts*. Do not attempt to weigh them.

Weighing Children
You must get the co-operation of an adult household member. This will help the child to relax and children, especially small children are much more likely to be co-operative themselves if an adult known to them is involved in the procedure.

Children wearing nappies should be wearing a dry disposable. If the nappy is wet, please ask the parent to change it for a dry one and explain that the wetness of the nappy will affect the weight measurement.

In most cases it will be possible to measure children's weight following the protocol set out for adults. However, if accurate readings are to be obtained, it is very important that respondents stand still. Ask the child to stand perfectly still - “Be a statue.” For very young children who are unable to stand unaided or small children who find this difficult you will need to alter the protocol and first weigh an adult then weigh that adult holding the child as follows:-

a) Code as “Weight obtained (child held by adult)” at *RespWts*

b) Weigh the adult as normal following the protocol as set out above. Enter this weight into the computer at *WtAd1*.

c) Weigh the adult and child together and enter this into the computer at *WtChA1.*

The computer will then calculate the weight of the child and you will be asked to check that you have recorded the weight onto the child's Measurement Record Card at *MBookWt*. Again the computer will give the weight in both kilos and in stones and pounds.

Weight refused, not attempted or attempted but not obtained

At *RespWts* you are asked to code whether the measurement was taken, refused, attempted but not obtained or not attempted. If for any reason you cannot get a height measurement, enter the appropriate code at this question and you will automatically be routed to the relevant follow up questions (*ResNWt* and *NoWtBC*) which will allow you to say why no measurement was obtained.

MEASUREMENT RECORD CARD

When you have taken the respondent's height and weight, offer the respondent a record of his/her measurements. Make out a Measurement Record Card and give it to the respondent. There is room on the Measurement Record Card to write height and weight in both metric and imperial units if the respondent wants both. The computer does the conversion for you. There is space to write in the respondent's Body Mass Index (BMI) as well, if the respondent is aged 16+ (the computer will calculate this for you). Remember to give respondents the BMI leaflet if you give them their BMI.

NDNS P8753

Protocols for Nurse Measurements

(Blood sampling, waist & hip circumferences, demispan, blood pressure, infant length, mid-upper arm circumference)

BLOOD SAMPLING

BLOOD SAMPLING

1.1 Introduction

Blood sample donation and subsequent correct sample distribution is a very important part of the NDNS. One of the main objectives of the NDNS programme is to measure indicators of blood function, nutrition and other measures of health to relate these to dietary and social data.

The blood will be analysed for a large number of analytes including haematology measures (white blood count, haemoglobin, platelets etc), serum lipids (cholesterol, triglycerides), markers of inflammatory status, and markers of mineral and vitamin status.

The samples will **not** be tested for any viruses, such as HIV/AIDS, or for bacterial infections, nor will they be used for genetic testing.

Respondents will receive £15 in high street vouchers as a thank you for providing a blood sample.

Blood sampling is extremely important on NDNS and we need to obtain high response rates. Some respondents will be reluctant to provide a blood sample but try to introduce it simply as 'the next stage' of the nurse visit. Reassure respondents that you (or the paediatric phlebotomist, where relevant) are highly trained and experienced in taking blood samples. Explain that a blood sample will make the information they have already provided us with even more useful. Also use the fact that they can receive clinically relevant results as a selling point – many respondents feel this is a very positive incentive to providing a blood sample, often even more so than the £15 token of appreciation.

1.2 Eligibility for blood sampling

- ***General eligibility***

All respondents aged 1.5 years and over, with the exceptions outlined in the Nurse Protocols, section 18.2, are eligible to give blood.

Respondents aged 4 and older will be asked to fast for 8 hours overnight before providing a blood sample. Respondents under the age of 4 will not be asked to fast.

- ***Obtaining blood samples from diabetics***

Most diabetics can provide fasting blood samples, but there are some precautions to take into account, as outlined below. CAPI will take you through the relevant questions. The preference is to obtain a fasting sample, if possible. You will provide reassurance about this, but if the respondent remains anxious a non-fasting sample can be taken.

***Acceptable procedures according to medication**:*

- Respondents on oral hypoglycaemic medication should be able to fast without complications
- Respondents on a combination of night time insulin and daytime tablets should also be able to fast unless they are known to have low blood sugar levels first thing in the morning. If they do have low blood sugar in the morning, they could still fast but should reduce their night-time insulin by a small amount and have breakfast as soon as possible after the blood is taken.
- Respondents on insulin alone can also provide a fasting sample, but should be given special consideration. They should postpone their morning insulin and should be seen as early in the day as possible.

In every case, diabetics should have breakfast as soon as possible after blood is taken.

Note that the option of providing a non -fasting sample is only open to diabetics and respondents under the age of 4. Blood should <u>not</u> be taken from respondents who are willing to provide a sample but are not prepared to fast.

1.3 Overview of blood taking procedures

A fasting blood sample will be obtained from those aged 4 years and above. Those aged less than four years will not be asked to fast but CAPI includes questions about whether the child has had something to eat or drink that morning, to ascertain whether it is a fasting or non-fasting sample.

A maximum of two attempts at blood taking are permitted with adults (16+) and only one attempt with children.

The volume of blood taken will vary according to the age of the respondent, as follows:

Age	*Volume*	*No. of specimen tubes to be filled*
Adult 16+yrs	35.1 mL	8
Child 7-15yrs	21.1 mL	6
Child 1.5-6yrs	10.9 mL	4

The volume differs to ensure that we abide by guidelines for taking blood from children for research purposes. To keep children's blood sample volume as low as possible, some analytes will not be measured in younger children.

Blood samples will be taken by you from respondents aged 11 and over. For respondents aged 1.5 to 10 years, the sample will be taken by someone with skills and recent experience in paediatric phlebotomy. If this is not you, you will accompany the paediatric phlebotomist during the visit to the respondent's home.

Some blood samples will be posted to Addenbrookes Hospital in Cambridge for analysis of routine analytes. Most of the blood tubes will be taken to local laboratories where samples will be centrifuged and aliquots of blood, serum, and red blood cells will be frozen for temporary storage.

An outline of the blood sampling tasks carried out prior to and at each visit is provided below:

During the first nurse visit

Assess eligibility for blood sampling and explain procedure in detail.
Obtain verbal consent to make appointment to revisit for blood sampling and instruct about overnight fast (age 4 and above only).
If respondent is aged <11, inform respondent (and parent/guardian) that blood will be taken by a paediatric phlebotomist (if necessary).
Arrange appointment with paediatric phlebotomist (if necessary).
Record details in CAPI.

Prior to second visit

If not yet done, arrange appointment with nurse/paediatric phlebotomist (if necessary).
Ensure you have all phlebotomy items.
Ensure cold packs are ready for use (i.e. placed in freezer).
Prepare label strips.

Second nurse visit

Re-check eligibility for blood sampling and ensure respondent understands procedures.
Confirm and obtain appropriate written consents.
Obtain blood sample, filling tubes in priority order.
Label Monovettes with pre-printed labels (**only** once blood has been obtained).
Record details in CAPI.
Leave blood sampling promissory note with respondent.

Immediately after the visit

Send tubes and associated documentation (3x carbonised Addenbrookes research analysis request forms) to Addenbrookes using the correct postal pack.
Take blood specimens, storage tubes, relevant labels, contaminated waste, and documentation to the local laboratory.
Record details in CAPI.
Use Milton wipes to wipe the cold packs before placing them into a new plastic bag in the freezer in preparation for the next appointment.
Use Milton wipes to clean the insides of the carrying box.

1.4 The blood tubes (Sarstedt Monovettes®)

Up to 8 tubes need to be filled, depending on the age of the respondent. The tubes should be filled in the following order so that, if a situation arises where there will be insufficient blood to fill all the tubes, the analyses with the highest priority can still be undertaken.

The tubes, plus details of the analytes carried out on the sample contained in each, are detailed below. The destination for each tube is also provided.

Tube:	**Goes to:**	**Label:**
Respondents aged 16+ years		
1. 2.6mL EDTA (red top)	Addenbrookes	E N1 (3)
2. 4.7mL serum gel (brown top)	Addenbrookes	SE N1 (5)
3. 4.5mL serum (white top)	Field Lab	SE N2 (6)
4. 7.5mL Li Hep TM (orange top)	Field Lab	LH N1 (7)
5. 7.5mL LiHep TM (orange top)	Field Lab	LH N2 (8)

6. 1.2mL Fluoride (yellow top) **7.** 4.5mL Li Hep (orange top) **8.** 2.6mL EDTA blood tube (red top)	Field Lab Field Lab Field Lab	F N1 (10) LH N3 (9) E N2 (4)
Respondents aged 7-15 years		
1. 2.6mL EDTA (red top) **2.** 7.5mL Li Hep TM (orange top) **3.** 2.6mL serum gel (brown top) **4.** 4.5mL serum (white top) **5.** 2.7mL Li Hep (orange top) **6.** 1.2mL Fluoride (yellow top)	Addenbrookes Field Lab Addenbrookes Field Lab Field Lab Field Lab	E N1 (3) LH N1 (7) SE N1 (5) SE N2 (6) LH N2 (8) F N1 (10)
Respondents aged 1.5 to 6 years		
1. 2.6mL EDTA (red top) **2.** 4.5mL Li Hep (orange top) **3.** 1.1mL serum (brown top) **4.** 2.7mL serum (white top)	Addenbrookes Field Lab Addenbrookes Field Lab	E N1 (3) LH N1 (7) SE N1 (5) SE N2 (6)

We are aware that typical clinical practice is not to use EDTA tubes first due to risk of contamination of subsequent samples. However, this is considered less of an issue with Sarstedt monovettes compared to other tubes because of the way the rubber comes down over the end of the tube as you remove each one. So far, obtaining blood in EDTA tubes first has not proved to be a problem with samples in other surveys (National Survey of Health and Development) where a very similar priority protocol is used. Although there is a slight risk of contamination, there is agreement that priority should be set by the analyte order agreed by the consortium, including the FSA.

1.5 Equipment and Consumables

The blood samples will be collected using the Sarstedt Monovette® blood-collection system with multifly needle (or Monovette fixed needle if preferred). Using the syringe rather than vacuum mode reduces the chance of haemolysis. This Monovette system offers trace element contamination control and is manufactured from plastic which allows for safe transport of sample through the postal system.

You will be provided with the following equipment for blood taking:

- Monovettes for blood specimen collection:
  - 2.6mL, EDTA Monovette (red top)
  - 7.5mL Lithium heparin Monovette for trace metal analysis (orange top)
  - 4.5mL, 2.7mL Lithium heparin Monovette (orange top)
  - 4.5mL, 2.7mL serum Monovette (white top)
  - 4.7mL, 2.6mL, 1.1mL serum Monovette (brown top)
  - 1.2mL fluoride Monovette (yellow top)
- Tourniquet
- Disinfectant gel
- Alcohol swabs/cotton wool balls or gauze swabs/plasters
- Micropore tape
- Adhesive dressing
- Ametop gel & tegaderm dressing (See section 17.9)
- Disposable vinyl gloves

- Sarstedt multifly needles: 21G with 60mm or 200mm tube length and 23G with 60mm tube length
- Sarstedt fixed needles: 21G and 22G
- Milton wipes
- Scissors
- Pen (permanent marker)
- Biohazard sharps box
- Biohazard labelled mini-grip bag

You will also be provided with the following equipment for the packaging and delivery/posting of samples:

- Plastic postal containers
- Pre-addressed padded envelopes
- Specimen and document bags
- Parcel tape
- Pre-printed labels for all tubes including those to be passed on to the laboratory
- Pulp tray for specimen tubes
- Pre-packs of 2ml empty micro tubes to be delivered to local lab
- Carrying box for specimen delivery to local lab
- Cold packs
- Instant cold packs (limited to use in emergencies and on overnight assignments)

1.6 Obtaining written consents for blood sampling

Written consents are needed for the following:

- Giving a blood sample
- Notifying GP of clinically relevant blood analyte results
- Providing clinically relevant blood analyte results to the respondent (or parent/guardian of child respondents)
- Storage of blood sample.

There are three variants of the blood sampling consent forms in the consent booklets:

- Consent sheet CF (A2) is for respondents aged 16+
- CF (C2) is for respondents aged 4-15 years
- CF (YC1) is for respondents aged 1.5-3 years

The appropriate blood consent form must be signed at the visit at which blood is taken, **before** blood is taken.

The different sections of the consent forms should be pointed out to the respondent and the form should be given to the respondent to read. After the respondent (parent/guardian) has read the consent form please encourage him/her to ask any questions they may have with regards to the procedure. Once they are content to sign, please ensure the respondent (or parent/guardian) **initials** all those boxes (procedures) they would like to consent to.

There are also tick boxes on the child consent sheets CF(C2) and CF(YC1) to indicate whether the respondent/parent consented to give a blood sample with or without the use of Ametop gel. **Please ensure the appropriate box is ticked.**

You must check that all appropriate boxes are initialled and signatures collected. If a respondent is aged 1.5-15 years, you must make sure that you obtain the signature of their parent or the person who has parental responsibility. Children should be encouraged to provide written assent if they wish (and are able) to do so.

Please also note that if the respondent (or parent/guardian of a child respondent) does not wish to receive a report of their (child's) blood analyte results nor do they want results to be sent to the GP, **they must sign the disclaimer form on page 8 of the consent booklet**. This is to ensure that they understand that if there are any findings outside the normal range, we will not be able to notify their GP or anyone else as we do not have their permission to do so.

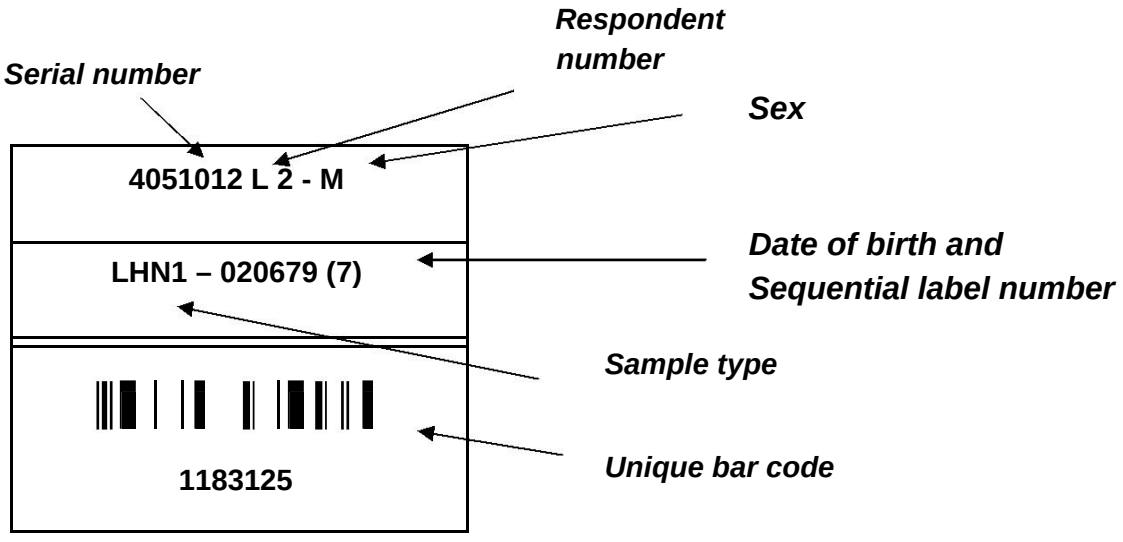
1.7 Labelling the blood tubes

♦ ***Introduction***

All possible labels are pre -printed for a particular respondent. This means that you will receive sets of labels that will not be used if the respondent does not provide a blood sample. These can be disposed of.
On each label there will be:

- the serial number (including the respondent number), followed by the check letter
- a code showing the sample type (see table in section 17.4) and the sequential label number in brackets; and
- a barcode with unique number (for HNR's use).

The labels will be used on documents and on blood and urine tubes. For each respondent a full set of labels (38) in a pre-specified order will be provided rolled up as a continuous strip. This strip provides all labels needed by the nurse and the field laboratory for processing the samples.



Note that it is your responsibility to label Monovette tubes for all respondents, even when blood is being taken from young children by a paediatric phlebotomist.

CAPI will guide you through which labels are to be used for each respondent, and which should be affixed to which tube or sent onto the laboratory. The protocol is also outlined in the following section.

Note that the full set of labels covers 24 hour urine samples, as well as blood.

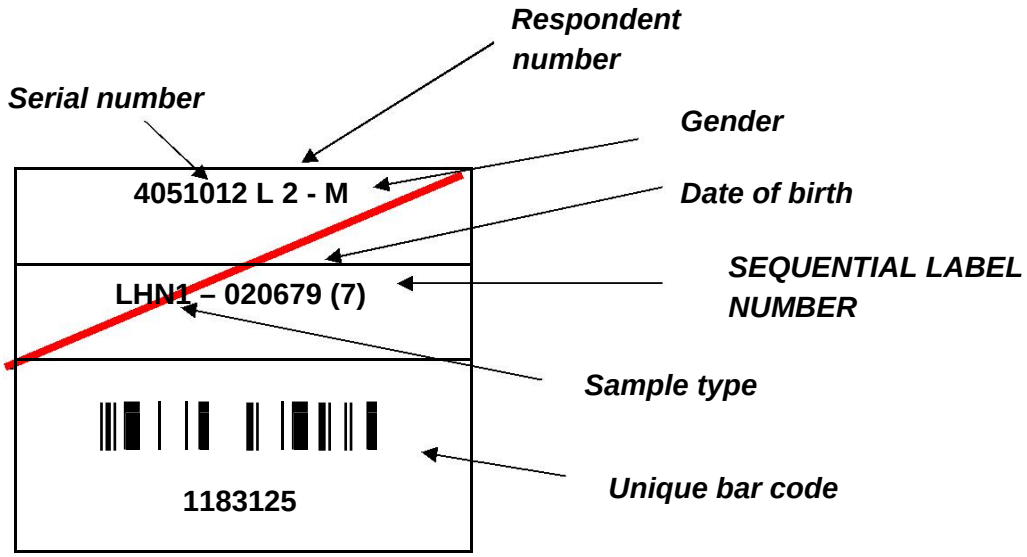
♦ ***Identifying labels to be used***

All of the 38 labels will be used for respondents aged 16+ who give blood and urine. This means all respondent 1s, as well as respondent 2s aged 16-18. Respondents aged 1.5 - 15 years require fewer labels: 32 for respondents aged 7-15, 22 for respondents aged 4-6 years, and 18 for respondents aged 1.5 to 3 years.

The sequential label number (in brackets next to the sample type) will assist you in crossing through the labels that are not required for the 3 younger age groups.
The following labels are **NOT** required for:

7 – 15 years	**4 – 6 years**	**1.5 – 3 years**
E N2 (4)	E N2 (4)	E N2 (4)
LH N3 (9)	LH N2 (8)	LH N2 (8)
LH WB (15)	LH N3 (9)	LH N3 (9)
E1 (16)	F N1 (10)	F N1 (10)
LH8 (25)	LH WB (15)	LH WB (15)
LH9 (26)	E1 (16)	E1 (16)
	LH4 (21)	LH4 (21)
	LH5 (22)	LH5 (22)
	LH6 (23)	LH6 (23)
	LH7 (24)	LH7 (24)
	LH8 (25)	LH8 (25)
	LH9 (26)	LH9 (26)
	SE3 (29)	SE3 (29)
	F1 (30)	F1 (30)
		U1 (31)
		U2 (32)
		U3 (33)
		U4 (34)
		UCOLL (35)
		UDESP (36)

For labels not required for the above age groups, the top two label sections (i.e. serial number and sample type) can be crossed through – the bar code should **not** be crossed through (see below) . Crossing through the serial number and sample type so they become illegible should also be avoided, in case of mistakes. Labels remaining on the strip include those for Monovettes and micro tubes not needed clearly marked by a diagonal line as shown below. The lab is instructed to return those with the samples to HNR (see also next section). The other remaining valid labels will be used by the field laboratory to label the microtubes for plasma and serum storage.



♦ ***Labelling blood tubes***

For each respondent you will be given a pre-packed set of blood specimen tubes (Monovettes) and a pre-packed set of empty storage tubes (micro-tubes). **You must pass the micro-tubes on to the field laboratory** when you deliver the filled Monovette tubes. See chapter 18 'Despatching Blood Samples'.

The plastic bags containing the Monovettes and micro-tubes will show the corresponding age range. On the Monovette packs, the expiry date of the tube with the shortest expiry date will also be shown. Please check the date and if the expiry date has passed, use a different pack. The expired Monovette tube set should be returned to the Brentwood office.

It is your responsibility to label the Monovette tubes **only**. We recommend that for child respondents you prepare the phlebotomy visit by crossing out the labels not needed as described above. As there are no spare labels, the Monovette tubes should only be labelled **after the blood is taken**.

The correct label for each tube should be peeled off and the top of the label should be positioned onto the tube first and then wrapped round the tube horizontally, ensuring the label does not crease. It is important that the label is not creased, otherwise the bar-code scanner cannot read the bar-code. If applied correctly even on the smallest tube there is no risk of overlap that would obscure any label information.

It is very important that the correct labels are used for each respondent. If incorrect serial numbers/labels are used there is a risk of matching the blood results to the wrong respondent. The respondent's GP could therefore be sent the wrong results, possibly leading to unnecessary worry or a problem not being picked up. To prevent mislabelling always ask the respondent to confirm that the date of birth on the serial ID labels is correct before you start labelling.

NB. The following 6 labels (31-36) are for the 24 hour urine collection:

U1 (31)
U2 (32)

U3 (33)
U4 (34)
UCOLL (35)
UDESP (36)

The following 2 labels (37-38) should be sent to Addenbrookes along with the blood sample:

FOL1 (37)
FOL2 (38)

Please remember to take the label strip to all visits, especially if blood sampling and 24hr urine are being carried out at different visits.

Label strips for respondents that do not consent to either urine or blood sampling or both should be sent back to Sue Duffy in the Blue team as soon as their non-participation in these procedures has been confirmed. This minimises the risk of mixing up labels for new respondents.

1.8 Protocol for taking the blood sample.

Before taking blood, check that the respondent has understood the purpose of the blood sample, and the protocols for taking it, and read the information leaflets. You will also obtain the necessary consents and follow the protocol outlined below:

Check one last time if the respondent has a bleeding or clotting disorder, is on anticoagulant drugs or has ever had a fit (for under 16s) / has had a fit in the last 5 years (for 16+). If such a problem is identified then do not attempt to obtain a blood sample.

Follow appropriate protocols if respondent is diabetic.

Explain the purpose and procedures for taking blood.

If aged 4+, check not had anything to eat or drink for 8hours. If not fasted, ask to make a new appointment if respondent still willing to provide a fasting blood sample.

If respondent is aged <16, explain the option of using Ametop

Obtain necessary written consents.

Prepare the phlebotomy items required, for ready accessibility.

Make sure that the respondent is at ease and seated comfortably or reclining for the phlebotomy procedure and ensure they cannot hurt themselves if they should faint.

Ask the respondent to roll up their left sleeve and rest their arm on a suitable surface. Ask them to remove their jacket or any thick clothing, if it is difficult to roll up their sleeve.

The antecubital fossae may then be inspected. It may be necessary to inspect both arms for a suitable choice to be made, and the respondent may have to be repositioned accordingly. Do **not** ask the respondent to clench his/her fist.

Select a suitable vein and apply the tourniquet around the respondent's arm, using minimal pressure and for the shortest duration of time. Do not leave the tourniquet in place for longer than 2 minutes.

Ask the respondent to keep his/her arm as still as possible during the procedure.

Put on your gloves at this point.

Clean the venepuncture site gently with an alcohol swab. Allow the area to dry completely before the sample is drawn.

Make sure the Sharps bin is readily available to receive used Multifly or other needles, and take the usual rigorous precautions against needle-stick accidents. Never resheath a used needle.

Tape the Multifly to the arm with Micropore tape across only half the width of the butterfly section, and with one end folded over, so as to make a non-adhesive flap for easy removal.

Collect the blood samples according to priority by placing the specimen tubes in the correct order in the sample tray provided.

You may use the Monovettes in the 'vacuum' mode, by withdrawing the plunger to the 'click'-point. It is a good practice to attach the first Monovette to the Multifly before insertion into the vein: this ensures a 'flash' of blood when the needle enters the vein.

Check for plaster allergies before applying a plaster. If allergic, use a cotton ball secured with micropore tape.

Ask the respondent to press afterwards on the bleeding point with their arm slightly raised, which helps reduce bruising.

Mix all tubes by gentle inversion five times except for the white and brown topped serum tubes (which do not need to be inverted).

Record details in CAPI.

1.9 Ametop gel

♦ ***Use of Ametop gel***

All children (aged 15 and younger) who consent to give a blood sample must be offered a local anaesthetic; Ametop gel. Ametop gel cannot be used on open wounds, eczematous skin, or if the respondent has had an allergic reaction to any local or general anaesthetic. This means that you may not take a blood sample from these respondents, unless they consent to giving a sample without using Ametop.

Ametop is a prescription medication and contains amethocaine (the active ingredient), which is applied to the skin. It is important that you ask the question below (also within CAPI) to determine whether the respondent has any known anaesthetic allergies.

> *Has the person giving this blood sample ever had a bad reaction to a local or general anaesthetic bought over the counter at a chemist, or given at the doctor, the dentist or in hospital?*

Use a new Ametop tube for each respondent and make sure you remove tubes from the household on completion of phlebotomy. For safety, Ametop must not be left lying around where young children could get at it. Any Ametop tubes you have left at the end of your assignment should be returned to the Brentwood office.

♦ *The pros and cons of using Ametop gel*

The advantages of Ametop are that it reduces sensation of needle prick, it is easy to apply and it is generally safe.

One disadvantage is that it takes 30 minutes to work, and so may increase anxiety. Ametop gel also has minimal side-effects and occasionally mild local skin reactions are experienced in people known to be allergic to similar drugs. Other possible side effects include reddening of skin (this is the action of the amethocaine & is to be expected) and a slight swelling or itching where the gel has been applied.

None of the local skin side-effects (if they occur) requires treatment. The reddening will disappear by itself over a period of hours. A local allergic reaction may involve itching, but is unlikely to require treatment. In the very rare instance of a blister forming, remove the Ametop immediately.

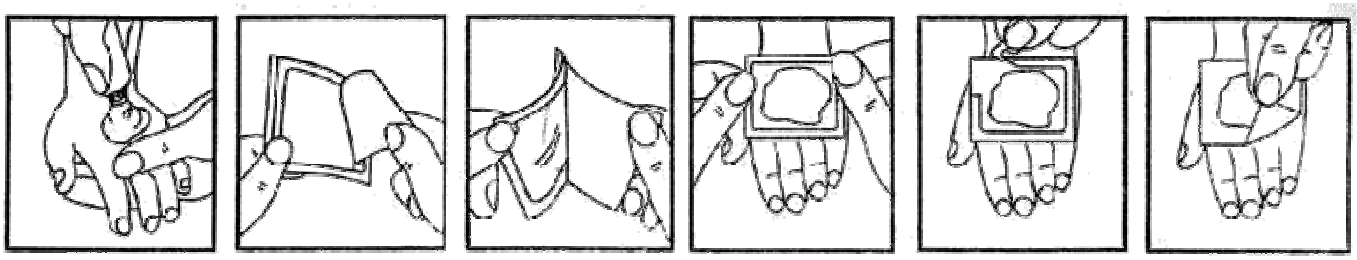
You will need to explain the pros and cons of using Ametop to each respondent and parent, in addition to giving them the leaflet to read. It is important that respondents understand that you are not a doctor and cannot treat unexpected reactions.

♦ *Applying Ametop gel*

Ametop gel must only be applied to healthy skin; therefore it must not be applied to sore or broken skin (eg. eczema or cuts). Make sure the Ametop gel is kept away from eyes or ears.

If the young person requires Ametop to be applied prior to venepuncture, inspect the antecubital fossae and decide which arm you will use for blood-taking. If both arms are suitable, use the left arm.

Apply Ametop gel over the antecubital fossa. Cover with a Tegaderm dressing (a vapour permeable and self-sticking film dressing) to keep the Ametop in place. See details about how to apply Ametop below. **Please note the illustration shows** Ametop **being used on the hand. *National Centre* policy is to only take blood samples from the arm.**



1. Squeeze ¾ of a tube in a mound on the area to anaesthetised. **Do not rub in.**

2. Peel the beige coloured 'centre cut-out' from the dressing.

3. Peel the paper layer marked 3M Tegaderm from the dressing.

4. Apply the adhesive dressing with its paper frame to cover the Ametop. **Do not spread the gel**.

5. Remove the paper frame using the cut mark. Smooth down the edges of the dressing carefully and leave in place for 30 minutes. The time of application can be written on the occlusive dressing.

6. After 30 minutes (max. 60mins), remove the dressing. Wipe off the Ametop. Clean entire area with alcohol and begin procedure.

As you may well be aware, removing the Tegaderm is sometimes painful so take care on hairy arms!

NB. THE CONCEPT OF BLOOD TAKING AND USE OF AMETOP GEL MUST NOT BE RAISED WITH THE RESPONDENT BEFORE THE APPROPRIATE POINT IN THE CAPI SCHEDULE. DO NOT INTRODUCE BLOOD TAKING BEFORE THIS, AS THIS MIGHT RISK AFFECTING OTHER MEASUREMENTS (E.G. BLOOD PRESSURE).YOU MUST NOT APPLY AMETOP GEL TO ANY RESPONDENT BEFORE YOU ARE PROMPTED TO DO SO IN THE CAPI SCHEDULE.

1.10 Taking blood from children

Unless the NDNS nurse is a trained paediatric phlebotomist, bloods from those aged 10 and younger will be taken by a trained paediatric phlebotomist. NDNS nurses will be taking blood samples themselves from those aged 11 and over. It is important to make the child feel as comfortable and as at ease as possible. Smiling, making eye contact and speaking so that the child can understand easily are ways to facilitate this. Also, ask the child for permission to do something rather than insisting or telling. This can encourage a sense of control in the child and minimises fear.

Precautionary Restraint (A.K.A. Cuddle Restraint)

If the parent/guardian is willing (note this is optional), they can help you to gently restrain the child to reduce any accidents due to pulling away at the pin prick or panicked movements. Ask the child to sit on the parent's lap. The child should be sitting so that their legs are between the parent's legs. The child should have their arm wrapped around the parent's back and vice versa for the parent. This exposes the chosen arm to the nurse while occupying the child's arms and legs.

NOTE: It is important to ask the child to sit on the same side of the parent as the arm identified for venepuncture.

Please note that if the child has turned 11 since the interviewer visit and is 11 when you are gaining agreement for blood sampling, you, the nurse, should take the blood from this child. This is the only scenario where you should base age on actual,

current age rather than the age set at the interviewer visit. CAPI will prompt you to arrange to take blood if the child has turned 11 since the interviewer stage.

1.11 Scheduling appointments

Due to restrictions on when laboratories can process samples and the fact that the vast majority of respondents will be providing fasting samples, **blood sampling can only take place on Monday-Thursday mornings.**

We appreciate that these restrictions mean you will need to make a second or even third visit to a household to collect blood samples (e.g. you may have to make one evening visit to collect all the measurements except the blood sample then another morning visit to take the blood sample(s)).

In order to minimise the number of visits, if a household contains two respondents you should schedule appointments for when both respondents are available.

When a household contains a respondent aged 10 or younger, you also need to schedule the blood taking appointment to fit in with the availability of your paediatric phlebotomist partner.

1.12 Liaison with paediatric phlebotomist

Blood from young children, aged 10 or younger, will be taken from someone with recent experience in paediatric phlebotomy. If this is not you, you will be allocated a paediatric phlebotomist partner who will accompany you on visits to take blood from young children.

The earlier you know whether you have a child aged 18 months to 10 years, the better. This means both you and the phlebotomist, as well as the office, can be better prepared to deal with this. As soon as you know you will be visiting an address with a child aged 18 months to 10 years, you should call XXXX. XXXX has a list of paediatric phlebotomists who have been recruited and trained for NDNS. She will be able to tell you the name, phone number and address of the best placed phlebotomist.

You should then call the phlebotomists to make them aware that you potentially have an address where there might be some work for them to do. At this initial contact, you should ascertain the phlebotomists general availability during the fieldwork period (e.g. any days when the phlebotomist is on holiday or otherwise engaged). This will help when arranging blood-taking visits.

During the first visit when willingness to give a blood sample is ascertained, you can call the phlebotomist to arrange the follow-up visit whilst you are still in the household. Ideally, you will have the phlebotomist availability in advance and can make an appointment then and there. If this is not possible, you will need to arrange the visit as soon as possible afterwards and confirm details with the household over the phone.

Important points when working with a phlebotomist:

- The NDNS nurse is responsible for providing and taking all equipment, including tubes, labels, and needles to the respondent's address.
- The NDNS nurse is responsible for obtaining written consent and making sure signed consents are obtained in the consent booklet.

- ♦ The NDNS nurse is responsible for entering information into the laptop and must follow the usual blood taking block in the CAPI.
- ♦ The phlebotomists will be asked to complete and sign a paper version of the venepuncture checklist. NDNS nurses will need to enter this information into the CAPI and should post the paper version to the office.
- ♦ The NDNS nurse is responsible for all labelling, despatch and delivery of samples.

In essence – the phlebotomists will take the blood sample only – the NDNS nurse does everything else. This is because you are more experienced and have better training in all these areas.

1.13 Blood sampling token of appreciation

Respondents of all ages will receive £15 in high street vouchers as a thank you for providing a blood sample. Remember this should **not** be presented as 'payment' but as a token of appreciation. Vouchers will be sent out from the office but you will need to complete the **yellow** promissory note and leave it with the respondent.

1.14 Other important points

Please refer to the Nurse Protocols for important information regarding:

- Venepuncture checklist
- Fainting respondents
- Needle stick injuries

The Nurse Protocol also provides general information regarding the handling and disposal of needles and other materials. Also note that for NDNS, sharps bins can be filled with needles from several respondents and taken to the local field laboratory for disposal when full. Other contaminated waste generated should be placed in the biohazard labelled mini-grip bag provided and taken to the local field laboratory for disposal.

Labelling & Despatch of BLOOD samples

Most blood tubes (Sarstedt Monovettes®) will be taken by you to the field laboratories, for the blood to be processed; but some will need to be sent in the post to Addenbrookes Hospital, Cambridge.

It is absolutely crucial that tubes are delivered to the correct destination.

1.15 Despatching blood samples to Addenbrookes

♦ ***Overview***

The type of blood tubes to be posted to Addenbrookes depends on the age of the respondent and is summarised in the table below.

Tube:	No of tubes:	Goes to:	Label:
Respondents aged 16+ years			
2.6mL EDTA blood tube (**red** top)	1	Addenbrookes	E N1 (3)
4.7mL serum gel blood tube (**brown** top)	1	Addenbrookes	SE N1 (5)
Respondents aged 7-15 years			
2.6mL EDTA blood tube (**red** top)	1	Addenbrookes	E N1 (3)
2.6mL serum gel blood tube (**brown** top)	1	Addenbrookes	SE N1 (5)
Respondents aged 1.5-6 years			
2.6mL EDTA blood tube (**red** top)	1	Addenbrookes	E N1 (3)
1.1mL serum gel blood tube (**brown** top)	1	Addenbrookes	SE N1 (5)

It is essential that the tubes are properly labelled as the Addenbrookes pathology laboratory will be receiving blood tubes from many different studies and respondents from around the UK.

♦ ***Packaging the tubes for posting***

The packaging for posting the tubes has to comply with Royal Mail guidelines. The packaging consists of the following:

- *Primary receptacle* – blood-filled Monovette tube
- *Secondary packaging* – Noax tube (recyclable)
- *Rigid outer packaging* – plastic 'video-cassette' box
- Labelled jiffy bag

Each blood-filled Monovette tube must be placed into a Noax tube (screw cap) before placing it into the rigid outer box. Labels FOL1 (37) and FOL2 (38) (see next section) should be attached to the 3 carbonised copies of the completed Addenbrookes biochemistry despatch note (see below) with a paperclip. The rigid outer box and the Addenbrookes biochemistry despatch notes, with attached label should be placed into the labelled jiffy bag and posted.

Tubes from respondents from the same household going to Addenbrookes can be posted together. Documentation for both respondents must be included in the packet.

The blood samples must be posted as soon as possible after they were taken, so that they arrive at Addenbrookes within 24 hours. The jiffy bags will fit in a post box. Before posting you must always check that you have not missed the same day collection. Only if it is unlikely that you will find a post box with a same day collection that has not passed yet in an acceptable driving distance can you post the sample in a post-box where collection will take place the next day.

Sub-sample Labels for Addenbrookes

Labels FOL1 (37) and FOL2 (38) are used by the Addenbrookes laboratory staff for labelling blood sub-sample tubes. These 2 labels should be cut from the bottom of the label strip, attached to the 3 carbonised copies of the Addenbrookes research analysis request form with a paperclip and enclosed with blood samples sent to Addenbrookes.

Blood Sample Despatch Notes for Addenbrookes

The Office Consent booklet contains three carbonised copies of the Addenbrookes biochemistry despatch note (Research Analysis Request – 952), **all** of which **must** be enclosed with samples posted to Addenbrookes.

You should clearly and legibly complete the following information in the top section of the **first** copy of the biochemistry despatch note (the bottom section will be completed by the laboratory):

- The respondent's date of birth.
- Whether the respondent is male or female.
- Whether the respondent provided a fasting or non-fasting blood sample.
- The date the sample was taken.
- The time the sample was taken.
- Whether a full or partial sample was obtained for **each** of the two tubes.

The Addenbrookes despatch notes are carbonised but please ensure the information you have recorded has transferred through to each of the three copies.

You should then affix the following labels onto the three copies of the despatch note:

- **FIRST COPY:** Affix serial number label **AddxB1 (11)** in the specified box.
- **SECOND COPY:** Affix serial number label **AddxB2 (12)** in the specified box.
- **THIRD COPY:** Affix serial number label **AddxB3 (13)** in the specified box.

Please ensure that you complete all necessary information fully as each part is a vital piece of information.

IMPORTANT: Please remember to fill in the carbonised despatch notes contained in the Office Consent booklet – Addenbrookes need all three of these in order to process the samples correctly. If they do not receive all three copies, correctly labelled and completed, they will not process the samples.

When the samples have been posted, you should record details of the samples collected, and the date of posting to Addenbrookes on the "Despatch Note for all Samples" form (DESP OFFICE) which is at the back of the Office Consent booklet.

1.16 Taking blood samples to local field laboratory for immediate processing

♦ ***Overview***

Most blood tubes will be taken to the field laboratories, for the blood to be processed. The number of blood tubes to be taken to the local laboratory depends on the age of the respondent and is summarised in the table below.

Tube:	**Goes to:**	**Label:**
Respondents aged 16+ years		
4.5mL serum (white top)	Field Lab	SE N2 (6)
7.5mL Li Hep TM (orange top)	Field Lab	LH N1 (7)
7.5mL Li Hep TM (orange top)	Field Lab	LH N2 (8)
1.2mL Fluoride (yellow top)	Field Lab	F N1 (10)
4.5mL Li Hep (orange top)	Field Lab	LH N3 (9)
2.6mL EDTA blood tube (red top)	Field Lab	E N2 (4)
Respondents aged 7-15 years		
7.5mL Li Hep TM (orange top)	Field Lab	LH N1 (7)
4.5mL serum (white top)	Field Lab	SE N2 (6)
2.7mL Li Hep (orange top)	Field Lab	LH N2 (8)
1.2mL Fluoride (yellow top)	Field Lab	F N1 (10)
Respondents aged 1.5 to 6 years		
4.5mL Li Hep (orange top)	Field Lab	LH N1 (7)
2.7mL serum (white top)	Field Lab	SE N2 (6)

♦ ***Packaging and delivering the tubes to the field laboratory***

The samples must be delivered to the laboratory within **2 hours** of the sample being taken. You must <u>not</u> take a blood sample if you cannot deliver it to the local laboratory within this time.

After the blood samples have been taken and when transporting them to the field laboratory it is important that they are kept in the cool box provided. The samples for the respondent should be put in a plastic bag and placed in the cool box so they stay upright during transportation. If two respondents (from the same or different households) have given blood samples in a morning, their samples can be transported together in the cool box; in this case it is particularly important that the samples are labelled and bagged correctly.

Each respondent's set of samples must be handed over to the designated person at the field laboratory together with the relevant despatch note, FL2 (see next section), the corresponding set of labelled pre-packed empty storage tubes, and remaining labels.

♦ ***Blood Sample Despatch Notes for field laboratory***

You should clearly and legibly complete all parts in section 1 of the Despatch Note. Always complete ALL parts of this section in full as each piece is a vital bit of information (section 2 will be completed by the laboratory).

♦ ***Liaison with field laboratory***

Samples may be delivered to your designated field laboratory on Mondays to Thursdays in the morning. It is very important that you **always notify the field laboratory of sample deliveries in advance**. Delivery times should be discussed with your contact person. As you will usually be taking fasting blood samples in the morning there is minimal risk that you are likely to deliver samples outside the normal opening hours of the laboratory but if this does happen (e.g. you get stuck in traffic), you must endeavour to contact the field laboratory to let them know. You must also notify the laboratory immediately you know that a scheduled delivery is not going to take place, e.g. because of a broken appointment or the respondent not being able/willing to provide a sample. This notification is a matter of courtesy to save the laboratory preparing the stabilising agents unnecessarily and then waiting for a delivery that is never going to arrive.

Contact details (i.e. name, address and telephone number) of the local laboratory recruited for your area will be given in a separate document, along with any special delivery instructions. Each document contains the name and telephone number of the contact person (including a deputy) at the local laboratory, opening hours of the laboratory, and any helpful information on parking and location.

Any difficulties encountered with the local laboratory during the study should be reported to HNR as soon as possible. It is the responsibility of HNR to resolve any difficulties between local laboratories and study nurses. You will be provided with a named contact person at HNR that can be contacted by phone or e-mail.

Please remember to record details of the samples collected on the “Despatch Note for all Samples” form (DESP OFFICE) which can be found at the back of the Office Consent booklet.

WAIST & HIP CIRCUMFERENCES

WAIST AND HIP CIRCUMFERENCES (AGED 11+) PROTOCOL

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 distribution of body fat (both subcutaneous and intra-abdominal). Analyses suggest that this ratio is a predictor of health risk like the body mass index (weight relative to height).

Equipment

Insertion tape calibrated in mm (with a metal buckle at one end – if used).

The tape is passed around the circumference and the end of the tape is inserted through the metal buckle at the other end of the tape.

Eligibility

Waist and hip measurements will only be carried out on respondents **aged 11 and over.** The respondent is ineligible for the waist and hip measurement if:

a. Chairbound
b. Has a colostomy/ileostomy
c. Pregnant

If (a) and/or (b) apply, record this on the computer (question WHPNABM). If there are any other reasons why the measurement was not taken, record this on the computer and type in the reason.

Preparing the respondent

The interviewer will have asked the respondent to wear light clothing for your visit. Explain to the respondent the importance of this measurement and that clothing can substantially affect the reading.

If possible, without embarrassing you or the respondent, ensure that the following items of clothing are removed:

- all outer layers of clothing, such as jackets, heavy or baggy jumpers, cardigans and waistcoats
- shoes with heels
- tight garments intended to alter the shape of the body, such as corsets, lycra body suits and support tights

If the respondent is wearing a belt, ask them if it would be possible to remove it or loosen it for the measurement.

Pockets should be emptied.

Some respondents may be wearing religious or other symbols which they cannot remove and which may affect the measurement. Do not embarrass or offend the respondent by asking them to remove such things.

If the respondent is not willing to remove bulky outer garments or tight garments and you are of the opinion that this will significantly affect the measurement, record this on the Schedule at questions WJRel and/or HJRel. Some respondents may be wearing articles of clothing which cannot be removed and will affect the measurement (e.g. saris) – this should also be recorded.

If possible, ask the respondent to empty their bladder before taking the measurement.

Using the insertion tape

All measurements should be taken to the nearest millimetre. If the length lies half-way between two millimetres, then round to the nearest even millimetre. For example, if the measurement is halfway between 68.3 and 68.4, round up to 68.4. And if the measurement is halfway between 68.8 and 68.9, round down to 68.8. Please note that you must enter the measurement to one decimal place - do not round it to the nearest centimetre. For example, enter '78.2', not just '78'. If you do not enter a decimal point, the computer will give you a warning. If the measurement is exactly, say, 78cm, then all you need to do is suppress the warning and it will automatically fill in the '.0' for you. Otherwise, you must go back and amend your answer. As a further check, the computer will also ask you to confirm that a measurement ending in '.0' is correct.

Ensure the respondent is standing erect in a relaxed manner and breathing normally. Weight should be evenly balanced on both feet and the feet should be about 25-30cm (1 foot) apart. The arms should be hanging loosely at their sides.

If possible, kneel or sit on a chair to the side of the respondent.

Pass the tape around the body of the respondent and insert the plain end of the tape through the metal ring at the other end of the tape.

To check the tape is horizontal you have to position the tape on the right flank and peer round the participant's back from his/her left flank to check that it is level. This will be easier if you are kneeling or sitting on a chair to the side of the respondent.

Hold the buckle flat against the body and flatten the end of the tape to read the measurement from the outer edge of the buckle. Do not pull the tape towards you, as this will lift away from the respondent's body, affecting the measurement.

Measuring waist circumference

The waist is defined as the point midway between the iliac crest and the costal margin (lower rib). To locate the levels of the costal margin and the iliac crest use the fingers of the right hand held straight and pointing in front of the participant to slide upward over the iliac crest. Men's waists tend to be above the top of their trousers whereas women's waists are often under the waistband of their trousers or skirts.

Do not try to avoid the effects of waistbands by measuring the circumference at a different position or by lifting or lowering clothing items. For example, if the respondent has a waistband at the correct level of the waist (midway between the lower rib margin and the iliac crest) measure the waist circumference over the waistband.

Ensure the tape is horizontal. Ask the participant to breathe out gently and to look straight ahead (to prevent the respondent from contracting their muscles or holding their breath).

Take the measurement at the end of a normal expiration. Measure to the nearest millimetre and record this on the schedule.

Repeat this measurement again.

If you are of the opinion that clothing, posture or any other factor is significantly affecting the waist measurement, record this on the schedule.

Measuring hip circumference

The hip circumference is defined as being the widest circumference over the buttocks and below the iliac crest. To obtain an accurate measurement you should measure the circumference at several positions and record the widest circumference.

Check the tape is horizontal and the respondent is not contracting the gluteal muscles. Pull the tape, allowing it to maintain its position but not to cause indentation. Record the measurement on the schedule to the nearest millimetre, e.g. 95.3. If the length lies half-way between two millimetres, then round to the nearest even millimetre.

If clothing is significantly affecting the measurement, record this on the schedule.

Repeat this measurement again.

General points

The tape should be tight enough so that it doesn't slip but not tight enough to indent clothing. If clothing is baggy, it should be folded before the measure is taken.

If the respondent is large, ask him/her to pass the tape around rather than having to "hug" them. Remember though to check that the tape is correctly placed for the measurement being taken and that the tape is horizontal all the way around.

If your second waist or hip measurement differs by 3cm or more from the first, the computer will give you a warning. If you have made a mistake when entering the figures (e.g. typed 78.2 instead of 68.2), you should type over the mistake. If it was not a mistake, you should suppress the warning and take a third measurement.

If you have problems palpating the rib, ask the respondent to breathe in very deeply. Locate the rib and as the respondent breathes out, follow the rib as it moves down with your finger. If your respondent has a bow at the back of her skirt, this should be untied as it may add a substantial amount to the waist circumference.

Female respondents wearing jeans may present a problem if the waistband of the jeans is on the waist at the back but dips down at the front. It is essential that the waist measurement is taken midway between the iliac crest and the lower rib and that the tape is horizontal. Therefore in this circumstance the waist measurement would be taken on the waist band at the back and off the waist band at the front. Only if the waistband is over the waist all the way around can the measurement be taken on the waistband. If there are belt loops, the tape should be threaded through these so they don't add to the measurement.

Recording problems

We only want to record problems that will affect the measurement by more than would be expected when measuring over light clothing. As a rough guide only record a problem if you feel it affected the measurements by more than 0.5cm. We particularly want to know if waist and hip are affected differently.

At WJRel and HJRel, record how reliable the waist and hip measures are, and whether any problems that were experienced were likely to increase or decrease the measurement. This information is important for analysis of the results. As a general rule, if you believe that the measurements you took are 0.5cm more or less than the true measurement because of problems you encountered (e.g.. clothing the respondent was wearing), this should be counted as unreliable.

Respondent feedback

Offer to write the measurements on the Measurement Record Card.

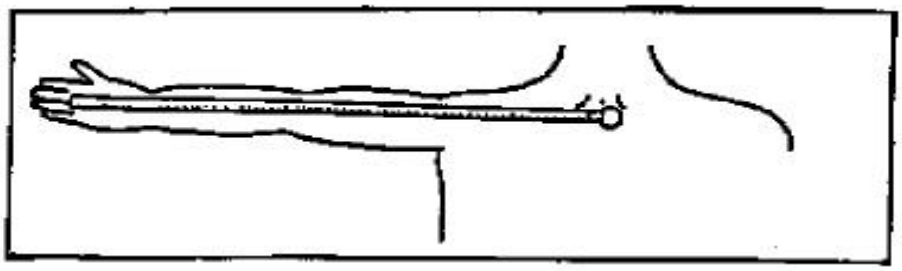
The measurements will be given in inches as well as centimetres by the computer. You can record the measurements on the MRC using centimetres, inches or both.

DEMISPAN MEASUREMENT

DEMISPAN PROTOCOL (FOR 65+ OR 16-64 WHERE THE INTERVIEWER COLLECTED A VALID WEIGHT MEASUREMENT BUT WAS NOT ABLE TO COLLECT A VALID HEIGHT MEASUREMENT)

Purpose

The demispan measurement is an alternative measure of height. It is the distance between the midline of the sternal notch and the base of the fingers between the middle and ring fingers, with the arm out-stretched laterally (see Figure below).



The demispan measurement is taken when it is difficult to measure height accurately. For example if the respondent cannot stand straight or is unsteady on their feet as is quite often in the case of the elderly and some disabled people. It is used as a proxy for a height measurement as there is a relationship between demispan and 'true height'. Additionally, height decreases with age to a varying degree depending on individuals, and thus the standard measure of height may be less useful for some older respondents. The long bones in the arm do no get shorter however, and thus can be used to estimate accurately a respondent's 'true height'.

Eligibility

Demispan measurements will be carried out on respondents **aged 65 and over.** Demispan measurements will be carried out on those aged 16-64 where the interviewer collected a valid weight measurement but was not able to collect a valid height measurement.

Exclusion criteria

Respondents are excluded from the demispan measurement if:

- They cannot straighten either arm without pain or discomfort.

Equipment

You will need:

- A thin retractable demispan tape calibrated in cm and mm
- A skin marker pencil
- Micropore tape
- Alcohol and non-alcohol swab

Using the demispan tape

A hook is attached to the tape and this is anchored between the middle and ring fingers at the finger roots. The tape is then extended horizontally to the sternal notch.

The tape is fairly fragile. It can be easily damaged and will dent or snap if bent or pressed too firmly against the respondent's skin. Also the ring connecting the hook to the tape is a

relatively weak point. Avoid putting more strain on this ring than necessary to make the measurements. When extending the tape, hold the tape case rather than the tape itself as this puts less strain on the hook and tape. When placing the tape against the sternal notch, do not press into the sternal notch so much that the tape kinks.

Preparing the respondent

Explain to the respondent the purpose of conducting the demispan measurement and explain the procedure. Further explain that the measurement requires minimal undressing because certain items may affect the accuracy of the measurement. The items of clothing that will need to be removed include:

- Ties
- Jackets, jumpers and other thick garments
- Jewellery items such as chunky necklaces/bracelets
- Shoulder pads
- High heeled shoes
- Shirts should be unbuttoned at the neck

If the respondent does not wish to remove any item that you think might affect the measurement, record that the measurement was not reliable in CAPI.

For the purpose of consistency, where possible the **right arm** should always be used. If this is not possible, carry out the measure on the left arm and make a note of this in CAPI.

Procedure

1. Locate a wall where there is room for the respondent to stretch his/her arm. They need to stand with their back to the wall but not support themselves on it, standing approximately 3 inches (7cm) from the wall.

2. Ask the respondent to stand with weight evenly distributed on both feet, head facing forward.

3. Have them raise their **right arm** and extend it horizontally to their side until it is parallel with the floor. The right wrist should be in neutral rotation and neutral flexion. Rest your left arm against the wall allowing the respondent's right wrist to rest on your left wrist.

4. When the respondent is in the correct position, mark the skin at the centre of the sternal notch using the skin marker pencil. This mark must be made when the respondent is standing in the correct position. Explain to the respondent that the mark will wash off afterwards.

5. If clothing, jewellery or subcutaneous fat obscures the sternal notch, use a piece of micropore tape on the clothing or jewellery. If the respondent refuses to the use of the marker pen or the tape, proceed with the measurement but record it as unreliable in CAPI.

6. Ask the respondent to relax while you get the demispan tape.

7. Place the hook between the middle and ring fingers of the respondent so that the tape runs smoothly across the arm.

8. Ask the respondent to get into the position they were in previously, with their arm raised horizontally, the wrist in neutral flexion and rotation. Check they are in the correct position.

9. Extend the tape to the sternal notch. If no mark was made, feel for the correct position and extend the tape to this point.

10. Ask the respondent to stretch his/her arm checking that they remain in the same position, the hook has not moved on their fingers and that the respondent is not leaning on the wall or bending at the waist.

11. Record the measurement in CAPI, in centimetres and millimetres. Always report to one decimal place. If the length lies halfway between 2 millimetres, then round to the **nearest even millimetre** (see section 2.4).

12. Ask the respondent to relax and loosen up the right arm by shaking it gently.

13. Repeat steps 2-11. Explain to the respondent that the measure needs to be taken again for accuracy. If the second measure is significantly different to the first, CAPI will give you an error message. At this point you can check to make sure that you have entered the readings correctly or take a third measure if there is another reason for the measurements being different. This is to be taken in the same way as the previous two. CAPI will work out which two of the three readings to use.

14. If the respondent wishes, record the results on their measurement record card. You can use the conversion chart on your showcards to convert the results into inches.

15. If the skin marker is used, offer the alcohol or non alcohol wipe to the respondent to wipe the skin mark off.

Additional points

- If the respondent is unable to stand in the correct position or finds it difficult to stand steadily, ask them to sit for the measurement. Use an upright chair and position it close to a wall. If a respondent is unable to sit or stand, the measurement can be taken when the respondent is lying down. In both cases still try to support the arm if possible. You may need to sit or kneel to take the reading.

- Record in CAPI how the measurement was taken (i.e.. with respondent standing, sitting, etc).

- If there is no wall available for the respondent to stand in front of and extend their arm horizontally, have them stand in front of any other flat surface e.g. in front of a cupboard or window, ensuring that they are not supporting their body weight on this surface.

- If the respondent is much taller than you take the measurement with the respondent sitting.
- If the respondent's arm is much longer than yours is, support the arm close to the elbow rather than wrist level. Your arm must not be between the elbow and shoulder, as this will not provide sufficient support.
- Before packing the tape away ensure the hand hook and length of tape is wiped to reduce potential cross infection between households.

BLOOD PRESSURE

BLOOD PRESSURE PROTOCOL

Blood Pressure (Aged 4+)

High blood pressure is an important risk factor for cardiovascular disease. It is important that we look at the blood pressure of everyone in the survey using a standard method so we can see the distribution of blood pressure across the population. This is vital for monitoring change over time, and monitoring progress towards lower blood pressure targets set in the Health of the Nation.

Timing- Blood pressure can be higher than normal immediately after eating, smoking, drinking alcohol or taking vigorous exercise. This is why respondents are asked to avoid doing these for 30 minutes before you arrive. As already suggested, if you can juggle respondents within a household around to avoid having to break this "half-hour" rule, do so. But sometimes this will not be possible and you will have to take their blood pressure within this time period. In which case enter all the codes that apply at *ConSubX.*

Eligibility

The only people not eligible for blood pressure measurement are those who are pregnant (who will have been screened out anyway) or aged less than 4 years old.

Protocol For Blood Pressure Recording: Omron Hem-907

This section describes the protocol for measuring blood pressure using the Omron HEM 907. More detailed information may be obtained from the instructions booklet inside the box. If you have any further questions or problems then please contact XXXX.

Equipment

Omron HEM 907 blood pressure monitor
Child/ small adult cuff (17-22 cm)
Standard adult cuff (22-32 cm)
Large adult cuff (32-42 cm)
AC adapter

The Omron HEM -907 blood pressure monitor is an automated machine. It is designed to measure systolic blood pressure, diastolic blood pressure and pulse rate automatically at pre-selected time intervals. On this study three readings are collected at one-minute intervals.

The Omron 907 is equipped with a rechargeable battery, which is usable for approximately 300 measurements when fully charged. To recharge the battery, connect the monitor to the mains. A battery symbol will appear in the CHARGING display when the battery is charging. When ready to use the symbol will disappear. A dark battery symbol in the BATTERY display indicates that the battery is charged and the machine is usable. The battery can be charged in approx. 12 hours. When the battery symbol in the BATTERY display starts to flash there are 20- 30 measurements left, you need to charge the battery soon. When a light battery symbol appears in the BATTERY display the battery needs to be put on charge immediately. The Omron 907 is **NOT** designed to work off the mains adaptor; it should be run off the battery power pack. The mains adaptor should ONLY be used to charge the battery pack.
PLEASE REMEMBER TO CHARGE THE BATTERY !!

The picture on page 28 shows the main features of the Omron HEM-907.

Preparing the respondent

The respondent should not have eaten, smoked, drunk alcohol or taken vigorous exercise in the 30 minutes preceding the blood pressure measurement as blood pressure can be higher than normal immediately after any of these activities. As already suggested, if you can juggle respondents within a household around to avoid having to break this "half-hour" rule, do so. But sometimes this will not be possible and you will have to take their blood pressure within this time period. In which case enter all the codes that apply.

Ask the respondent to remove outer garments (e.g. jumper, cardigan, jacket) and expose the right upper arm. The sleeve should be rolled or slid up to allow sufficient room to place the cuff. If the sleeve constricts the arm, restricting the circulation of blood, ask the respondent if they would mind taking their arm out of the sleeve for the measurement.

Selecting the correct cuff

Adults aged 16 and over: Do **not** measure the upper arm circumference. Instead, choose the correct cuff size based on the acceptable range which is marked on the inside of the cuff. You will note that there is some overlap between the cuffs. If the respondent falls within this overlap range then use the **standard** cuff where possible.

Children aged 4 to 15: It is important to select the correct cuff size. The appropriate cuff is the largest cuff which fits between the axilla (underarm) and the antecubital fossa (front of elbow) without obscuring the brachial pulse and so that the index line is within the range marked on the inside of the cuff. You will be provided with a child's cuff as well as the other adult cuffs. Many children will not need the children's cuff and instead will require an adult cuff. You should choose the cuff that is appropriate to the circumference of the arm.

Adults and Children: The appropriate cuff should be connected via the grey air tube to right end side of the monitor.

Procedure

Wrap the correct sized cuff round the upper **right** arm and check that the index line falls within the range lines. Use the left arm only if it is impossible to use the right. If the left arm is used, record this on the schedule. Locate the brachial pulse just medial to the biceps tendon and position the arrow on the cuff over the brachial artery. The lower edge should be about 1-2 cm above the cubital fossa (elbow crease).

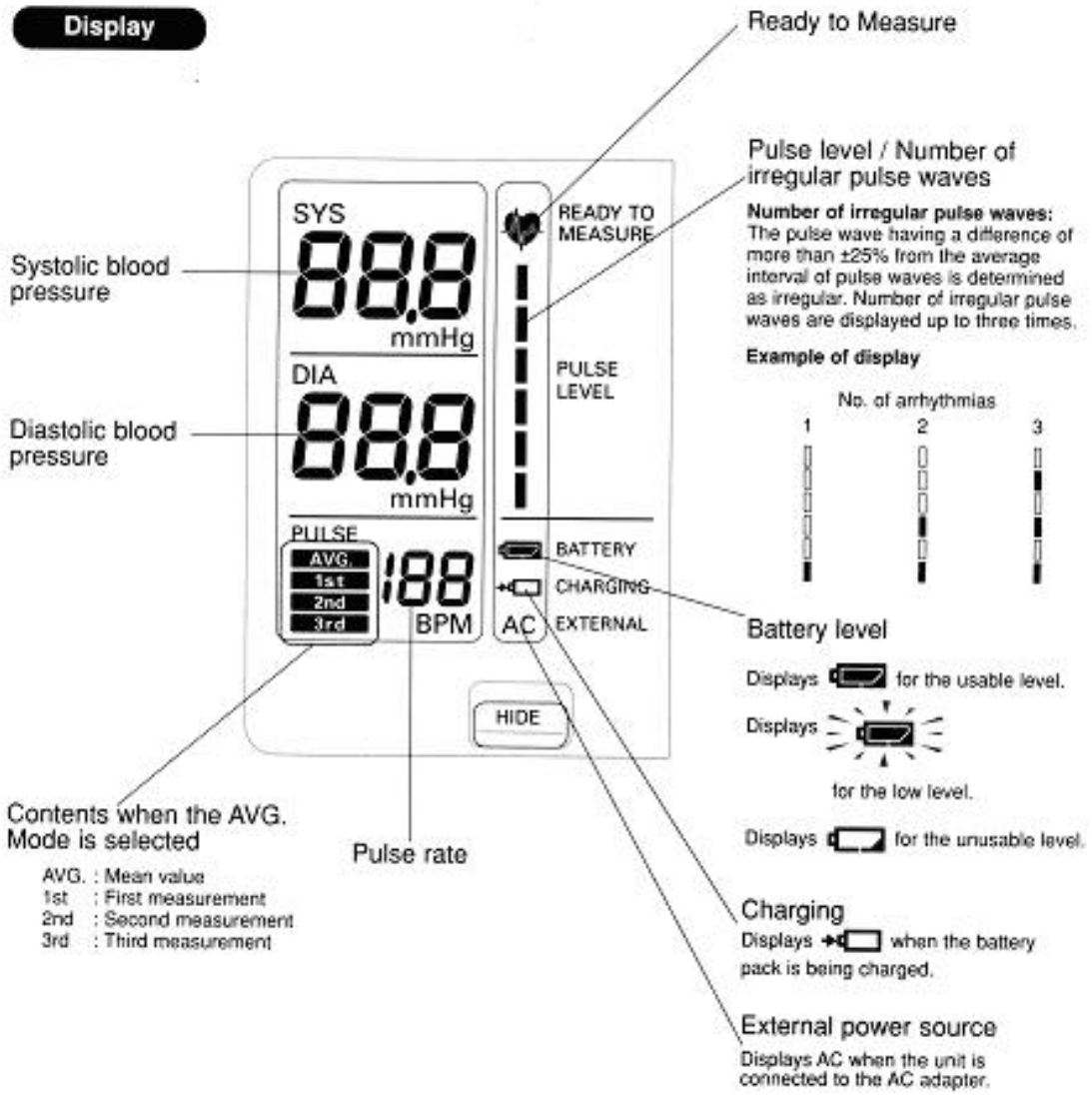
Do not put the cuff on too tightly as bruising may occur on inflation. Ideally, it should be possible to insert two fingers between cuff and arm. However, the cuff should not be applied too loosely, as this will result in an inaccurate measurement.

The respondent should be sitting in a comfortable chair with a suitable support so that the right arm will be resting at a level to bring the antecubital fossa (elbow) to approximately heart level. They should be seated in a comfortable position with cuff applied, legs uncrossed and feet flat on the floor.

Explain that before the blood pressure measurement we need them to sit quietly for five minutes to rest. They should not smoke, eat or drink during this time. Explain that during the measurement the cuff will inflate three times and they will feel some pressure on their arm during the procedure.

It is important that children as well as adults rest for five minutes before the measurement is taken. However, making children sit still for five minutes can be unrealistic. They may move around a little, but they should not be running or taking vigorous exercise. As with adults, they should not eat or drink during this time.

After five minutes explain you are starting the measurement. Ask the respondent to relax and not to speak until the measurement is completed as this may affect their reading.



How to operate the monitor

See Picture of Omron HEM-907 monitor above.

1. Switch the monitor on by pushing the **ON/OFF** button. Wait for the **READY TO MEASURE** symbol to light, indicating the machine is ready to start the measurement (approx 2 sec).

2. Check that the **MODE** Selector is set to **AVG** and the **P-SET** (pressure setting) Volume is set to **AUTO**.

3. Press the **START** button to start the measurement. The cuff will now start to inflate and take the first measurement. When the first measurement is complete the LCD displays

show systolic pressure, diastolic pressure, and pulse rate. Record the readings on the interview schedule.

4. Blood pressure will then be recorded at one-minute intervals thereafter. After each interval record the reading from the LCD displays on the interview schedule.

5. After the three measurements are complete press the **ON/OFF** button to turn off the power and remove the cuff.

If there are any problems during the blood pressure measurements or the measurement is disturbed for any reason, press the **STOP** button and start the procedure again. If the respondent has to get up to do something, then ask them to sit and rest for five minutes again.

Error readings

They appear on the LCD display:

Er1, Er2. Check that the tube connecting the cuff to the monitor is properly inserted and it is not bent. Check that the cuff is properly wrapped around the arm. Repeat the measurement.

Er3. Check that the tube connecting the cuff to the monitor is not bent. Repeat the measurement.

Er4. This could be because of a motion artefact. Ask the respondent to sit as still as possible and take the measurement again. If you still get another Er4 error reading, it could be because the respondent has a very high blood pressure. Set the P-SET Volume to 260 and repeat the measurement.

Er5, Er6. Check that the cuff is properly wrapped around the arm. Repeat the measurement.

If any of these errors readings persist, record that it wasn't possible to get a reading and explain to the respondent that this sometimes happens. Then contact Brentwood and inform them that there is a problem with the monitor.

Er7, Er8. Check that the respondent does not move, ask the respondent to sit as still as possible and take the measurement again. If you still get an error reading the pulse may be irregular. Do NOT palpate the pulse. Record that it wasn't possible to get a reading and explain to the respondent that this sometimes happens.

Er9. Technical fault. Contact Brentwood immediately and inform them that there is a problem with the monitor.

CAPI:

Readings - Record the blood pressure readings in the order shown on the screen. Double check each entry as you make it to ensure you have correctly entered the reading. If you have got to this point and then become aware that you are not going to be able to get a reading after all, you should enter '996' then press <End>. This will automatically enter '999' in each box, to save you having to type it in 12 times. Blood pressure readings given by the Omron are systolic blood pressure, diastolic blood pressure and pulse: the Omron does not give MAP.

NAttBP - If you failed to get a reading, or you only managed to obtain one or two readings, enter a code to show what the problem was. If necessary, write in full details at *OthNBP*.

Feedback to respondents

Offer the respondent his/her blood pressure readings. If (s)he would like them, enter them on the Measurement Record Card (MRC). If an adult respondent has a raised blood pressure you must give her/him advice based on the result. This will be calculated by the computer and will appear on the screen for you to read out exactly as written. Write any advice given onto the MRC. The interviewer should have given them a MRC with the height and weight recorded on it. If the respondent has lost it, or claims never to have had one, make out a new one, ensuring the name is on the front of the card.

It is not the purpose of this survey to provide respondents with medical advice. Nevertheless, many respondents will ask you what their blood pressure readings mean. Make sure you are very familiar with the guidance below. We wish it to be strictly followed. It is very important that as little anxiety as possible is caused but at the same time we have a duty to advise people to see their GPs if blood pressure is raised.

a) Child respondents (age 4 to 15)

We do **not** wish you to comment on the child's blood pressure readings to the parents. If they seek comment, reiterate what you have already said about not being able to interpret a single blood pressure measurement without checking to see whether it is normal for the child's age and height. Reassure them that if it is found to be abnormal, the Survey Doctor will get in touch with them or their child's GP, if they give permission for the results to be sent to their child's GP, and advise them as to what steps they should take. This rule applies for **all** readings you obtain.

b) Adult respondents (aged 16+)

In answering queries about an adults blood pressure it is very IMPORTANT to remember that it is **not** the purpose of the survey to provide respondents with medical advice, nor are you in a position to do so as you do not have the respondent's full medical history. But you will need to say something. What you say in each situation has been agreed with the survey doctor. The computer screen will tell you what to say in each situation. It is very important that **you make all the points relevant to the particular situation and that you do not provide a more detailed interpretation as this could be misleading**. Read the information below very carefully and make sure you always follow these guidelines. This information will be based on the highest systolic and highest diastolic reading from the last two readings. This will usually, but not always, be from the same reading. For example, occasionally it may be the systolic from the second reading and the diastolic from the third reading.

Definitions of raised blood pressure differ slightly. We are using the ones given below for this survey. They are the same as those used in the Health Survey for England. It is important that you adhere to these definitions, so that all respondents are treated in an identical manner. These are shown below.

ADULTS ONLY

SURVEY DEFINITION OF BLOOD PRESSURE RATINGS

For men and women aged 16+

Rating	Systolic		Diastolic
Normal	<140	and	<85
Mildly raised	140 - 159	or	85 – 99
Raised	160 - 179	or	100 – 114
Considerably raised	180 or more	or	115 or more

Points to make to a respondent about their blood pressure (given on screen):

Normal:

'Your blood pressure is normal'

Mildly raised:

'Your blood pressure is a bit high today.'

'Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure.'

'You are advised to visit your GP within 2 months to have a further blood pressure reading to see whether this is a once-off finding or not.'

Raised:

'Your blood pressure is a bit high today.'

'Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure.'

'You are advised to visit your GP within 2 weeks to have a further blood pressure reading to see whether this is a once-off finding or not.'

Considerably raised:

'Your blood pressure is high today.'

'Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure.'

'You are strongly advised to visit your GP within 5 days to have a further blood pressure reading to see whether this is a once-off finding or not.'

Note: If the respondent is elderly and has considerably raised blood pressure, amend your advice so that they are advised to contact their GP within the next week or so about this reading. This is because in many cases the GP will be well aware of their high

blood pressure and we do not want to worry the respondent unduly. It is however important that they do contact their GP about the reading within 7 to 10 days. In the meantime, we will have informed the GP of their result (providing the respondent has given their permission).

Action to be taken by the nurse after the visit

If you need to contact the Survey Doctor, do not do this from the respondent's home - you will cause unnecessary distress.

a) Children

No further action is required after taking blood pressure readings on children. All high readings are viewed routinely by the Survey Doctor. However, in the rare event that you encounter a child with a very high blood pressure, i.e. systolic 160 or above or diastolic 100 or above please call the Survey Doctor.

b) Adults

The chart on the next page summarises what action you should take as a result of the knowledge you have gained from taking an adult's blood pressure readings. For this purpose you should only take into account **the last two of the three readings** you take. We do not want you to use the first reading as it is prone to error for the reason stated above.

BLOOD PRESSURE	ACTION
Normal/mildly raised/raised BP *2nd or 3rd reading:* Systolic less than 180 mmHg **and** Diastolic less than 115 mmHg	No further action necessary If you feel that the circumstances demand further action, inform the Survey Doctor who will then inform the respondent's GP urgently if she deems it necessary.**
Considerably raised BP *2nd or 3rd reading:* Systolic at or greater than 180 mmHg **or** Diastolic at or greater than 115 mmHg	Contact the Survey Doctor at the earliest opportunity and she will inform the respondent's GP.** If the respondent has any symptoms of a hypertensive crisis* call an ambulance immediately. The Survey Doctor must be informed at a later stage.

* A hypertensive crisis is an extremely rare complication of high blood pressure. Its signs and symptoms include diastolic bp > 135 mmHg, headache, confusion, sleepiness, stupor, visual loss, seizures, coma, cardiac failure, oliguria, nausea & vomiting.

** You must still contact the Survey Doctor even if respondents tell you that their GP knows about their raised BP.

All high or unusual readings will be looked at by the Survey Doctor when they reach the office. If the reading is high, then the Survey Doctor will contact the respondent directly.

In all instances, follow the protocol.

Survey Doctor contact details

The Survey Doctor is **Dr. Jennifer Mindell** of the Department of Epidemiology and Public Health, at UCL. She is available on XXXX during working hours. Out of office hours, Dr. Mindell has a mobile phone (on which you can leave a message, if necessary), phone no. **XXXX**. Her phone is not switched on all the time but she will usually check for messages and call back within a couple of hours. You are likely to need to speak to a doctor more urgently than that only in circumstances in which you should be calling an ambulance.

If you need to leave a message, leave the following details:

- Your name
- Contact telephone number
- The survey
- Briefly, the type of problem
- If you want the Survey Doctor to ring you back at a specific time etc, leave those details as well.

Do not hesitate to contact Dr Mindell whenever you feel you need advice about what to do after seeing a respondent. If you need to speak with the Survey Doctor in the evening please try to do so before 10 pm.

If you cannot make contact with Dr. Mindell, speak to XXXX, who will contact her on your behalf.

When Dr Mindell will be unavailable for more than a couple of hours (e.g. annual leave), she will divert her calls to XXX (another doctor in the same department) or another doctor. Just dial Dr Mindell's mobile phone number as usual but do not be surprised if XXXX or someone else answers on occasion.

3 INFANT LENGTH MEASUREMENT

3.1 Introduction

The infant length measurement, when taken in conjunction with other growth parameters, can be used as an indicator of an infant's nutritional status. Taking this measurement across many years allows trends in infant length to be monitored and provides a means for the evaluation of current policies, interventions and treatments relating to infant health and nutrition. The measurement is taken for children aged six weeks or more and under two years.

3.2 Equipment

You will need:

- A Rollameter baby measure mat
- A Frankfort Plane card
- Milton wipes

3.3 Preparing the respondent

Explain to the parent or legal guardian of the infant the reason for taking the length measurement. Further explain that you will need their assistance in taking this measure and how they can help.

3.4 Procedure

1. Ask the parent to remove any bulky clothing or shoes that the infant is wearing as it may result in an inaccurate measurement. It is not necessary for them to remove the infant's nappy.

2. Unroll the Rollameter and lay it flat on any suitable flat, firm surface, preferably the floor. It is essential that the Rollameter is fully unrolled and as flat as possible, therefore doing the measurement on a deep pile carpet or rug is not appropriate. If the carpet is too thick, take the measurement in another uncarpeted room, e.g. kitchen or bathroom.

3. Wipe the surface of the Rollameter with a Milton Wipe and allow to dry for 30 secs.

4. The measurement can be taken with the infant on a Rollameter on a raised surface, e.g. a table, ONLY if the baby is held by an adult at all times, even if the baby has never previously rolled over.

4. Place the child on the foam bed of the Rollameter with his/her head touching the headpiece on which the name Rollameter is printed.

5. Move the child's head so that Frankfort Plane is in a position at right angles to the floor/table. The Frankfort Plane is an imaginary line passing through the external ear canal and across the top of the lower bone of the eye socket, immediately under the eye (see Figure 1). This position is important if an accurate reading is to be obtained. Ask the parent to hold the child in this position and make sure their head is in contact with the headpiece.

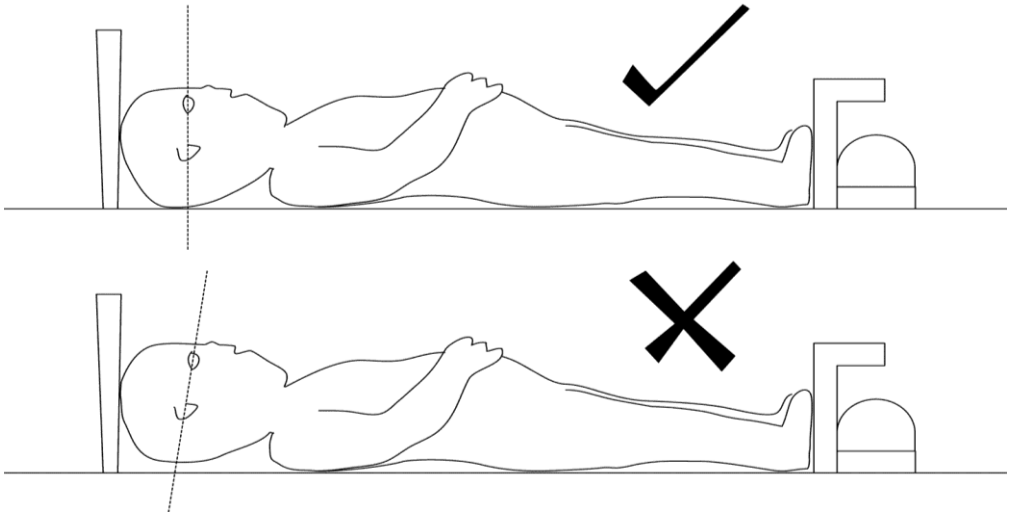


Figure 1 The infant Frankfort Plane

6. Straighten the child's legs by holding the legs by the ankles with one hand and applying a gentle downward pressure.

7. With your free hand, move the footrest on which the measuring tape is mounted to touch the child's heels by depressing the red button on the tape measure.

8. The measurement is read from the red cursor in the tape window. The measurement is recorded in centimetres and millimetres to the nearest millimetre. If the measurement lies between two millimetres then you should round to the **nearest even millimetre** (see section 2.4)

9. Wipe Rollamat with Milton wipe before placing back into carry pot.

7 MID UPPER ARM CIRCUMFERENCE

7.1 Introduction

Mid upper arm circumference is an anthropometric measure providing information on muscle mass and subcutaneous fat. Changes in arm circumference are relatively easy to detect and as such the mid upper arm circumference is a key indicator of the nutritional status of children and adults. The measure is reduced substantially in the undernourished and substantially increased in people who are overweight. Like other anthropometric measures it can be used as a tool to examine the effectiveness of public health policies, particularly with regards to child nourishment.

7.2 Equipment

You will need:

- A 'Lasso-o' MUAC tape measure
  One end of the tape is broad and on it you will see the words 'READ HERE' with a small arrow. This is the start of the tape.
- A skin marker pen
- An Alcohol and non alcohol swab
- Milton wipes

7.3 Preparing the respondent

The respondent must have a bare arm and shoulder for this measurement. When the nurse appointment is made (by either the nurse or the interviewer), if a child is to be measured, the child will be asked to wear a sleeveless garment for the visit. Make sure that you explain to the respondent (and their parent if appropriate) the importance of accuracy when taking the measure and that clothing can result in an inaccurate result. If the child is wearing a sleeved garment, ask them to slip their arm out of the garment or to change into something more suitable.

If the respondent is a child, ensure that the parent is with you at all times whilst the measurement is being taken as you are asking them to expose their bare arm.

The **non dominant** arm is to be used to measure mid upper arm circumference. If the respondent is not displaying arm dominance e.g. in the case of small children, the right arm should be used and a note of this to be made in CAPI. Additionally if, for any reason, the non dominant arm cannot be measured, use the alternative arm and record this in CAPI.

7.4 Procedure

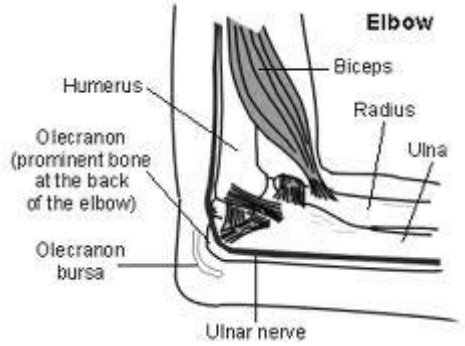
1. Ask the respondent if they are left or right handed and explain that the non dominant arm is going to be measured as it provides a more accurate indication of nutrition.

7.4.1 Measuring the length of the upper arm

2. The respondent should be standing with the arm to be measured across their body and held at a right angle at the elbow.

3. Using the skin marker pen, mark the process of the **Acromium**; this is the tip of the shoulder.

4. Mark the process of the **Olecranon** of the respondent; this is the tip of the elbow.



5. Using the tape, measure the distance between the two points marked. Divide this measurement in half. This is the mid point of the upper arm.

6. Mark this using the fine point of the skin marker pen.

7.4.2 Measuring the arm circumference

7. Let the non dominant arm hang loosely by the side, just away from the body. Thread the tape through and slip it up the respondents arm, to the mid point that you have marked. The tape should lie on top of the mark, covering it.

8. Check that the tape is passing **horizontally** around the arm, not sloping, and that it is in continuous contact with the skin. It should not be loose but neither should it be puckering the skin.

9. Read off the measurement where the 'READ HERE' arrow appears on the tape.

10. Enter the measurement into CAPI in centimetres and millimetres. Always report to one decimal place. If the arrow falls between two millimetres always give to the **nearest even millimetre** (see section 2.4).

11. Repeat steps 2-10 to obtain a second measurement. DO NOT use the same markings as you did in the first measurement, remark them. Explain to the respondent that the second measurement is required for accuracy.

12. If there is a significant difference between the two readings, CAPI will report an error message. At this point you should check to ensure that you have entered the results correctly or take a third measurement according to the procedure above. Enter this result into CAPI and it will work out which two readings to use.

13. If the respondent wishes, record the results on their measurement record card. You can use the conversion charts to report the measurements in inches.

14. If the skin marker is used, offer the alcohol or non alcohol wipe to the respondent, or respondent's parent (if a young child), to wipe the skin mark off.

15. Before packing the tape away ensure the length of tape is wiped to reduce potential cross infection between households.