

SN 3303

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ARCHIVE NOTES

Study No: 3303

Please note that during processing a number of anomalies were found in this dataset. These are currently being investigated with the depositor and are listed below for your information.

File	Variable	Questionnaire	Question No
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Adgre4 por	E59	People Aged 70 and over	59
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The ordering of the response values is different between the data and the documentation.

Adgre6 por	M110B1	Main	110b
	Q105C3	Main	105c

Zeros appear as response values for both of these variables but without an explanation of what they mean.

Adpa1 por: There is no explanation in the documentation of the Home appraisal
Adpa2 por: Information variables v120 to v135
Adpa3 por:

ALLIED DUNBAR NATIONAL FITNESS SURVEY

Technical Report

by

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on behalf of

ACTIVITY AND HEALTH RESEARCH

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We acknowledge the help of many people, but the Survey was developed, modified and overseen by Professor Gerald Hoinville who throughout the arduous analysis phase was seriously ill and died soon after the publication of the findings, a great loss to the social research field about which he was so enthusiastic and vigorous. This report is dedicated to his memory.

INTRODUCTION:

THE PURPOSE, ORIGINS AND FORM OF THE SURVEY

- 1.1 The Allied Dunbar National Fitness Survey (Activity and Health Research, 1992) was undertaken after prolonged development and pilot phases by a team at the Universities of London, Nottingham, Birmingham and Loughborough, advised by a scientific advisory group
- 1.2 The Survey sought to measure and record for a representative sample of adults in England
 - (a) the type, frequency and intensity of habitual current physical activity and past patterns of participation,
 - (b) how physical activity fitted in to their lifestyle and what attitudes they had towards activity,
 - (c) related aspects of lifestyle (notably smoking, drinking alcohol, eating habits, sleep and stress and social support) and medical history,
 - (d) some personal characteristics for classification and weighting relating to age, gender, social employment and education status,
 - (e) their recorded performance and perception of effort in selected fitness tests of strength, flexibility, power, cardio-vascular (aerobic) capacity, and their performance relative to functional thresholds expressed in terms of everyday tasks and levels below which the quality of their lives was likely to suffer,
 - (f) their body weight, composition and shape, blood pressure and respiratory capacity,
 - (g) the drawing together of this data into baseline measures so that follow-up surveys can measure change particularly in relation to any targets set

This technical report describes

- (a) how different types of physical activity were described, coded and analysed (Section 2),
- (b) how attitudes to health and fitness and lifestyle and personal factors were recorded and analysed (Section 3),
- (c) how individuals were screened before participating in the appraisal (Section 4),
- (d) how the physical appraisal was carried out and analysed (Section 5)

- (e) how the sample was drawn and the effects of non-response or bias (Section 6).

The results of the Survey and other details are to be found in the Main Report. The Summary Report also contains a brief description of the principal findings.

- 1.3 It should be noted that the key areas chosen in the White Paper "The Health of the Nation" (1992) were published as the results were being analysed. We anticipated the need to classify activities and devised a scale suitable for classification of respondents according to levels of habitual physical activity [levels labelled 0 to 5, see Section 2 for definitions]. This scale was intended to serve as a suitable basis for setting targets for physical activity. The questionnaire was however designed in a way which would meet contingencies such as have occurred, in relation to the requirement to establish baselines and targets for the Health of the Nation. The analyses published in the main report provide a straightforward description of the findings and meet the need to define respondents' physical capacities targets and significant functional thresholds. Numerous other classifications and manipulations of the data are however possible to meet other research objectives.

Development Work

- 1.4 The Fitness and Health Advisory Group (FHAG), an advisory committee serving the Health Education Council (later Health Education Authority) and the Sports Council, recognised the immense importance of the questions which could be addressed by a survey.
- 1.5 Prior to the Survey, which began in February 1990, a programme of development work took place including extensive field trials and a pilot survey by a team from the Universities of Birmingham, London, Loughborough and Nottingham. This work covered the period 1985-89 and was funded by the Health Education Authority, the Sports Council and three Regional Health Authorities (Trent, North-West and West Midlands). During the period of the development programme and subsequently during the conduct and analysis of the Survey the research team was strongly supported by a Scientific Advisory Board, chaired by Professor Peter Fentem. (See Appendix A for the composition of the Scientific Advisory Board).

The Information Collected

- 1.6 The Survey consisted of two sets of measurements. The first set was achieved using a questionnaire administered by an interviewer; this formed the basis of a home interview and focused on the health and lifestyle of the individual, including their physical activity behaviour. The 4,316 interviews were conducted by interviewers from the Social Survey Division of the Office of Population Censuses and Surveys (OPCS). The interview was shortened and modified for people over 70 years (see Appendix B).

- 17 The second set of measurements, carried out in a nearby mobile laboratory on part of the interviewed sample (2,699 people), comprised body dimensions and composition, aerobic fitness and muscle function. The cardio-respiratory response to exercise was based on changes in walking pace and gradient on a treadmill and was administered by trained fitness assessors. For respondents aged 75 years and over a more limited set of physical measurements was carried out in the person's home. Home appraisals were completed on 318 people.

Fieldwork

- 18 The Survey (ADNFS) took place between February and November 1990.
- 19 The fieldwork within each constituency had to be synchronised between interviewers and the fitness assessors. Interviewers began work a week or two before the arrival of the mobile laboratory in which the physical appraisals took place.
- 110 Respondents were randomly selected from addresses within thirty parliamentary constituencies in England. Probability sampling procedures were employed at each stage in order to ensure that the selected sample was not biased through the selection process. Each selected address received a letter some two weeks or so before fieldwork commenced in that area to announce the survey and to alert the residents to an interviewer's visit. Contact was then made at each address by an experienced interviewer from the Office of Population Censuses and Surveys (OPCS) who selected one adult (16 years and above), using a specified random selection procedure, and arranged a time to interview that person. A team of seven interviewers was allocated by OPCS to each of the sampling points.
- 111 The interview, including a health screening questionnaire, was carried out at the respondent's home. A time was then arranged for that person to attend a nearby mobile laboratory for a physical appraisal (fitness measurements). The subject was taken by car to the mobile laboratory and introduced to one of the physical assessors for the fitness measurements. The subject then returned home by car (or taxi).
- 112 For subjects aged 75 years and over (and as an option for women aged 60 to 74), the fitness measurements were carried out at home, instead of at the Centre, on a subsequent visit by a member of the local fitness assessment team accompanied by an interviewer. This home appraisal omitted some of the muscle function measurements and the lung function measurement, because they required bulky equipment, and the treadmill test. A few additional simple functional tests were included.
- 113 There were three mobile laboratories in operation for the Survey, in each of which fitness measurements were made. The mobile laboratories were moved from site to site every three to four weeks to cover 10 different sampling points. Each unit

was staffed by a team of eight, including an administrator. These laboratories had to be located at centrally convenient sites within each sampling point, which satisfied several criteria including estate requirements (services, access and parking) and accessibility to emergency back-up medical facilities. To meet these requirements hospital sites were chosen in consultation with the local Directors of Public Health. Moving the mobile units from site to site every three weeks was organised by a haulage contractor.

- 1.14 The Survey had to be designed so that fieldwork could take place in several waves subject to funds available. The first wave covered 20 sampling points and took place between February and August 1990. The second wave extended the fieldwork to 30 sampling points and was completed by mid November 1990. It was hoped that a third wave could be added at a later stage to increase the sample to 12,000. It did not prove possible, however, to proceed beyond the second wave of the Survey.
- 1.15 The data analysis was carried out on the University of Birmingham main frame computer. A data file is available for other users through the Engineering and Science Research Council data archive with the prior agreement of the Sports Council and Health Education Authority.

Preliminary analyses of each batch of data have been undertaken to check for completeness and consistency.

The Home Interview

- 1.16 This took, on average, between one and a quarter and one and a half hours to complete and the details are shown in Figure 1.1. About half of this time was concentrated on questions about physical activity focusing on the previous four weeks, on the past year and, in a more limited way, on the person's lifetime. The level of detail demanded of respondents was varied to suit the reference period; for the four-week period details of frequency, duration and intensity were collected covering all kinds of physical activity including home activities, work, travelling and sport and active recreation as discussed in Section 2. Data for the 12 month period and for the lifetime experiences was included (see paragraph 2.62).

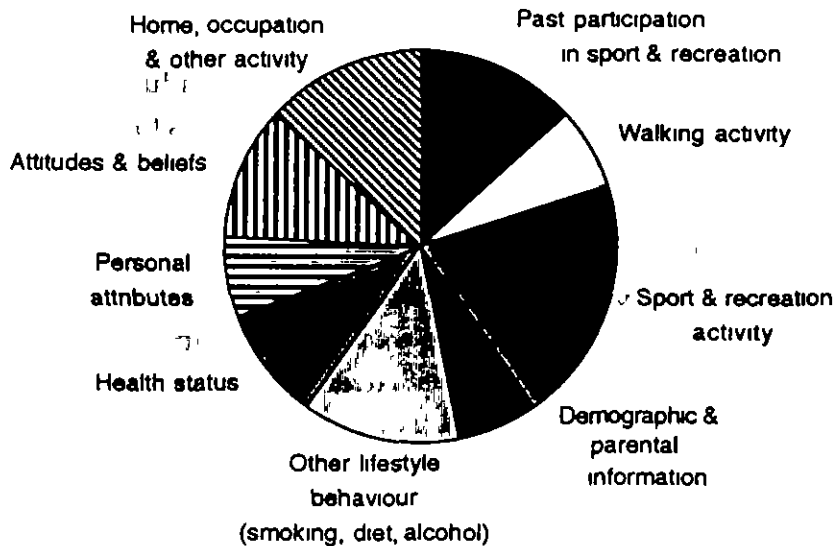


Fig 1.1 shows the content of the home interview which on average took 1 hour 15 minutes

- 1.17 To place the estimates of physical activity in context, and to enable them to be related to the health and lifestyle of each respondent, the home interview also included questions dealing with the following
- (a) Health - current and past illnesses, symptoms in past four weeks and effect of health problems on day to day living, injuries
 - (b) Lifestyle and health-related behaviour - smoking, diet, and alcohol consumption
 - (c) Barriers to and motivation for exercise - attitude questions to determine the relative importance of factors which motivate or deter people from taking exercise
 - (d) Social background variables - social contact, education, and social class
 - (e) Personal attributes - anxiety level, well-being, and aggression.
 - (f) General attitudes - towards exercise, self-assessments of fitness, and health and physical activity
- 1.18 As part of the home interview a screening questionnaire was also completed which was used to provide local doctors with information prior to the fitness measurements
- 1.19 Further interviews using the same questionnaire were subsequently commissioned by the Health Education Authority and carried out at sites throughout England during 1991 (Health Education Authority National Survey of Activity and Health,

HEANSAH, Walker 1993). The sample was composed of 2,622 individuals aged 16-74. As there was no physical appraisal in the second survey there was not the same need for clustering of the sample. The data from HEANSAH on reported physical activity levels have been amalgamated with the data from the ADNFS. This data provides samples of the populations of individual Health Authority Regions which are of an adequate size for valid comparisons to be made.

Medical Screening

- 1.20 An extensive and rigorous medical screening procedure was developed for the Survey. This was agreed with, and approved by, the local Ethical Committee of each of the Health Districts which covered the 30 sampling points with often varying requirements regarding medical cover. The extent of the medical cover during the fitness measurements (that is, whether all subjects were tested in the presence of a doctor or only those subjects at greater risk) varied from site to site, but the screening procedures were common to all sites.
- 1.21 There was just one incident during the testing which required any kind of medical emergency response and this was for a women who fainted before her treadmill measurement began. The cost of providing this medical cover was over £30,000. No fault insurance cover at one site cost £2,500 (cf "Obtaining approval from District Ethics Committees during a national survey of exercise, fitness and health", Harries, Fentem, Tuxworth & Hoinville, 1994)
- 1.22 The design of the Survey had the advantage that people were brought to central laboratories which provided medical supervision; a panel of doctors was recruited locally to screen subjects prior to their fitness assessment and to exclude those judged to be most at risk if they undertook the procedure. Those doctors who had not had recent experience in supervising exercise tests and monitoring ECGs were asked to attend clinical exercise testing sessions at a local hospital. All doctors were briefed about the procedures to be used for this particular Survey and the criteria for stopping the treadmill test (see Section 4). For all subjects on all occasions safety was protected by the quality of care offered by the assessors, all of whom were trained in cardio-pulmonary resuscitation and ECG recognition, and the availability of hospital emergency services nearby.
- 1.23 The general procedure was such that those aged 16 to 59 were only examined and supervised at the laboratory by a doctor if information on the screening questionnaire (Appendix D) indicated that there was a contra-indication. Those aged 60 to 74 were always examined by a doctor before the tests and supervised through the tests.
- 1.24 Those aged 75 and over were not normally taken to the laboratory; instead a home appraisal was carried out that did not require a medical examination or medical supervision.

The Physical Appraisal

- 1.25 The second set of measurements, the physical appraisal, consisted of
- Anthropometry - height, weight, skinfold thickness, waist and hip girths
 - Blood pressure - arterial blood pressure was included partly as a screening measure prior to participation in some of the fitness tests
 - Lung function - forced vital capacity (FVC) and forced expiratory volume (FEV1)
 - Joint flexibility - shoulder abduction (i.e. reaching above the head)
 - Muscle function - isometric handgrip, isometric knee extension strength, and power of the leg
 - Cardio-respiratory response to exercise - achieved using treadmill walking at standard speeds and gradients
- 1.26 In total, the measurements took an average of one hour and forty-five minutes to complete as shown in Figure 1.2. The last of these measurements took about three-quarters of an hour to complete, including practice and familiarisation with walking on a treadmill and mouthpiece breathing and it formed the main item of the complete battery of measurements

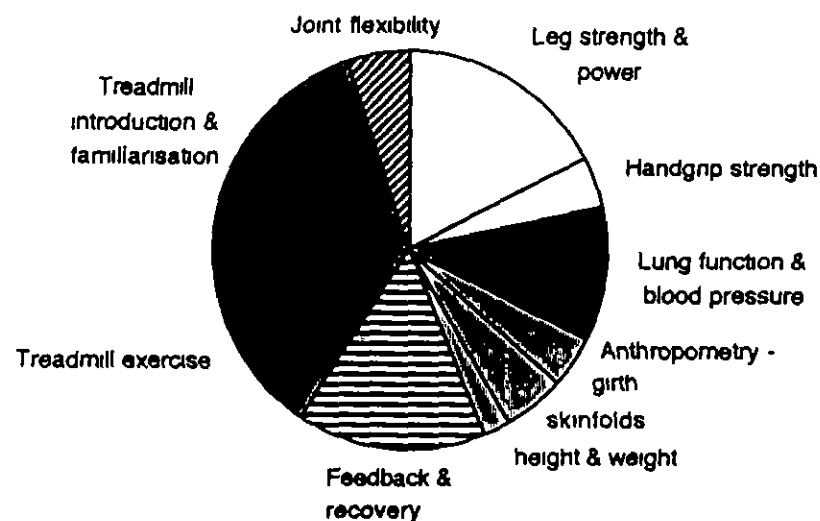


Fig 1.2 shows the content of the physical appraisal which on average took 1 hour 45 minutes (including time taken in offering feedback and for recovery)

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MEASUREMENT AND ANALYSIS OF PHYSICAL ACTIVITY

Introduction

- 2.1 The main development of the questionnaire for use in the Allied Dunbar National Fitness Survey took place in 1986 and, although some modifications were made during the field trials, the basic format and the rationale behind the physical activity questions remained essentially unchanged in the final version. These questions were designed to record the frequency of individual participation in physical activity, the duration of that participation and its intensity.
- 2.2 Evidence current at the time of the development of the questionnaire, regarding the association between high levels of physical activity and fitness and health, emphasised the importance of vigorous activity. There were some studies which suggested that physical activity of moderate intensity might also be beneficial to future health. There were no generally accepted guidelines on what frequency or duration of activity was important to health although the guidelines for fitness (three times a week of vigorous activity for at least twenty minutes) were generally taken to be applicable.
- 2.3 Given these uncertainties the questionnaire was designed to collect information on physical activity in as 'open' a way as possible, ie with few or no predefined thresholds designed into the questioning.

Choice of Instrument

- 2.4 One of the conclusions of the International Conference on Exercise, Fitness and Health in Toronto, in 1988, was that

'For the immediate future, we shall probably continue to rely very largely on diary records or questionnaires, possibly supplemented by selected measurements of movement patterns and/or heart rates, when assessing relationships between habitual physical activity and health' (Bouchard, 1990)
- 2.5 The choice of a questionnaire in preference to a diary for obtaining an accurate assessment of physical activity was based on two considerations: the cooperation of the respondents and the time span of reliable recall. Since physical activity was only one element in a wide range of information being sought and respondents were being asked to take part in a physical appraisal, it was felt that the burden imposed on the respondent by requiring a detailed activity diary was too great. The limited time span of an activity diary was also considered to be too short as the basis for identifying habitual physical activity.
- 2.6 The questionnaire was administered by an interviewer because of its complexity and length.

Scope and Detail

- 2.7 Previous studies have often concentrated on occupational activity and on participation by men. However with the decline in the amount of physical activity undertaken in employment during the working day more recent studies have concentrated on measuring physical activity in leisure time. Some individuals continue, however, to have physically demanding occupations. Since part of the study concerned the relationship between activity and fitness for individual respondents all physical activity had to be covered by the questionnaire.
- 2.8 Physical activity was grouped into four basic categories both within the questionnaire and in the subsequent analysis:

Sports and recreational activities

Getting about (walking, cycling, stair climbing)

Home activities (housework, gardening, DIY)

Occupation

- 2.9 All types of physical activity were included with the exception of daily living activities. No estimate was made of time spent at rest. Thus the questionnaire was designed to enable the categorisation of individuals into groups according to their level of activity rather than to permit an estimate of their total energy expenditure.

The Reference Period

- 2.10 In any analysis of physical activity no one reference period will serve all purposes. The questionnaire made use of several time periods which were varied according to the nature of the data and the proposed analysis.
- 2.11 In defining the reference period to be used in the Survey there were three main considerations:
- a) Current and habitual physical activity had to be assessed for a given individual because either or both may play a part in determining current fitness levels and future health.
 - b) The pattern of lifetime participation may reflect an individual's propensity to engage in physical activity; by recording this pattern it will contribute to an assessment of its likely impact on current fitness and future health. Obtaining a past history of participation will inform basic analyses to define social changes in levels of participation.
 - c) Information regarding adolescence is important and relevant. This is a significant period of lung growth and of bone formation and calcification and physical activity is one determinant. Adolescence is also an important period for the establishment of patterns of health-related behaviour and lifestyle. It

is unlikely that those who do not participate at this age become participants later on (Brodie, Roberts & Lamb, 1992)

- 2 12 The time span for 'current activity' in previous studies has varied from two days to one year. Use of the period of four weeks prior to the interview is one of the more frequently used measures. Its use allows comparison with figures on participation from the OPCS' General Household Survey.
- 2 13 In addition to these theoretical considerations, the length of reference period was determined by the ability of people to recall reliably what physical activity they had taken and how stable their activity behaviour was. These two demands worked in opposite directions. A short time span would yield fewer inaccuracies through problems of recall but a longer time span would provide a more accurate picture of an individual's activity.
- 2 14 An individual's current aerobic fitness is believed to be related to the volume and intensity of physical activity during the preceding six to eight weeks. This period was felt to be too long for accurate reporting, so a four week period was used as a compromise. A study to measure repeatability was carried out using this as the reference period.

Stability of Activity Behaviour

- 2 15 One of the development studies comprised an interview with 44 people who were then re-interviewed after an interval of 4 weeks using the same questionnaire.
- 2 16 Using the data from the same individuals for two consecutive 4 week periods it was possible to see how consistently people were classified according to a series of activity bands.
- 2 17 With the exception of people who had been on holiday during one of the four week periods, only two people had engaged in significantly different levels of sport and recreation activities and three others had varied in their walking behaviour between the two four-week periods.
- 2 18 This stability of behaviour was also true for gardening, DIY activities and heavy housework when treated as grouped activities. Individuals varied in the nature of their home based activities from week to week, but were reasonably consistent in their total level of home based activity over two four-week periods. More importantly, the duration in hours for each activity appeared fairly stable.

Accuracy of Recall

- 2 19 The accuracy of reporting lifetime activities and those of the past year was investigated by comparison of the two interviews. Consistent reporting between two interviews spaced four weeks apart doesn't necessarily mean that both reports were accurate, but the level of consistency achieved (generally 80% or more) and

the nature of the inconsistencies suggested that the approaches adopted were capable of yielding reasonably accurate information.

- 2.20 For example: of the 181 regular activities mentioned at the first interview (which were continued beyond school)
- (a) over 80% were consistently reported as regular activities at the second interview;
 - (b) the consistency of reporting the duration of activities (continued beyond school) in five bands based on years was also over 80%, and
 - (c) the consistency of reporting of activities undertaken at least monthly in the past year was also over 80%.
- 2.21 Accuracy of recall was checked for the current activity data through comparing information from the interview with that from a diary record. This covered a two week period and the level of agreement was found to be high, with the exception of walking. Faced with these findings the method of collecting the details on walking was modified .
- 2.22 To meet the requirements of the analysis and to take account of observations made during refinement of the methods three main reference periods were used for recording sport and recreation activities - adult lifetime, the past year and the past four weeks. The latter two measurements allowed comparisons to be made with the General Household Survey for 1987 and 1990. In describing lifetime behaviour home and occupational activities were omitted (see table 2.1). For walking, the past year was omitted. In all questions where respondents were asked about the past four weeks they were also asked about the past week.

SUMMARY TABLE 2.1

REFERENCE PERIODS FOR VARIOUS CATEGORIES OF PHYSICAL ACTIVITY

ACTIVITY	REFERENCE PERIOD						
	lifetime (since age 14)	previous year	previous 4 weeks	previous week	previous day	average week	average day
Occupation						*	
Sport & Recreation	*	*	*	*			
Cycling	*	*	*	*			
Home-based activity		*	*	*			
Walking (≥ 2 miles)	*		*	*			
" (>1 to <2 miles)				*	*		
" (> 5 min & <1 mile)				†			
Caring activities						*	
Stair climbing							*

† Yes (No)

Frequency and Duration

2.23 The detailed definitions for 'frequency' and 'duration' are provided in the sections relating to each type of activity. For current activity, the standard definition of frequency was the number of occasions in the past four weeks. Frequency over the past year was derived from the average number of times per month in which the activity was performed. Information on lifetime activities was restricted to activities carried out on a regular basis.

2.24 Information on duration was collected for current activity only. Activities of all durations from 1 minute upwards were sought during the interview. Particular care was taken in the question wording to ensure that the answer referred to the specific level of activity being asked about. This is described in more detail in the sections dealing with the various kinds of physical activity.

Intensity

2.25 The ideal would be for the energy expenditure of each individual to be measured for each activity. In a large scale survey this is not possible, so a two stage method of assigning energy expenditure was adopted. Activities were scored according to

published energy costs and then information from the questionnaire was incorporated to take some account of the individual variation in intensity of effort.

- 2.26 Estimates of the energy costs of activities were obtained from published sources (Durnin and Passmore, 1967; Montoye, 1971; McArdle et al, 1981; WHO, 1985; Wilson et al 1986). Assigning energy cost scores posed some difficulties. Many of the data have not been confirmed recently and the nature of some activities (eg housework) have changed. Often the figures are based on very small samples and the figures vary between sources.
- 2.27 Activities were ranked on the basis of the energy cost (kcalories/minute) for a man of 65 kilograms body weight. One kilocalorie per minute is equivalent to 4.2 kilojoules(kJ) per minute. Variations arising from differences in body weight will not alter the relative ranking of activities. An upper and lower energy cost score based on the ranges found in the published literature was assigned to each individual activity. The exceptions to this were activities at home which were pre-grouped into 'heavy' and 'light' activities and scored as a group.
- 2.28 The upper or lower score was assigned to each activity for each individual according to their answer to the question(s) appropriate to that activity.

Sports, recreation and cycling:

"During the past four weeks was the effort of (name activity) usually enough to make you out of breath or sweaty?"

Walking:

"Which of the following best describes your usual walking pace: a slow pace, a steady average pace, a fairly brisk pace or a fast pace - at least 4 mph?"

Occupation:

"Are you mainly sitting down, standing up or walking about? Do you do any climbing in the course of your work? Do you usually have to lift or carry things at work which you find heavy?"

The use of these questions is discussed in more detail in the sections relating to the relevant activities.

Questions about Current Activity (Q's 1-13, 21-27, 30-37)

2 29 Sport and Recreation Q 12, 13

Frequency – Number of occasions in past 4 weeks (Q 13 a)

Number of occasions in past week (Q 13 b)

Duration – Time spent on most recent occasion or usual time spent if this was different The question stressed that time given should be actual 'playing time' not including time getting changed or any breaks (Q 13 c-e)

Energy score and intensity of effort – Q 12, 13 f

2 30 In Table 2 3, the sports and recreation activities in the left hand column were those which were included in the Activity Booklet (Appendix C) used as an interview aid to prompt respondents' recall The activities in the middle column were those spontaneously mentioned by respondents which were assigned their appropriate energy score

2 31 Q14 f asked if the effort usually involved in the activity in the past four weeks was sufficient to make them 'out of breath or sweaty' If the answer was "yes" the higher score was used

2 32 Similar questions have been used in many other studies of activity A validation study carried out by Siconolfi (1985) on a similar question concluded that "the (reported) frequency of activity sufficient to generate sweating related more closely to maximal oxygen uptake than does the more complex Physical Activity Index

2 33 There is a potential weakness to this approach, insofar as using two different scores for the same activity introduces a variation that could be related to relative fitness (unfit people may be assigned the high score not because they used much effort but simply because their lack of fitness led to the sweating and breathlessness, and vice-versa) On the other hand, it seemed preferable to attempt, where the data allowed, to distinguish between an activity performed at a higher level by one person and the same activity performed at a lower level by another person On the basis of some investigatory analyses summarised below, the use of varying energy cost figures was adopted

2 34 For example, there was a strong relationship (significant at the 1% level) between the average energy cost of sport and recreation activities and cycling and the responses to the question about becoming 'out of breath or sweaty' Only 4% of the light activities, those with an average cost of less than 5 kcal/min, elicited a positive response to the question about becoming 'out of breath/sweaty'

compared with 91% of the vigorous activities, those with an average energy cost of 7.5 kcal/min or more.

Table 2.3 : Energy scores allocated to each activity and the classification used in the analysis

		Energy score (kcal/min)		
		High	Average	Low
squash, boxing martial arts jogging/ running	marathon running	13	10.5	8
football, rugby netball, basketball fencing, weight-training climbing, skiing	lacrosse, skirmish/ active war games, Water skiing refereeing football, orienteering, water polo diving/sub aqua, shinty	10	8	6
heavy occupation			7.5	
heavy gardening/DIY			7	
swimming, tennis badminton, volleyball weight-lifting, gymnastics, keep-fit aerobics, athletics hiking and backpacking Ice skating, roller skating rowing, canoeing hockey, dancing for fitness cycling	windsurfing/surfing pot- holing tobogganing/ sledging aquafit pulling a bus defence training ballet	8	6.5	5
social dancing cricket, rounders exercise, Sailing walking	parachuting, hang gliding/para gliding absailing, ball games, marching, beagling	6	5	4
moderate occupation heavy housework			5	
table tennis, golf, rambling, horse riding	bell ringing	5	4	3
light gardening /DIY			4	
bowls, yoga ten pin bowling, skittles fishing	pitch and putt archery, quoits		3	
snooker, darts shooting, motor sports	bird watching bar billiards		2	
			(average value only)	
			2	
			(average value only)	

Notes: A description of how these values were applied can be found in the appropriate activity section. Activities in the centre column were mentioned unprompted. All other activities were asked about specifically or, in the case of the sports and recreation activities, were listed in a prompt booklet.



vigorous



moderate



light

- 2 35 Further analyses focussed on three popular activities with energy costs in the middle of the range swimming, exercises and cycling. Among people who had swum in the past four weeks 38% said it usually made them out of breath; among people who had done 'exercises' 57% said thus, and 44% of cyclists said the effort of cycling usually made them out of breath or sweaty. An investigation of the variation in this proportion with respect to personal characteristics, reported physical activity and health showed that the only consistent relationship across all three activities was that younger people were more likely than those older to say that the effort of each of these activities made them out of breath or sweaty.
- 2 36 This suggested that the question was identifying the increased intensity of effort of the young rather than the relatively lower levels of fitness and/or health-related problems of the elderly. Other analyses to identify people assessed as overweight, those who stated they were troubled by shortness of breath, and those who said they had ever had asthma, bronchitis or emphysema did not indicate that more of them said the effort of these activities made them out of breath. On balance, therefore, it was felt that the 'out of breath or sweaty' question responses were more a reflection of variations in the physical effort people used rather than in their physical condition.

2 37 Cycling Q 8

For some people cycling is simply a method of transport while for others it is a recreational or sporting activity. The interviewers asked about cycling before sports and recreational activities to ensure that all types of cycling were included.

<i>Frequency</i> -	Number of occasions in past 4 weeks	(Q 8 c)
-	Number of occasions in past week	(Q 8 d)
<i>Duration</i> -	Time spent on most recent occasion	(Q 8 e)
<i>Energy scores</i>	were assigned in the same way as for sports and recreation activities(Q 8 f)	
	High score	8 kcal/min
	Average	6.5 kcal/min
	Low score	5 kcal/min

2 38 Walking Q 4, 5, 6

This is a frequent activity which generally has no special relevance for people when they are asked about exercise. There is, therefore, a large amount of data to be collected, while at the same time recall tends to be poor. In order to overcome this problem, the common reference period of four weeks was used only for walks of two miles or more, e.g. as used by the GHS and National Countryside

Recreation Survey (Countryside Commission 1985). For walks of one to two miles and shorter walks lasting at least five minutes, the reference period used was the previous week. This means that for the summaries of activity only walks of two miles or more were included, since these data share the common four week reference period. However, a separate activity profile based on all the walking information was also used.

- 2.39 Results from the development work showed that the standard intensity question used for other activities did not seem to elicit equivalent information when used about walking. People who said their walking made them breathe more heavily or sweat a lot tended to be overweight. Morris (1990) found that self-assessed walking pace has a relationship to future incidence of coronary heart disease so this was chosen to use as an identifier of intensity of effort.

<i>Frequency</i> –	Number of walks of 2 miles or more in past 4 weeks	(Q 4 b)
	Number of walks of 2 miles or more in past week	(Q 4 c)
	Number of walks of 1-2 miles in past week	(Q 5 b)
	Number of walks of 1-2 miles yesterday	(Q 5 c)
	Number of 5 minute walks in past week (2 miles or more only)	(Q 5 d)
<i>Duration</i> –	Time spent walking on most recent occasion (2 miles or more only)	(Q 4 d)

It should be noted here that the question on walks of two miles or more defined such a walk as a "continuous walk that would usually take at least 40 minutes" and walks of 1-2 miles were defined as "taking 20 to 30 minutes".

<i>Energy Scores</i> (Q 6) –	A fast pace (at least 4 mph)	6 kcal/min
	A fairly brisk pace	5 kcal/min
	A steady average pace	4 kcal/min
	A slow pace	

2.40 Stair Climbing (Q 32, 33)

Respondents were asked for the average number of times a day stairs were climbed at home and how many steps their stairs comprised. Regarding stairs climbed at work or elsewhere, people were also asked the number of days on which this happened. These questions were used to calculate a daily average number of stairs climbed.

- 2.41 For the more detailed activity classification stair climbing was not included because the duration of each occasion was below the 20 minutes threshold. Nevertheless, because stair climbing, when it occurs at all, is generally a daily

activity, and because short duration activities taken frequently can contribute to fitness, stair climbing is dealt with separately in some analyses. The number of stairs climbed in an average day was taken as an indicator of the energy score when the classification was not based upon exceeding the threshold duration of 20 minutes.

Frequency – Number of days for stairs climbed at home = 28
For stairs climbed in other situations, informants were asked how many days they climbed stairs in that situation (Qs 32, 33)

Duration – Not categorised

Energy score – Number of stairs climbed in an average day was taken as an indicator of the level of activity

500 or more active at a vigorous level

300 - 499 active at a moderate level

100 - 299 active at a light level

Number per day was calculated from $(Q32B \times Q32C) + \frac{(Q33A \times Q33B \times Q33C)}{28}$

Intensity of effort was not assessed separately although respondents were asked if they generally run up stairs or not (Q 34).

2.42 Housework (Q 1)

Respondents were asked to give details of the 'heavy' housework they had undertaken in the previous four weeks. They were shown a list of examples (see below) and asked (Q 1 c) about all such types of housework as one activity

- walking with heavy loads of shopping
- scrubbing/polishing floors by hand (on knees)
- washing a lot of clothes by hand
- stripping and remaking several beds
- spring cleaning (moving furniture etc.)
- or any similar heavy housework

Frequency – Number of days in past 4 weeks (Q 1 d)
Number of days in the past week (Q 1 e)

Duration – Total time spent on most recent day (Q 1 f)

Energy score – All heavy housework was assigned a score of 5 kcal/min, placing it in the moderate band

2.43 Gardening and DIY (Q 2, 3)

These activities were recorded by showing the respondents two cards, one giving examples of 'heavy' and 'light' gardening and the other of 'heavy' and 'light' DIY. The frequency and duration details collected related to these groups of activities rather than to the individual components.

Heavy manual work (gardening) (Q 2 b):

- digging, moving earth, clearing rough ground
- building in stone
- mowing large areas with a hand mower
- cutting grass/hedge by hand (large areas)
- major work on tree or shrub planting/moving
- sweeping leaves over large areas
- erecting new fences/garden walls
- felling trees, chopping wood
- other similar activities

Lighter work (gardening) (Q 2 g):

- hoeing, weeding, pruning
- mowing with powered mower
- planting flowers, seeds
- tidying up, sweeping
- work in the greenhouse
- repairing garden fences
- other similar activities

Heavy manual work (DIY) (Q 3 b):

- mixing, laying concrete
- moving heavy loads
- demolishing walls, breaking up concrete
- continuous sawing/planning wood
- bricklaying (large areas)
- plastering (large areas)
- or any similar heavy manual work

Lighter work and car maintenance (DIY) (Q 3 g):

- decorating, including preparation
- electrical wiring
- general carpentry work
- furniture repair, restoration
- minor repairs to brick walls or plaster
- repairs to domestic appliances
- car repairs and maintenance
- car washing and polishing
- or any similar lighter work

<i>Frequency</i>	-	Number of days in past 4 weeks	.....(Q 2 d, h, 3 d, h)
	-	Number of days in past week	.....(Q 2 e, i, 3 e, i)
<i>Duration</i>	-	Time spent on most recent day	.....(Q 2 f, j, 3f, j)

Energy score - "Heavy" (Q 2 b, 3 b) 7 kcal/min
 "Light" (Q 2 g, 3 g) 4 kcal/min

2.44 Caring Activities

Looking after children or disabled people can involve carers in considerable physical activity. The data collected from the questions relating to caring activities were not quantifiable in the same way as the other activity data. Consequently these caring roles were not included in the detailed activity classification. The data on activity in an average week were used, however, to produce a general indicator of physical activity.

2.45 Childcare (Q 35)

Three specific activities and their frequency in an average week were addressed. These have been used in combination to produce an indicator of level of physical activity.

Active at a moderate level

Carries a child and pushes a child in pram or pushchair on most days

Active at a light level

At least two of the following on one or two days a week, or one of the following on three to five days a week.

- carries a child
- pushes a child in a pram or pushchair
- plays games with a young child that involves physical activity

Frequency - For the 'moderate' level of activity this was taken as six days a week

Duration - Not assigned

2.46 Care of the Disabled (Q 36)

The same approach was used as in assessing level of childcare activities.

Active at a moderate level

Lifts and carries a disabled adult and either gives walking support to a disabled adult or pushes a wheelchair on most days

Active at a light level.

At least two of the above on one to two days a week, or one of the above three to five days a week.

Frequency and Duration - As for childcare

2.47 Occupations Q 21-27

These were not assigned specific energy scores separately. Each OPCS occupation code (OPCS 1980) (Q22) was assigned to one of the energy groups of 'heavy', 'heavy/moderate' or 'less than this' based on published lists (Durnin & Passmore, 1967).

2.48 The level of activity was assigned by combining this grouping with the answers to three activity questions:

"Are you mainly sitting down, standing up or walking about?" (Q 23)

"Do you do any climbing in the course of your work?" (Q 25)

"Do you usually have to lift or carry things at work which you find heavy?" (Q 26)

Heavy work:

OPCS occupation code defined as moderate/heavy or heavy work

and: 'mainly walks about' and 'lifts and carries heavy loads'

or: 'mainly walks about' and 'climbs' and 'lifts heavy loads'

or: 'mainly stands', 'lifts and carries heavy loads' and 'climbs'.

Moderate work:

OPCS occupation code less than above but satisfies activity criteria listed under heavy work.

OPCS occupation code defined as moderate/heavy or heavy work

and: 'mainly walks about' and one of: 'lifts heavy loads' or 'climbs'

or: 'mainly stands' and at least one of: 'lifts heavy loads', 'lifts and carries heavy loads' or 'climbs'.

Light work:

OPCS occupation code less than above but satisfies activity criteria listed under moderate

or: 'mainly sitting down' and 'lifts and carries heavy loads'.

Sedentary work:

'Mainly sitting down' does not 'lift and carry heavy loads'

'Mainly stands' but no other activity.

Frequency – Number of days worked per week calculated from the number of hours (Q 21 b).

Duration - Not assigned but assumed to be greater than the threshold durations of 20 minutes used in the analyses

Table 2.2 Occupations classified as 'heavy' or 'heavy/moderate'

Job Title	1980† operational code	1980† Registrar General's occupation group
Fireman	138	061-2
Forestry Workers	170	080
Fishermen	171	082
Furnacemen	231-3	109
Fettlers & Dressers	244	113 3
Sheet metal workers, shipwrights, riveters	261-2	126
Steel erectors, benders, fixers	263-4	127
Galvanisers, tin/dip platers	269	131 2
Plasterers	302	140 2
Roofers, glaziers	303	140 4
Handymen, gen building workers	304	140 5
Builders	305	140 6
Concreters, road surfacers, rlwy lengthmen, kerb layers etc	306-9	141
Building & civil engineering labourers	313	143 2
Face trained coalminers	314	145
All other in construction, mining quarrying etc	315-6	146
Stevedores, dockers, goods porters refuse collectors, dustmen	334-6	157 2-4
All other in transport operating materials moving & storing etc	337-8	158
General labourers	339-46	160

† 'Classification of occupations' 1980 OPCS HMSO

- 2.49 Since the reference period was four weeks, a check was made (Q 9) whether the respondent had been more, less or typically physically active in that period. In analysis of the aggregate data of a random sample for every person unusually active, there should be another unusually inactive and therefore these should be balanced. But for analysis at an individual level and relationships to fitness these variations should be taken into account since an unusual period of activity or inactivity may not necessarily relate to the findings of the physical appraisal.

Physical Activity in the Past Year (Q 10, 11, 1 a, 2 b, 3 b, 8 a)

- 2.50 In addition to the detailed questions on current participation, the interview also covered activity during the past year but in lesser detail. These questions were included to investigate seasonal variations in physical activity and to provide additional information for classifying individuals. Sports and recreation activities

(as listed in Table 2.1) were the only activities for which details were collected, (Q 10). For each sport the months in which participation took place were recorded. This detailed collection of information month by month provides a complete picture for the whole year for each individual. The information was recorded for the past twelve calendar months starting with the first whole month before interview (unlike all other activity details for which the time period started the day before the interview) (Q 11 a). For every sport and recreation activity the average monthly frequency of participation was recorded (Q 11 b).

2.51 For the following activities the only information recorded was whether or not the respondent had participated during the previous year:

- housework(Q 1 a)
- heavy/light gardening(Q 2 b)
- heavy/light DIY(Q 3 b)
- cycling(Q 8 a).

Lifetime Participation (Q 14-20)

2.52 Details regarding lifetime participation in physical activity were limited to sports and recreation activities, long walks and cycling done on a regular basis at any time since the age of 14, and not as part of the school curriculum. These limits were imposed after early evaluation work had shown that people were inconsistent in reporting occasional activities and those done in childhood or as part of the school curriculum.

2.53 The section started (Q 14) with a general question about important life events between ages 14 and 24, e.g. leaving school and starting work, marriage, birth of children, moving house, which serve as a context in which to set participation details both for the respondent and the interviewer (Hedges 1986).

2.54 Questions 15 and 16 sought an overall assessment of activity levels during the critical period for participation through adolescence, leaving school and joining the workforce. Parts (b) can be compared with Q 39, an assessment of current physical activity.

2.55 The questions on long walks (Q 17 a–f) and cycling (Q 18 a–f) correspond exactly to those on the sports and recreation grid (Q 19, Q 20 a–e). The combination of information from Q 20 a, b, c & d give the total number of years of regular participation for each activity listed, as well as the ages of starting and stopping. Through combining the details of the different activities it is possible to form a picture of overall participation throughout the individual's adult life (as also seen in Brodie, Roberts and Lamb, 1992).

2.56 For every sport or recreation activity in which the respondent was no longer a regular participant the main reason for stopping was recorded (Q 20 e). This

information forms part of the investigation into barriers to exercise. The list of reasons is found on card 4 and was compiled during the pilot work for the study.

- 2.57 For the over 70s the questionnaire was simplified by asking fewer details of past activity but including questions relating to functional ability (see Appendix B and questionnaire at Appendix G).

SUMMARIES OF ACTIVITY

Current Activity (past 4 weeks)

- 2.58 Having established the range, frequency, duration and energy cost, the data could be aggregated to provide summaries. The main summaries used were based on the energy band of the activities undertaken by respondents. The energy bands were defined as follows:

	kcal/min	kJ/min	% max aerobic capacity*
Vigorous.	≥ 7.5	≥ 31.4	> 60%
Moderate:	5 – 7.4	20.9 – 31.3	40 – 60%
Light:	2 – 4.9	8.4 – 20.8	< 40%

*These percentages correspond approximately to a percentage of the maximum aerobic capacity of an average middle aged man of 65 kg bodyweight. They are thresholds which have been used elsewhere in studies of the health benefits of exercise.

- 2.59 Two general summaries of current activity were prepared. The first was based solely on the highest level of activity reached in the four weeks before interview, the criteria employed are listed in Table 2.4.

Table 2.4 A Summary of physical activity

		physical activity level		
classification	inactive	light	moderate	vigorous
SPORT/ RECREATION	none	light only	moderate but not vigorous	some vigorous
WALKING	no walks of 2 miles	walks of 2 miles or more @ slow or average pace	walks of 2 miles or more @ fast or brisk pace	
CYCLING	no cycling	no cycling	moderate cycling only	some vigorous cycling
STAIRS	< 99/day	100-299 /day	300-499 /day	500+ /day
HOME	no activity except light 'caring'	light DIY; light gardening; less frequent specific 'caring' activities	heavy DIY; heavy gardening; heavy housework; frequent specific 'caring' activities	
OCCUPATION	sedentary; not working	some specified activities	all specified activities but not specified job title <u>or</u> specified job title and some specified activities	all specified activities and specified job title

Footnote

- a. This method of summarising activity excludes walking from those activities classified as vigorous. However the health benefits of brisk walking are now well documented (Davison & Grant, 1993) and further analysis treats such walking as a positive factor in any model of the relationship between activity, health and fitness. Such analysis also includes walks of 1 to 2 miles.
- b. The activity level of a 'second' job was deduced solely from the title of the job. Only moderate and heavy jobs were identified.

Activity Level Scale

- 2.60 Since exercise three times a week of 20 minutes' duration at a moderate level or above has been reliably shown to maintain and improve cardio-respiratory fitness, summaries based on occasions of moderate and vigorous activity lasting at least 20 minutes were created for each main activity type. These were then combined to form an activity level scale which identified those who had been performing at a vigorous level and who had done so 12 or more times in the past four weeks (an average of three times a week) and those who had equivalent frequency of participation but at a moderate level.

All classifications of moderate and vigorous activity were included in the activity level scale with the exception of stair climbing, which did not meet the duration criteria, and caring activities, details of which were not quantifiable in the same way as for the other activity data.

Summaries of activity occasions

Number of occasions of sports and exercise activities lasting at least 20 minutes and scored at 7.5 kcal/min or above VIGOROUS

Number of occasions of sports and exercise activities lasting at least 20 minutes and scored at 5 kcal/min to 7.4 kcal/min MODERATE

Number of occasions of sports and exercise activities lasting at least 20 minutes and scored at 5 kcal/min or above MODERATE AND VIGOROUS

Number of occasions of cycling lasting at least 20 minutes and scored at 8 kcal/min VIGOROUS

Number of occasions of cycling lasting at least 20 minutes and scored at 5 kcal/min MODERATE

Number of occasions of cycling lasting at least 20 minutes and scored at 5 kcal/min or above MODERATE AND VIGOROUS

Number of occasions of walks of two miles or more at a fast or brisk pace (lasting at least 20 minutes and scored at 5 kcal/min or 6 kcal/min MODERATE

Number of occasions of home activities lasting at least 20 minutes (heavy housework 5 kcal/min, heavy gardening and heavy DIY 7 kcal/min) MODERATE

(Duration for home activities was based on the amount of time spent in a day rather than a separate occasion)

Number of days spent working in an occupation that was classified as heavy (see 2.48) VIGOROUS

Number of days spent working in an occupation classified as moderate (see 2.48) MODERATE

Number of days spent working in an occupation classified as moderate or heavy (see 2.48) MODERATE AND VIGOROUS

These occasion summaries were combined to form the activity level scale:

Based on 20 minute occasions (all activities) in past 4 weeks of vigorous or moderate intensity:

- Level 5: twelve or more occasions of vigorous activity
- Level 4: twelve or more occasions of a mix of moderate and vigorous activity
- Level 3: twelve or more occasions of moderate activity
- Level 2: five to eleven occasions of at least moderate activity
- Level 1: one to four occasions of at least moderate activity
- Level 0: no occasions of moderate or vigorous activity lasting for at least 20 minutes

Walking

2.61 Walks of 2 miles or more with a fast or brisk pace were included in the overall summaries of activity. A further walking summary was also used to take account of shorter walks. This was defined as follows:

- One or more walks of a mile or more in the past week with a fast or brisk pace
- One or more walks of a mile or more in the past week with an average or slow pace
- No walks of a mile or more in the past week (Q4C, Q5A & Q6)

Past year and lifetime participation as an adult

2.62 Detailed activity data referring to the past year and the respondent's lifetime was only collected for sports and exercise activities. All sports and exercise activities in which respondents had participated had to be assigned an energy score to permit the data to be aggregated. There was no question asking whether activity led to the respondent being 'out of breath or sweating' so each activity was assigned the average of the higher and lower value used for the current activity scores. To maintain comparability with the data on current activity a slightly different banding schema was employed to allocate respondents into energy groups.

Heavy vigorous – higher and lower energy score 7.5 kcal/min or above (classified vigorous for current activity)

High moderate – higher score 7.5 kcal/min or above but lower score less than this (classified vigorous or moderate for current activity)

Low moderate – higher score 6 kcal/min (classified moderate for current activity)
lower score 4 kcal/min (classified light for current activity)

Light - higher and lower scores 2-5 kcal/min (classified light for current activity with a very few exceptions which were classified as moderate)

2 63 Since respondents were asked to state the specific months in which activities had taken place it was possible to combine the data to provide a picture of the year. Activity in the past year was summarised using the months in which the sport or recreation of a specified energy level had been undertaken either 'at all' or 'on a regular basis' (four times a month or more)

2 64 Lifetime participation was summarised using the number of years in which any sports and recreation of a specified energy level had been undertaken on a regular basis (at least once a week for a few months of the year or more). The conversion into the proportion of the respondent's life that this number represented was calculated as follows

Number of years since age 14 regularly participated in sport or active recreation of specified energy level divided by (current age -14). The values were assigned to five groups as follows

zero
0 - 0.249
0.25 - 0.499
0.5 - 0.749
> 0.75

2 65 A second variable was formulated to summarise an individual's physical activity history. This was based on the highest level of regular activity in which respondents had participated when they were aged 16, 24 and 34.

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3 RECORDING ATTITUDES, LIFESTYLES, HEALTH AND PERSONAL FACTORS

Introduction

- 31 Physical activity is only one of many lifestyle factors believed to determine current levels of fitness and the risk of cardiovascular disease. Smoking, alcohol consumption, diet and stress are other important factors. Each has been the subject of numerous large scale surveys and epidemiological studies, so that a wide range of tested questions and approaches were available. With so many topics to explore the main problem was keeping the interview to a manageable length.
- 32 The Survey also collected information about the relevant attitudes of respondents with which to document the reasons for particular behaviour patterns, to assist those who wish to formulate promotional campaigns to change behaviour and to examine the relationship between physical performance and attitudes.

Attitudes and Exercise Behaviours

- 33 Exercise behaviour is governed by a person's belief about the value of exercise, tempered by other beliefs and attitudes. The relationships between knowledge, beliefs, attitudes, intentions and actual behaviour are complex. Models used to describe these complicated interactions which lead to behaviour must, of necessity, oversimplify.
- 34 Nevertheless, attempts to structure the process into some kind of systematic model helps to identify which are the most apposite questions. Canadian workers have evolved an exercise attitude/behaviour model based on Fishbein's Theory of Reasoned Action. Shephard (1985) described how personal beliefs and the beliefs of others interact with existing behaviour to create attitudes, which in turn lead to behavioural intentions that are not always fulfilled because of the various constraints on individuals and the barriers to exercise.
- 35 Limitations on the length of the questionnaire meant that it was not possible to cover all aspects of this behavioural model. It was agreed that the questions should concentrate on the formation of attitudes and the perceived barriers to exercise. Three key factors were covered by the questions on attitudes.

Q 108 The importance of personal goals in life (relaxing, meeting other people, feeling achievement or independence, maintaining health, losing weight, etc) including *prompt card 16*

Q 45, Q 46 and Q 41 Personal beliefs about exercise, fitness and health and *prompt card 8*

Q 43 Knowledge and beliefs about attitudes of others regarding activity, particularly family, friends and one's own social group

- 3.6 Once created, these attitudes are transformed into a behavioural intention and subsequently into behaviour, subject to various perceived and actual barriers which occur along the way. These barriers include:

Health, injury and disability
 Family commitments and time pressures
 Availability of facilities, equipment
 Cost of activities
 Self image
 Availability of partners to share the activity

Q 42 and Q 20 e cover these aspects

- 3.7 Although the Canadian model was followed the question wording and scales were not identical. These changes are partly cultural, partly due to using an interviewer-administered questionnaire rather than a self-completion one, and partly the result of different emphases in the two surveys.
- 3.8 In addition to questions relating to the Fishbein model, people were asked how active or fit they thought they were relative to people of their own age, and how often (if at all) they exercised enough to get out of breath or sweaty (Q 39, Q 40 & Q 44).
- 3.9 Q 38 is an attempt to identify (very briefly) the commitment to physical activity in relation to other types of leisure activity.

Psychological Factors

- 3.10 In addition to placing physical activity in the context of other health risk factors there is also some evidence that level of physical activity may be positively associated with general well-being, lower levels of anxiety and depression and positive mood, as set out in Section 2 of the report of the main findings. Overall, this section of the questionnaire was very brief because of the need to keep the interview to an acceptable length. The questions were, on the whole, designed to be indicators of psychological states rather than detailed assessments.
- 3.11 Various validated scales for the assessment of different psychological states were examined for possible inclusion in the questionnaire. But for many scales it was found that the validation was not applicable to the general population or they were too long or they were not designed to be interviewer administered. The Bradburn Scale (Bradburn, 1969), however, did not fall into these categories (Q 52). It was methodologically appropriate and gave a positive and negative mood score in which there was particular interest. Use of this measure also gave comparability with the Canadian Survey. Davey Smith has also used this scale in the second

Whitehall study (1991) and it has also been used by, Briscoe (1983) and Giel et al (1978)

- 3 12 Questions 47 and 48 cover loss of sleep from stress and a self-assessment of how much the respondent worried as simple indicators of anxiety. Two simple questions on the self-assessment of impatience and loss of temper were the eventual outcome of the reduction of standard scales to measure mood (Q 50 – 51). These questions and their interlinking have not been validated.
- 3 13 In Q 53 an indicator of stress was based on the respondent's perception of how stressful the past year had been. Another bearing on this is obtained from the question about lack of sleep in the past year through worry (Q 48), while a question (Q 28) on job stress is included at the end of the battery on occupational activity. These have been adapted from a very detailed set of questions used in the second Whitehall Study.
- 3 14 Three items were selected from a standard 18 item scale used to assess locus of control in relation to health. Each item represented one of three factors (personal control, chance and reliance on the medical profession). These three items are included in the health section of the questionnaire (Q 86).
- 3 15 Social support is an important factor in encouraging or suppressing many behaviours. It has also been found to be inversely related to health problems. Lack of support leads to depression and stress. Q 54 – 58 ask about contact with friends and involvement in clubs or churches, as based on standard questions recently used in the second Whitehall Survey and the Health and Lifestyle Survey (Cox, 1987).

Other Lifestyle Factors

3 16 Diet

The diet section is not designed to assess total caloric intake nor provide a complete nutritional analysis of respondents' diets which requires very detailed recording or even weighing of quantities. As with the other lifestyle factors, the intent was to classify respondents into broad categories, which in this case were related more to the type of food they ate than actual intake. However, the list of foods used in Q 68 covered all the main food groups. This list was based on those used in the Canadian Fitness Survey and the Health and Lifestyle Survey and was developed to give a broadly representative picture of nutritional intake. Each item can, of course, be used separately or combined with other single items for particular analysis purposes.

- 3 17 The other questions in this section mainly covered fat and fibre intake. All of the questions had been used in other surveys. For example, the OPCS nutrition survey (1990) the Health and Lifestyle Survey, information "questionnaires" produced by the Health Education Authority (1987) and the Welsh Heart Survey (1987).

- (a) Bread and cereal intake were covered separately from the overall intake list so that the fibre levels of these two foods could be established. (Q 60, 61)
- (b) Fat intake was covered by questions on fried and grilled foods, spreads, fat on meat, and quantity of milk consumed. The frequency list also included fatty foods Q 62 – Q 67).
- (c) The section began with a standard question on the eating of breakfast which was generally considered to be an indicator of good dietary behaviour (Q 59).
- (d) The last question on tea and coffee gave an indication of sugar intake in these drinks (Q 69).

3.18 Alcohol

Q 70 – Q 76 covered current and past drinking habits and any reduction of alcohol consumption.

- 3.19 The questions on current drinking habits (Q 70 – Q 73) were very similar to those used in the General Household Survey, including the detailed record of drinks consumed. The GHS asks about consumption over the past year, but as earlier reviews of alcohol research showed no standard reference period existed, we used the past four weeks to be consistent with the rest of the questionnaire.
- 3.20 It is customary to measure alcohol consumption in standard units where half a pint of beer or a glass of wine is equal to one unit. Rather than do this conversion when coding, the interviewers recorded the answer in "units".
- 3.21 Q's 72 & 73 are self-assessed questions on frequency and quantity of drinking which have been used in numerous other studies, including the Health and Lifestyle Survey (Cox, 1985) and the second Whitehall Study, while Qs 74-76 on the reduction of alcohol consumption were modelled on those used by Cox.
- 3.22 The questions about alcohol consumption enabled us to classify respondents in three different ways based on groupings according to:
 - (a) Estimated total alcohol consumption during the past four weeks. Measured in standards units, this can then be compared with recommended limits.
 - (b) Frequency of alcohol consumption.
 - (c) Those who classified themselves as currently or formerly heavy drinkers.

3.23 Smoking

Q 77 – Q80 on smoking are all based on standard epidemiological definitions. They enabled respondents to be classified by

- (a) Smoking frequency (regular/occasional) - current or past
- (b) The number of cigarettes smoked a day - current or past
- (c) The length of time since starting/stopping smoking
- (d) The reason for stopping/the type of cigarettes smoked

Q 81 & Q 82 A similar set of questions were asked on cigar and pipe smoking covering (a)–(c)

Health Status

3.24 The information collected concerning health status served two purposes. First, it was used as part of the screening procedure prior to the physical appraisal and second, as data for use in analysis. A separate screening questionnaire was employed for collecting the data relevant for the physical appraisal. This is described in Section 4.

3.25 The health status section of the interview (Q 87 – Q 105) comprised a brief medical history in terms of specific health problems, past and current, current symptoms, problems of daily living and a small section on injuries. The whole section was based on standard questionnaires, with additional questions included as appropriate.

3.26 The section was preceded by questions (Q 83 – Q 85) to collect information on maximum and minimum adult weights. These questions were based on those used by Cox (1987) in the Health and Lifestyle Survey. The respondent's current weight estimate was asked for at the screening stage, and his/her weight measured at the physical appraisal.

3.27 Q 86 sought a response to statements about locus of control in relation to health described in paragraph 3.14.

3.28 The main health section proper began with the respondent's self-assessment of his/her own general health. The wording of Q87 corresponded to that used by Cox.

3.29 The simple medical history (Q 88 – Q 90) was based on examples from Rose et al (1977) and on advice from medical members of the team. Lists of health problems can be found in all standard texts and health surveys. This prompted list was fairly restricted but Q 105 enabled respondents to add additional health problems, thus preventing the questionnaire structure totally dictating future analyses. The second Whitehall Study had used Q 90 to identify the presence of heart problems.

3.30 Problems of the cardio-respiratory system were covered by:

Q 91 & Q 92 The London School of Hygiene Cardiovascular Questionnaire

Q 93 Dyspnoea Questionnaire

Q 94 & Q 95 Respiratory Questionnaire

These questions are found in Cardiovascular Survey Methods (Rose & Blackburn, 1986) and they have been well used and validated.

3.31 Consultations with Silman, Badley and colleagues at the ARC Epidemiology Research Unit led to the development of specific questions on joint problems (Q 96).

3.32 Sports injuries are a major concern in the promotion of an active lifestyle both in their effect on general attitudes and beliefs and in their physical effect on those who experience them. This question (Q 97) covered injuries and long term health problems caused by taking part in sport. The questions followed the design of those used by Williams and Nicoll (1993) in their survey of exercise related injuries and illness.

3.33 Q 98 – Q 104 on womens' health problems again relied on standard questions used in medical histories. Following discussions with Bassey (Nottingham University), the questions were designed to obtain information relevant to the development of osteoporosis which has been shown to be related to physical activity.

3.34 The list of current symptoms (Q 106) was taken from the Health and Lifestyle Survey and the Whitehall Study. Cox's list was based on GP consultation rates as published in Morbidity Statistics for General Practice 1982.

3.35 Problems of daily living were covered partly in these questions and partly in the screening questionnaire. Q 107 was a modification of the last part of the Nottingham Health Profile. Use of the entire Profile was discounted because of its length and on the advice of its developers that it was not appropriate for a general population sample.

3.36 Q 109 – Q 111 dealt briefly with family history. Once again these are standard questions based on those in Cardiovascular Survey Methods and used, for example, by Morris in his study of civil servants, Cox in the Health and Lifestyle Survey and Davey Smith in the second Whitehall Study.

Socio/Demographic Profile

3.37 The questionnaire ended with three pages of questions on demographic variables. Only standard questions have been used.

3.38 Q 112 – Q 116, Q 119 – Q 121 provided details on age, sex, marital status and educational level of the respondent and household composition, tenure and socio-

economic group Details for assigning the respondent's own socio-economic group were collected in the occupational activity section. The ethnic/racial background question was used in the 1991 census. It should be noted that the sample is too small to do any analysis of separate ethnic minority groups. The serial number contained information regarding region of residence.

- 3 39 Q 117, Q 118 & Q 120 dealt with the possession of a driving licence, use of car and use of telephone, all of which have a bearing on ease of access to local facilities for exercise and activity.

3 40 Questionnaire for people aged 70 and over

For people over 70 the questionnaire was simplified to ask fewer of the opinion questions, less on jobs and parental history and a simplified dietary enquiry (see Appendix B, and the Questionnaires at Appendix G).

Summaries of Health & Lifestyle

3 41 Motivating factors

Factors important as personal goals and achievable through exercise were combined to give an overall measure of importance. This was created by multiplying together the percentage who said the factors were important (codes 4 or 5) on Q 45 & Q 108.

3 42 Health Problems

Q 107 was used to derive a variable indicating whether lifestyle was affected by health problems. Those answering 'no' to all items were categorised as having no health problems. Those answering 'yes' to any item were categorised as having a health problem.

3 43 Health Threshold

Q 88 relating to angina, arthritis, asthma and diabetes, Q 89 – Q 93, Q 96 and Q 97 relating to stroke, heart disease, chest pain, pain/discomfort in the chest, shortness of breath, joint problems and longstanding health problems were used to derive a health threshold. Those subjects without any of these problems were above the health threshold while those with at least one of these problems were below the threshold.

3 44 Symptoms

Those subjects with 5 or more of the symptoms listed in Q 106 were categorised as having a health problem.

Heart disease, angina and breathlessness

Those respondents were identified who had reported either a heart attack, valvular heart disease, a septal defect ('hole in the heart'), who were identified as

experiencing angina from their answers to a sequence of questions based on the Cardiovascular Questionnaire (Rose et al 1982) , or who had to stop for breath when walking at their own pace on level ground (Q 90, Q 91 & Q 93c).

The questions from the Cardiovascular Questionnaire asked whether respondents had pain or discomfort in the upper or middle sternum, the lower sternum, the left anterior chest or the left arm when walking uphill or hurrying or walking on level ground, whether it caused them to stop or slow down and whether it went away in 10 minutes or less.

3.45 Well-being score

A well-being score was calculated from Q 52. The statements which comprise this question are alternately positive and negative. To derive a composite score the answers given by each respondent were coded, reversing the codings for the second, fourth, sixth eighth and tenth statements, and then summed. The resultant score had a maximum value of 30. A high score represents a negative outlook on life whereas a positive individual would be expected to have a low score.

3.46 Smoking

Q 78 and Q 79 were used to categorise respondents as either non-smokers, ex-smokers or smokers. The smokers were further sub-divided into those who smoked more than 20 cigarettes a day, 10-19 cigarettes a day or less than 10 cigarettes a day. Cigar and pipe smokers were classified as non-smokers.

3.47 Diet

This information was used to determine whether, in their eating habits, respondents appeared to follow what might currently be regarded as a 'healthy' diet and to reveal themselves as being health conscious. A simple classification was used based on the responses to Q 59 – Q 67 and Q 69. Each question was reduced to a 2 or 3 point scale, generally a 'good' eating habit scored 1 and a 'bad' eating habit, 3.

- Q 59 1 = eats within 1 hour of getting up on weekdays (workdays)
 2 = eats more than 1 hour but less than 2 hours after getting up
 3 = eats more than 2 hours after getting up
- Q 60 1 = takes high fibre cereals more than twice a week
 2 = takes medium fibre cereals more than twice a week or high fibre cereals once or twice a week
 3 = other
- Q 61 1 = eats wholemeal bread
 2 = eats white bread
 3 = other

- Q 62 1 = uses low fat spread or no fat on bread
2 = uses polyunsaturated spread
3 = other
- Q 63 1 = vegetarian
2 = not a vegetarian
- Q 64 1 = cuts the fat off or never eats fat on meat
2 = eats the fat and the lean meat
- Q 65a 1 = eats fried food less than once a week or never
2 = eats fried food once or twice a week
3 = eats fried food more than twice a week
- Q 65b 1 = uses low fat margarine or low fat butter
2 = uses corn oil, sunflower oil, or other polyunsaturated oil or margarine
3 = other
- Q 66 1 = eats grilled meat without added fat/oil or does not eat grilled food
2 = eats grilled meat with added fat/oil and grilled meat less than once a week
3 = eats grilled meat with added fat/oil and grilled meat at least once a week
- Q 67 1 = drinks no milk or semi skimmed or skimmed milk
2 = drinks silver top/red top/other whole milk or less than half a pint gold top/Channel Islands milk
3 = drinks more than half a pint gold top/'Channel Islands' milk
- Q 69 Estimates were made of the amount of tea and coffee drunk and of the quantity of sugar consumed in beverages. The intake of tea or coffee was coded according to the number of cups of each beverage usually drunk in a day as follows
- | | | |
|------------------|---|-----|
| no tea or coffee | = | 0 |
| 1 or 2 cups | = | 1.5 |
| 3 or 4 cups | = | 3.5 |
| 5 or 6 cups | = | 5.5 |
| 7 or more cups | = | 8 |

The amount of sugar consumed was coded in a similar way

no sugar	=	0
less than 1 teaspoon	=	0.5
1 but less than 2 teaspoons	=	1.5
2 or more teaspoons	=	2.5

From these numbers, adding together the number of cups of each beverage consumed and multiplying by the amount of sugar added, a total daily sugar consumption in teaspoonfuls was estimated. The range was from 0 to 40 and was coded as follows:

no sugar	=	1
estimate 0.75 to 9	=	2
estimate 10 to 40	=	3

For all the dietary questions used in these calculations missing values were coded as 2., a composite diet variable was created by adding the above 11 values.

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4 SCREENING RESPONDENTS FOR THE PHYSICAL APPRAISAL, SAFEGUARDS DURING THE TESTS

(Details of the provision made for the safe conduct of individual protocols are included with the description of the protocols in Section 5)

- 4.1 An extensive and rigorous medical screening procedure was developed for the physical appraisal part of the Survey. Qualified doctors were involved in the screening of those whose answers to the preliminary screening questionnaire raised doubts about the safety of their participation. In appropriate cases the doctor also supervised the physical appraisal.

All the physical appraisals were conducted on hospital sites. During the development phase of the Survey it was decided that all people aged 60 years and over would be supervised by a doctor whilst undertaking the exercise test used in the physical appraisal. Those aged 16-59 were also to be supervised if they were considered to be at any risk on the basis of their responses to the screening questionnaire. The intention was to take such precautions and make such provisions as would reduce any hazards in the procedures to acceptable proportions whilst minimising the number who were excluded for borderline reasons identified during the preliminary screening procedures. In the Canada Fitness Survey the screening procedure (Par-Q) excluded a greater proportion of subjects as their age increased and hence excluded many belonging to the very age groups about which data were needed, the old and very old.

Ethics Committees

- 4.2 The screening and supervisory procedures were agreed with, and approved by, each of the local Ethical Committees serving the Health Districts covered by the 30 sampling points. At some sites all subjects were tested in the presence of a doctor to meet the requirement of the Ethics Committee. There was just one minor incident during the testing which required any kind of medical emergency response, where one person fainted before her treadmill measurement began.
- 4.3 Interviewers administered the screening questionnaire (Appendix D) as part of the home interview. When responses were obtained which indicated a potential risk the completed questionnaire was seen by the site doctor prior to the respondent's visit to the mobile laboratory to determine how the testing of that respondent would be handled. The fitness assessors were not permitted to proceed with the physical appraisal until this vetting had been completed, the questionnaire signed by the doctor and the instructions given for any modifications to the testing of that individual.

Categorising Respondents for the Screening and Medical Procedures

- 4.4 On the basis of their responses subjects were placed in one of five categories. The screening and medical procedures were as follows

CATEGORY 1 - for subjects aged 16-59 years who reported no contra-indication on the screening questionnaire, the physical appraisal took place at the Centre *without their being seen by a doctor*

CATEGORY 2 - for subjects aged 16-59 years whose responses to the screening questionnaire suggested the presence of a condition which might be a contra-indication, *the attending doctor was asked to review the answers to the questionnaire and to determine*

- a) whether an invitation to attend the Centre was contra-indicated,
- b) whether the appraisal could be safely conducted with a doctor present (see category 3 below), or
- c) whether part of the fitness measurements should be omitted and the remaining conducted without medical supervision

CATEGORY 3 - all subjects aged 60-69 years, and those aged 16-59 years whose responses to the screening questionnaire included definite contra-indications to their being tested, except under direct medical supervision, were booked to attend when a doctor was present. *The doctor completed a simple clinical history and examination to determine whether there were contra-indications and to decide whether any of the fitness measurements should be restricted or omitted*

CATEGORY 4 - subjects aged 70 years or over were asked to take part in a home fitness assessment to reduce risks (including the travel to and from the centre) and to increase their cooperation. The interviewer made a second visit to the subject's home accompanied by a member of the physical appraisal team so that the measurements could be completed. The cardio-respiratory, leg strength and explosive power tests were omitted from this home assessment. No medical supervision was required. If the physical assessor decided that the subject could after all perform the battery of tests constituting the physical appraisal then the subject was invited subsequently to the Centre and tested in the same way as those 60-69 years old

CATEGORY 5 - subjects whose mobility was impaired out of doors were asked to take part in a home fitness assessment comparable to that for category 4

The Selection and Training of Personnel

- 4.5 The selection and training were organised by the Survey Director and Field Operations Director as follows -

- a) The field supervisors had all had extensive experience of testing human subjects in the laboratory and field situations. They had been involved with developing the protocols for the battery of tests, they trained the

physical assessors and the teams, as well as making regular visits to the sites during the field work.

- b) The physical assessors attended an intensive three-week training course . The first two weeks comprised instruction and practice of each measurement. The final week of training took place in the mobile laboratory in the field with subjects tested. The assessors were instructed and practised in ECG monitoring. They also received an accredited course of instruction in cardio-pulmonary resuscitation.
- c) Steps were taken to ensure that the doctors providing supervision were able to recognise serious cardiac dysrhythmias. Notwithstanding the availability of the hospital's 'cardiac arrest' team, they rehearsed cardiac defibrillation using a mannequin and were familiar with all the emergency equipment. The doctor was asked to seek local *expert advice* and ensure that all the procedures received local scrutiny and approval to establish that they were not likely to be criticised in the event of an incident requiring their use. It was considered best if this *expert opinion* was sought by the Community Physician responsible for the health district in which the work was to be conducted and that the same physician agreed any modifications to the team's standard procedures if the best local opinion demanded it.

The Siting and Equipment used in the Temporary Laboratories

- 4.6 Emergency and resuscitation equipment was provided in each mobile laboratory. It included portable oxygen and suction, a defibrillator, laryngoscope , airways and a supply of drugs for emergency use. These were provided for possible use by the local hospital 'cardiac arrest' team, in case they had to be summoned.

The technical supervisor arranged the safety testing of all the equipment in use in the laboratory especially those devices which would be connected directly to the subjects, eg ECG and heart rate monitors.

Recruitment of Doctors

- 4.7 An initial letter to the Director of Public Health (DPH) at each site was the first step in recruiting doctors. This letter included a paragraph explaining that occasional medical help was needed and asked whether the DPH could pass on names of people who might be able to help us find suitable doctors. A standard letter was then sent to any contacts identified in this way. This letter outlined the type of help that was required, how often it was required, and the payment that was offered. The letter was modified during the Survey as lessons were learnt from previous sites.

The responses of the DPHs to this request varied from site to site. Some were extremely helpful, and undertook to organise the doctor rota for us. At the other extreme, some DPH said they did not know anyone who could help and did not

pursue the matter further. At most sites the DPH came up with two or three contact names, who were then followed up. In cases where the DPH and their suggested contacts could not help at all, the hospital's Medical Staffing Department was sometimes a useful source of information, as was the British Medical Association locum service, or the local Family Practitioner Committee although there was marked variation in the help offered at different sites.

The Briefing of Supervising Doctors

4.8 Non-clinical briefing

In the field supervisor's initial contact with the doctors it was established what recent relevant experience they had of supervising exercise tests and monitoring ECGs. If they had recent experience of supervising tests and monitoring ECGs they were not required to attend any "clinical" briefing sessions. The briefing they received was to familiarise them with the particular procedures used in the Survey, and to make them aware of the guidelines used to screen subjects, and the agreed criteria for stopping the treadmill test. Ideally the field supervisor would have liked to be able to meet all the doctors and carry out the briefing in person. However, this was not possible in the time available so most of the briefing was carried out over the 'phone and by post.

- 4.9 After the first few sites, a standard briefing pack was developed. This included a copy of the ethical submission, the detailed protocols for the appraisal and notes on screening of subjects. These documents were sent to doctors along with a covering letter which emphasised the need to standardise the medical procedures as far as possible. There was also a recommended textbook which included a self-test section on ECG monitoring.

- 4.10 The doctor's role was not to carry out the fitness measurements. This was the responsibility of the trained fitness assessors. The doctor was present to provide medical supervision and to advise on the suitability of subjects with medical problems for testing.

4.11 Clinical briefings

In cases where the doctor had no recent experience of running exercise tests, the field supervisor made arrangements for them to attend clinical exercise test sessions at one of the local hospitals. This was done either through personal contacts that they themselves had, or through contacting the relevant consultant at the local hospital and asking for their co-operation. Most consultants approached were very willing to allow the doctors to sit in on sessions in their departments. After the Survey had left the area "Thank you" letters were sent to the Consultants of departments which had provided clinical briefings, along with a cheque for £50 or £100 as a contribution towards departmental funds.

- 4.12 Some doctors also requested sessions on emergency procedures other than ECG monitoring. Sometimes this was arranged through the local cardiology department. In two areas the appointed local resuscitation officer agreed to provide briefing sessions.

Categories of Doctor Recruited

- 4.13 In total 101 individual doctors were recruited to provide supervision at the 30 sites. Seven of the doctors helped at more than one site, and one doctor worked at five sites. Most of the doctors recruited were either GPs, SHOs/Registrars in General Med/Anaesthetics/Casualty, or Public Health Physicians.

SHOs and Registrars in Medicine/Cardiology/ Anaesthetics/A&E

At several sites the hospital doctors in relevant departments offered their help. There was a problem booking daytime sessions, although anaesthetists and casualty officers often worked shift systems which meant they were available to do morning and afternoon slots. It was unfortunate that the launch of the Survey coincided with the introduction of Crown Indemnity for doctors employed by Health Authorities. This meant that not all doctors employed by the Health Authority had their own indemnity policies, so were unable to work for the Survey. In some instances funding was provided to purchase insurance cover for an individual doctor, or upgraded an existing policy. This obviously put up the cost of the supervision. The cost of a personal policy for one doctor was £180. These doctors tended not to need clinical briefing sessions.

General Practitioners

GPs with a particular interest in sport/exercise were a good source of help. They were usually younger GPs, who had only recently completed their training. Some recently-retired GPs were also employed. Full-time GPs were of course usually available only in the evenings and the launch of the Survey coincided with the introduction of their new contracts thus further limiting their availability. Some of the GPs needed to attend clinical briefing session whereas others who had recent experience in General Medicine/Cardiology did not.

Public Health Physicians

In some areas Registrars in Public Health assisted with the supervision. Whether or not they required clinical briefings depended on how long they had been away from clinical medicine. They tended to be able to work day-time slots more easily than the other categories of doctors.

Others

Other types of doctor recruited included clinical medical officers, doctors working in private practice (health screening), occupational health physicians, doctors employed in University research departments and retired consultants.

- 4.14 As far as possible the screening procedures were applied uniformly and the doctors did not exclude subjects or stop tests unnecessarily. When necessary the Field Operations Director intervened to ensure that the agreed procedures were followed.

5 PROTOCOLS USED IN THE PHYSICAL APPRAISAL

Introduction

- 5.1 This Section contains the detailed protocols for the procedures carried out during the physical appraisal for the Allied Dunbar National Fitness Survey. The tests were selected to represent several facets that contribute to an individual's overall fitness. Some of these procedures were well established tests and references to standard methods have been given. Other tests were innovative measures which were devised during the development work for the Survey. In all cases the protocols had been scrutinised and approved by experts in the relevant field and members of the Scientific Advisory Board. The submission to local Ethics Committees included these same details.

Siting the Mobile Laboratories

- 5.2 See paragraph 1.11 for a description of the arrangements made for interviewing respondents and transporting them to the nearby mobile laboratory; paragraph 1.12 for a note regarding the home appraisal and paragraph 1.13 regarding the siting of the mobile laboratories and access to a doctor who would provide supervision.

The Physical Appraisal

- 5.3 This consisted of the following:

Anthropometry:	height, weight, skinfold thickness, waist and hip girths
Blood pressure:	arterial blood pressure was included partly as a screening measure prior to participation in some of the fitness tests
Lung function:	forced vital capacity (FVC) and forced expiratory volume (FEV1)
Joint flexibility:	shoulder abduction (i.e. reaching above the head)
Muscle function:	isometric hand grip, isometric leg extension strength and power of the leg
Cardio-respiratory response to exercise:	achieved using treadmill walking at standard speeds and gradients

The cardio-respiratory exercise test took about three-quarters of an hour to complete, including practice and familiarisation with walking on a treadmill and mouthpiece breathing. It formed the main item of the complete battery of measurements that took about one and a half hours to complete.

5 4 Content of the physical appraisal

See paragraph 1 16, fig 1 1

Description of the Battery of Tests

5 5 Each component of the battery is described under the following headings

Rationale the reasons for performing the test and including it in the battery

General description including a reference to the standard method where applicable

Equipment including the supplier of the equipment

Procedure step-by-step method explaining how the test was performed

Administrator's notes notes on parts of the procedure which were considered problematic or to require special attention

Exclusion criteria criteria for excluding certain subjects from the test If a doctor was in attendance then he or she decided which tests should not be conducted on the basis of a thorough medical history and clinical examination

Components of the Physical Appraisal Battery

5 6 The subject was normally brought by car to the mobile laboratory, accompanied by the interviewer Once the interviewer had performed the necessary introductions, the subject was left with the assessors (and a doctor if the subject was deemed at risk) A brief explanation of the whole test procedure was given before any tests or measures were begun The nature of the tests was explained to the subject, and after reading a written information sheet (or having it read to them by the assessor), the subject was invited to sign a consent form covering the first series of tests The information and consent forms relating to the treadmill tests were dealt with once all other testing had been completed, that is immediately before the treadmill test itself.

Where possible (depending upon the sex of the assessor) and where applicable the tests were conducted in the following order

Timetable of procedures

- 1 Examination by the attending doctor (where appropriate)
- 2 Anthropometry
height, weight, skinfold thicknesses, waist and hip girths
- 3 Shoulder abduction
- 4 Arterial blood pressure

5. Lung function: forced vital capacity, forced expiratory volume in unit time
6. Muscle function: explosive power of the lower limb, hand-grip strength, isometric quadriceps strength
7. Cardio-respiratory exercise test: graded treadmill walking (submaximal)

5.7 Examination by the Attending Doctor

The general procedure was such that those aged 16 to 59 were only examined and supervised at the mobile laboratory by a doctor if information on the screening questionnaire indicated that there was a contra-indication. Those aged 60 to 74 were always examined by a doctor before the test and supervised through the tests. Those aged 75 and over were not normally taken to the mobile laboratory, instead a home appraisal was carried out that did not require a medical examination or medical supervision. When a doctor was in attendance, he or she decided which tests should not be conducted. The assessors recorded the results of each test. There was provision for recording the reason why measurements could not be made or which complications seemed possible. If the appraisal was in the home, the member of the team of the same sex as the subject accompanied the interviewer into the home. The interviewer stayed to assist whilst all achievable tests were completed.

5.8 Anthropometry

These measures all use standard protocols which had been used extensively in population surveys, and posed no risk to the subject.

5.9 Height

Rationale: Height was used in conjunction with the measurement of weight to derive the weight-height ratio, where the body weight in kilogrammes is divided by the square of the height in metres. (W/H^2). This ratio, the Body Mass Index (BMI), is used extensively and represents the current approach to estimating the body fat in clinical practice and nutritional surveys. It was adopted in the Royal College of Physicians' report on Obesity (Royal College of Physicians, 1983).

In a large population study such as the Survey, the BMI could be expected to correlate well with fatness derived from the measurement of body density. It will misclassify relative fatness in individuals with a lean body mass (Fat Free Mass) which is towards either extreme of the distribution.

General description: Maximum standing height of individual, following a standard method (Weiner and Lourie, 1981).

Equipment: Metal stadiometer (Holtain).

Procedure

- 1 The stadiometer was placed on a firm surface
- 2 The subject was asked to remove shoes and step onto the baseplate with his/her back to the upright. Heels had to be against the upright with legs together and arms loosely by the side
- 3 The head position was checked and adjusted if necessary (see Administrators' note i). The arm of the stadiometer was then slid down to make contact with the crown of the head
- 4 The subject was told "Now keep your head in that position and your heels on the ground, (pause) now stand up as tall as you can" (see Administrators' note ii)
- 5 A further check was made that the heels are on the base-plate and the head position correct (see Administrators' notes iii and iv)
- 6 With the subject in the correct position, the cursor was read to the nearest millimetre and the result recorded

Administrators' Notes

- i) The Frankfort Plane i.e. the straight line through the lower bony orbital margin and the external auditory meatus when the head is viewed in profile, is used to determine the correct head position and should be horizontally level when the height measure is made
- ii) Subjects who fidget can be steadied by gently holding the head in the position corresponding to the Frankfort Plane, and then asking them to "Stand up as tall as you can"
- iii) If the subject is hunching shoulders, a touch on the offending shoulder and the request to "Relax your shoulders please" will normally correct this
- iv) If the subject is unable or unwilling to adopt the right posture for the height measurement, this should be noted on the result sheet. Similarly, if the subject is wearing a turban or has a hair style that may not acceptably be compressed, the measurement should be taken but any such complication noted

Exclusion criteria

There were no risks involved in this procedure, and all subjects who were willing to complete this measurement should have done so

5.10 Weight

Rationale see above on height

General Description Total body weight in kilograms, following a standard method (Weiner and Lourie, 1981)

Equipment: A calibrated digital weighing machine recording to the nearest 0.1 kilogram.

Procedure:

1. The scales were placed on a hard, flat surface (see Administrators' note i).
2. The scales were adjusted for zero reading (see Operator's manual).
3. The subject was asked to remove shoes and outer garments, heavy watches or jewellery and loose change from pockets.
4. The subject was asked to step on the scales with both feet fully on the platform, heels close to the back edge, looking straight ahead and keeping as still as possible.
5. The digital reading was allowed to stabilise (see note ii) and the weight was recorded to the nearest 0.1 kg.

Administrators' Notes:

- i) If there was no such surface in the case of the home visit (e.g. soft carpet) the board supplied was used, this being noted on the results sheet.
- ii) If the reading fluctuated between two numbers, the more persistent reading was recorded.

Exclusion criteria:

There were no risks to the subject in this procedure. All subjects should have completed the measure.

5.11 Skinfold thicknesses

Rationale: Measurement used as one index of body composition. There was no available field technique for directly measuring body fat (adipose tissue). The measurement of body density by underwater weighing was impracticable. An indirect technique was used based upon the measurement of 4 skinfold thicknesses. The sum of the skinfolds, measured at standard sites (biceps, triceps, subscapular and suprailiac) has been shown to serve as a representation of the total amount of fat in the body as a whole (Durnin & Womersley, 1974). Each fold contains a layer of subcutaneous adipose tissue. This field measure has been widely used in international studies such as the International Biological Programme (Weiner & Lourie, 1969, Collins, 1990).

General Description: The thickness of the raised skinfolds at four body sites (biceps, triceps, subscapular and supra-iliac), following standard method (Weiner and Lourie, 1981).

Equipment: Skinfold calipers supplied by British Indicators Limited; [jaw pressure = 10 grammes per mm].

Procedure The measurement was performed on women by a female administrator. Men were measured by an administrator of either sex.

- 1 The measurement was explained briefly to the subject
- 2 The zero setting of the calipers was checked before measurements
- 3 The skinfold was lifted above the prescribed site of measurement in such a way that the vertical distance from the crest of the fold to the point of measurement was approximately the same as the thickness of the fold itself (see note 1). All measures are made to the nearest 0.2 mm. Two readings were made at each site, unless they were discrepant by more than 10%, in which case a third measure was taken and the mean of the closest two was recorded. Readings were normally taken on the right side (see Administrators' note 11).
- 4 The biceps skinfold was measured on the front of the unclothed arm at a level midway between the tip of the acromion and the tip of the olecranon processes. This position was located by measurement with a tape measure. The subject was seated and the arm was relaxed with the forearm resting on the thigh with the elbow at approximately 90° and the palm facing upwards. The skinfold was lifted parallel to the long axis of the arm and measurement was made.
- 5 The triceps skinfold was located on the back of the unclothed arm at a level midway between the tip of the acromion and the tip of the olecranon. The subject stood with the arm relaxed and pendant. The skinfold was lifted parallel to the long axis of the arm and measurement was taken.
- 6 The subscapular skinfold was located on the back just below the tip of the scapula with the subject standing in a relaxed position. The tissues form a natural potential crease that runs at an angle of about 45° downwards from the spine, this was lifted for measurement.
- 7 The suprailiac skinfold was lifted just above the iliac crest in the mid-axillary line with the subject standing in a relaxed position, the hands clasped loosely behind the back. A horizontal fold was lifted for this measurement.

Administrators' Notes

- i) Firm pressure was applied by the thumb and forefinger to gather and lift the skinfold. The skinfold was then lightly supported during measurement with minimal pressure being exerted on the fold. Because there is a tendency for measures to drift downwards if the calipers are left applied the reading was taken at a standard interval of 3 seconds after application of the calipers.
- ii) The readings were taken on the right side, unless there was some injury to the right arm or other reason for measurement on that side to be impractical, inconvenient or embarrassing. In any of these instances, the readings were taken on the left side, this fact being recorded on the result sheet.

Exclusion criteria:

There were no risks to the subject in this procedure. All subjects were expected to complete the measures.

5.12 Waist and hip girths

Rationale: Measurement used as one index of body fat distribution. Values for waist and hip girths permitted calculation of the ratio of waist to hip girth as an indicator of the distribution of body fat and especially intra-abdominal fat deposits (Jones et al, 1986). This has been associated in some studies with risk of coronary heart disease. The measurements were made directly over the skin or over minimal clothing (underwear).

General Description: The waist girth is defined as the horizontal circumference halfway between the iliac crest and the 12th rib. The hip girth is the horizontal circumference at the broadest part of the lower body, usually at the level of the trochanters.

Equipment: Fibreglass metric tape.

Procedures: The measurements were made directly over the skin or over minimal clothing (underwear or light weight shorts). The measure was performed by a female administrator on female subjects. Male subjects were measured by either sex.

A) Waist Girth

1. The measure was explained briefly to the subject.
2. From behind the subject the administrator identifies the iliac crest and the 12th rib, keeping the second (index) and fourth fingers on the sites (see Administrators' note i).
3. A mark, using a dermatographic pencil, was put on the skin midway between two sites using the third (middle) finger as an indicator.
4. 2 and 3 were repeated on the other side of the body.
5. The tape was placed around the waist to cover the two marked spots and to lie in a horizontal plane around the body.
6. The subject was instructed to stand upright in the standard anatomical position and to breathe normally (see Administrators' note ii).
7. The reading was noted at the onset of inhalation and of exhalation and a mean figure was recorded to the nearest millimetre.

B) Hip Girth

- 1 The horizontal circumference was measured at the broadest part of the lower body, usually at the level of the trochanters, but in some subjects at the greatest protuberance of the buttocks (see Administrators' note iii)
- 2 The measurement was recorded to the nearest millimetre

Administrators' Notes

- i) The subject should normally raise or lower his or her clothing, apart from basic underwear, to facilitate location of the sites and accurate measurement of the girths. If this proved impossible, either by the nature of the subject's clothing or because of an unacceptable degree of embarrassment, the measure was made over the clothing and a note to this effect made on the results sheet
- ii) Particular care should be taken to ensure that the subject's abdominal wall was relaxed
- iii) Several measures at different levels may be necessary to ensure that the maximum girth was obtained

Exclusion criteria

There were no risks to the subject in these procedures. All subjects should have completed the measures

5.13 Shoulder Abduction

Rationale Shoulder flexibility - the range of movement at the shoulder joint, i.e. abduction, was selected because of its involvement in many sports and recreational activities and in everyday function, e.g. dressing, lifting. Shoulder abduction is the movement involved in reaching for objects above head level, or at the back of the neck. The selection of a single measure should not be taken to imply that there is a general factor of flexibility, rather the time constraints on the test and the overall burden on respondents limited the Survey procedures to one measure. It was considered that the shoulder joint was perhaps the most relevant, particularly to the retention of function with increasing age.

The range of movement was measured as the maximal number of degrees of arc through which the arm could move upwards in 45° flexion (Basse et al, 1989). This was measured on the dominant side unless that was injured. The device used to measure the angle (a goniometer) was strapped to the individual's bare arm and he/she was asked to keep their shoulders horizontal. A warning device was used to ensure that an individual did not arch his/her back. The measurement was repeated until two readings within 5° of each other were obtained. Three attempts were the norm.

General Description The range of movement was measured as the maximal number of degrees of arc through which the arm moves upwards in 45° horizontal flexion from hanging vertically by the side. The elbow is extended during the manoeuvre. Both

movement of the upper arm on the shoulder blade (glenohumoral abduction) and of the shoulder blade on the collar bone (scapulo-thoracic abduction) contribute (Bassey et al, 1989).

Equipment: A gravity goniometer (Ob, Sweden) was used. A vertical guide projecting from the wall with a contact switch helps to ensure the correct back position.

Procedure:

1. The measurement was explained briefly to the subject.
2. The subject removed outer clothing. The dominant arm (see Administrators' note i) needed to be bare. Sleeves were rolled or pushed to the top of the arm, provided that movement was not restricted as a consequence.
3. The goniometer strap was attached to the upper arm at the midpoint of the acromial and olecranon processes. The goniometer was attached to the strap facing directly backwards.
4. The shoulder abduction manoeuvre was then explained and demonstrated to the subject (see Administrators' notes ii and iii). The subject was then positioned with the centre of the back (vertical plane) against a vertical guide.
5. The subject looked straight ahead keeping shoulders horizontal (see note iv) and maintaining contact with the vertical guide at the level of the shoulders and of the lumbar spine.
6. When the arm was judged to be hanging freely at the side of the body, the zero of the goniometer was set to coincide with the indicator needle (i.e. vertical).
7. The subject then abducted the arm with the observer checking that the body position as described above was maintained.
8. When the arm was fully abducted the administrator ensured that the goniometer indicator was functioning correctly (see Administrators' note v). The angular range achieved was read directly from the goniometer dial and recorded to the nearest 2°.
9. The subject then lowered his/her arm and moved the shoulders about to loosen up before the next trial.
10. The measurement was repeated including checking and resetting zero, until two measures within 5° of one another had been obtained. Three measures were standard unless the third score exceeded the previous better score by more than 5° degrees, in which case a further measure was made, up to a maximum of five measures. Non-standard attempts were not recorded.

Administrators' Notes

- i) The measurement was taken on the dominant side unless that side was injured or damaged, in which case the measurement was made on the other side with this fact being recorded
- ii) The subject was instructed to carry out all manoeuvres in a smooth, controlled manner within limits determined by the onset of discomfort
- iii) To complete the manoeuvre of shoulder abduction the respondent had to start with the arm hanging freely at the side, the plane of movement was neither directly to the front, nor to the side, but at 45° (with the administrator standing in line with the required plane of movement) The instructions were as follows "allow your arm to hang vertically by your side. Swing your arm up towards your head and back as far as you can, so that the hand travels in an arc midway between the forward and sideways position. Hold the position, when the limit of the range has been reached, until I have made the measurement, then relax"
- iv) It was important to check that the shoulders were level throughout the movement
- v) The goniometer dial was tapped firmly before each reading to ensure that the indicator was not against the dial

Exclusion criteria Subjects who had a recent history of shoulder dislocation or related surgery were excluded from this test. If there was a problem with one shoulder only, the opposite shoulder was measured. The assessor checked these exclusion criteria immediately prior to testing.

5.14 Arterial blood pressure

Rationale Arterial blood pressure was measured because of its importance as a cardiovascular risk factor and, for screening purposes, because hypertension was identified as a relative contra-indication to exercise testing.

The results for blood pressure were included in the Main Report of the Survey, Appendix A, page 153.

General Description Systolic and diastolic blood pressure were measured after the carrying out of all the anthropometry and flexibility tests but before the commencement of the strenuous elements of the physical appraisal. At least three readings of systolic and diastolic pressure were taken at one minute intervals, after the subjects had been seated with legs uncrossed for at least three minutes. The values used were the corresponding readings, where the diastolic pressure was lowest.

Equipment Automated sphygmomanometer "Accutorr 1" (Data corporation, Cambridge) was selected after extensive discussion with experts.

This non-invasive blood pressure monitor utilises a pump, inflatable cuff, transducer and microprocessor to determine the systolic and diastolic pressure using an oscillometric technique.

This sphygmomanometer is automated in operation thus avoiding the problems of inter-observer variations in blood pressure readings. The systolic and diastolic pressures and pulse rate were displayed digitally. The same device had been used in a recent Health and Lifestyle Survey (Cox et al. 1987). The best available evidence suggests that this model may underestimate diastolic pressure by 8 mm Hg when compared with measures made manually by auscultation (Rahman 1989). In presenting the results the necessary correction was made to the diastolic readings, that is 8 mm Hg was added to the recorded value. The subjects were asked for their consent so that their general practitioner could be informed of the result.

Procedure: Observers referred to the Operator's manual for the Accutorr regarding the operation of the instrument.

1. The measurement was explained briefly to the subject.
2. All measures were performed on the left arm, the sleeve being rolled up, but not so that it restricted circulation in the upper arm (see Administrators' note ii).
3. The "normal adult size" cuff was usually selected unless the upper arm was of an exceptional circumference, either too great or too small, in which case the larger or smaller cuffs were used (the cuff selection switch on the sphygmomanometer had to be set accordingly).
4. The cuff was fitted to the subject's left arm (see Administrators' note iii) while the test was explained.
5. The subject sat with the forearm extended and supported on a table of suitable height, with the arm and fingers relaxed and the cuff approximately level with the heart.
6. The subject sat resting for three minutes before the measurement (see Administrators' note i). The subject was asked not to cross their legs and not to talk for at least a full minute prior to the measurement.
7. The subject was warned of the feeling of pressure around the upper arm before the machine was switched on and inflation commenced.
8. Three measures were made automatically one minute apart, and the results recorded.

Administrators' Notes:

- i) During this period the administrator explained the nature of the physical appraisal and the other tests, but was at pains to ensure that the subject was as relaxed and as quiet as possible.

- (ii) If, by rolling up a sleeve, the subject became uncomfortable or the rolled sleeve interfered with the circulation to the forearm, the subject was asked to remove their upper garment or slip their arm out of the sleeve assuming this was possible
- (iii) The black connection hose was placed so that it pointed down towards the subject's fingertips approximately in line with the fourth finger. The cuff was wrapped around the arm with the lower edge about one inch above the elbow crease, the cuff was applied at a tightness whereby two fingers could just be inserted between the cuff and the arm before inflation

Exclusion criteria

All subjects had their blood pressure measured because it formed part of the screening procedure for the subsequent tests. If for any reason blood pressure could not be measured (eg equipment failure), subjects were automatically excluded from the hand-grip test, the test of lower leg explosive power, the isometric leg extension test and the treadmill test

5.15 Lung Function

Rationale These simple ventilatory tests were performed to assist in the interpretation of the results of other tests and to identify those with pulmonary disease contributing to disability

General Description Forced vital capacity (FVC) and Forced expiratory volume in one second (FEV₁) were measured. Forced vital capacity (FVC) is the volume of gas delivered on expiration made as rapidly and completely as possible starting from full inspiration. Forced expiratory volume (FEV₁) is measured simultaneously i.e. as the volume exhaled in the first second during the forced vital capacity manoeuvre. A well-established standard method is followed (Cotes, 1979)

Equipment Standard Vitalograph Model no V1909 supplied by Vitalograph (Loughborough, UK). Calibration notes and operating instructions for the setting up and use of the Vitalograph were available

Procedure

- 1 On insertion of a new recording sheet the stylus zero position was checked and adjusted accordingly
- 2 The test was explained to the seated subject. Emphasis was placed on the need for a full inspiration and for the expiration to be as hard and as fast as possible, until no more air can be expelled. The administrator gave a full demonstration of the manoeuvre and the effort required (see Administrators' note 1)
- 3 A check was made that the subject was seated comfortably and upright and that clothing around the neck and chest was not likely to impede full inspiration. A nose clip was fitted

4. The subject tried blowing through their mouthpiece (disconnected from the Vitalograph tube).
5. The subject was asked to insert their mouthpiece into the tube and grasp the upper end of the tube ready to perform the test.
6. The observer ensured that the carriage return switch was depressed on the right hand side of the machine to record the trial.
7. The subject was asked, in their own time, to take in "as deep a breath as possible" and then immediately blow into the tube (see Administrators' note ii).
8. The administrator gave strong verbal encouragement throughout the exhalation (see Administrators' note iii).
9. After completion of the trial the tubing was removed from the Vitalograph to allow deflation of the bellows. The tubing was replaced and the carriage returned to its starting position, with a check that the system was in the correct starting position (adjusted if necessary).
10. The test was repeated at least twice, with a rest of about 30 seconds between trials.
11. The best values for FVC and FEV₁ were identified and read off the ATPS scales as the measures of those capacities whether or not they occur in the same exhalation. (Only the highest values were transferred to the results sheet).
12. The temperature of the room at the time of the test were recorded.

Administrators' Notes:

- i) The mouthpiece was to be lightly gripped with the teeth and the lips closed around the tube to form a seal.
- ii) It was better not to try to get the subject to synchronise their preparatory inhalation and the subsequent effort with an administrator's command, provided that the subject understood the need for a maximum effort expelling all the air they could as fast as possible.
- iii) When the subject stopped exhaling the trace became horizontal, at which time the trial ceased. The administrator then re-emphasised that the exhalation must continue as long as possible.

Exclusion criteria:

This test posed no risk to the subject, and was performed by all subjects.

Muscle function

5.16 Explosive power of the lower limb

Rationale: This measure was included in the battery because of its importance in daily life where explosive power, the rate at which the muscles can extend the lower

limb, is critical for the performance of tasks such as rising from the seated position, take-off of normal and hurried strides, negotiation of kerbs and steps, the use of stairs and especially avoidance of tripping and falling

General Description A single, maximal, dynamic push with one (dominant) leg against an inclined footplate driving a heavy fly-wheel from rest, (the return spring of the footplate provides additional resistance) The subject was seated with the buttocks against a firm support and pushed through a range of movement equivalent to climbing a single stair. Extension also took place at the hip joint, but little movement occurred at the ankle. The maximum angular velocity of the flywheel was used to calculate the limb power

Equipment: A purpose-built, computerised ergometer, developed at the University of Nottingham by Dr A.H. Short and Dr E.J. Bassey (Department of Physiology & Pharmacology) and manufactured by Bio-medical Engineering (Bassey & Short, 1990).

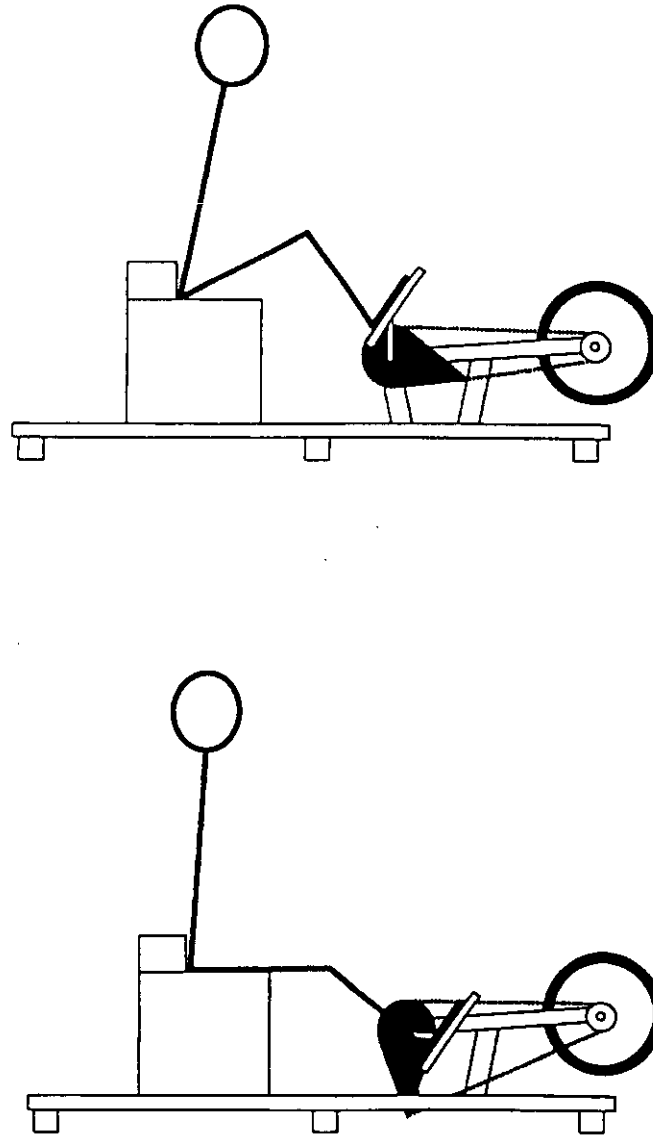


Figure 5.1 This diagram illustrates the use of the rig used to measure a subjects power. In the upper panel the subject sits with the knee flexed in preparation for a maximum 'push'. The lower panel shows the position of the limb on completion of the movement.

Procedure

- 1 The subject was shown the ergometer and the test demonstrated
- 2 The subject was asked which was the preferred leg (i.e. dominant) and the choice recorded. The dominant leg was measured unless an injury or medical condition precluded measurement, in which case the other leg was measured, always provided there were no contra-indications for that leg also
- 3 The sliding seat clamps were loosened and the seat was pushed forward to an appropriate position for the size of the subject (i.e. so that only backward adjustment was needed at 6)
- 4 The subject was seated on the ergometer with the dominant foot on the appropriate footplate, with the heel in contact with the base of the footplate and the side of the foot against the inside edge of the footplate. The other foot was placed on the floor in a comfortable position
- 5 The administrator ensured that the subject's buttock was firmly against the seat support
- 6 The subject was asked to slowly and almost fully extend the leg against the footplate while pushing the footplate to the end of its range of travel and then pushing the seat backwards until the knee was almost fully extended
- 7 The sliding hand screws were secured (see Administrators' note i)
- 8 The administrator ensured that the subject could fully, but only just, extend the knee (by compressing the padding behind the buttocks)
- 9 A visual check was made of the alignment of the ankle, knee and hip joints on the leg to be tested. The subject was asked to slide sideways on the seat until these joints were in a straight line, while taking care that the buttock was not against the metal side of the seat
- 10 The subject was prepared for the commands to be used (see Administrators' note ii). The subject was instructed to lean forward slightly with their arms folded, and to maintain that position throughout the effort
- 11 The test was performed, the first two trials being designated as "practice", with the first practice as a gentle introduction, the second a fairly vigorous trial. (The results from the practice trials were not recorded)
- 12 Trials were repeated after short rest intervals of about 15-20 seconds (no longer than the administrator needs to record the trials and reset the test) until a plateau was achieved (increase less than 10% on previous best)
- 13 If no plateau was achieved by the tenth trial the test was terminated and the best result was recorded

Administrator's Notes:

- i) It was important to make sure that there was no slack in the system, i.e.:
 - a) that the subject's knee did not achieve full extension with further travel still available (resulting in an uncomfortable and potentially injurious jolt); and
 - b) the flywheel had to be backed up to eliminate slack in the transmission. In practice, because the padded seat-back became compressed during the movement, the knee was set at an angle very slightly less than full extension.
- ii) The subject was asked "Are you ready?" before each trial. The wording used was "I shall say 'One, two, three go!' and on 'go!' I want you to push the pedal down as hard and fast as you can".

Exclusion criteria:

Subjects were excluded if any of the following applied:

- a) they had sustained a recent injury or surgery affecting both legs, or if they could not extend the hip or knee fully in the standing position (this was ascertained by questioning prior to testing)
- b) they had active back problems (ascertained by questioning prior to testing)
- c) their blood pressure measured using the Accutorr was greater than 200 mm Hg for systolic or 112 mmHg for diastolic.

5.17 Isometric hand-grip strength

Rationale: Hand-grip strength is important in many aspects of daily life, for example hand-grip is required for holding onto heavy objects or raising the body weight, as when using a handrail on the stairs in the home or on a bus. It has been measured in a community survey of elderly people and was well accepted with no untoward incidents (Harries, 1987, Bassey & Harries, 1993).

General Description: A maximum voluntary contraction of the hand-grip was measured by gripping a dynamometer between flexed fingers and the base of the thumb (thenar eminence), the subject being seated. Verbal encouragement was given, exhorting the subject to produce a maximal effort by squeezing the grip as hard as possible and maintaining the maximal effort for 2-3 seconds, all the time trying to increase it.

Equipment: A strain-gauge hand-grip dynamometer designed at Nottingham University and supplied by Biomedical Engineering (Bassey et al, 1986).

The dynamometer consists of a gripping handle (with strain-gauge transducer) and an amplifier with bar-graph and digital displays.

Procedure

- 1 The equipment was prepared ready for use as described in the operating instructions
- 2 The subject was seated facing the dynamometer display
- 3 The zero control on the dynamometer was checked and adjusted if necessary. The range switch was normally set to 0-100 kg (see Administrators' note i)
- 4 The subject was asked which was his/her preferred hand (i.e. dominant) and the choice recorded. The test was then performed using the dominant hand, unless there were contra-indications, in which case the other hand was measured, or if this was also contra-indicated the subject was excluded from the test
- 5 A brief explanation was given to the respondent (see Administrators' note ii), the instrument was shown to the subject and a demonstration was performed (see Administrators' note iii)
- 6 The subject was positioned as follows -
 - a) seated comfortably
 - b) the upper arm was close into the body and neutrally rotated (i.e. hanging straight down)
 - c) the elbow was flexed at approximately 90° and the forearm in the mid-prone position (i.e. with the thumb up). The subject could rest their forearm on their lap if they wished
 - d) the digital display was visible to both assessor and subject
- 7 When the subject was suitably positioned, the dynamometer was placed centrally in the dominant hand, with one edge against the thenar eminence, the other enclosed by the curl of the fingers. The dynamometer was then squeezed with moderate effort to establish the position of the hand (see Administrators' note iv). If necessary the dynamometer was wiped with a tissue at this stage
- 8 The subject was instructed as follows -

"I am going to count up to three and then ask you to squeeze as hard as you can, just for a couple of seconds. I would like you to watch the display while you are squeezing so that you can see how well you are doing"
- 9 The display was reset
- 10 When the subject was ready, say - "One, two, three, squeeze! Squeeze! Squeeze! Now relax" (see Administrators' note v)
- 11 The value that was held on the digital meter was recorded to the nearest 0.1 kg

12. The three trials on the dominant hand were separated by 30 second rest intervals.
13. One or two more trials were required if the last trial was more than 10% above the previous best.

Administrators' Notes:

- i) If an elderly or frail subject was being tested, the 0-20 kg range was selected in the first trial.
- ii) It was explained that the measurement was to assess the strength of the hand in a gripping action. The test depended upon the subject performing at their best possible level, and for that reason there was a need to encourage a maximal effort by shouting. They were told that at least three attempts at a maximum effort would be required.
- iii) The transducer was placed in the assessor's hand and squeezed, the light scale indicated that this had been done.
- iv) Large rings could cause discomfort - if so they were removed.
- v) It was important that the subject relaxed rapidly after maximal effort by releasing their grip quickly and completely.

Exclusion criteria:

Subjects were excluded if:

- i) they had observed swelling, inflammation, severe pain or recent injury or surgery to the hand within the last 6 months. Normally the dominant hand only was tested. However, if this hand was excluded for one of the reasons listed above, the non-dominant hand was tested. This was ascertained by questioning immediately prior to the test.
- ii) their blood pressure reading measured on the Accutorr sphygmomanometer was over 160 mmHg for systolic or 102 mm Hg for diastolic.

5.17 Isometric quadriceps strength

Rationale: The quadriceps muscle is one of the most powerful muscles in the body. It extends the leg and lack of strength in this group of muscles will adversely affect most weight-bearing activities.

General Description: A maximum voluntary contraction was performed with the minimal movement consistent with acceptable constraints, the subject being seated with the knee joint at 90 degrees. Verbal encouragement was given, exhorting the subject to produce a maximal effort by attempting to kick outwards as hard and fast as possible, then to sustain the maximal effort for 2-3 seconds, all the time trying to increase it.

Equipment A chair of steel construction (after Tornvall, as described by (Edwards et al, 1977)

Force was transmitted through a tension wire attached to the ankle via a padded strap, to a strain-gauged bar at the back of the chair. The strain gauge output was coupled to an amplifier, an analogue to digital converter and a computer so that recruitment, peak force and decay could be recorded. A lap strap was provided to prevent the subject's buttocks from leaving the seat. The rigid seat was lightly padded.

Procedure

- 1 The test was explained briefly to the subject (see Administrators' note i)
- 2 The measurement was normally made on the dominant leg (see Administrators' note ii)
ii) The subject removed the shoe from the measured leg
- 3 The seat back was slackened and moved to the back of its adjustment
- 4 The subject was seated upright with the back of the knee in contact with the front edge of the seat. The back of the seat was then moved forwards until a slight compression of the buttocks was achieved, and the seat back tightly clamped
- 5 The strain gauge assembly was moved sideways to a position directly behind the ankle
- 6 The subject's dominant foot had the ankle strap slipped over it and positioned so that the lower border of the strap was immediately above the medial malleolus
- 7 The bar to which the strain gauge was attached was adjusted up or down so that the connecting cable lay in the horizontal plane, while the subject exerted light pressure on the strap to take up the slack in the cable (see Administrators' note iii)
- 8 The restraining straps were secured firmly
- 9 The subject folded the arms across the chest
- 10 The procedure and sequence of commands were explained to the subject as follows

The subject was asked to first "gently take up the slack" and then, on the command "one, two three, NOW!", kick out as hard and as fast as possible, make a maximal effort for 2-3 seconds, trying to increase the force all the time, and then "relax"
- 11 The test was performed
- 12 After 30 seconds' rest a further test was made
- 13 Trials continued with 30 second rest intervals until a plateau or decline in performance was shown (see Administrators' note iv)
- 14 The highest score was recorded on the test sheet

Administrators' Notes:

- i) The explanation needed to make it clear that a maximal effort was required and there would be three or more trials.
- ii) The dominant leg was identified and the choice recorded, and this leg was measured unless that leg was for any reason unsuitable (recently injured, arthritic), in which case the non-dominant leg was measured, and the fact recorded. The administrator checked that there had been no local injury between the time of medical screening and the physical appraisal.
- iii) In practice the knee joint was at a slightly acute angle once these adjustments had been made. However, with the compression of the front of the seat padding and the full take-up of the cable slack (both achieved early in the effort) the knee joint was very close to 90° at the peak of maximal effort. The distance from the front of the ankle strap to the strain gauge was constant, therefore no adjustment of the cable length was necessary after initial setting up of the apparatus (see Calibration Notes).
- iv) The explanation needed to make clear that a maximum effort was required and that there would be three or more trials. The verbal commands to be used were rehearsed before an effort was made.

Normally 3 - 5 trials sufficed. No more than 6 trials were made, less if the subject appeared distressed (when the fact was recorded).

When the latest score exceeded the previous best value by no more than 5% this was regarded as the "plateau" value.

Exclusion criteria: Subjects were excluded if:

- a) they were excluded from the test of explosive power of the lower limb
- b) they had leg ulcers or any predisposition to leg ulceration at the site of pressure on the lower leg. This was ascertained by questioning immediately prior to the test.
- c) their blood pressure, measured on the Accutorr sphygmomanometer, was greater than 160 mmHg for systolic or 102 mmHg for diastolic.

5.18 Cardio-Respiratory Exercise Test

Rationale: The capacity of the cardiorespiratory system is a central aspect of fitness relating to health and participation in vigorous leisure pursuits. It determines the level of physical work which can be sustained and thus determines which of the activities of daily living are comfortable for subjects and within their capacity. It reflects the extent to which an inactive lifestyle may be contributing to limitation and disability on the one hand and the extent to which the physiological changes promoted by regular vigorous exercise may be conferring health benefits on the other. It is a complex attribute and, in terms of physical performance, has a profile

specific to the activity for which it is required and is influenced by both genetic endowment and adaptation through training

General Description A progressive incremental walking test on a motorised treadmill. Speed changes were made near the beginning and towards the end of the standardised protocol (see Figure 5.2 page 70, the mid-range speed of 5 km hr⁻¹ being sustained from the 5th minute to the 14th. Gradient changes were made every minute from the 6th minute to the 13th minute. Hence, the great majority of subjects reached the later stages of the test (of the order of 85% estimated maximum heart rate adjusted for age) while walking at 5 km hr⁻¹. The final stages of the protocol with increases up to 6 km hr⁻¹ were only achievable at this defined level of sub-maximal exertion by subjects with a high order of aerobic fitness, (some of whom failed to reach their target heart rate by the end of the protocol). At the other end of the fitness continuum, only older subjects with poor aerobic fitness did not reach the beginning of the 5 km hr⁻¹ stages. They normally embarked on the alternative protocol with a constant speed of 3 km hr⁻¹ (see Figure 5.3 page 71) as a consequence of the administrator's observations during the habituation session (see Administrators' note i). Heart rate and expired gases were monitored throughout the test. Perceived exertion was also assessed.

Equipment A motorised treadmill (Quinton Q55) with front and side guard rails and emergency stop buttons was interfaced to an automated respiratory gas analyser (Quinton Q-plex) and a diagnostic electrocardiogram (Quinton Q4000). Routinely, five electrodes were fitted: four near to the roots of the limbs (to represent the four limb positions) and one in the V5 position. This allowed monitoring of seven of the standard ECG leads. In practice three leads were monitored during exercise, V5, aVF and lead II.

The Borg scale of Perceived Exertion was shown towards the end of each stage for a subjective rating of effort (Borg, 1982).

Procedure

- 1 Two administrators, or one plus the doctor providing medical supervision where appropriate, were in attendance for the treadmill test. The role of the second administrator was to monitor the heart rate and electrocardiogram and assist in the event of an emergency.
- 2 The subject had been advised beforehand to wear loose fitting clothes and appropriate footwear (Administrators' note ii). Women were asked not to wear unsuitable undergarments (see Administrators' note iii). Subjects were asked to avoid eating a large meal for at least two hours before the test and were requested not to smoke or take alcohol or coffee during that period. Compliance with this advice was checked prior to the start of the physical appraisal (see Appendix D for Current Status questionnaire).
- 3 Where indicated, the doctor interviewed and examined the subject prior to the test.

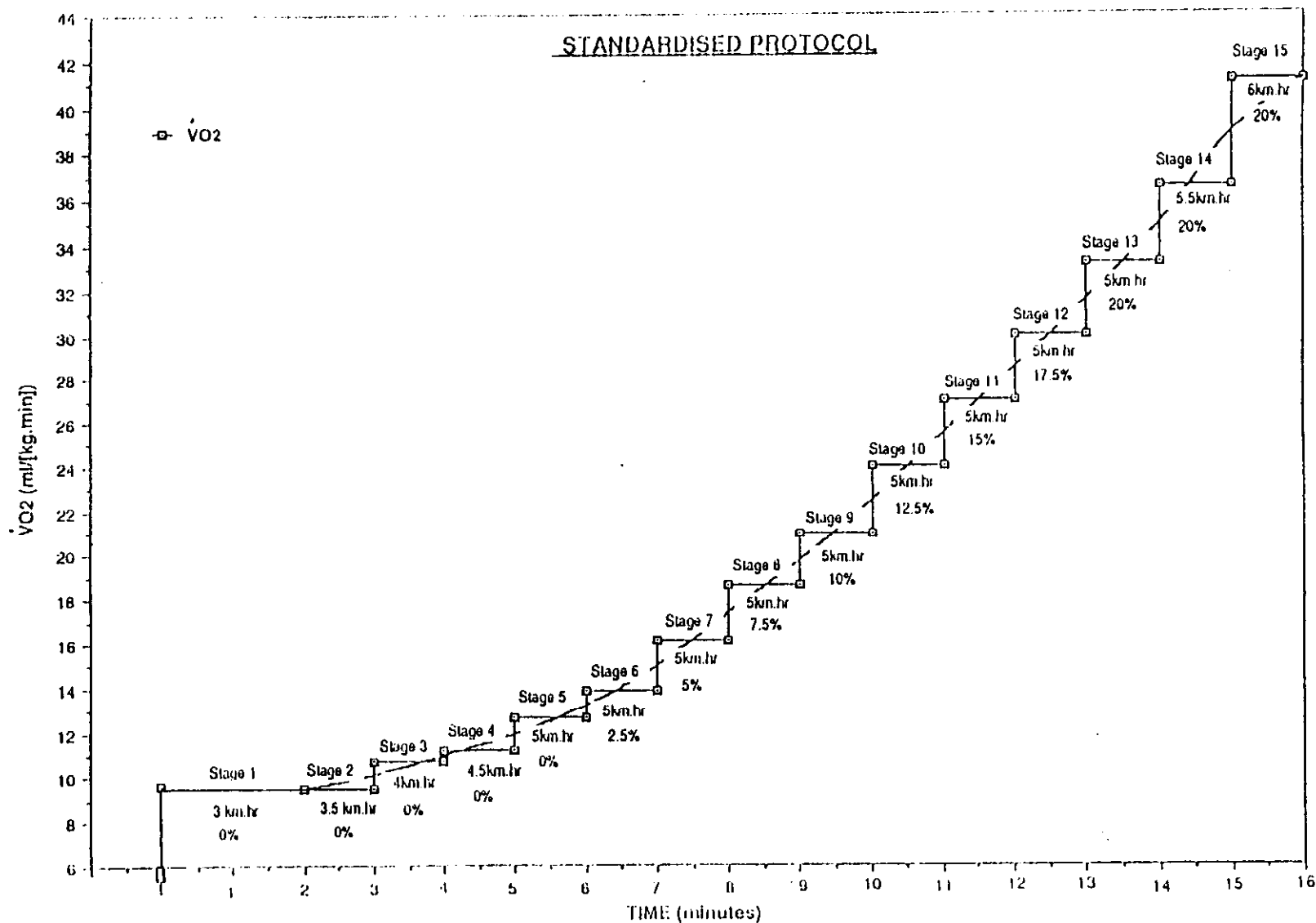


Fig 5.2 shows the increments in energy expenditure with each stage of the standard protocol. The changes in treadmill speed and gradient are indicated.

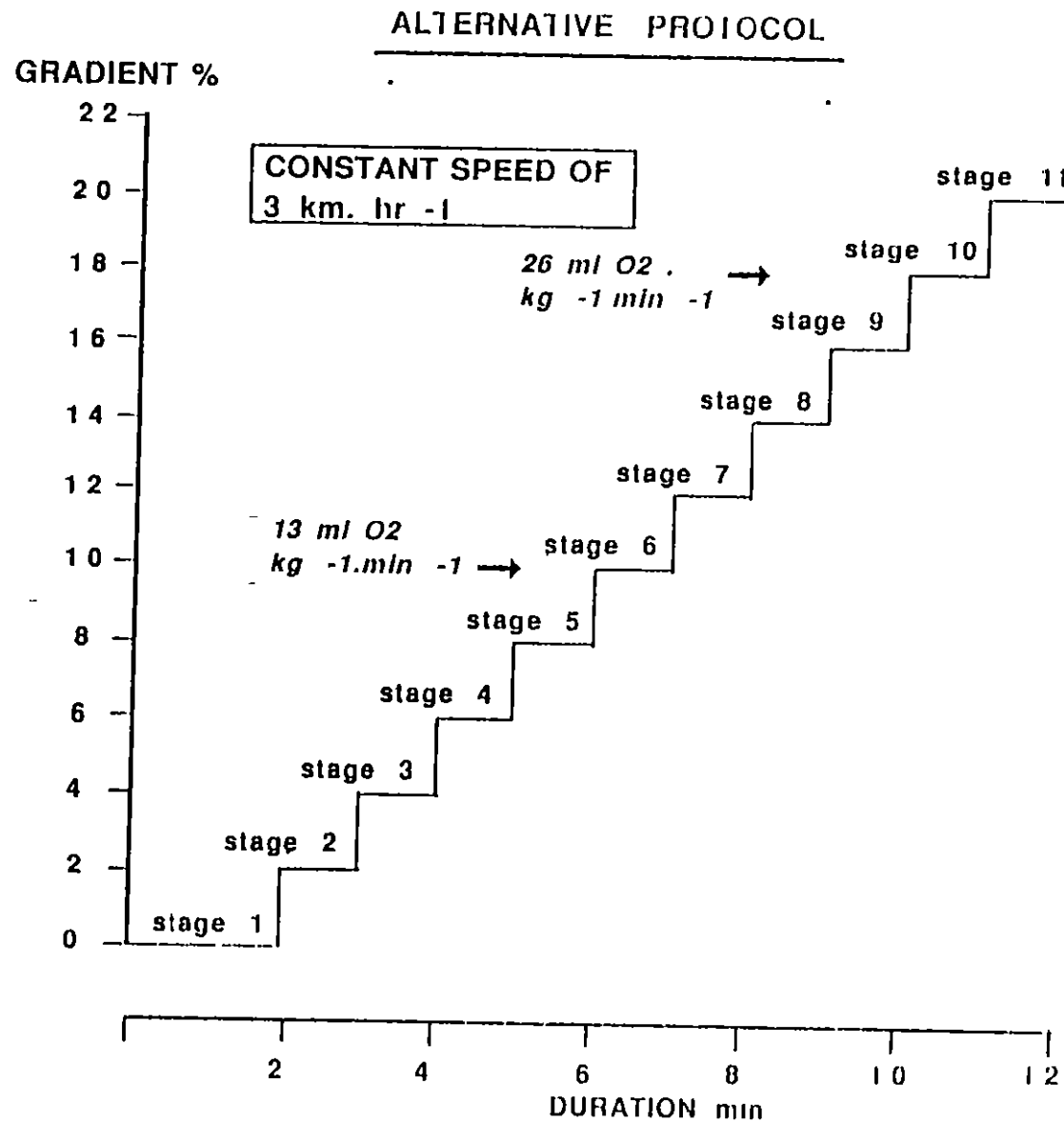


Fig 5.3 shows the increments in energy expenditure with each stage of the alternative protocol. The changes in treadmill speed and gradient are indicated.

4. Electrodes were fitted by a female assessor (or by the doctor) in the case of female subjects and by either sex for male subjects. Five electrodes were attached, as described above.
5. The administrator demonstrated the technique of walking on the treadmill. The administrator supervised the familiarisation and the subject was given time to practice at walking on the treadmill and at breathing through the mouthpiece; this occupied about 10 minutes in all. The procedure for stopping the treadmill in an emergency was demonstrated and practised. The Borg Scale was also explained.
6. The test was explained to the subject, who then read the description of the test and signed the consent form. (Appendix 3 of Ethical Submission document).
7. During the familiarisation and practice period a decision was taken regarding which protocol would be followed, the standard or the protocol which relied upon reduced speed. This decision was based upon the heart rate response and the subject's ability or readiness to walk at the speed of 5 km hr⁻¹.
8. After a final check that the subject was ready, (heart rate was recording clearly, mouthpiece and valvebox assembly were comfortable and nose clip was fitted correctly), the treadmill was started at its minimum speed and brought up to the starting speed of 3 km hr⁻¹ (standard for either protocol). When the subject appeared settled the test was begun.
9. The protocol continued with speed and gradient adjustments being made in accordance with the standard formats.
10. Towards the end of each stage the subject was asked to point at a numerical rating (adjacent to verbal equivalents) on the Borg Scale.
11. The test continued until the end of the one-minute stage in which the subject's heart rate reached 85% of estimated maximum rate for age ($210 - 0.65 \text{ age}$, beats min⁻¹), unless there was a prior reason for stopping the test. (See 5.19 below).
12. At the end of the stage at which the test was complete, the subject was instructed to continue walking while, a) the speed was reduced, b) the gradient was reduced to zero, and c) the mouthpiece was removed. Walking continued for a further minute after which the subject sat down on a chair placed behind them on the stationary treadmill. The ECG was then monitored for several minutes further until the heart rate declined to a normal recovery plateau (100 beats min⁻¹ or less) while the administrator assembled material for the feedback session when the results were interpreted for the subject.
13. The subject was offered a cool drink and invited to discuss the results of the test they had undergone.

Administrators' Notes

- i) The alternative protocol was to be selected as appropriate during the habituation procedures if any of the following applied-
 - a) an inability to walk at 5 km hr⁻¹
 - b) to walk at 5 km hr⁻¹ would be unsafe
 - c) the heart rate was in excess of 65% age related maximum at 5 km hr⁻¹
- ii) If the subject arrived in unsuitable footwear, training shoes in a range of sizes were available at the laboratory
- iii) Female subjects were requested not to wear one-piece undergarments or overgarments (e.g. dress). They were told that "separates" were advised, permitting access to skinfold sites, girth measurements and for electrode placement

Exclusion Criteria Absolute contra-indications to testing

- 1 **History of recent acute myocardial infarction within the previous six months**
- 2 **Symptoms of coronary ischaemia on exercise**
 (screening questions 9 and 12 on the screening questionnaire alerted the examiner to the occurrence of chest pain, 'YES' did not automatically exclude the subject without further questioning)
 Those subjects who describe any of the following were excluded
 - ill-defined chest pain
 - simple retrosternal discomfort suggesting angina
 - frank, characteristic pain of cardiac ischaemia
- 3 **Cardiac illness**
 Atrial and ventricular dysrhythmias including heart block (of any degree)
 Having an implanted pacemaker in situ
 Congestive cardiac failure, even when successfully controlled by medication
 Congenital heart disease with symptoms or requiring medical observation
- 4. **Resting diastolic blood pressure over 102 mmHg or resting systolic blood pressure over 160 mmHg as measured on the Accutor automatic sphygmomanometer**
- 5 **Valvular heart disease with symptoms or treated by surgery**
- 6 **Other rare serious illnesses**
 Severe aortic stenosis

Suspected or diagnosed dissecting aneurysm

7. **When acute viral myocarditis was possible**

exclude subjects with acute febrile influenzal upper respiratory tract infections

8. **Thrombophlebitis, recent pulmonary embolus within the previous six months**

9. **Significant emotional distress**

psychotic illness

anything worse than mild anxiety or depression

10. **Receiving any medication which was likely to lead to any of the following**

i. a change in the resting heart rate or blood pressure and/or the cardiac or blood pressure responses to exercise, especially beta-blockers

ii. electrolyte abnormalities e.g. diuretics

iii. impairment of gait or balance

11. **Neuromuscular, musculo-skeletal or rheumatoid disorders which made walking difficult or impossible or when rheumatoid arthritis appeared to be "active"**

Conditions which might lead to exclusion after questioning by the supervising doctor were as follows:

(i) **Asthma, Chronic obstructive airway disease, when the peak expiratory flow (PEF) measured with a Wright Peak Flow meter was less than 60% of the predicted value for that subject. These subjects had their PEF checked before they left the laboratory and a dose of aerosol bronchodilator was administered if there had been any deterioration**

(ii) **Uncontrolled metabolic disease; diabetes, thyrotoxicosis, myxoedema, especially the possibility of retinal vascular complications**

(iii) **Serious systemic disease, eg glandular fever, recent hepatitis**

(iv) **Epilepsy**

(v) **Pregnancy**

5.19 **Criteria for stopping the treadmill test**

A *when the test was conducted by trained personnel without a physician in attendance the instruction given was to stop the test if any of the following occurred:*

i. **Subject wished to stop. (Administrator established unequivocal hand signals before the test, including pointing to parts that hurt);**

- ii Subject appeared unduly distressed and/or began to stumble or falter. Any marked change in the subject's gait was to be taken as an indication that all was not well, Development of undue pallor, rolling of the head or poor general attention signalling an early need to bring the test to a conclusion,
- iii If the subject rated the perceived intensity of the exertion at the top of the scale ie a Borg Scale rating of 18 or greater,
- iv Difficulty with breathing, choking, continuous coughing, rapid rise in respiratory frequency with reduction in tidal volume, severe breathlessness,
- v Chest pains - especially if progressive,
- vi Heart rate/ECG characteristics, viz -
 - a Frequent premature beats during exertion, especially if they appeared at high levels of work (e.g. ventricular ectopics with any of the following features coupled beats, 6 single-focus ectopics within a the period of a minute, closely coupled ectopics (approaching R on T), multifocal ectopics of any frequency)
 - b ST segment depression exceeding 2 mm
 - c The development of atrio-ventricular block or complete heart block
- vii Equipment failures, especially the absence of a reliable ECG trace
- B *When a physician was in attendance at the treadmill test the instructions given were the following*

The physician was to be on the alert for conditions which had been identified on the screening questionnaire and/or clarified by the short consultation,

The administrator was to carry out the test following the standard procedure, the physician was responsible for monitoring the subject's general condition and was to intervene if and when appropriate. Communication with the subject was to be kept 'low key' providing friendly reassurance rather than transmitting alarm or concern

The criteria for stopping the test were essentially the same but could be interpreted with greater sensitivity and authority by the physician and in relation to the specific risk factors affecting the subject

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6 THE POPULATION SAMPLE RESPONSE RATE

Selecting the sample

- 6.1 The sample selection process was designed to yield a representative sample of the (residential) adult population of England aged 16 years and over. Probability sampling was used at each of three stages.
- 6.2 *Area selection* - A random selection of 30 parliamentary constituencies was made across England from a total of 523. Prior to selection, these 523 constituencies were stratified by grouping them into the regions administered by Regional Health Authorities and ordering them in terms of population density and a socio-economic index. A sample of 30 constituencies was then selected. The criteria used were
- (a) whether metropolitan or not as defined by OPCS,
 - (b) population density in three bands for Yorkshire, Trent, Wessex and South West Regions, two bands in others,
 - (c) percentage of 1987 electorate who voted 'labour' in the 1987 parliamentary election.
- 6.3 *Address selection* - Within each selected constituency the electoral register was used to select 200 addresses at random to give a total of 6,000 addresses. An evaluation of the electoral register has shown that it provides a comprehensive list of addresses in each area even though the names of electors at each address may be inaccurate and incomplete. As a means of selecting addresses it has the added advantage that the weighting factors required to take account of differing size households at each address are minimised.
- 6.4 *Respondent selection* - The third stage in the selection was carried out by the interviewers. They were required to identify all the adults aged 16 and over living at each address and then to select one per address using a pre-specified random selection procedure to avoid any chance of self-selection by members of the household or bias on the part of the interviewer.

The effect of clustering the sample

- 6.5 The use of mobile laboratories for the Survey determined the optimum size of sample in each constituency (200 addresses). Each laboratory had to remain in an area for a minimum of three to four weeks to get a good response at the fitness measurement stage. This was larger than the number usually allocated to each first stage sampling unit in population surveys of this type. To offset this degree of clustering the selected addresses were spread over each entire constituency and not clustered within Wards, as would normally be the case. This spread of addresses, covering a fairly heterogeneous population, appears to have offset the converse effects of clustering within just 30 constituencies; the sampling errors for estimates from the Survey, which take account of the clustering, compare favourably with those calculated for an additional sample of interviews, not constrained by the demands of the physical appraisal, spread over 112

constituencies. The second survey (Health Education Authority National Survey of Activity and Health 1991) did not include physical appraisals and the sample selection followed more conventional lines.

6.6 The areas selected for the Survey are listed below:

Aylesbury (Oxford)	Oxford (Oxford)
Bootle (Mersey)	Peckham (S.E. Thames)
Carshalton (S.W. Thames)	Preston (North West)
Chipping Barnet (N.W. Thames)	South Hams (South West)
Enfield (N.E. Thames)	South Shields (North)
Epping (N.E. Thames)	South Staffs (W.Midlands)
Gillingham (S.E. Thames)	Southport (Mersey)
Harrogate (Yorkshire)	St. Albans (N.W. Thames)
Harwich (N.E. Thames)	The Wrekin (W. Midlands)
Hexham (North)	Wentworth (Trent)
Huntingdon (East Anglia)	West Bromwich (W. Midlands)
Langbaugh (North)	Westbury (Wessex)
Leeds (Yorkshire)	Weston-super-Mare (Wessex)
Loughborough (Trent)	Worthing (S.W.Thames)
N.W. Leicestershire (Trent)	Wythenshawe (North West)

Non response to the interview

- 6.7 Of the 6,000 issued addresses 302 were unoccupied or demolished, leaving 5,698 effective addresses at which interviews were sought. Interviews were achieved at 4,316 of those effective addresses (76%), equivalent to 81% of adults actually selected for interview. Table 6.1 provides details of the outcome at each address.

Table 6.1 Response to the interview

<u>Response</u>	n	%
Effective addresses	5,698	100
No contact at address	114	2.0
Refused prior to interviewer visit	57	1.0
Household refused prior to adult selection	184	3.2
No contact with selected adult	127	2.2
Selected person refused	762	13.4
Selected person ill or away during fieldwork	138	2.4
Achieved interviews	4,316	75.8

- 6.8 This report is based only on respondents aged up to 74 years of age. They comprised 1840 men and 2109 women. Men aged 16 to 74 in the Survey sample accounted for 47% of the

total interviews. OPCS population estimates indicate that 48% of people aged 16 to 74 are male. That means that the interview response rate among men was 73%, among women it was 78%. Data from the Survey are not combined for men and women so this differential response rate between the sexes does not affect the results.

- 6.9 Table 6.2 compares the distribution of the achieved interviews with OPCS mid 1990 population estimates of age groups for men and women. The sampling procedure, by focusing on the adult population living in households, has led to under-representation of those in the youngest two age groups. This is a feature of other OPCS surveys for which follow up work on non-respondents has shown little evidence of increased non contacts and refusals among these groups. This suggests the cause is mainly a deficiency in the sampling frame rather than in the fieldwork achievement (ie the absence of many young people at the selected addresses who did not live permanently at home, such as students and young people with no fixed abode).

People receiving institutional care or in hospital also were not covered by the Survey.

Table 6.2 Comparison between the population age distribution and the achieved interviews

Age group	MEN		WOMEN	
	OPCS	The Survey	OPCS	The Survey
	%	%	%	%
16-24	19	14	18	15
25-34	21	19	21	20
35-44	19	20	19	18
45-54	16	19	15	16
55-64	14	15	14	16
65-74	11	13	13	15
TOTAL	100	100	100	100

- 6.10 Population estimates are not available from OPCS between censuses for socio-economic groups, based on occupations. However, these data are available from the 1990 General Household Survey. Comparison with the Survey data (Table 6.3) showed that the Survey contains proportionately more in the professional/employer categories, and fewer in the manual categories than the General Household Survey. Differences were small, however, given the application of the complex coding system for social class by people in different organisations to different data sets.

Table 6.3 Socio-economic group of the survey sample and the population
(General Household Survey)

Socio-economic group of head of household	Allied Dunbar National Fitness Survey (1990)	General Household Survey (1988)
Professional	7.9	5.5
Employer/manager	22.7	19.4
Intermediate non-manual	10.7	10.1
Junior non-manual	9.2	10.1
Skilled manual	29	29.2
Semi-skilled manual	13.9	16.3
Unskilled manual	4.2	5.7
Armed forces	0.5	0.6
Unclassified	1.9	3.3

- 6.11 Response rates were lower in the South of England (70%) than in the Midlands (80%) and the North (77%), partly due to a difference in response between major cities (72%), other urban areas (75%) and rural areas (80%).

Adjusting the activity results to correct for non response

- 6.12 Table 6.4 shows the effect of re-weighting the Survey's physical activity results to take account of the different age distributions between the OPCS population estimates and the Survey sample. This has been done, separately for men and women, by correcting the number of achieved interviews in each age cell to match the population number in that cell. The underlying assumption of this re-weighting is that people missing from an age cell in the Survey have physical activity behaviour patterns similar to those we interviewed in that cell. This will not always be a correct assumption, but it should bring the 'corrected' estimates of the activity profile closer to the 'true' population figures than the original Survey data.
- 6.13 The effect on the activity results of re-weighting the sample is very slight. Table 6.4 compares the 'corrected' activity profile distributions (frequency and intensity of 20 minute activity occasions in the past four weeks of vigorous or moderate activity as defined in Section 2) with the 'uncorrected' distributions. For men the Survey contained slightly too few people in the higher activity levels 4 and 5, because of the higher non response among young people. The same tendency is apparent, although barely noticeable, among women. Thus, the Survey is likely to portray a marginally worse picture of activity levels than exist in the population. The analyses in this report and in the ADNFS Main Report based on separate age groups will not be affected by the

differential response rates between ages, they provide the best population estimates available for each age group

Table 6 4 Activity (Frequency and Intensity) estimates in England, adjusted for non-response to the Survey

	MEN		WOMEN	
	results	adjusted estimates	results	adjusted estimates
	%	%	%	%
Level 5	14	16	4	5
Level 4	12	13	10	10
Level 3	23	22	27	27
Level 2	18	18	25	25
Level 1	16	16	18	18
Level 0	17	15	16	15
	100	100	100	100

Non-Response to the Physical Appraisal

- 6 14 Almost nine out of 10 of those interviewed agreed initially to take part in the physical appraisal. That represents 66% of the effective addresses. However, a number of those who agreed to take part dropped out before the appraisal took place, (9% of effective addresses), others were unable to be fitted into the fairly tight timetable at each site (3% of effective addresses).
- 6 15 The net result was that 70% of those interviewed took part in a physical appraisal (56% of those selected for interview or 53% of effective addresses). Based on effective addresses that was made up of 47% centre appraisals carried out in mobile laboratories and 6% home appraisals. A summary of the outcome at the physical appraisal stage for those interviewed is shown in Table 6.5. The percentages are based on the total number of effective addresses.

Table 6.5 Response to the Physical Appraisal

Effective addresses	5,698	100%
Total interviewed <i>cf</i> Table 6.1	4316	75.8%
Refused the physical appraisal	578	10.1%
Broke appointment	523	9.2%
No suitable slot available	198	3.5%
Attended centre for appraisal	2,699	47.4%
Completed home appraisal	318	5.6%

6.16 The proportion of men aged 16 to 74 who were interviewed who then went on to the physical appraisal was 73%. The corresponding figure for women aged 16 to 74 was 68%. The division of the appraisal sample between the two sexes (48% men) matched that of the total adult in population England.

Exclusions during the physical appraisal

- 6.17 Not everyone who attended a mobile laboratory for their physical appraisal was able to complete all the fitness tests. There were a few exclusions from the basic body dimension and composition measurements (eg those who could not stand, pregnant women). However, virtually everyone (99% or more) who went to the mobile laboratory was able to undergo measurement of body dimensions and shoulder flexibility, 96% provided girth measurements and 94% hand-grip strength.
- 6.18 For the leg strength and power measurements rather more were excluded on medical grounds (eg high blood pressure, back or leg problems). In addition, equipment failures, particularly of the power rig, caused the loss of further measurements. The net result was that 2369 people completed the leg strength measurement (88% of the physical appraisal sample) and 1990 (72%) completed the power measurement.
- 6.19 A high proportion of those who attended the mobile laboratory were unable to begin or continue the treadmill exercise test to a stage which produced sufficient data for analysis. About 60% of these people were prior exclusions, principally for medical reasons: problems identified on the screening questionnaire or by the doctor in attendance, or through high arterial blood pressure or abnormal pre-test electrocardiograms. Once the measurement had begun, the normal end point for the test was when the person had reached around 85% of their estimated maximum heart (based on their age).
- 6.20 Some tests had to be ended prematurely because the person felt distressed and unable to continue or because an ECG abnormality or other medical warning point was reached. The combined effect of excluding subjects was that we obtained treadmill exercise test results for 1741 people, about two out of three of those who went to the mobile laboratory.

Bias among those who dropped out/were excluded from the appraisal

6.21 An examination has been made of five different samples, separately for men and women, to see how these varied. The samples were

- i) All people interviewed
- ii) Those who attended the mobile laboratory (the base for body dimensions, body composition, hand-grip and shoulder flexibility measurements)
- iii) Those who completed the leg strength measurement
- iv) Those who completed the leg power measurement
- v) Those who completed the treadmill measurement

Figure 6.1 shows that those who attended the mobile laboratory had a very similar age profile to the interviewed sample. However the exclusions from the leg strength, power and treadmill samples progressively biased the remaining samples towards younger people. The height of each column represents the number of men or women in each age group in the sample. The numbers, and therefore the column heights, are smaller for the fitness sub-samples, particularly the treadmill sample. The changing composition of the samples is deduced from the pattern of the column heights as one moves across the diagram. In this case there was a differential exclusion rate for the fitness tests, as one would expect, between the different age groups.

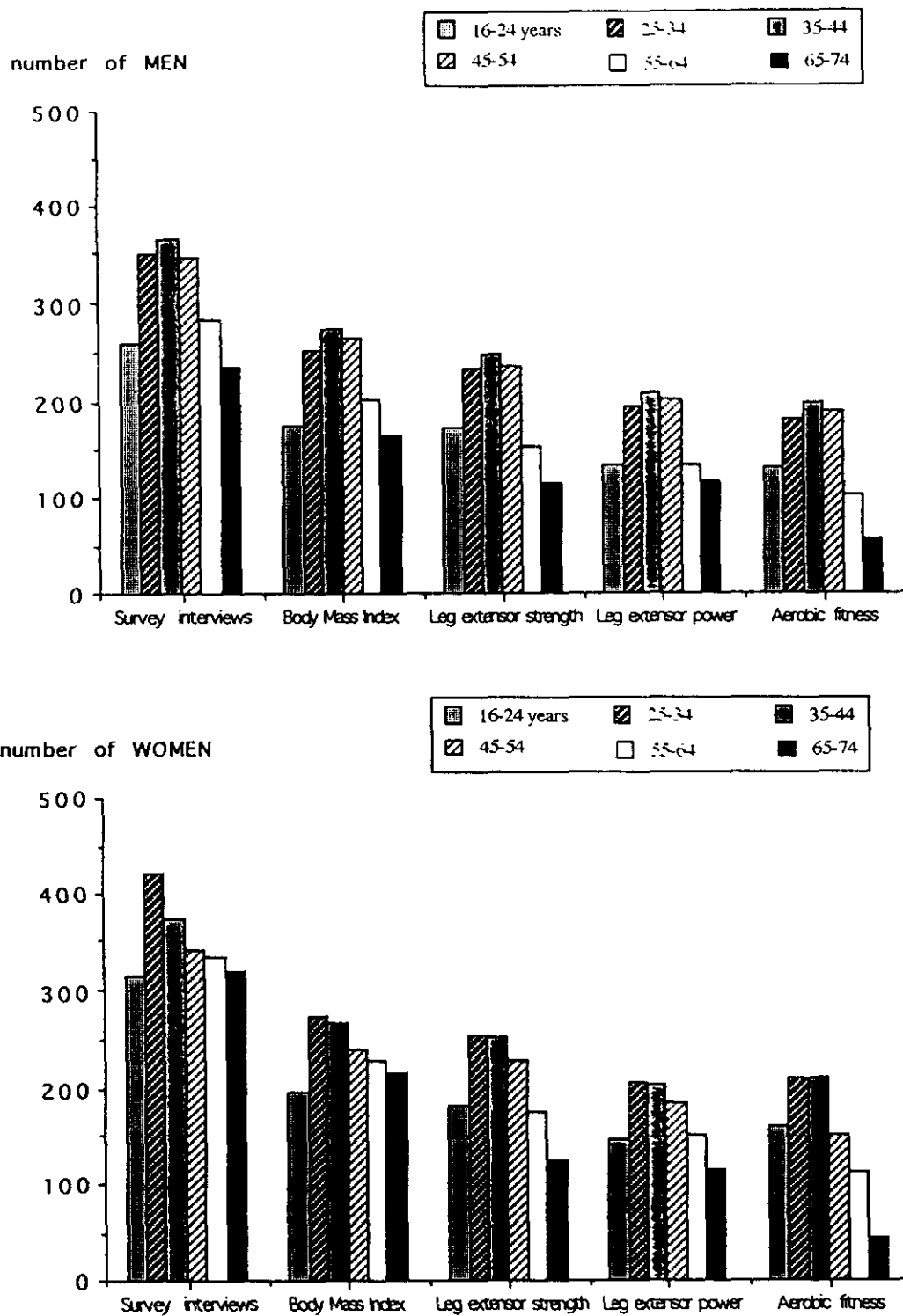


Fig 6.1 Shows the number of men and women of different ages who took part in each aspect of the Survey. It compares the size of the interview sample with the samples achieved at different stages of the physical appraisal

- 6 23 The same analysis for social class and education produced a much closer match for the structure of the samples. They differed in terms of the size of their household in a way that corresponded to the age bias. Those who took part in the leg strength, power and treadmill tests contained too few people in one and two person households.
- 6 24 A higher proportion of those in the 'good health' category remained through all the tests as more of those in the remaining category dropped out. A similar trend was apparent for the well-being indices.
- 6 25 Figure 6 2 shows that those who did no vigorous or moderate intensity activity of 20 minute duration in the previous four weeks were increasingly and progressively omitted from the fitness measurements as one moves across the samples. The converse result of increased participation among the more active is also apparent in Figure 6 4. Variation between samples in terms of past participation in sport and exercise was also sought. There was a tendency for women who had been more active in the past to have continued with all the fitness measurements. That trend was apparent, but less noticeable among men.

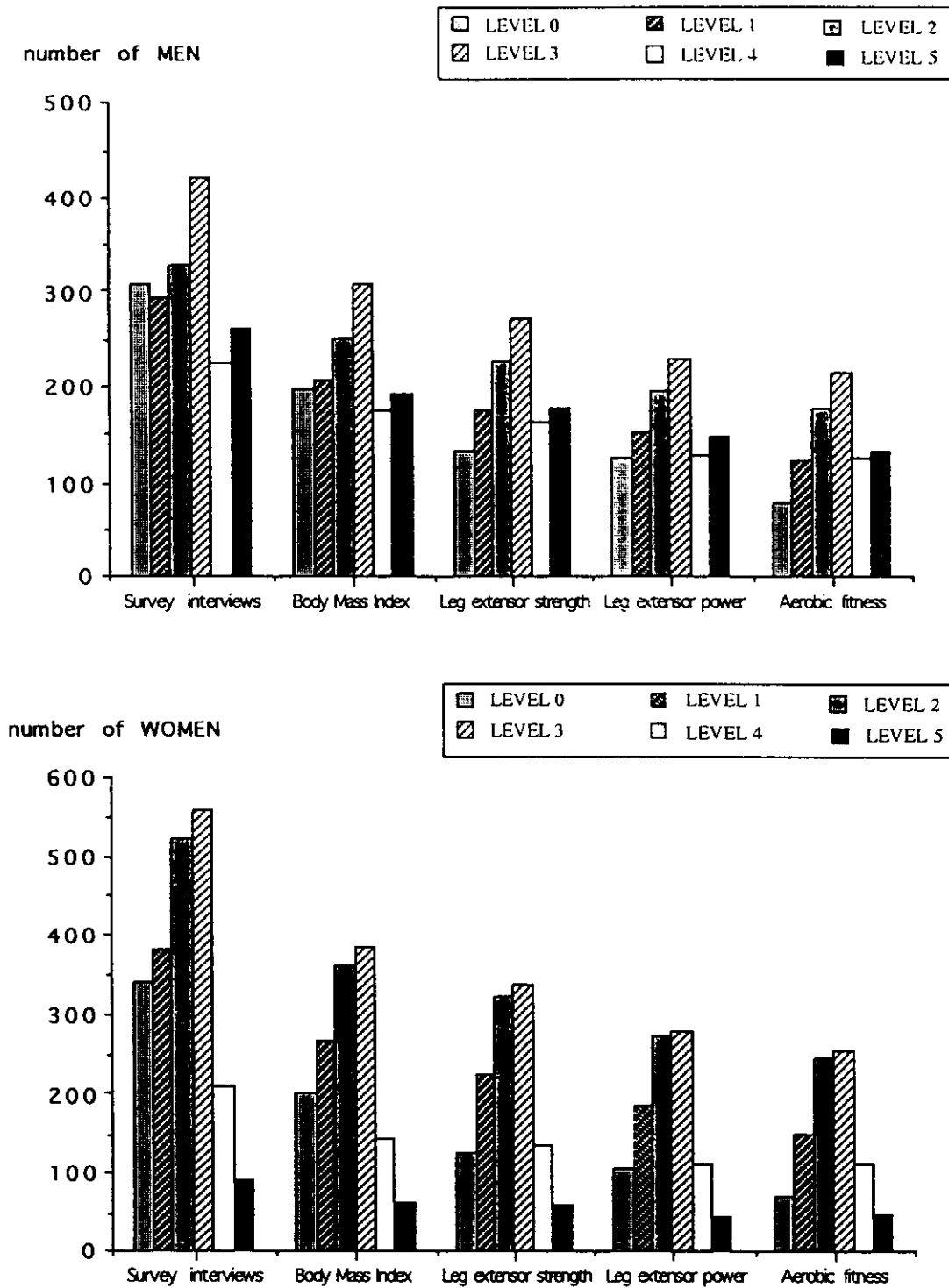


Fig 6.2 The activity profiles of the interview and physical appraisal samples. Shows the number of men (upper panel) and women (lower panel) of different ages who undertook the main components of the physical appraisal reporting the six activity levels and compares the distribution with the interview sample.

6.26 At the mobile laboratory several measurements were made of virtually everyone who attended, including BMI, hand-grip and shoulder flexibility. Those who went on to do

the leg strength, power and treadmill measurements were similar in their BMI values to all of those who went to the mobile laboratory. Their hand-grip strengths were, on average slightly higher

Adjusting the Fitness Results to Take Account of Exclusions

- 6.27 To see whether the Survey is likely to have under or overstated 'true' levels of fitness in the population, the overall results can be weighted in various ways and according to one of a series of assumptions. The sensitivity of these estimates to these different assumptions can be assessed. Samples can be adjusted so that their age and sex composition matches the OPCS population data, and their activity profile matches the interview sample (within each age and sex category) in terms of the frequency and level of physical activity in the previous four weeks. These data are available from the interviews
- 6.28 This form of corrective weighting is reasonable for measurements of body dimensions and composition, shoulder flexibility and hand-grip in view of sample comparisons previously discussed. But it does make the implicit assumption that the average fitness of, say, women aged 45-54 years in 'Activity Level 3' for whom we do not have measurements is the same as the average for those in that cell for whom we do have measurements
- 6.29 This is not an unreasonable assumption for those excluded because of equipment failures, through temporary injury, and even for many where the medical team had to be cautious to avoid unnecessary risks. It will not apply in all cases, though, and the sensitivity of the 'corrected' results to other assumptions was examined using the following procedures for leg strength and aerobic capacity measurements:
- a) each missing value in a cell is given the average measured value of that cell
 - b) three quarters of the missing values given the same value as the measured average for that cell with the other quarter given a value equivalent to only 80% of the measured value
 - c) as above but a quarter of the missing values are given a value equivalent to 60% of the measured value, instead of 80%
 - d) half of the missing values given the same value as the measured values, the other half given values of 60%
- 6.30 The results of these analyses (available in a technical paper from the research team) showed that the Survey is likely to have produced good population estimates of body dimension and composition and shoulder flexibility. There were missing hand-grip values for some 150 people who attended the mobile laboratory, but the adjustment to take account also of the missing young people at the interview stage appears to have caused the Survey to slightly understate average hand-grip scores in the population, probably by no more than around 1 or 2%

- 6.31 For the other strength and aerobic capacity measurements, depending on the assumption chosen for imputing missing values, the Survey aerobic capacity measurements are likely to overstate average fitness levels by between 3% and 10%. The overstatement of the strength and power measurements is likely to be somewhat less, between 2% to 8%.
- 6.32 A check was made to see whether the close match between uncorrected Survey figures and the adjusted distributions and averages could have arisen from opposite and compensating biases within the age groups. For example, it is known that young people are not fully represented in the Survey. This is likely to cause some estimates of population fitness based on the Survey to be too low. Conversely, it is also known that those who were least active, particularly among older people with health problems, are not fully represented in the more complex physical appraisal measurements.
- 6.33 This is likely to cause population estimates of these aspects of the appraisal to be too high. To check on the effects of these two tendencies, a comparison was made of adjusted and uncorrected fitness values separately within three age groups, 16-34, 35-54 and 55-74. The detailed results, not included in this report, showed a close match between distributions. The discrepancies between adjusted and unadjusted figures for leg strength, power, and aerobic capacity for elderly men and women were very marginally enlarged. However, the differences were very small.

Sample Sizes

- 6.34 In order to simplify the presentation of the results in the Main Report sample sizes (n) have been omitted from the tables and diagram. The main sample bases for the different measurements are shown in Table 6.6.

Table 6.6 Sample sizes for the interview and physical appraisals

Age	Interviews	BMI	Leg strength	Leg extensor power	Aerobic capacity
MEN	n	n	n	n	n
16-24	260	176	171	132	131
25-34	350	253	233	193	182
35-44	367	273	246	208	197
45-54	346	264	235	202	190
55-64	282	203	154	132	103
65-74	235	166	114	116	55
TOTAL	1840	1335	1153	983	858

Age	Interviews	BMI	Leg strength	Leg extensor power	Aerobic capacity
WOMEN	n	n	n	n	n
16-24	316	195	181	144	159
25-34	423	274	256	207	210
35-44	373	268	253	204	210
45-54	342	241	229	183	152
55-64	334	228	174	151	110
65-74	321	217	123	114	42
TOTAL	2109	1423	1216	1003	883

6 35 For respondents 75 years of age and over there is additional data as follows

	MEN No	WOMEN No
Interviews	123	244
Estimates of Body Mass Index	89	158

They undertook shoulder abduction and hand-grip tests, but not other tests listed in Table 6 6

6 36 The sample sizes for Health Regions were too small to be individually analysed and for analytical purposes the areas were clustered into three regions, North, Midlands and South. Each RHA had 1, 2 or 3 sampling points and thus 200, 400 or 600 addresses. What was encouraging was that the response distribution for the groups of RHAs was close to that of the population (Table 6 7) when the geographic distribution was estimated for five clusters of RHAs.

Table 6.7 The Survey sample and RHA Electorates

	electorate % by RHA	electorate % by geographic region	achieved sample % by RHA	achieved sample % by geographic region
Northern	6.6	22.5	10.2	23.6
Yorkshire	7.6		7.1	
North Western	8.3		6.3	
Mersey, Trent	5.1	26	7.1	28
West Midlands	9.9		10.1	
	11.0		10.8	
East Anglia	4.2	20.2	3.2	18.5
NE Thames	8.2		9.1	
SE Thames	7.8		6.2	
SW Thames	6.3	13.1	6.0	12.1
NW Thames	6.8		6.1	
Oxford	5.1	18.2	7.2	17.8
Wessex	6.1		3.4	
South Western	7.0		7.2	

6.37 There is still data to be analysed from the main sample and incorporated from the 69 home appraisals, but the decline in activity with age is clear in Table 6.8.

Table 6.8 The reported activity levels for the sample who undertook a home appraisal

<u>Activity level</u>	≥70 years		≥75	
	men %	women %	men %	women %
Level 5				
Level 4		1		1
Level 3	12	7	8	7
Level 2	11	9	11	7
Level 1	17	22	12	19
Level 0	61	60	68	66
base number	229	381	123	244

6 38 Additional descriptions of the Survey sample are included in tables 6 9 to 6 19

Table 6 9 Survey sample – the interview response of the 6 age groups to the interview

Age	Interview response %
16-24	56
25-34	74
35-44	75
45-59	87
60-74	86
75+	76

Table 6 10 Survey sample – the interview response of men and women compared

	Expected interviews %	Achieved interviews %
Men	48	46
Women	52	54

Table 6 11 Survey sample – the interview response of the 6 age groups compared

Age	Expected interviews	Achieved interviews
16-24	18	13
25-34	18	18
35-44	17	17
45-59	20	23
60-74	18	20
75+	0	9

Table 6 12 Survey sample – the interview response of areas of different population density

	Electorate %	Achieved sample %
Metropolitan areas	37 8	35 1
Non-Metropolitan areas (high density)	27 4	29 7
Non-Metropolitan areas (low density)	34 8	35 2

Table 6.13 The composition of the Survey sample according to the Socio-Economic Group of Head of Household

Interview		
Socio-Economic Group of Head of Household	Allied Dunbar National Fitness Survey (1990)	General Household Survey (1988)
Professional	7.9	5.5
Employer/manager	22.7	19.4
Intermediate non-manual	10.7	10.1
Junior non-manual	9.2	10.1
Skilled manual	29	29.2
Semi-skilled manual	13.9	16.3
Unskilled manual	4.2	5.7
Armed forces	0.5	0.6
Unclassified	1.9	3.3

Table 6.14 Survey sample – the expected and achieved response to the appraisal and a comparison of the response to the interview and appraisal of the 6 age groups

Appraisal			Interview (a)	Appraisal (b)	ratio (a) to (b)
Age group	Expected %	Achieved %	(n)	(n)	
16-24	18	12	570	365	0.64
25-34	18	18	777	535	0.69
35-44	17	18	740	542	0.73
45-59	20	24	1001	715	0.71
60-74	18	20	858	602	0.70
75+	8	8	370	258	0.70

Table 6.15 The composition of the appraisal sample and of the group which 'dropped out' at the appraisal stage according to social class

	Appraisal sample	Drop-outs at appraisal stage
<u>Social class of respondent</u>	%	%
Professional	6	5
Intermediate	27	20
Skilled non-manual	25	25
Skilled manual	20	22
Partly skilled	15	18
Unskilled	5	7
Unclassifiable	2	3

Table 6 16 The composition of the appraisal sample and of the group which 'dropped out' at the appraisal stage according to working status

	Appraisal sample	Drop-outs at appraisal stage
<u>Working status</u>	%	%
Employed full-time	46	43
Employed part-time	15	14
Seeking work	3	4
Sick or disabled	2	5
Retired under 70 years	9	7
Retired 70 years and over	13	13
Keeping house	8	10
Other (including student)	4	4

Table 6 17 The composition of the appraisal sample and of the group which 'dropped out' at the appraisal stage according to stage of life-cycle

<u>Stage in their life-cycle</u>	Appraisal sample	Drop-outs at appraisal stage
	%	%
Single 16-24	10	11
Married 16-24	1	2
Female with child 0-10	9	9
Male with child 0-10	9	7
Lone parent, child 0-15	2	4
Female with child 11-15	2	2
Male with child 11-15	3	2
Non-married under 45 years	9	9
Married under 45 years	6	6
45-64 with other adult	24	22
45-64 living alone	3	4
65+ with other adult	15	15
65+ living alone	7	7
Base for percentages	3019	1297

Table 6 18 The composition of the interview and appraisal samples (respondents < 70 years) according to 4 categories of physical activity

	Total interview sample	Total appraisal sample	Completed full treadmill test
	Completed/full treadmill test		
<u>Activity summary</u>	%	%	%
some vigorous	34.6	35.8	41.7
some moderate	53.9	54.6	53.4
light only	8.6	7.9	4.7
none	2.9	1.7	0.2

Table 6.19 The composition of the interview and appraisal samples
according to reported levels of physical activity

<u>Activity level</u> VIG/MOD ACTIVITY	occasions of vigorous activity in previous 4 weeks	Total interview sample	Total appraisal sample	Completed full treadmill test
Level 3-5	≥ 12	59.8	61.1	67.3
Level 2	5 to 11	15.6	16.5	16.9
Level 1	1 to 4	13	12.9	10.9
Level 0	0	11.6	9.6	4.9

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Some 200 members of OPCS interviewing staff

The 4,316 members of the public who took part in the Survey

The questionnaire for people aged 70 years and over

- B.1 It is generally acknowledged that interviews with older people tend to take longer on average than those with younger people. This is particularly true when the questions concern matters in the past or are attitudinal. As the ADNFS questionnaire contained both such types of questions and resulted in a fairly lengthy interview the questionnaire for people aged 70 or more was shortened. The main sections affected were those on attitudes and beliefs and past participation. Some extra questions on functional ability were added.

Differences from Main Questionnaire

B.2 Activity

Q 1 was an extra question which asked about simple daily living activities.

Q 2, & Q 3 dealt with specific problems of function.

Gardening and DIY were not divided into light and heavy work. (Q 5 & Q 6)

Extra questions were added on walking ability. (Q 8 & Q 9)

There was no separate question on cycling but cycling was included in the list of sports and recreational activities.

The activities booklet was replaced by a card with a shorter list of activities but respondents were able to add to this list if they wished.

Questions referring to the past year were omitted.

Self assessment of past activity was related to 'from when you left school to the age of 25' and not the two separate time periods of '14 to 19' and '20 to 24'. Q 17

The questions on lifetime participation were reduced. The definition was changed from 'since the age of 14' to 'since you left school' and activities had to have been done for a minimum of two years. The length of time spent participating was ascertained instead of age of starting and length of breaks. There was no question on why respondents had stopped regular participation. (Q 18 – Q 20)

The questions on employment activity were reduced with only one question on activity. (Q 21 – Q 23)

The questions on 'running for a bus' and 'running up stairs' were omitted.

B.3 Attitudes, lifestyles, health and personal factors

The attitude section was considerably reduced and only included the self assessments of activity, fitness and exercise. (Q 29 – Q 31)

Questions on temper and impatience were omitted

The detailed intake questions were omitted from both the diet and alcohol sections

The question about stroke contained extra detail (asking how long did the effect last?) Questions for women concerning menstruation and parity were omitted (Q 74 & Q 75)

The remainder of the health section was identical to the main questionnaire with the addition of three questions on falls and balance (Q 77 – Q79)

The questions on family history were reduced Q 83

- B 4 Questions which are the same on both the main (white*) and elderly (green*) questionnaires

TABLE B1 corresponding questions by number

Main questionnaire	Questionnaire for 70 ⁺
1a to 1f	4a to 4f
2a	5a
3a	6a
4a to 4d	10a to 10d
5a to 5c	11a to 11c
5d	12
6	13
9a to 9c	7a to 7c
10	14
No sports & exercise activities in the past year	
Number of sports & exercise activities in the past year	
12	15
Number of activities in the past 4 weeks	
22a to 22e	22a to 22c
27	23
32a to 32c	24a to 24c
33a to 33c	25a to 25c
35a to 35c	26a to 26c
36a to 36d	27a to 27d
37a to 37f	28a to 28f
47	32
48a to 48c	33a to 33c
49	34
52	35
53	36
54	37
55	38
56a & 56b	39a & 39b
57a & 57b	40a & 40b

Main questionnaire	Questionnaire for 70 ⁺
58a & 58b	41a & 41b
59	42
60a & 60b	43a & 43b
61	44
62a & 62b	45a & 45b
63	46
64	47
65a & 65b	48a & 48b
66a & 66b	49a & 49b
67a & 67b	50a & 50b
72	51
73	52
74a & 74b	53a & 53b
77	54
78a to 78e	55a to 55e
79a to 79d	56a to 56d
80	57
83	60
84a & 84b	61a & 61b
85a & 85b	62a & 62b
86	63
87	64
88a to 88c	65a to 65c
89b & 89c	66b & 66c
90a to 90e	67a to 67e
91a to 91g	68a to 68g
92a to 92d	69a to 69d
93a to 93d	70a to 70d
94a to 94c	71a to 71c
95a to 95d	72a to 72d
96a to 96c	73a to 73c
97a to 97f	76a to 76f
98a to 98c	74a to 74c
104a & 104b	75a & 75b
105a to 105c	80a to 80c
106	81
107	82
112a & 112b	84a & 84b
113a to 113e	85a to 85e
114	86
115a to 115c	87a to 87c
116a & 116b	88a & 88b
117	89

TABLE B1 continued

Main questionnaire	Questionnaire for 70 ⁺
118	90
119a & 119b	91a & 91b
120	92
121a & 121b	93a & 93b
122	94

CARD 1 / E1

HEAVY HOUSEWORK AND SHOPPING

For example:

Walking with heavy loads of shopping
Scrubbing / polishing floors by hand (on knees)
Washing a lot of clothes by hand
Stripping and remaking several beds
Spring cleaning (moving furniture etc)
OR ANY SIMILAR HEAVY HOUSEWORK

CARD 2

IN THE GARDEN

HEAVY MANUAL WORK

For example:

Digging, moving earth, clearing rough ground
Building in stone
Mowing large areas with a hand mower
Cutting grass/hedges by hand (large areas)
Major work on tree or shrub planting/moving
Sweeping leaves over large area
Erecting new fences/garden walls
Felling trees, chopping wood
OR ANY SIMILAR HEAVY GARDENING

LIGHTER WORK

For example:

Hoeing, weeding, pruning
Mowing with powered mower
Planting flowers, seeds
Tidying up / sweeping
Work in the greenhouse
Repairing garden fences
OR ANY SIMILAR LIGHTER WORK

CARD 3

**D.I.Y. BUILDING WORK AND CAR
MAINTENANCE**

HEAVY MANUAL WORK

For example:

Mixing, laying concrete

Moving heavy loads etc

Demolishing walls, breaking up concrete

Continuous sawing/planing wood

Bricklaying (large areas)

Plastering (large areas)

OR ANY SIMILAR HEAVY MANUAL WORK

LIGHTER WORK AND CAR MAINTENANCE

For example:

Decorating, including preparation

Electrical wiring

General carpentry work

Furniture repair, restoration

Minor repairs to brick walls or plaster

Repairs to domestic appliances

Car repairs and maintenance

Car washing and polishing

OR ANY SIMILAR LIGHTER WORK

CARD 4

1. Marriage / change in partnership
2. Having children / looking after children
3. Moved house
4. Work reasons – change of job/college /
change in working time
5. Sports injury
6. Other injury or health problems
7. Getting too old / health failing generally
8. Could no longer afford it
9. Needed time to do other things
10. Difficulty getting there
11. Team or playing partner no longer available
12. Facilities closed or changed
13. Lost interest in it
14. Other reason

CARD 5

How often does it apply to you?

Never applies to me ☐ 1 ☐ 2 ☐ 3 ☐ 4 Always applies to me

CARD 6

I'm not the sporty type
 I haven't got the time
 I've got young children to look after
 I'm too shy or embarrassed
 There's no-one to do it with
 I'm too old

 I have an injury or disability that stops me
 My health is not good enough
 There's no suitable facility nearby
 I need to rest and relax in my spare time
 I don't have time because of my work
 I might get injured or damage my health

 I haven't got the right clothes or equipment
 I'd never keep up
 I'm too fat
 I haven't got the energy
 I can't afford it
 I don't enjoy physical activity

CARD 7

How much could vigorous exercise help?

Could not
help at all

1 2 3 4 5

Could help
a great deal

CARD 8

How important is it for a person of your age
who wants to be healthy?

Not at all
important

1 2 3 4 5

Very
important

CARD 9

Often Sometimes Never

CARD 10

Daily More than twice a week Once or twice a week Less than once a week Rarely or never

CARD 11

GROUP A	
Beer \	} draught, bottles, cans or homebrew
Lager /	
Shandy	
Stout	
Cider	
GROUP B	
Wine	Sherry
Champagne	Port
Babysham	Vermouth
Cinzano	Dubonnet
Martini	etc.
GROUP C	
Spirits e.g. Gin, Whisky, Rum, Brandy, Vodka	
Liqueurs	
Advocaat	

CARD 12

Most days
3 – 4 times a week
Once or twice a week
Once or twice in the last 4 weeks

CARD 13 / E4

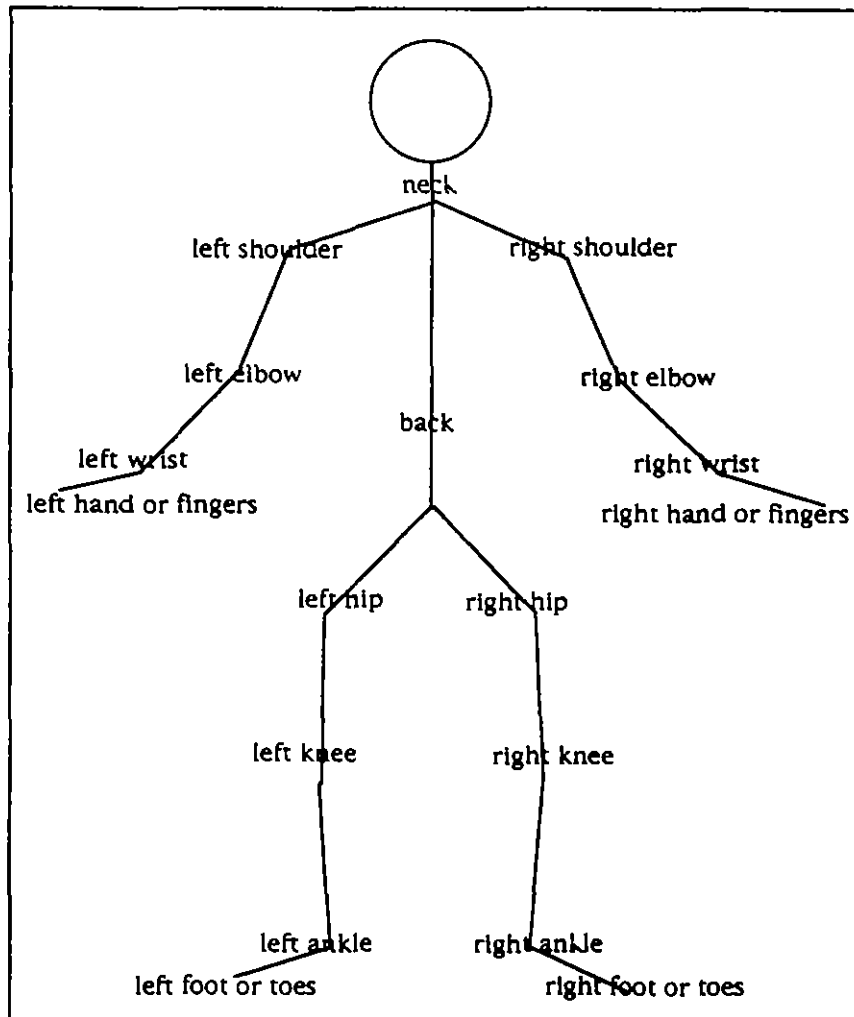
How strongly do you agree or disagree?

Disagree
strongly

1 2 3 4 5

Agree
strongly

CARD 14 / E5



CARD 15 / E6

Looking after the home
 Going shopping
 Doing paid work
 Looking after children

Gardening
 Going out socially
 Relationships with people you live with
 Your sex life

Taking part in sports/exercise activities
 Your interest and hobbies
 Going away for weekends or longer holidays
 Getting out and about as much as you want

CARD 16

How important is it to you?

Not at all
 important

1 2 3 4 5

Very
 important

CARD 17 / E7

White	1
Black – Caribbean	2
Black– African	3
Black – Other	4
Indian	5
Pakistani	6
Bangladeshi	7
Chinese	8
Any other ethnic group	9

CARD 18 / E8

CSE Grades 2 – 5

CSE Grade 1

GCE 'O' Level

School Certificate

Scottish (SCE) Lower

City & Guilds Craft/Ordinary Level

GCSE

GCE 'A' Level / 'S' Level

Higher Certificate

Matriculation

Scottish (SCE) Higher

Overseas School Leaving Exam/Certificate

ONC/OND/City & Guilds Advanced/Final Level

HNC/HND/City & Guilds Full Technological Certificate

RSA/Other clerical and commercial

Teachers training qualification

Nursing qualification

Professional qualification (membership awarded by
a professional institute)

Degree, including higher degree

Other work-related qualifications/certificate

Other qualifications

CARD E2

Swimming

Golf

Bowls

Exercises

Keep Fit

Rambling

Social Dancing

Tennis

Table Tennis

Badminton

Fishing

Snooker

Darts

ANY OTHER ACTIVITIES

CARD E3

Often

Sometimes

Never

ACTIVITIES BOOKLET

Swimming
 Tennis
 Table Tennis
 Squash
 Badminton
 Football
 Rugby
 Cricket
 Rounders
 Hockey
 Netball
 Volley Ball
 Basketball
 Golf
 Bowls
 Boxing
 Martial Arts (e g Judo, Karate, Kendo etc)
 Weight Training
 Weight Lifting
 Yoga
 Gymnastics (Including Trampolining)
 Exercises (E g Press-Ups, Sit-Ups)
 Keep Fit
 Aerobics
 Dancing for Fitness
 Jogging/Running
 Athletics (Field Events, Track Events, Cross Country)
 Rambling
 Hiking/Backpacking
 Climbing
 Social Dancing
 Snooker
 Darts
 Ten Pin Bowling
 Skittles
 Shooting
 Fishing
 Horse Riding
 Skiing
 Motor Sports (Cars and Bikes)
 Ice Skating
 Roller Skating
 Sailing
 Rowing
 Canoeing

Any other sports or exercise activities?

CODES USED FOR OPEN QUESTIONS IN THE QUESTIONNAIRE

Q 9b What happened in the past four weeks that made it different from usual?

<i>Holidays</i>	1
<i>Family reasons</i>	2
<i>Moved house</i>	3
<i>Work/college/school</i>	4
<i>Injury</i>	5
<i>Other health problems</i>	6
<i>Change in team/playing partner</i>	7
<i>Other</i>	8

Q 37 Can I just check, is there anything else that you've done in the past four weeks which involved physical activity?

<i>Heavy housework</i>	1
<i>Heavy gardening</i>	2
<i>Light gardening</i>	3
<i>Heavy DIY</i>	4
<i>Light DIY</i>	5
<i>Other</i>	6

Q 38a, b

Leisure time activities - most time doing and most important

<i>Watching TV and videos</i>	1
<i>Social interaction - friends and relatives</i>	2
<i>Leisure pursuits including no physical activity</i> <i>eg knitting, reading, music etc</i>	3
<i>Leisure pursuits including physical activity</i> <i>(including fishing)</i>	4
<i>Sports and exercise</i>	5
<i>Other</i>	6
<i>Housework</i>	7
<i>Church, voluntary, charity</i>	8
<i>Work/no answer</i>	9

Q 60b What kind of cereal do you usually have?

<u><i>High fibre</i></u>	1
<i>Porridge, Muesli, Puffed Wheat</i>	
<i>Wheatflakes, Bran cereals</i>	
<u><i>Medium fibre</i></u>	2
<i>Shreddies, Shredded wheat, Weetabix</i>	
<u><i>Low fibre</i></u>	3
<i>Other cereals eg: Corn flakes, Rice Crispies</i>	
<i>Coco Pops, Frosties etc</i>	

Q 62b If soft margarine or low fat spread What brand?

<u>Low fat spreads</u>	1
eg Gold, Delight, Outline, Floralite all own brand & other low fat spreads	
<u>Soft margarine - polyunsaturated</u>	2
eg Flora, Kraft polyunsat, Vitalite, Vitaquelle, Sunflower, Soya, CWS Goodlife, own brands labelled polyunsaturated	
<u>Soft margarine - non polyunsaturated</u>	3
eg Stork SB, Kraft Superfine, Carousel, Banquet, Blue Brand, Luxury Soft Safeway label, Sainsbury's red & green label	
<u>Yellow spreads</u>	4
eg Clover, Meadowlark, Golden Vale	
<u>Other</u>	5
<u>Don't know</u>	8

Q 68 Other foods

Curries, Indian takeaways	1
No	2
Chinese foods, takeaways	3
Pizza	4
Crispbreads, savoury biscuits etc	5
Marmite, Bovril, Vegemite	6
Other	7

Q 92c If had severe pain across front of chest What did the doctor say it was?

Heart attack	1
Angina	2
Other	3

Q 97b Problems caused by injury Coded by site of injury

Back	1	Head	11
Neck	2	Eyes	12
Knees	3	Other (face)	13
Hip	4	Other (leg)	14
Shoulder	5	Other (body)	15
Elbow	6	Joints (nothing else specified)	16
Wrist	7	Collar bone	17
Hand/finger	8	Other	18
Foot/toes	9		
Ankle	10		

Q 105 Have you had any other major illnesses or health problems?

<i>Infections and parasitic diseases</i>	1
<i>Neoplasms</i>	2
<i>Endocrine, nutritional & metabolic diseases and immunity disorders</i>	3
<i>Diseases of blood and blood forming organs</i>	4
<i>Mental disorders</i>	5
<i>Diseases of the nervous system</i>	61
<i>Ear complaints</i>	62
<i>Eye complaints</i>	63
<i>Diseases of the circulatory system</i>	7
<i>Diseases of the respiratory system</i>	8
<i>Diseases of the digestive system</i>	9
<i>Diseases of the genito-urinary system</i>	10
<i>Complications of pregnancy, childbirth & puerperium</i>	11
<i>Diseases of the skin and subcutaneous tissue</i>	12
<i>Diseases of the musculoskeletal system & connective tissue</i>	13
<i>Congenital abnormalities</i>	14
<i>Injuries</i>	15
<i>Other</i>	16

Q 110b Social class coding based on 1980 classification of occupations OPCS

I	<i>Professional</i>	01
II	<i>Intermediate</i>	02
III _{nm}	<i>Skilled - non-manual</i>	03
III _m	<i>Skilled - manual</i>	04
IV	<i>Partly skilled</i>	05
V	<i>Unskilled</i>	06
	<i>Other (including armed services)</i>	07

CURRENT STATUS PRE-APPRAISAL QUESTIONNAIRE

Before we start any of the measures I need to check what you have done in the last two hours, that is since about _____

		yes	no	details
1	Have you drunk any tea or coffee?			
	How many cups?			_____
2	Have you smoked any cigarettes, cigars or pipe?			
	How many?			_____
3	Have you eaten a main meal?			
	How long ago?			_____
4	Have you drunk any alcohol?			
	How much?			_____
5	Have you taken any drugs or medication?			
	What?			_____
6	Have you done any strenuous exercise?			
	Give details			_____
7	Do you have any minor ailments at present which may hinder your performance?			
	Give details			_____

E.1 Population estimates based on sample surveys are subject to sampling errors.

Table E.1 below provides the confidence limits for population estimates made from a simple random sample. The confidence intervals in the table are shown for different sample sizes and different proportions. For example, a population estimate of 30% current smokers based on a sample of 4,000 would have confidence limits of +1.4% and -1.4% at the 95% confidence level i.e. we could be 95% certain that the true value of the proportion who smoke lies between 28.6% and 31.4%. For a sample of only 500 the confidence interval would be 4.1% in either direction, and so on.

E.2 The size of the sampling error for a simple random sample, which is neither clustered nor stratified, will depend partly on the characteristic of the population being measured and partly on the sample size: the more varied the characteristic the larger the likely sampling error; the larger the sample size the smaller the likely sampling error.

Table E1

Table of 95% confidence intervals for various percentages (p)
and various sample sizes (n)

	50	100	150	200	250	300	400	500	1000	2000	4000
5%	6.2	4.2	3.6	3.1	2.8	2.5	2.2	2.0	1.4	1.0	0.7
10%	8.4	6.0	4.9	4.2	3.8	3.5	3.0	2.7	1.9	1.3	0.9
15%	10.1	7.2	5.8	5.0	4.5	4.1	3.5	3.2	2.2	1.6	1.1
20%	11.3	8.0	6.5	5.6	5.1	4.6	4.0	3.6	2.5	1.8	1.3
25%	12.2	8.6	7.1	6.1	5.5	5.0	4.3	3.8	2.7	1.9	1.4
30%	13.0	9.2	7.5	6.5	5.8	5.3	4.6	4.1	2.9	2.0	1.4
35%	13.5	9.5	7.8	6.7	6.0	5.5	4.8	4.2	3.0	2.1	1.5
40%	13.8	9.8	8.0	6.9	6.2	5.6	4.9	4.4	3.1	2.2	1.5
45%	14.1	9.9	8.1	7.0	6.3	5.7	5.0	4.4	3.1	2.2	1.6
50%	14.1	10.0	8.2	7.1	6.3	5.8	5.0	4.5	3.2	2.2	1.6

E.3 In practice, almost all field surveys employ a more complex sample design than simple random sampling; the sample is normally clustered (and stratified) into an initial selection of geographical areas (first stage or primary sampling units) before the addresses or individuals are selected. For the Allied Dunbar National Fitness Survey 30 Parliamentary Constituencies were selected as the primary sampling

units and the entire sample of addresses was selected from within those 30 constituencies (see SECTION 6)

- E 4 The calculation of sampling errors for a multi-stage, stratified sample design of the kind used here is much more complex than for a simple random sample. It is not practicable to provide such estimates for every variable and instead it is customary to provide an estimate of 'deft' (the factor by which the simple random sample error needs to be multiplied to take account of the complex sample design) for a range of variables in the survey, as a general guide to the likely effect of a particular sample design on the simple random sampling errors. For example, a deft value of 1.5 applied to the confidence limits for the smoking illustration above would increase them to +2.1 to -2.1 and place the true value at the 95% confidence level, within the range 27.9% to 32.1%.
- E 5 The paragraphs which follow explain how the deft values were calculated for this survey. This explanation is followed by Table E2 which shows the deft values that were produced for a range of variables on this survey. These variables included a selection of fitness measurements, physical activity measurements, attitude questions, lifestyle and health questions and some classification items. The deft values we have calculated ranged between 0.8 and 2.0, three-quarters of those deft values were between 0.9 to 1.4, the median value was 1.13.
- E 6 The deft value will be higher for a variable that is not spread evenly across the 30 constituencies. For example, an estimate of the proportion of the population in the professional socioeconomic group will have a higher deft value than an estimate of the proportion of men in the population.
- E 7 From Table E2 it can be seen that our estimates of physical activity appear to have deft values in the order of 1.1 or lower, suggesting that those who engaged in physical activity were reasonably well spread across the 30 constituencies. This was true also for the self-assessment of health and physical activity questions and for many of the overall indicators of health.
- E 8 Some of the specific health problems were less evenly spread between constituencies and the deft values for these tended to be around 1.3 or 1.4. Also at that level was the attitude question which focussed on whether the respondent did enough exercise to keep fit and so, too, were most of the actual fitness measurements. The highest deft values of 1.5 or above tended to occur for classification variables such as age (particularly at the extremes of the age distribution) and socio-economic group (also at the extremes). The proportion of people who smoked also had a high deft value of 1.57.
- E 9 Deft values have also been calculated for estimates based on age groups within the total sample. The simple random sample confidence limits for estimates based on one age group, of course, will be higher than for the total sample because each age group contains less than 800 respondents compared with the total sample of

4,316. However, the deft values for estimates based on an age group are considerably smaller than those based on the total sample. This is because one large source of variation between constituencies (age) has been removed. Deft values for estimates based on age groups are mainly below 1.2 with a median value of about 1. (See Table E3).

- E.10 Kish and Hess (1959) presented methods which enable the calculation of sampling errors for estimates from complex sample designs based only on the sample variation between first stage or primary sampling units (psus). The methods are outlined in Butcher and Elliot. The reason for considering only variation between psus is that in a multi-stage design, the sub-sample from each psu can itself be regarded as being in some sense a separate sample, so that comparison of estimates based on several psus can lead to some idea of the variation in these estimates, and hence the likely error in the estimate from the survey as a whole. If the survey is stratified, care must be taken to avoid the over-estimation of sampling variation. This might occur if comparisons were made between psus in widely divergent strata. In the case of sample selection from a complete ordered list of psus as in this survey the method used to avoid the stratification problem is to compare each psu only with adjacent selected psus; the method of successive differences. Thus the variations that were considered here were those between constituency 1 and constituency 2, between constituency 2 and constituency 3, between constituency 3 and constituency 4 etc. Since the sample comprised 30 constituencies, 29 comparisons were made. This is a relatively small number on which to base estimates of sampling variation and as a result the sampling errors are themselves subject to possible relative errors in the order of 25%.
- E.11 Sampling errors were calculated for means and proportions by considering these to be ratio estimates. For example, the proportion of men aged over 30 can be thought of as a ratio estimate y/x , where y is the number of men aged over 30 in the survey and x is the number of men in the survey. The calculation of sampling error is then based on the fact that for a ratio y/x

$$v(y) = \frac{n}{2(n-1)} \sum_{i=1}^{n-1} (y_i - y_{i+1} + 1)^2$$

$$v(x) = \frac{n}{2(n-1)} \sum_{i=1}^{n-1} (x_i - x_{i+1} + 1)^2$$

$$\text{cov}(x, y) = \frac{n}{2(n-1)} \sum_{i=1}^{n-1} (x_i - x_{i+1} + 1)(y_i - y_{i+1} + 1)$$

$$v(y/x) = \frac{1}{x^2} (v(y) - (y/x)^2 v(x) - 2(y/x) \text{cov}(x, y))$$

and sampling error $(\%) = \sqrt{v(y/x)}$

where n_i = subsample size in psu_i

y_i = psu total for variable of interest for psu_i

n = number of psus sampled = 30

One caution is that the approximation to $v(y/x)$ which comes from the theory of Taylor series should only be used if x is not too variable. The criterion that is often used is that the coefficient of variation of x should be less than 0.1, i.e.

$$cv(x) = \frac{se(x)}{x} < 0.1$$

This criterion was met more than adequately by all variables considered in our calculations.

Table E2 Deft Values for percentages and means considered over the whole sample

	Sample size	Mean or %	Simple error	Complex error	Deft = $\frac{\text{complex error}}{\text{simple error}}$
Occasions of vig/mod activity in past 4 weeks (all activities)	4,316	14.22	27	30	1.13
Occasions of vig/mod sports activity in past 4 weeks	4,316	3.88	15	14	.95
Occasions of mod home based activity in past 4 weeks	4,316	5.30	11	11	1.01

Reported frequency of vig. exercise* (20 mins or more)

3 times a week	3,631	20%	67	72	1.08
once per week	3,631	21%	68	74	1.09
less often or never	3,631	59%	81	92	1.12

Frequency of running up stairs*

rarely	3,681	32%	77	74	.96
sometimes	3,681	36%	79	82	1.04
often	3,681	32%	77	67	.88

Self-assessment of physical activity

very	4,280	18%	59	52	.88
fairly	4,280	56%	76	70	.93
not very	4,280	20%	61	60	.98
not at all	4,280	6%	35	34	.97

Self-assessment of health

excellent	4,279	13%	52	52	1.02
good	4,279	52%	76	90	1.18
fair	4,279	31%	71	90	1.27
poor	4,279	4%	31	34	1.11

Proportion identified as

in reasonable health	4,316	29%	69	73	1.05
unaffected by health problems	4,316	74%	67	74	1.11

Proportion affected by health problems

	Sample size	Mean or %	Simple error	Complex error	Diff = complex error simple error
housekeeping	4,099	8%	.42	.51	1.20
working	3,323	8%	.46	.50	1.07
going out socially	4,180	7%	.40	.43	1.05
sport and recreation	3,854	15%	.57	.59	1.03

Importance of improving / maintaining health*

not at all	3,667	8%	.15	.13	.88
very	3,667	60%	.81	1.07	1.32

Importance of feeling mentally alert*

not at all	3,666	5%	.11	.11	1.06
very	3,666	66%	.78	.75	1.02

Importance of keeping in good shape*

not at all	3,667	1%	.06	.07	1.21
very	3,667	62%	.80	.93	1.16

Proportion who suffer from

heart disease	4,316	3%	.27	.35	1.31
breathlessness	4,316	15%	.55	.77	1.41
restricted mobility	4,316	18%	.58	.79	1.36
Ever had chest pain	4,306	23%	.65	.60	.93
Had any symptoms in past 4 weeks	4,284	78%	.62	.84	1.34

Fitness measurements

resting heart rate	3,012	70.64	.22	.22	1.01
fat free mass	2,992	49.56	.18	.18	1.01
Vo ₂ max**	2,138	2.60	.02	.02	1.14
diastolic blood pressure	3,012	75.80	.23	.32	1.39
hand grip	2,829	37.15	.26	.35	1.36
leg extension**	2,697	431.65	4.28	9.09	1.45
shoulder abduction	3,013	142.91	.34	.49	1.44

Reasons for not taking more exercise*

need to rest/relax	3,659	26%	.72	.99	1.37
not the sporty type	3,660	32%	.77	1.11	1.53
haven't got the time	3,657	43%	.82	1.14	1.39

Ability to walk/jog a mile continuously

cannot walk a mile	3,997	12%	.51	.75	1.47
can walk a mile	3,997	56%	.79	.84	1.07
can jog a mile	3,997	33%	.74	.65	.87

APPENDIX E - SAMPLING ERRORS

	Sample size	Mean or %	Simple error	Complex error	Dett = complex error simple error
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Walking pace

slow	4,289	14%	53	65	1.22
average	4,289	49%	76	79	1.03
brisk	4,289	30%	70	94	1.34
very fast	4,289	7%	39	56	1.42

Proportion who do enough exercise to keep fit

yes	4,281	54%	76	1 10	1 44
no	4,281	44%	76	1 15	1 52
don't know	4,281	2%	21	25	1 21
Proportion who smoke	4,312	29%	69	1.09	1 57
Socio-economic group					
employers (large)	4,238	13%	51	68	1 33
employers (small)	4,238	11%	48	78	1.62
professional	4,238	8%	42	86	2.05
intermediate	4,238	11%	48	62	1 28
own account	4,238	7%	39	37	94
junior non-manual	4,238	9%	45	45	1 00
personal services	4,238	3%	28	38	1 36
foreman and supervisors	4,238	7%	40	53	1 34
skilled manual	4,238	16%	57	1 00	1 77
partly skilled manual	4,238	10%	46	63	1 39
unskilled manual	4,238	4%	31	46	1 46
Exact age	4,316	46.94	28	51	1.78

Age group

under 30	4,316	23%	64	97	1 52
30-64	4,316	56%	76	91	1 21
65 and over	4,316	21%	63	1 15	1 84

* these questions were not asked of those 70 and over

** these measures were not taken for those 75 and over

Table E3

Deft values for percentages and means based on age subgroups

	Sample size	Mean or %	Simple error	Complex error	Deft = $\frac{\text{complex error}}{\text{simple error}}$
--	----------------	--------------	-----------------	------------------	--

Reported frequency of vigorous exercise

<u>3 times a week</u>					
16-24	570	35%	2.00	2.51	1.25
25-34	756	24%	1.56	1.55	1.00
35-44	730	21%	1.50	1.64	1.10
45-54	675	17%	1.45	1.49	1.02
55-64	596	11%	1.26	1.24	.98
65-74	304	8%	1.52	1.50	.99
all ages	3,631	20%	.67	.72	1.08

Once a week

16-24	570	25%	1.81	1.32	.72
25-34	756	27%	1.62	1.38	.85
35-44	730	24%	1.58	1.65	1.04
45-54	675	18%	1.50	1.26	.84
55-64	596	11%	1.32	.94	.71
65-74	304	14%	2.02	1.98	.98
all ages	3,631	21%	.68	.74	1.09

Less often or never

16-24	570	40%	2.05	2.24	1.09
25-34	756	49%	1.82	1.56	.86
35-44	730	55%	1.84	1.89	1.02
45-54	675	64%	1.85	1.78	.96
55-64	596	78%	1.71	1.45	.85
65-74	304	78%	2.38	2.10	.88
all ages	3,631	59%	.81	.92	1.12

APPENDIX E - SAMPLING ERRORS

	Sample size	Mean or %	Simple error	Complex error	Dett = $\frac{\text{complex error}}{\text{simple error}}$
--	----------------	--------------	-----------------	------------------	--

Proportion whose lives are unaffected by health problems

16-24	576	84%	1 52	1 56	1 03
25-34	773	83%	1 36	1 07	79
35-44	740	78%	1 53	1 21	79
45-54	688	75%	1 65	1 81	1 09
55-64	616	70%	1 85	1 60	87
65-74	556	65%	2 02	2 52	25
75+	367	49%	2 61	2 42	93
all ages	4,316	74%	67	74	1 11

Proportion who suffer from heart disease

16-24	576	5%	30	28	92
25-34	773	8%	32	.42	1 31
35-44	740	4%	23	22	93
45-54	688	3%	62	61	98
55-64	616	7%	1 05	90	86
65-74	556	8%	1.12	1.22	1 09
75+	367	6%	1 21	1 32	1 09
all ages	4,316	3%	27	35	1 31

APPENDIX E - SAMPLING ERRORS

	Sample size	Mean or %	Simple error	Complex error	$D_{eff} = \frac{\text{complex error}}{\text{simple error}}$
Fitness measures diastolic blood pressure					
16-24	371	68.83	.51	.47	.93
25-34	532	71.12	.43	.43	1.00
35-44	541	75.47	.48	.49	1.02
45-54	504	78.03	.49	.34	.69
55-64	431	80.39	.61	.73	1.19
65-74	383	79.93	.69	.61	.89
75+	250	78.06	1.02	.99	.97
all ages	3,012	75.80	.23	.32	1.39

Fat-free mass					
16-24	371	50.88	.53	.54	1.01
25-34	526	52.09	.46	.45	.98
35-44	540	51.30	.43	.46	1.06
45-54	504	49.98	.44	.39	.90
55-64	428	48.28	.43	.50	1.18
65-74	379	46.85	.45	.41	.92
75+	244	43.80	.56	.59	1.05
all ages	2,992	49.56	.18	.18	1.01

	Sample size	Mean or %	Simple error	Complex error	Dett = $\frac{\text{complex error}}{\text{simple error}}$
Leg extension**					
16-24	371	507.38	10.27	14.66	1.43
25-34	529	494.10	9.58	17.40	1.82
35-44	540	479.31	8.94	10.43	1.17
45-54	502	449.16	8.68	8.98	1.04
55-64	412	334.50	10.53	12.35	1.17
65-74	333	270.07	10.93	11.71	1.07
all ages	2,697	431.65	4.28	9.09	1.45

* question not asked of those 70 and over

** measure not taken for those 75 and over

References

Kish, L and Hess, I (1959) On variances of ratios and their differences in multi-stage samples JASA 54, 416-446

Butcher, B Elliot, D A Sampling Errors Manual, OPCS, Social Survey Division MN13

TABLE for Figure 1.6.1
SAMPLE SIZES FOR THE INTERVIEW AND PHYSICAL APPRAISAL

Age	Interviews	BMI	Leg strength	Leg extensor power	Aerobic capacity
MEN	No.	No.	No.	No.	No.
16-24	260	176	171	132	131
25-34	351	253	233	193	182
35-44	367	273	246	208	197
45-54	346	264	235	202	190
55-64	282	203	154	132	103
65-74	235	166	114	116	55
TOTAL	1840	1335	1153	983	858

WOMEN					
16-24	316	195	181	144	159
25-34	423	274	256	207	210
35-44	373	268	253	204	210
45-54	342	241	229	183	152
55-64	334	228	174	151	110
65-74	321	217	123	114	42
TOTAL	2109	1423	1216	1003	883

TABLE for Figure 1.6.2
ACTIVITY PROFILES OF THE INTERVIEW AND PHYSICAL APPRAISAL SAMPLES

activity level	Interviews	BMI	Leg strength	Leg extensor power	Aerobic capacity
	No.	No.	No.	No.	No.
0	308	197	135	126	79
1	294	209	175	154	125
2	328	251	227	195	177
3	423	308	272	228	214
4	225	175	163	129	126
5	262	192	178	149	135
TOTAL	1840	1335	1153	983	858

WOMEN					
0	340	201	127	108	70
1	382	267	226	189	152
2	524	362	323	271	246
3	560	384	339	278	254
4	211	144	137	112	113
5	92	63	62	44	48
TOTAL	2109	1423	1216	1003	883

TABLE for figure 3 1 1
HIGHEST ENERGY COST ACTIVITY in past four weeks - Men and women aged 16 to 74

Highest activity level achieved during previous four weeks on at least one occasion

	Men	Women
highest activity level	%	%
none	3	3
light	10	8
moderate	47	60
vigorous	40	29
TOTAL	100	100
Sample size = n	1840	2109

TABLE for figure 3 1 2
NUMBER OF ACTIVITY OCCASIONS in previous four weeks
Men aged 16 to 74

frequency of occasions in past 4 weeks		all moderate and vigorous activities	moderate and vigorous activities of at least 20 minutes	vigorous activities of at least 20 minutes
None	0	13	17	66
One to four occasions	1-4	12	16	12
Five to eleven occasions	5-11	13	18	8
Twelve or more occasions	>12	62	49	14
TOTAL		100	100	100
Sample size		1840	1840	1840

Women aged 16 to 74				
None	0	11	16	78
One to four occasions	1-4	14	18	12
Five to eleven occasions	5-11	18	25	6
Twelve or more occasions	>12	57	41	4
TOTAL		100	100	100
Sample size		2109	2109	2109

TABLE for figure 3.1.3
PROPORTION OF MEN AND WOMEN
in different Activity Levels
Men and women aged 16 to 74

occasions lasting >20 min in past 4 weeks
of vigorous or moderate intensity

Activity Level		MEN	WOMEN
None	0	17	16
One to four (mixed)	1	16	18
Five to eleven (mixed)	2	18	25
Twelve or more (no vigorous)	3	23	27
Twelve or more (mixed)	4	12	10
Twelve or more (vigorous)	5	14	4
TOTAL		100	100
Sample size		1837	2109

TABLE for figure 3.1.4 - ACTIVITY LEVELS FOR AGE GROUPS
shows the proportion of each age group, separately for men and women, who
were in the frequency and intensity levels 3, 4 & 5

20 minute occasions (all activities) in past four weeks
of vigorous or moderate intensity

<u>Men aged 16 to 74</u>		----- age groups -----					
Activity Level		16-24	25-34	35-44	45-54	55-64	65-74
Twelve or more (no vigorous)	3	15	20	25	31	24	21
Twelve or more (mixed)	4	23	19	16	8	4	1
Twelve or more (vigorous)	5	30	20	16	11	6	1
TOTAL		100	100	100	100	100	100
Sample size							

<u>Women aged 16 to 74</u>		----- age groups -----					
Activity Level		16-24	25-34	35-44	45-54	55-64	65-74
Twelve or more (no vigorous)	3	22	28	34	31	26	16
Twelve or more (mixed)	4	16	15	12	7	5	3
Twelve or more (vigorous)	5	9	7	4	4	2	0
TOTAL		100	100	100	100	100	100
Sample size							

TABLE for Figure 3 3 1

THE CONTRIBUTION OF DIFFERENT KINDS OF ACTIVITY

Shows the proportion of respondents who achieved different intensities of activity during the previous 4 weeks of each type of activity. The analysis takes no account of frequency and duration

Men aged 16 to 74					
highest intensity of activity achieved	All activity	Sport and recreation	Cycling	Walking (over 2 miles)	Home, occupation and stairs
none	3	34	83	56	4
light	10	20		22	19
moderate	47	16	9	22	66
vigorous	40	30	8		11
sample size	1840				

Women aged 16 to 74					
none	3	42	87	57	5
light	8	13		26	13
moderate	60	22	8	17	77
vigorous	29	23	5		5
sample size	2109				

TABLE for Figure 3.3.2

WALKS OF A MILE OR MORE IN THE PAST WEEK

Shows the proportion of men and women in three different age groups who walked continuously for a mile or more in the past week on at least one occasion, and the pace at which they walked

age groups - men	pace of walking			sample size
	All walks combined	Brisk pace/fast walks	Average/slow pace	
16-34	58	36	22	610
35-54	54	27	27	713
55-74	53	14	39	517

age groups - women				
16-34	58	24	34	739
35-54	55	23	32	715
55-74	51	17	34	655

TABLE for Figure 3.4.1

SPORT AND ACTIVE RECREATION PARTICIPATION IN EARLIER YEARS

Shows, for each current age group, the proportion who were regularly active in sport and active recreation at a moderate or vigorous level at the earlier ages of 16, 24 and 34

Men aged 16 to 74		% of sample from each age group					
		16-24	25-34	35-44	45-54	55-64	65-74
at age	16	59	37	32	39	39	35
	24	N/A	46	34	27	22	29
	34	N/A	N/A	36	23	12	14

Women aged 16 to 74		% of sample from each age group					
at age		16-24	25-34	35-44	45-54	55-64	65-74
16		47	25	19	22	23	24
	24	N/A	33	23	15	15	16
	34	N/A	N/A	28	23	14	12

TABLE for Figure 3 4 2

REGULAR PARTICIPATION IN SPORT AND ACTIVE RECREATION IN EARLIER YEARS

Shows the extent of past participation by dividing each age group on the basis of the proportion of years since age 14 that people had engaged in regular vigorous or moderate sport or recreation activity

Men aged 35 – 64	% of sample from each age group		
past participation (proportion of adult years)	35-44	45-54	55-64
None	17	18	25
a quarter or less	14	23	28
more than a quarter up to a half	11	16	16
more than a half up to three-quarters	13	10	10
more than three quarters	45	33	21

Women aged 35 – 64	% of sample from each age group		
	35-44	45-54	55-64
None	17	18	25
a quarter or less	14	23	28
more than a quarter up to a half	11	16	16
more than a half up to three-quarters	13	10	10
more than three quarters	45	33	21

MAIN REPORT SECTION 4.1

TABLE for Fig 4.1.1 Height of MEN & WOMEN by age

AGE	MEAN	plus 2SD	minus 2SD
16-	177.3	190.3	164.3
25-	176.8	190.8	162.8
35-	175.5	188.3	162.7
45-	175.1	188.9	161.3
55-	172.8	186.6	159
65-	170.9	183.3	158.5
••			
16-	163.1	176.1	150.1
25-	163.8	177.4	150.2
35-	162.5	174.5	150.5
45-	162.3	174.5	150.1
55-	160.1	172.7	147.5
65-	157	168.4	145.6

TABLE for Fig 4.1.2 Weight of MEN & WOMEN by age

AGE	MEAN	plus 2SD	minus 2SD
16-	72.4	95.6	49.2
25-	76.8	100	53.6
35-	78.2	99.4	57
45-	79.9	103.5	56.3
55-	78.5	101.9	55.1
65-	75.2	97.6	52.8
••			
16-	61.5	83.9	39.1
25-	64	89.6	38.4
35-	65.8	89.6	42
45-	66.4	88.8	44
55-	68.7	93.5	43.9
65-	66	88.8	43.2

TABLE for Figure 4 1 3 BMI by sex and age

AGE	MEAN	SD	plus 2SD	minus 2SD
16-	23	3	29	17
25-	25	3	31	18
35-	25	3	32	19
45-	26	3	33	19
55-	26	3	33	20
65-	26	3	32	19
••				
16-	23	4	31	15
25-	24	4	33	15
35-	25	4	34	16
45-	25	4	33	17
55-	27	5	36	18
65-	27	4	36	18

Table for figure 4 1 4

THE PROPORTION OF MEN AND WOMEN 'MILDLY OVERWEIGHT' OR 'OBESE'

MEN - age groups 16-74	16-	25-	35-	45-	55-	65-
Mildly Overweight	21	35	42	47	48	47
Obese	3	5	8	11	15	9

WOMEN	16-	25-	35-	45-	55-	65-
Mildly Overweight	21	29	35	44	41	48
Obese	10	11	18	16	31	30

Table for Figure 4 1 5 DISTRIBUTION OF BODY MASS INDEX
for men and women (3 age groups)

Fig 4 1 5			
MEN - 3 age groups 16-74	16-34	35-54	55-74
<20	10	1 5	2 6
20 1-	56 4	44 9	40
25 1-	29 4	44 5	45 6
>30	4 2	9 1	11.8

WOMEN			
<20	15 6	5.3	5 6
20 1-	59 3	51 7	35 5
25 1-	16 2	31 8	38
>30	9	11 2	20 9

Table for Figure 4.1.6 SKINFOLD THICKNESS OF MEN AND WOMEN
6 age groups 16-74

MEN			WOMEN		
	n	SD		n	SD
16-	48.4	175	62.5		
25-	55.3	253	64.9		
35-	58.6	273	70.5		
45-	62.2	262	72.4		
55-	60.8	203	76.8		
65-	55.7	164	69.4		

Table for figure 4.1.7
THE PERCENTAGE BODY FAT OF MEN AND WOMEN BY AGE

MEN - AGE	MEAN	SD	plus 2SD	minus 2SD	n
16-	17.5	5.3	28.1	6.9	176
25-	20.6	5.2	31.0	10.2	253
35-	24.5	4.6	33.7	15.3	273
45-	28.0	4.9	37.8	18.2	264
55-	28.7	5.1	38.9	18.5	202
65-	27.2	5.3	37.8	16.6	165

WOMEN					
	MEAN	SD	plus 2SD	minus 2SD	n
16-	28.8	5.6	40.0	17.6	195
25-	30.1	5.5	41.1	19.1	276
35-	33.1	5.2	43.5	22.7	268
45-	36.1	5.2	46.5	25.7	241
55-	38.3	4.7	47.7	28.9	228
65-	37.1	4.6	46.3	27.9	215

Table for figure 4 1 8

WAIST TO HIP GIRTH RATIO
of men and women by age

MEN - AGE	MEAN	SD	plus 2SD	minus 2SD
16-	0 85	0 05	0 96	0 74
25-	0 89	0 06	1 00	0 78
35-	0 92	0 06	1 05	0 80
45-	0 94	0 05	1 05	0 83
55-	0 96	0 06	1 07	0 84
65-	0 95	0 06	1 07	0 83

WOMEN				
16-	0 77	0 06	0 88	0 66
25-	0 79	0 06	0 91	0 68
35-	0 80	0 07	0 94	0 65
45-	0 81	0 07	0 95	0 67
55-	0 83	0 07	0 97	0 69
65-	0 85	0 07	0 99	0 70

Table for Figure 4 1 9 DISTRIBUTION OF

'WAIST TO HIP GIRTH RATIO' for men and women (3 age groups)

MEN - age groups	16-34	35-54	55-74
Categories - W/H ratio			
<0 7-	0 2		
0 75-	7 5	0 4	0 9
0 8-	21 2	6 2	2 8
0 85-	35 1	17 1	12 5
0 9-	24 2	32 9	30 5
0 95-	8 5	27 4	33 3
1 -	2 4	12 4	14 5
1 05-	0 7	3	4 3
>1 10	0 2	0 6	1 1

WOMEN			
<0 7-	24 1	16 7	9 1
0 75-	38	30 2	21 4
0 8-	21 2	25 4	27
0 85-	12 4	15 9	23 8
0 9-	3	7 9	11 5
0 95-	0 9	3 2	6 1
1 -	0 2	0 6	0 5
1 05-	0 2	0 2	0 3
>1 10			0 3

Figure 4.2.1 Hand-grip strength of men and women by age

Table for Fig 4.2.1 (A1.25). Isometric Handgrip Strength (N) Distribution by Age & Sex				
MEN	AGE	MEAN	plus 2SD	minus 2SD
	16-	485	658	312
	25-	513	695	331
	35-	505	690	321
	45-	485	664	306
	55-	424	627	220
	65-	363	619	107
WOMEN	••			
	16-	294	403	185
	25-	307	408	207
	35-	309	422	197
	45-	293	405	181
	55-	262	396	127
	65-	220	356	85

Figure 4.2.2 Hand-grip strength relative to body weight for men and women by age

Table for Fig 4.2.2 (A1.27). Distribution of Isometric Handgrip Strength per kilogramme Body Mass (N.kg-1) by Age and Sex				
MEN	AGE	MEAN	plus 2SD	minus 2SD
	16-	6.8	9.1	4.4
	25-	6.8	9.4	4.1
	35-	6.5	9.1	4.0
	45-	6.2	8.4	3.9
	55-	5.5	8.2	2.8
	65-	4.9	8.3	1.5
Women	••			
	16-	4.9	6.9	2.9
	25-	4.9	7.0	2.9
	35-	4.8	6.9	2.7
	45-	4.5	6.4	2.6
	55-	3.9	6.1	1.7
	65-	3.4	5.5	1.3

Figure 4.2.3 The percentage distribution of hand-grip strength per kg body weight

Table for Fig 4.2.3 handgrip strength per kg body weight for men and women					
men	less than 1 99	2-3 99	4-5 99	6-7 99	8+
16-34		1 2	26 1	56 4	16 3
35-54	0 2	3 1	33 5	54 5	8 7
55-74		11	55 2	33 2	0 6
women					
16-34	0 2	18 3	67 7	13 5	0 2
35-54	0 4	22 4	68 5	8 8	
55-74	2 4	56 9	39 7	1 1	

Figure 4.2.4 Leg extensor strength relative to body weight for men and women by age

Table for 4.2.4 (A1.34) Distribution of Isometric Knee Extension Strength per kilogramme Body Mass (N Kg ⁻¹) by Age and Sex				
MEN	AGE	MEAN	plus 2SD	minus 2SD
	16-	8 95	12 95	4 95
	25-	8 71	12 77	4 65
	35-	8 05	11 61	4 49
	45-	7 34	10 66	4 02
	55-	6 76	10 06	3 46
	65-	5 98	9 06	2 9
	••			
WOMEN	16-	7 16	10 92	3 4
	25-	6 79	10 39	3 19
	35-	6 55	10 49	2 61
	45-	6 05	9 53	2 57
	55-	5 11	8 65	1 57
	65-	4 92	7 66	2 18

Figure 4.2.5 The percentage distribution of leg extensor strength per kg body weight

Table for Fig 4.2.5 leg extensor strength per kg (N per kg)			
men	less than 5	5-	10+
16-34	1	73	26
35-54	5	84	11
55-74	20.9	77.6	1.5
women			
16-34	12.7	80.9	6.5
35-54	23.1	73.3	3.5
55-74	53.4	45.3	1.3

Table 4.2.1 Percentage distribution of leg extensor strength

Percentage Distribution of functional isometric knee extensor strength according to a classification based upon body mass. Results are shown for each of 6 age groups for men and women

The bold line in bigger font provides data for Fig 4.2.6

CATEGORY	16-24	25-34	35-44	45-54	55-64	65-74	n
MEN							
≤ 50% BODY MASS	1.2	0.9	4.5	5.5	14.3	29.8	84
50-75% BODY MASS	20.5	30.5	32.5	53.6	58.4	52.6	462
> 75% BODY MASS	78.4	68.7	63.0	40.9	27.3	17.5	607
TOTAL n	171	233	246	235	154	114	1153
WOMEN							
≤ 50% BODY MASS	9.4	15.8	21.1	27.1	51.4	56.1	331
50-75% BODY MASS	55.8	54.2	53.8	58.8	38.9	38.2	618
> 75% BODY MASS	34.8	30.0	25.1	16.2	9.7	5.7	263
TOTAL n	181	253	251	229	175	123	1212

Figure 4.2.6 Estimate of percentage with significantly reduced leg strength**Figure 4.2.7 Leg extensor power relative to body weight for men and women by age**

Table for Fig 4.2.7 (Table A1.38) Distribution of Leg Extensor Power per kilogram of Body Mass (Watts per kg) by Age and Sex				
MEN	AGE	MEAN	plus 2SD	minus 2SD
	16-	4.82	7.62	2.02
	25-	4.65	7.29	2.01
	35-	4.17	6.45	1.89
	45-	3.93	5.89	1.97
	55-	3.24	5.26	1.22
	65-	3.05	5.07	1.03
	••			
WOMEN	AGE	MEAN	plus 2SD	minus 2SD
	16-	3.3	5.32	1.28
	25-	3.15	5.15	1.15
	35-	2.84	4.58	1.1
	45-	2.57	4.25	0.89
	55-	2.14	3.64	0.64
	65-	1.81	3.01	0.61

Figure 4.2.8 The percentage distribution of leg extensor power per kg body weight

Fig 4.2.8 leg extensor power adjusted for body weight (Watts per kg)

men	less than 2	2 -	4 -	6 +
16-34	0.9	28.6	53.2	17.2
35-54	2.2	46.8	46.6	4.4
55-74	12.1	70.2	16.9	0.8
power				
16-34	8.3	72.6	17.7	1.4
35-54	20.9	71.6	7.2	0.3
55-74	52.1	47.2	0.8	

Figure 4.2.9 The percentage distribution of the range of movement at the shoulder joint**Table for Fig 4.2.9**

	MEN	< 99	99-	109-	119-	129-	139-	149-	159-	169-	179-	189+
16-34					0.5	0.9	10	22.1	31.7	25.4	8.4	0.9
35-54		0.2		0.4	2.1	6.9	19.1	27.7	28.1	11	3.9	0.6
55-74		0.8	2.2	6.8	18.4	26.8	22.5	15.9	5.8	0.5	0.1	0.2
WOMEN												
16-34					0.6	2.9	14.9	20.4	32.6	19.2	7.2	2.1
35-54				0.2	1.8	7.6	22.4	30.2	21.4	12.2	2.5	1.8
55-74		2.5	1.8	8.8	18.9	27	23.2	12.8	3.6	1.4	0	0

Figure 4.2.10 Estimate of percentage with a significantly reduced range of movement at the shoulder joint

Table for Fig 4.2.10 % with abduction limited to <120 degrees, men and women by age

		n	n	%	%
		MEN	WOMEN	MEN	WOMEN
	16-	1	1	1	1
	25-	1	2	0	1
	35-	6	3	2	1
	45-	8	7	3	3
	55-	15	15	7	7
	65-	23	44	14	20

Figure 4.3.1 The distribution of aerobic fitness

Fig 4.3.1 - % distribution of aerobic fitness (VO₂ max in ml kg⁻¹ min⁻¹) men & women, 3 age groups

Men			
Categories	16-34	35-54	55-74
<20	0	0	1.3
20-	1	1.6	19.7
30-	7.1	34.6	58.6
40-	32.1	45.2	17.2
50-	42.6	16.8	2.5
60-	14.4	1.6	0.6
70+	3.5	0.3	0
Women			
<20	0	0.6	4.6
20-	6.8	28.7	67.1
30-	52.3	57.2	27
40-	35.7	12.2	1.3
50-	4.4	1.4	0
60-	0.8	0	0
70+	0	0	0

Figure 4.3.2 Aerobic fitness

Table for Fig 4.3.2 Aerobic Fitness ml O₂ per kg per min

AGE	(ml kg ⁻¹ min ⁻¹)			
	MEAN	plus 2SD	minus 2SD	n
MEN				
16-	55.5	71.8	39.2	131
25-	49.8	67.9	31.7	182
35-	45.5	61.0	30.0	197
45-	41.3	54.5	28.1	190
55-	36.6	51.2	22.0	103
65-	32	44.7	19.3	55
TOTAL				858
.....				
WOMEN				
16-	40.3	52.8	27.8	159
25-	38.2	52.1	24.3	210
35-	34.8	46.9	22.7	210
45-	31.9	44.3	19.5	152
55-	28.3	38.5	18.1	110
65-	24.7	32.7	16.7	42
TOTAL				883

Figure 4.3.3 Estimate of proportion exceeding anaerobic threshold walking on the level and uphill

Table for Fig 4.3.3 - % respondents exceeding their anaerobic threshold walking at 3 mph up a 5% gradient		
AGE		
	MEN	WOMEN
16-	2	27
25-	5	40
35-	11	62
45-	20	76
55-	49	93
65-	75	100
% respondents exceeding 70% of their maximal heart rate walking at 3 mph on the level		
16-	0	0
25-	0	2
35-	0	1
45-	0	7
55-	3	20
65-	9	45

Figure 4.3.4 The distribution of heart rates during walking on level ground

Table for Fig 4.3.4 - Distribution of % max heart rate at uptake of 13 ml.kg-1.min-1			
Men			
Categories	16-34	35-54	55-74
<50	35.2	13.4	3.2
50-59.9	49.2	51.5	22.2
60-69.9	14.2	30.1	44.9
70-79.9	1.1	4.9	23.8
80-89.9	0.3	0.0	5.4
90+	0.0	0.0	0.5
Women			
<50	10.8	2.5	1.0
50-59.9	48.5	30.7	9.7
60-69.9	34.3	45.0	35.9
70-79.9	6.4	19.6	35.9
80-89.9	0.0	2.3	14.9
90+	0.0	0.0	2.6

Figure 4.3.5 The distribution of heart rates during walking uphill

Table for Fig 4.3.5 - Distribution of % max heart rate at uptake of 21 ml kg ⁻¹ min ⁻¹			
Men			
Categories	16-34	35-54	55-74
<50	4.1	0.7	0.5
50-	42.9	14.8	2.2
60-	44.8	52.0	22.7
70-	7.7	30.6	49.2
80-	0.5	1.9	22.2
>90	0.0	0.0	3.2
Women			
<50	0.3	0.0	0.0
50-	9.3	3.0	1.0
60-	49.2	22.4	7.2
70-	36.3	50.8	32.3
80-	4.9	21.9	46.7
>90	0.0	2.0	13.8

Fig 4.3.6 Estimate of percentage exceeding 70% of maximal heart rate walking on the level and uphill.

Table for Fig 4.3.6 - % respondents exceeding 70% of their maximal heart rate walking at 3 mph up a 5% gradient		%	%
AGE			
		MEN	WOMEN
16-		4	34
25-		11	49
35-		23	68
45-		43	81
55-		70	91
65-		81	92
% respondents exceeding 70% of their maximal heart rate walking at 3 mph on the level			
16-		1	5
25-		2	12
35-		8	19
45-		9	38
55-		30	49
65-		45	78

Figure 4.3.7 The energy expenditure walking uphill (1-in-7 gradient) and walking on level ground at about 3 mph compared with the estimated maximal aerobic capacity of men who were about the mean of the Survey.

Table for Fig 4.3.7

MEN age as mid-point of range	mean values for aerobic fitness	30% of mean	65% of mean
20	55.5	16.7	36.1
30	49.8	14.9	32.4
40	45.5	13.7	29.6
50	41.3	12.4	26.8
60	36.6	11	23.8
70	32	9.6	20.8

Figure 4.3.8 Energy expenditure at maximal aerobic capacity ($\text{VO}_2 \text{ max}$) of men at lower limit (5%) of the sample surveyed

Table for Fig 4.3.8

MEN age as mid-point of range	col 1 values for lower limit (5%) of aerobic fitness	30% of col 1	65% of col 1
20	41.9	12.6	27.2
30	34.7	10.4	22.5
40	32.6	9.8	21.2
50	30.3	9.1	19.7
60	24.4	7.3	15.8
70	21.4	6.4	13.9

Figure 4.3.9 The energy expenditure walking uphill (1-in-7 gradient) and walking on level ground at about 3 mph compared with the estimated maximal aerobic capacity of women who were about the mean of the Survey.

Table for Fig 4.3.9

WOMEN age as mid-point of range	mean values for aerobic fitness	30% of mean	65% of mean
20	40.3	12.1	26.2
30	38.2	11.5	24.8
40	34.8	10.4	22.6
50	31.9	9.6	20.7
60	28.3	8.5	18.4
70	24.7	7.4	16.1

Figure 4.3.10 Energy expenditure at maximal aerobic capacity ($\text{VO}_2 \text{ max}$) of women at lower limit (5%) of the sample surveyed

Table for Fig 4.3.10

WOMEN age as mid-point of range	col 1 values for lower limit (5%) of aerobic fitness	30% of col 1	65% of col 1
20	29.8	9	19.4
30	26.6	8	17.3
40	24.7	7.4	16
50	21.6	6.5	14
60	19.8	5.9	12.9
70	18	5.4	11.7

Table 4.3.1 The upper limits of the lowest quintiles for aerobic fitness taken from Blair's sample

The values are for maximal oxygen uptake in ml O₂/kg/min

age	MEN	WOMEN
20-39	≤ 35.2	≤ 28.7
40-49	≤ 32.3	≤ 25.9
50-59	≤ 29.4	≤ 23.6
60+	≤ 24.6	≤ 22.2

Table 4.3.2 The distribution of the aerobic fitness of the Survey sample according to the limits of the quintiles derived by Blair.

The age groups of the Survey sample have been adjusted to match those used in Blair's study.

<u>MEN</u> - age groups	20-39	40-49	50-59	60-69		%
BLAIR'S QUINTILES					TOTALn	%
FITNESS CATEGORIES						
1 least fit	5.0	4.3	9.7	6.4	46	5.8
2	4.5	10.0	6.9	20.5	63	8.0
3	11.2	10.0	11.1	9.0	84	10.7
4	19.9	19.1	26.4	32.1	174	22.1
5 most fit	59.4	56.5	45.8	32.1	421	53.4
TOTAL NUMBER	357	209	144	78	788	
PERCENTAGE	45.3	26.5	18.3	9.9		100.0
<u>WOMEN</u>						
1 least fit	15.8	23.9	17.8	17.4	147	18.2
2	7.6	10.6	17.1	12.8	84	10.4
3	15.8	10.1	16.3	31.4	131	16.2
4	21.7	22.9	10.1	15.1	157	19.4
5 most fit	39.2	32.4	38.8	23.3	290	35.8
TOTAL NUMBER	406	188	129	86	809	
PERCENTAGE	50.2	23.2	15.9	10.6	10.6	100.0

TABLE for Figure 5 1 1

SELF ASSESSMENTS OF ACTIVITY, FITNESS AND HEALTH for men and women

Shows how men and women assessed their own level of activity, fitness and overall state of health compared with people of their own age

men & women aged 16-74	men	women
physically active	%	%
very	21	15
fairly	55	57
not very	19	22
not at all	5	6

fitness		
very	17	15
fairly	63	64
not very	16	18
not at all	4	3

health		
excellent	14	12
good	51	54
fair	30	31
poor	5	3

TABLE for Figure 5 1 2

CORRESPONDENCE BETWEEN CLAIMED VIGOROUS ACTIVITY AND 'MEASURED' ACTIVITY (ACTIVITY LEVELS 4 & 5)

Shows the correspondence between Activity Levels 4 & 5 of the frequency and intensity scale (at least 12 occasions of vigorous activity of 20 minutes duration in the past 4 weeks) and the percentage who said they did vigorous activity at least x 3/wk

Men aged 16 to 74	Activity levels 4 & 5	Reported vigorous exercise >3 times per week
	%	%
16-24	53	51
25-34	39	32
35-44	32	26
45-54	19	22
55-64	10	11
65-74	2	11

Women aged 16 to 74		
16-24	25	22
25-34	22	17
35-44	16	15
45-54	11	12
55-64	7	10
65-74	3	5

TABLE for Figure 5.1.3

COMPARISON BETWEEN DIFFERENT SELF ASSESSMENTS OF ACTIVITY AND FITNESS

Shows that the closest match between activity thresholds and self-assessed activity was through the very active proportions. Note the high percentages, compared with the thresholds, who said they got enough exercise to keep fit.

<u>Men aged 16 –74</u>	% of sample from each age group		
	16-34	35-54	55-74
	%	%	%
above activity threshold	24	26	29
exercise enough to keep fit	51	50	67
active - very	21	20	21
fairly	57	55	52
fit - very	12	18	23
fairly	68	63	56

<u>Women aged 16 –74</u>			
above activity threshold	23	46	23
exercise enough to keep fit	39	47	66
active - very	9	15	22
fairly	56	59	56
fit - very	6	14	26
fairly	63	67	60

TABLE for Figures 5.1.4, 5.1.5, 5.1.6

self assessments						
	<u>MEN</u>	active		fit		exercise enough to keep fit
	<u>Men 16-34</u>	very	fairly	very	fairly	
no activity at moderate or vigorous level in past 4 weeks	level 0	16	33	9	56	43
below activity threshold for age	level 1-4	16	59	7	69	42
above activity threshold level for age	level 5	38	62	28	68	78
	<u>Men 35-54</u>					
no activity at moderate or vigorous level in past 4 weeks	level 0	7	30	8	53	42
below activity threshold for age	level 1-3	15	60	14	66	71
above activity threshold level for age	level 4-5	39	53	30	60	65
	<u>Men 55-74</u>					
no activity at moderate or vigorous level in past 4 weeks	level 0	12	40	16	44	52
below activity threshold for age	level 1-2	20	62	24	66	71
above activity threshold level for age	level 3-5	34	57	31	60	65

TABLE for Figures 5.1.4, 5.1.5, 5.1.6 continued

TABLE for figures 5.1.4, 5.1.5, 5.1.6 continued						
		-----self assessments-----				
	<u>WOMEN</u>	active		fit		exercise enough to keep fit
		very	fairly	very	fairly	
	<u>Women</u> <u>16-34</u>	2	33	7	48	29
no activity at moderate or vigorous level in past 4 weeks	level 0	8	57	8	63	34
below activity threshold for age	level 1-3	18	67	9	66	56
above activity threshold level for age	level 4-5					

	<u>Women 35-54</u>					
no activity at moderate or vigorous level in past 4 weeks	level 0	8	51	5	55	36
below activity threshold for age	level 1-2	11	61	14	66	41
above activity threshold level for age	level 3-5	21	60	16	70	51

	<u>Women 55-74</u>					
no activity at moderate or vigorous level in past 4 weeks	level 0	11	52	14	61	58
below activity threshold for age	level 1-2	21	61	30	60	64
above activity threshold level for age	level 3-5	37	52	33	60	79

TABLE for Figure 5.2.1

aged 16-69		men	women
scale of importance		%	%
very important	1	55	54
	2	28	26
	3	14	16
	4	2	2
not important at all	5	1	2
sample size		1707	1948

TABLE for Figure 5 2 2
BELIEF IN VALUE OF REGULAR EXERCISE

age groups - men	% scoring 'importance' 1 or 2	sample size
16-34	86	598
35-54	84	705
55-74	75	403

age groups - women		
16-34	85	730
35-54	80	706
55-74	74	510

TABLE for Figure 6 2 1
SELF ASSESSMENTS OF HEALTH FOR MEN AND WOMEN

	men	women
	%	%
excellent	14 1	11 4
good	50 7	54 1
fair	30 3	31 1
poor	4 9	3 4
TOTAL	100	100
sample size	1823	2089

TABLE for Figure 6 2 2		
	men	women
	%	%
>26	6 2	5 9
25-26	18 6	14 6
23-24	31 7	27
21-22	23 8	24 2
19-20	11	15
17-18	4 4	7 2
<16	2 2	4 4

TABLE for Figure 6.2.3

	<u>Men 16-34</u>	%	%
no activity at moderate or vigorous level in past 4 weeks	level 0	7	58
below activity threshold for age	level 1-4	11	54
above activity threshold level for age	level 5	20	60
	<u>Men 35-54</u>		
no activity at moderate or vigorous level in past 4 weeks	level 0	7	46
below activity threshold for age	level 1-3	13	50
above activity threshold level for age	level 4-5	28	52
	<u>Men 55-74</u>		
no activity at moderate or vigorous level in past 4 weeks	level 0	7	33
below activity threshold for age	level 1-2	14	51
above activity threshold level for age	level 3-5	19	55
	<u>Women 16-34</u>		
no activity at moderate or vigorous level in past 4 weeks	level 0	12	43
below activity threshold for age	level 1-3	8	53
above activity threshold level for age	level 4-5	13	65
	<u>Women 35-54</u>		
no activity at moderate or vigorous level in past 4 weeks	level 0	13	45
below activity threshold for age	level 1-2	11	60
above activity threshold level for age	level 3-5	15	57

	Women 55-74		
no activity at moderate or vigorous level in past 4 weeks	level 0	6	38
below activity threshold for age	level 1-2	13	59
above activity threshold level for age	level 3-5	20	50

SN 3303

SURVEY OF ACTIVITY AND HEALTH

INTERVIEWER'S INSTRUCTIONS

Introduction

There is growing evidence from around the world that people who have been physically active during their lives are likely to have built up protection against some diseases, in particular heart disease, and are able to continue to be active for longer as they get older

Little information is available on the levels of, and relationship between, fitness, general health, exercise and other physical activity of people in this country except for selected groups such as athletes. To remedy this major gap in knowledge about the health of the population, a research programme was prepared to develop:

- 1) a composite battery of fitness measurements,
- and 11) a survey interview

which could be applied to a large national sample of the total population. The survey will provide information on the current levels of activity and fitness, which can be used as a baseline against which to measure change and to identify those sub-sections of the population most in need of health promoting exercise programmes

Five field tests were carried out between May 1987 and March 1988 to develop methodology which was then used in a large scale pilot study carried out from September to December 1988

The most important factor in the design of the methodology was to maximise co-operation and minimise the number of people screened out of the fitness measurements for health reasons while still retaining scientific credibility and making the experience enjoyable and safe for the informants

The development of the questionnaire continued after the 1988 pilot study and a smaller interview only field test was conducted in 1989 which resulted in the final questionnaire to be used in the 1990 national survey

Overall design

The overall design comprises an interview in the home followed, usually a day or so later, by a physical appraisal at a central location specially set up for the survey. The physical appraisal is "high tech" and uses a treadmill to measure cardio-vascular fitness along with various other measures of joint flexibility, muscle strength, height, weight and blood pressure

A modified design is used for people aged 75 and over which comprises a home-based physical appraisal

The use of a central location rather than a home-based test for the under 75's was one of the major elements of the design which came out of the first field tests. In the first test 24 of 26 people opted to go to a centre rather than have the appraisal at home

Respondents expressed three main factors which influenced their choice of location, these were:

- i) The feeling that the measurements would be more scientific and accurate if done in a centre.
- ii) The privacy of the centre, not so much in terms of embarrassment but more to be removed from the disturbances and distractions of a home environment.
- iii) Curiosity as to what the external measurement centre would be like.

We are using 3 portakabins as our measurement centres, each covering roughly a third of the country.

A sample of 20 constituencies was selected initially, followed by a second phase of 10 constituencies. Each portakabin remains in a constituency for 3 to 4 weeks before moving to the next area. Interviewing starts two weeks before the arrival of the portakabin. The testing is carried out by specially recruited teams of physical assessors who have undergone an extensive training course.

Introducing the survey

An advance letter (further copies are in your supplies) has been sent to each selected address telling people about the survey.

The survey should be presented as building up a picture of the lifestyle of adults in Great Britain, particularly how active people are now (and have been in the past) and how fit and healthy they are. You can point out that in all aspects of life nowadays we have machines to do most of the heavy work, both in the home and at work, so people tend to be less physically active than they used to be.

If we are to help people improve their health and the quality of their lives, it is important that we learn more about the lifestyle of all kinds of people to relate this to their fitness and health. It is particularly important that the less fit and active people are included in the survey to give us an accurate picture of the population as a whole.

Many millions of pounds are spent on caring for people in poor health and treating those who become ill, particularly from heart attacks or other circulation or respiration problems. Improved health education about diet, exercise and so on could help to reduce that financial burden and considerably improve the quality of life, especially as people get older. This survey is part of the research programme to gather the information which is needed to explore these relationships and to provide the basis of health education programmes.

The sponsors

As this survey is concerned with both health and activity, including participation in exercise and sport, it is jointly funded by:

The Health Education Authority - This is the organisation responsible for major government health education programmes, including the 'Look After Your Heart' campaign.

The Sports Council - This organisation is concerned with widening participation in exercise and sport among the general population as well as the elite side of sport e.g. Olympic and national teams.

The Department of Health

A charitable company - Activity and Health Research - has been set up to run the survey supported by a scientific advisory board which comprises experts from all areas of the study including a representative from the Social Survey Division of OPCS.

The company is based in three universities which each had a special role to contribute to the development of the project. The questionnaire and overall survey design were developed at the London School of Hygiene. Nottingham University Medical Centre developed the fitness measurements for use in the appraisal with the exception of the exercise test to measure the cardio-respiratory fitness which was developed at Birmingham. The main role of Birmingham University was to evolve a field work operations strategy for the physical appraisal and to be responsible for this side of the national survey.

The fieldwork team

In all our preparatory fieldwork the interviewing has been carried out by Social Survey interviewers and the physical appraisal by specially trained assessors who generally have a sports science or physiological background. This is also the case for the main survey.

Each of the three portakabins has a team of seven assessors attached to it, three of whom work the day shift, three work the evening shift and the seventh takes the role of driver on a rotating basis. There is a coordinator who books the appointments, liaises between interviewers and assessors and does all the administrative work of the unit.

The assessors and coordinator have been specially recruited for the survey and will travel around with the portakabin.

In each area a local doctor or group of doctors have been asked to provide the medical cover needed and to scrutinise the screening questionnaires.

Seven interviewers will work in each area, interviewing and making appointments for the physical appraisals. In a few cases an interviewer may cover more than one area but as the sample is widely spread this will not happen often.

From your point of view one of the major differences between this survey and other surveys is the fact that you are very much part of a team. In order that the work at the unit runs smoothly you need to maintain close contact with the coordinator throughout the fieldwork period in your area.

On the first Monday that the portakabin is on site you will have the opportunity to visit the unit, meet the assessors and coordinator and have a go at the various tests, in particular a walk on the treadmill and trying on the mouthpiece, so you can tell respondents how simple everything is.

The fieldwork strategy

The sample is of adults aged 16 years and over. There is no upper age limit but the fieldwork strategy varies for people aged 60 or more.

the data collection operation consists of three parts -

- 1) The main interview
- 2) The screening questionnaire
- 3) The physical appraisal

The standard approach is as follows:-

- 1) One adult is selected using the sampling procedure (described later) at a pre-selected address.
- 2) The main interview is completed in the respondent's home. This takes between one hour and an hour and a half.
- 3) The physical appraisal is introduced at the end of the interview and the screening questionnaire is completed.
- 4) According to the outcome of the screening questionnaire an appointment for the physical appraisal is arranged.
- 5) The informant is collected by the unit driver who takes him/her to the centre. The visit for the informant takes about one and three quarter hours. The informant is returned home by the unit driver. Each centre will have a car marked clearly with our logo and the drivers will carry an identity card. People aged 75 or more will be asked to take part in a home appraisal. In some cases women aged 60-74 will be offered a home appraisal (see later).

The Centre

This is a "portakabin" type building and will be moved from one fieldwork area to another as the fieldwork progresses. The dates and address and phone number of the portakabins will be given out at your briefing. The portakabin will be sited at a local hospital so that emergency cover is available in the very remote possibility that it is needed. The sites have been selected with the spread of the sample in mind but clearly in some areas they may be more convenient for one part of the sample than another.

Two teams of physical assessors will alternate at the centre which will be open from 9.30 am to 10.30 pm Monday to Friday and on the second Saturday at the site. In addition to the rooms for testing there is a small office where the appointment calendar, spare documents and phone are located. A field coordinator will be on site from 9.30 to 5.00 each day to book in and confirm appointments, collect the screening questionnaires and deliver those which need to be referred to the doctors. All screening questionnaires have to be at the centre prior to the assessment taking place since the assessors are not allowed to carry out any measurements before seeing them. All other relevant documents should be returned to the portakabins. Do not send documents to OPCS.

The centre will arrive on site on the Friday of the first week of interviewing in the area. Monday will be spent setting up the equipment and it will be open for appointments from the Tuesday. Normally it will spend three weeks in each area (closing on the final Thursday) with the exception of the first area visited by each unit and the areas visited over the Easter and summer periods when the units will be on site for four weeks.

Making appointments for the appraisal

In general you should introduce the appraisal at the end of the main questionnaire before you complete the screening questionnaire. Obviously in some cases you may want to mention it earlier - we leave this to your discretion. It can be quite a useful 'selling' point for some informants. They are getting a £150 fitness appraisal for free. Similarly, it is up to you to decide how much or little you should say about the content of the appraisal. A fairly general description just listing the tests was found to be adequate. On the whole the interviewers in the earlier field tests found that the idea of the treadmill (moving walkway) was a plus rather than a minus but they were divided on whether to mention that respondents have to breathe through a mouthpiece. You can

also mention the fact that there is a 10 minute feedback session for the informant at the end of the appraisal, which has been found generally to be considered a bonus. Introduce the appraisal as positively as possible. An example introduction is in your training tape. If the respondent agrees to take part in the appraisal, the next stage is to complete the screening questionnaire. This will give you the "screening category" of the respondent so that you know how to proceed with booking an appointment.

If the informant refuses to take part in the appraisal please try to complete the screening questionnaire so that we know which category he/she would have been, and have the maximum information possible about non-respondents.

<u>Category</u>	<u>Procedure</u>
5 & 4	If the informant is aged 75 or more <u>or</u> cannot walk unaided, the appraisal takes place at home at a subsequent visit, carried out by one of the assessment team who will accompany the interviewer
3	If the informant is aged 60 to 74 the appraisal will be at the centre, but there must be a doctor present so the appointment time must be set for when the doctors are at the centre. Your rota (see below) will tell you the time when the doctor is available. Make two provisional appointments since other interviewers may also be arranging appraisals that need the doctor present
X	If the informant is a woman aged 60 to 74 and she refuses to come to the centre then you may offer her a home appraisal. This is the <u>only</u> group from whom the home appraisal is an alternative to visiting the centre and must be considered as 'second best' since we will not be able to carry out the full test - in particular the treadmill measures.
2	If the informant is aged less than 60 and has a negative screening factor, the screening questionnaire has to be returned to the centre for the doctor to check whether he needs to be present at the appraisal before you can make a definite appointment. In most cases we hope to have a 24 hour turn around on these questionnaires. You can either give the informant two provisional appointments one when the doctor will be there and one allocated to you on the rota or make one provisional appointment but make sure the informant understands it is provisional and may be changed. You can confirm with the informant when the doctors has given his decision.
1	If the informant is aged under 60 and there are no negative screening factors, then the appraisal can be booked at a time allocated to you on the rota, or make a provisional appointment in an 'open' slot

With this design your task is to maximise the willingness of the respondents to take part, given that the doctor or assessor will indicate if it is not possible for the person to take part in some or all of the measurements. Very nearly everyone will be able to take part in at least some of the appraisal

You need to strike a balance between stressing the importance of respondents keeping to their booked appointment and the importance of not dropping out altogether because a crisis means they can't make that time. We have tried to express this on the appointment slip so you will need to back this up verbally. This is particularly true for women in the 25 to 45 age range who, in the pilot study, were most likely to break appointments

When the respondent has agreed to come to the appraisal and you have arranged a suitable time, you need to give a few instructions as follows

- 1) Wear loose clothing which comes apart in the middle - a separate top and trousers/skirt are preferable - a track suit would be ideal. Use your discretion on whether to mention track suits. If possible, underwear should also come apart in the middle i.e. not full length slips, all in one corsets etc.

- ii) No heavy meals within 4 hours but they can eat something
No smoking/coffee once they've been collected

It's probably best if you do these as suggestions rather than formal instructions.
We don't want to put people off!

Appointment slips

We have supplied you with NCR pads of appointment slips. When you make a definite appointment complete the slip and leave the top copy with the informant. You keep one copy and pass the other two to the coordinator who gives one to the appropriate driver. Please note that the time given to the informant should be the time the driver will arrive to collect them not the appointment time. You may need to estimate the length of time it will take to drive to the portakabin initially because you won't necessarily have visited the site.

People will sometimes offer to make their own way to the portakabin. Please try to arrange for them to be collected (it does not necessarily have to be from their own home) unless the arrangements would then be totally inconvenient to the informant.

Respondents who are booked into doctor slots need to arrive at the portakabin 15 minutes before their appointment time so that the doctor can see them first. Please remember this when you arrange the time for collection.

The appointment slip should also contain any useful information about finding difficult addresses. Remember that you are used to finding specific addresses, the drivers are not and any extra information will be very helpful.

Booking appointments

Unlike most other surveys you work on, the fieldwork design of this study is based on teamwork. You must remember that in each area seven interviewers are arranging appointments for the team at the portakabin who can only see one respondent at a time, so you need to keep in close contact with the coordinator.

The length of stay of the unit and the appointment times through the day have been designed to make the fieldwork as cost effective as possible. We have allowed about 150 appointment slots for each area (with the possibility of some extra slots) so if we are to achieve a good response rate the vast majority of slots need to be filled. This means that as soon as the unit is operational, appointments need to start, so initial slots must be booked first.

In order to achieve this, interviewing starts two weeks before the unit arrives in the area so that appraisals can be booked in advance. In general, appraisals should be booked as close to the interview as possible so that respondents don't forget or change their minds. At the beginning of the fieldwork you should offer appointments for the first three days of appraisals only. If the informant finds it impossible to make any of these dates you should offer an appointment within the next three days and so on.

This procedure is very important because otherwise there is a build up of appraisals at the end of the unit's visit and consequent loss of response because no suitable slots are available.

Screening questionnaire

You also need to liaise closely with the coordinator for the passing of screening questionnaires that need to be seen by a doctor. In order to safeguard all respondents who agree to take part in the appraisal the range of negative indicators has to be quite large. From our previous experience we have found that on average one in three screening questionnaires needed to be seen by the doctor. Don't worry if you have a lot less or more than this - it's only an average figure.

Of course the number of people who actually require medical supervision during the appraisal is very small in comparison to the number of screening questionnaires seen by the doctor. In some cases a standard appraisal can be conducted and in others the respondent has to omit parts of the appraisal (eg the treadmill) but they do not require medical supervision.

The first two weeks

Since interviewing starts two weeks before the portakabin arrives, the coordinator will not be available to book appointments and pass on screening questionnaires. During these first two weeks one interviewer acts as 'liaison' interviewer. She has the appointment calendar so you must confirm all your appointments with her during those first two weeks. It is probably most convenient to contact the liaison interviewer first thing in the morning. Please remember that she has a full quota as well.

It is very important to keep in regular contact with the liaison interviewer.

In the second week the liaison interviewer will arrange to see the doctor to get the screening questionnaires checked. So you either need to pass over your screening questionnaires with negative factors before this meeting or arrange to meet the liaison interviewer at the time she is meeting the doctor. The liaison interviewer will let you know the outcome as soon as possible.

Before the portakabin arrives the coordinator is also in contact with the liaison interviewer. They can then arrange to meet either on the Friday or Monday before the appraisals start on the Tuesday. At this meeting the liaison interviewer passes over the calendar and all the screening questionnaires both checked and unchecked. For the rest of the fieldwork all booking appointments and handling of screening questionnaires should be done through the coordinator.

The third week

First thing Monday morning (3rd week of interviewing, first week of portakabin in operation) you should ring the unit to let the coordinator know at what time you'll be visiting the portakabin that day. It is very important to make contact on the Monday so that the coordinator knows how you are doing.

You'll need the portable phone number for this call as the fixed line (if we have one) will not be connected by then

Some time on Monday after 11 00 each of you should visit portakabin to

- i) meet coordinator and assessors,
- ii) have a go on the treadmill wearing mouthpiece and any other equipment (but do not do a proper test),
- iii) check any screening outcomes not yet know,
- iv) confirm all existing appointments with coordinator and book in new ones.

During this week a trainer will visit the portakabin and pre-check 2 questionnaires from each interviewer.

Liaising with the coordinator

Once a day, interviewers need to book in appointments they've made and bring screening questionnaires in. The coordinator should, wherever possible, deliver all screening questionnaires to the doctor on the same day, so that the decision is available first thing the next morning at the latest. You will be informed of outcome when you next ring/visit the portakabin.

Interviewers, coordinators and doctors should aim for 24 hour turn around on screening questionnaires.

Each of you will have a folder at the portakabin where the notes will be left by the coordinator and you can leave screening questionnaires if the coordinator is not available. This will be useful if you are passing the portakabin when the coordinator has finished work.

If you need to contact someone urgently and can't get through to the portakabin you should ring Birmingham where there will be an answerphone.

The portakabin may be using a portable phone - if it does remember it is expensive to ring into as well as to ring out from, so keep phone calls down to the basic information passing.

The rota

We have designed a rota for physical appraisals so that each interviewer knows when she can make definite appointments for informants who have no problems. The sessions are 2 hours long and start at 9:30 am and finish at 10:30 pm. The centre will be almost continuously open so you will find that on each day of the fieldwork you have been allocated morning, afternoon or evening slots in order to suit all informants. During the course of the week some of the slots will be marked as having a doctor available and those are the slots you should use for people aged 60-74 and those who need a doctor present. These sessions have not been allocated per interviewer, so you will need to be more flexible with suggested times for informants who need to have the doctor present. The rota will be given out at the briefing.

Any designated slots not confirmed by 10.00 am on the previous day are open to all interviewers (including the one whose slot it was) so these will need to be confirmed with the coordinator before confirming with the respondent. So it is better if all interviewers can ring in each morning. Interviewers can ring from informant's home for immediate response but need to offer to pay for the cost of the phone call (beware the high cost of the mobile phone when phoning in). This can only be done for informants who have no negative screening factors. Unbooked doctor slots will also be opened up for general use.

Home appraisals

People aged 75 or more, those whose outdoor mobility is impaired and women aged 60 to 74 who have refused to attend the centre will have a home appraisal. This is a shortened version of the centre appraisal excluding tests which require large pieces of equipment and medical supervision. These appointments can be booked in the same way as appointments for people with no negative screening factors. You should return to the respondent's home with an assessor at the appointment time and act as the recorder while the appraisal is carried out. The assessors will not be able to leave the centre till the actual time of the appointment so the time given to the informant should allow the assessor travelling time. Home appraisals take about an hour. You will need to amend the appointment slip for home appraisals. Screening questionnaires still need to be returned to the portakabin before the home appraisal so that the data can be transferred to the appraisal form, and the assessor sees it before he/she sets off.

It should be noted that the age divide for centre or home appraisals is 75, while the age divide for the shortened questionnaire is 70. This is because we want as many people as possible to take part in a centre appraisal because it gives us much more data but it was felt that the longer main questionnaire would be too difficult for many 70 to 74 year olds

The sample

The sample is of adults aged 16 and over in England. We selected 6000 addresses from 30 constituencies. The fieldwork is spread over 10 months from February 1990 to November 1990.

The sample is drawn from the Electoral Registrar (not P.A.F.) which means that there should be fewer ineligible addresses on each quota. Please note, however, that this is an address sample i.e. the name on your address list is simply there as a guide and you should interview whoever currently lives at the address.

The address list

The address list has a box for you to tick once you have made a selection and columns to note appointments for interview and appraisal. Please tick the relevant box once each of these is completed. The final columns are for the coordinators use, (they have copies of the address list)

Selecting a respondent

At each address you need to select one adult at random using a set procedure. First you establish whether or not there is more than one household at the address. If there is more than one use the multi-household procedure (see below).

Having established the household at the address to be included, you need to list all adult members of that household on the selection list. You may list them in any order and using any form of identification (wife, son, etc), but having done so you then need to number them (in the person no. column) in a fixed order starting with males in descending order of age followed by females in descending order of age.

Then write the total number of adults aged 16 and over in the box at the bottom of the household list. That number will correspond with the highest digit you used to number the adults in the household.

You then need to use the selection table to select the person to interview. Find the column with the number of people in the household and the figure below is the number of the person you should interview. In the example shown overleaf, there were five adults in the household and, by chance, the third person was chosen using the instructions above. This will not always be the case, selection sheets vary so that we randomise the selection procedure.

The address needs to be postally correct since the administrator at the centre will be sending a thank you letter after the physical appraisal. It would also be useful at this stage if you could write in the selected person's name on the appropriate line. If this is not appropriate you may complete this at the end of the interview.

Multihousehold addresses

The procedure of selecting a household is identical to that for selecting the person from the household. List households and number them either in flat number order or clockwise from the lowest floor in the building. Use the selection table as described above.

Calls and outcome

You should record your calls and the outcome on the reverse of the selection sheet. You will note that Part C is for the coordinator to complete as you will not know the final outcome of the appraisal. (Part D should be completed at the end of the interview, this is explained at the end of the questionnaire section)



SELECTION, CALLS AND OUTCOME SHEET

SIDE 1: SELECTION

SIDE 2: CALLS AND OUTCOME

SURVEY OF ACTIVITY AND HEALTH

ADDRESS

4, The Avenue
Newtown
NE1 3PQ

Unit Area Serial no.

1	2	4	1	0	4
---	---	---	---	---	---

Interviewer No.

--	--	--	--

SELECTION PROCEDURE

1. List all people in household aged 16 and over and record sex and age
2. Number males in descending order of age followed by females in descending order of age
3. Use selection table below to choose person number for interview
4. Record full name of selected person

(1.a) 'Name'	(1.b) Sex	(1.c) Age	(2) Person Number	(3) Ring for interview	(4) Full name of selected person
Wife	F	45	4	1	
Husband	M	50	1	1	
Son	M	21	2	1	
Daughter	F	18	5	1	
Mother	F	72	3	①	Gladys Rose Lawrence
				1	
				1	
				1	
				1	
				1	

Total number of people aged 16 and over

5

SELECTION TABLE

If the total number is:	1	2	3	4	5	6	7	8	9	10+
Selection number is:	1	1	2	4	3	5	7	2	6	10

MULTIHOUSEHOLD ADDRESSES

1. Identify households and number from: left to right
front to back
bottom to top
2. Total no. of households
3. Select one household using selection table above

Household	No.	Household	No.

Serial numbers

We are using a 6 digit serial number The first digit refers to the unit number (1, 2 or 3), the second and third refer to the area and the last three are the serial number for the respondent

DON'T FORGET TO PUT THE SERIAL NUMBER ON EVERY DOCUMENT

The documents

There are a lot of documents to be used for this survey. For each address you will require:

- Respondent Selection and Outcome Sheet
- Main Questionnaire
- Screening Questionnaire
- Explanation Leaflet

In addition to these documents you will also need:

- The address list and map
- Copies of the advance letter
- The activities booklet
- Show cards
- Rota for appointments
- The appointment slip pad
- Spare sheet for page 7
- Questionnaires and show cards for people aged 70 and over
- Women's self-completion questionnaire
- Interviewer instructions

Once each interview is completed all documents referring to that respondent should be tagged and taken to the portakabin Please do not send documents to OPCS.

The main questionnaire

The main questionnaire divides into sections as follows:

- Home activities
- Walking and cycling
- Recreational activities
- Employment
- Attitudes to activity and health and psychological factors.
- Diet
- Alcoholic drinks
- Smoking
- Health status
- Classification

We have used different coloured pages to help you find your way about the questionnaire. Before you begin the interview please enter the respondent's serial number, your interviewer number, the date and the time started.

Home activities

This section covers housework, gardening and DIY. Starting with these topics should give you a good lead into the interview with questions everyone can answer.

You need to know for this and other sections the day and date of one year ago, four weeks ago and one week ago. You will find a marked calendar in your briefing pack.

- Q1c Requires show card 1
We are interested in any of the types of heavy housework shown on the card, or other similar housework. We are not interested in the individual activities. We do not ask about lighter housework as it is much less relevant to people's total level of activity.

If the respondent has done none of this sort of housework in the past 4 weeks then go to Q.2.

In this and any subsequent questions where double digit boxes are used please write in leading zeros.
- Q1e This question will overlap with part d), but we have included it to enable us to compare data relating to the "last week" with data relating to "the last 4 weeks" to test the stability of information over the whole sample. This repeat will be found in all the activity questions.
- Q1f The most recent day does not have to be in the last week but does have to be in the last 4 weeks. We need the total time for the day and this can come from one or more occasions on that day. The wording stresses the importance of recording the actual time spent on heavy housework. Informants have been rather over enthusiastic in their estimates in our earlier fieldwork.

In this and the questions on gardening, DIY, childcare and care of the disabled, DO NOT INCLUDE OCCUPATIONAL WORK.

Q2 and Q3 are identical questions covering work in the garden and DIY type work in the house. They differ from Q1 in that we are asking about both "heavy" work and "lighter" work during the past year and past 4 weeks.

- Q2 Requires show card 2 and Q3 requires show card 3
The cards give examples of heavy manual work and lighter work. We are not interested in individual items just the overall times spent doing these or similar types of work in each category

The work can have been done in someone else's house or garden or at an allotment but work done professionally as a gardener or builder etc should be excluded
- Q2b) If heavy manual work only ask part c) (and d-f if they apply)
Q3b) If lighter work only ask part g (and h-j if they apply)
If both, ask all parts
If none, go to the next question
- Q2c-j)
Q3c-j) The instructions for Q1d-f apply.

Walking

For each separate activity we obtain details of the frequency and duration of participation during the past 4 weeks. Walking, however, is a very frequent activity which often holds no particular relevance for the informant and so people find this activity difficult to recall accurately. For this reason we have divided walking into three groups 2 miles or more, between 1 and 2 miles, shorter walks.

- Q4 Refers to walks of 2 miles or more These are long walks We describe them as being at least 40 minutes of continuous walking This excludes "being on your feet" for 40 minutes or more eg when shopping
- Q4d If the informant gives a time of less than 40 minutes check that they are talking about a 2 mile walk.

Remember to use leading zeros where necessary
- Q5a This refers to walks of between 1 and 2 miles done in the past week
Note the change of reference period This is to make the question easier for the informant (and you) and to improve the accuracy of recall
These walks are described as lasting 20 to 30 minutes so we don't ask duration at this question
- Q5d This applies to all It also refers to the past week
- Q7 If the informant is physically unable to run use code 3.

Cycling

- Q8 Include any type of cycling here - from racing to going to the shops
The question covers the past year, past 4 weeks and past 1 week
Include exercise bikes.
- Q8f This is trying to assess the effort the informant was using In the analysis this information is required to make assessments of energy expenditure.
- Q9 Since so much of the data refers to the past 4 weeks we need to check for unusual circumstances Make sure you identify whether any change had an effect on the respondent's level of activity and whether this increased or decreased the activity

Sports and exercise activities

This section covers any recreational activities done in the past year, and past four weeks and then asks about activities which have ever been done on a regular basis since school days.

For this section you need the activities booklet. Walking and cycling are not included here because we have already covered them. If informants say hiking etc. check that they have not already told you about this in the walking section.

Q10 This refers to all recreational activities done during the past year. Go through the booklet with the informant and write each sport ever done during the past year at the top of the grid on page 7. Check for any extra activities. Please can you code the sports listed at Q10, using the codes from the list at Q19. You can either do this during the interview or afterwards. If more than 10 sports, use a continuation sheet - don't forget to put the serial number on it and to ring the code at the top of the grid in the questionnaire. If no activities at all in past year ring code 1 and go to Q.14.

Q11 Ask a) and b) for each activity in turn.

This question deals with the frequency of activity over the past year. this is important for seasonal sports. Generally the last year starts "yesterday" but since we are dealing in months at this question we want you to start with the last complete calendar month.

Q11a When you ask about the first activity listed please ask about each month separately working backwards through the year. For second and subsequent activities you ask (aii) which means you don't have to work through all the months every time.

If the informant tells you he does an activity in every month you may ring all the months together.

Q11b This requires one answer per activity - an average taken over all the months in which they did the activity.

Q12 When you have asked about all activities in the last year, ask which were done in the last four weeks.

"Last four weeks" starts from the day before the interview.

Once you have the list of activities check if there were any other sport or exercise activities which the informant did in the last four weeks. If there were, go back and get the past year details for this activity. If no activities at all in last 4 weeks (all code 2 at Q12) ring code 1 and go to Q.14.

Q13 Ask a) to f) for each sport/exercise activity in turn.

Q13c This asks about the most recent occasion. Place particular emphasis on the fact that we want to know the actual time they spent doing the activity. Previous field tests have shown that this is particularly important with activities such as swimming or social dancing where times are likely to include getting changed or sitting down between dances.

Q13d If the time was "about average" go on to part f), if more or less time ask e).

Q 13f This applies to all We want to identify the level of activity at which a person performs, or at least whether the level of activity was sufficient to make the person out of breath or sweaty. The important thing is that it should have been the "effort" they used which made them out of breath or sweaty, not just the fact that the temperature was high. For some activities, such as swimming, people might get out of breath without sweating, only one of the criteria has to be fulfilled for the answer to be "yes"

Q14-Q20 cover past participation in sports and exercise activities.

Q's 14-16 form a general introduction to the section to get the respondent thinking back to school days and on from then and to enable us to assess the levels of exercise people engaged in when they were younger. This is then covered activity by activity in Q's 17-20

The time period from 14 to 24 is very important in the development of lung function - the level of physical activity people are involved in then can determine what they are able to do later in life. This means it is important that we get information about activity during this period of accurately as possible

Q14 To assist you and the informant (the older ones in particular) we have included a check list of "important" life events for this time. This will serve as a memory prompt for the informant and will enable you to prompt ages/years in the detailed questions on activities

The information required at Q14 is the age of the respondent when changes occurred in his life. However some may find they know the year but not their age so it will be up to you to work it out. To help you we suggest writing in the year in which they were 14. For any events where age is known you do not need to write in the year. Start by asking how old the informant was when he left school. (If he is still at school write in still at school and go to Q15) Then establish age of finishing full-time education (if applicable) and starting work. Then find 3 or 4 other events which span the time up to 24. These need not only be personal events but could be changes which happened to others or "news" events which the informant remembers clearly

If the informant is aged less than 24 just stop as appropriate

Q's 15 and 16 are opinion questions. Q16 does not apply to people aged less than 20

Q17-20 These collect details concerning activities done on a regular basis since the informant was aged 14. "Regular" is defined as at least once a week.

Q17) These concern walking and cycling. The questions are identical to
Q18) those used for other sports and exercise activities but these two are not in the activities booklet. Include exercise bikes here.

(b-d) These apply if the respondent has ever walked or cycled on a regular basis since the age of 14. Note that at (d) the period should be from age 14 even though the informant may have started the activity regularly earlier than this.

(e) This applies to respondents who have had 2 or more periods of regular walking/cycling.

- (f) This applies if the respondent no longer walks or cycles on a regular basis, whether or not he had 1 or more periods of regular walking/cycling.
- Q17f & 18f Code one only from card 4.
- Q19 This refers to all sports and exercise activities that the informant has ever done on a regular basis since the age of 14 excluding those done only in school time.
- Do stress the definition of regular.
- Go through the activities booklet again with the informant. The sports/exercise activities are listed in the same order as the booklet but please note that in the booklet several activities (usually of a similar kind) appear on the same page whereas they are separated on the questionnaire.
- Please note that Q19 covers two pages.
- Ring the appropriate code for each activity ever done regularly since the age of 14 and check at the end of the booklet for any other activities. Make sure the informant realises he should include current regular activities.
- Q20a-c Ask for each activity in turn. The questions are printed in full at the top of each column and repeated on the second page.
- Q20a This can be before the age of 14 provided the activity was done out of school.
- Q20d This applies to respondents who had 2 or more periods of doing a particular activity regularly.
- Q20e Applies if the activity is no longer done regularly, regardless of how many periods of regular participation there were.
- One code only from card 4.

Employment

- Q21-22 This information serves two purposes. It will be used to code SEG and social class so we need the usual amount of detail to do that and we will also be using it to grade jobs into different levels of physical activity. Q's 23-27 will be used to help with this. For people of employment age take their current/last job (or the main one if more than one). For retired people take what they consider to be their last main job. Exclude any part time jobs etc taken on after retirement.
- Please will you code occupation and industry.
- Q21d The filter to Q22 refers to full-time students only.
- Q23-31 Apply only to those currently in employment.
- Q23-27 We are interested in the normal daily work activity which people encounter in their jobs at these questions, not isolated incidents of lifting or climbing.

- Q28 This deals with job stress and job satisfaction. This information will be used with that from the other stress questions later in the questionnaire. This question is the first in a series that use the same technique. The informant is shown a card with a 5 point scale on it. Each end of the scale is labelled but the middle numbers are not. The informant has to select a number from 1 to 5 to show how closely his answer is to either of the labelled points.
- You may find you have to remind informants of the process half way through the list of statements.
- Q29 More than one code can be ringed here if someone uses a car and train, for example, on the same journey. But we want the usual method of travel so if this is normally train (for the whole journey) but very occasionally by car then only the code for train should be ringed.

Other activities

- Q32 An approximate daily average is all that is required here. We only want to separate people into broad groups and are not expecting exact precision.
- Q33 If someone regularly climbs stairs at work they should again be capable of giving an approximate daily average.
- Q34 This is an opinion question.
- Q35) Note that the reference period at these questions is "an average week".
Q36) Make sure you stress this change. Do not include occupational work at Q35 or Q36.
- Q37 If no other activities (which is generally the case) ring code 1 and to to Q38.
- Q38 We're trying to assess, in a very general way, the relative importance of people's physical activities to their other leisure time activities. We only need one answer at (a) and there should always be an answer at (b) even if 'don't know' or 'none'.

Attitudes to activity and health

Try to avoid "don't know" answers in this section. Please note that the majority of these questions are opinion questions.

- Q42 It is possible that none of these statements will apply especially if the informant does a lot of sport. Use show card 6 and repeat the question as necessary.
- Q43 You need to ask both parts (if they apply) before you can code the answer.
- Q44 This is an opinion question. Do not query if it disagrees with what they have already told you they do.
- Q45 This is one of a pair of questions looking at what people want out of life and what they think sport will give them. The other question is at Q108. See notes on Q28. There is a don't know code here which is not printed on the card. Use it if the informant really can't make a choice.

Q46 Instructions as for Q28. Make sure you give the respondent time to consider each item before moving onto the next one.

Q47-58 Cover sleep, stress and social support.

Q55 & Q56 The frequency is for all relatives or friends not any one individual.

Diet

Q61 Nan/pitta bread etc., write in white or brown.

Q62 Don't forget to write in the brand of soft margarine or low fat spread.

Q65b Code one only from the answer given. If you are not sure to which group it belongs specify.

Q67 This is milk consumed personally.

Q68 Where different foods are grouped take the total frequency of eating (eg pasta: once a week, rice: twice a week, should be coded more than twice a week).

Q69 Ask for number of cups and amount of sugar for tea and then for coffee.

Alcoholic drinks

Q70 Use show card 11. Drinks are grouped into three types. Ask a) for each type and then b) and c) for each type respondent has drunk in past four weeks. (b) requires show card 12.

(d) We would like you to convert the quantity to "units" of alcohol. A unit is equivalent to a measure of spirits, a glass of wine, or half a pint of beer. The quantity boxes contain the multiplier to remind you.

If less than one unit is drunk per occasion (eg $\frac{1}{2}$ pint beer, $\frac{1}{2}$ glass of wine) code 0 in the units box.

Q72 This is concerned with the frequency of drinking irrespective of the amount.

Q73 This is concerned with the amount drunk.

Q75 & Q76 Apply to everyone.

Q76b Record verbatim and then code 1 or 2 as appropriate.

Smoking

Q77 A "no" at this question ends the smoking section.

Q78b & c If the answer is less than one per day at both parts, Q79 applies but parts d) and e) of Q78 must be completed first.

Q79-82 Throughout this section "regularly" means a cigarette or cigar or a bowl of pipe tobacco a day (whichever applies) for at least a year.

- Q79d This is an opinion question
- Q80 Applies to all current smokers and ex-regular smokers

Height and weight

- Q84a) Answers in either kilos or stones and pounds, (but doesn't have to be the same units at both questions)
- Q85a)
- Q84b) The age to be coded here is the age the person was most recently at their lightest/heaviest weight.
- Q85b)
- Q86 See instruction for Q28

Health status

This section looks quite long but contains a number of standard sets of questions which are each determined by an introductory filter question. The majority of people should answer no to at least some of the filter questions.

- Q88 Go through list first then ask b and c where they apply.
- Q91 If never had any pain in chest go to Q93
- Q91g Let the informant indicate position on himself, you should then be able to code from the marked areas on the diagram. Code all that apply.
- Q94)
- Q95) a) and b) apply to all
- Q94c)
- Q95c) Applies if a) or b) is answered yes
- Q96b The list of joints is long so we have supplied a diagram. Ring the appropriate codes in the two columns of the grid (left column for left joints, and right for right')
- Q97a If more than 3 mentioned, obtain details for the 3 most serious
- Q97b This requires a one or two word answer, eg bad back, tennis elbow.
- Q97f Medical treatment includes treatment from doctor, nurse, hospital, physiotherapist etc
- Q98-104 WOMEN ONLY THESE QUESTIONS SHOULD BE OFFERED TO THE INFORMANT FOR SELF COMPLETION
- Q98 Treat as opinion question if they query it
- Q103b We require the total time, include all separate periods of taking it and exclude any gaps (eg pregnancies)
- Q104a If they don't know what HRT is code no
- Q107 Use show card 15 and repeat the question as necessary Don't forget part (b)

- Q108 See Q45.
Q109/111 We are interested in the hereditary nature of some diseases so it is important that these questions are asked about the natural parents.
Q109c) Try to get more than "old age". You can use the prompt "What was
Q111c) on the death certificate?".

Classification

- Q112 The household grid includes the respondent. Full time work is more than 30 hours, anything less than that - include as part time.
Q112b We already have occupation details for respondent.
Q113 Please code occupation and industry. Take current/last job if he/she is of working age (take the main if more than one job). If retired, take what informant considers was his/her last main job.
Q116 Treat this as an opinion question.
Q117 This can be a car or motorcycle licence, but must be a full licence.
Q118 & 120 This is regular use, not ownership.

Don't forget to write in the time completed.

National Health Service Number

Once the interview is completed introduce the appraisal and complete the screening questionnaire. We would then like you to ask the informant for two more pieces of information; the name and address of their GP and their National Health Service Number. You will also need to record their full name if you have not done so already.

We are informing the local family practitioner committees that the survey is taking place in their area so as a matter of courtesy we want to inform the local GPs that their patient has taken part in the survey. Respondents who attend the appraisal will also be asked for written consent to inform their GP of their blood pressure reading. At this stage, however, we would rather you just mentioned the courtesy letter. Use the possibility that we might wish to pass on any results which the GP might wish to investigate further as a secondary explanation - you will need to say that respondents will be asked for written consent at the unit if you do mention this aspect.

If the address is not easily available ask the informant to bring it to the appraisal.

The National Health Service Number will ensure that when we write to the GP we identify the patient correctly. Once again if it is not easily available ask the informant to bring it to the appraisal.

PLEASE RECORD NHS NUMBER ON THE REVERSE OF THE SELECTION SHEET. IT MUST NOT BE WRITTEN ON THE QUESTIONNAIRE AS IT UNIQUELY IDENTIFIES THE RESPONDENT. If you do not record the NHS number or the doctor's name and address note the reason so the coordinator knows whether it was refused or they should be bringing it to the appraisal.

For your information only

We are intending to conduct two follow up studies once the main fieldwork is over. Please do not mention these to the informant at this stage as it is much more important that they agree to take part in the appraisal.

At the end of the appraisal we will ask if we can come back to interview them in a few years' time to see if people's lifestyles are changing. We also hope to carry out further appraisals.

A further research study will involve tagging informant's NHS records at Southport, recording cause of death and relating it to fitness and activity levels. This will, of course, be a very long term project. This is another reason why it would be useful to have the respondent's NHS number, although we can still find the record with full name, exact date of birth and address.

As we said earlier, please do NOT mention these projects at this stage. Your job is to get the respondent to take part in the appraisal.

The Screening Questionnaire (Buff)

The use and handling of this has been discussed in much detail earlier.

The questions are all straightforward, but some are repeats of the main questionnaire. You need to explain that we have to have a comprehensive check list for the people at the centre and so you have to run through a few points again. There are also some questions to which the answer will be obvious, but you must ask them anyway. Treat either of these as 'check' questions if you wish.

The first page of the screening questionnaire collects information which will be useful to the doctors and assessors but are not actual screening questions. These are all in the middle two pages. Q6 gives outdoor mobility and Q's 7 to 23 determine negative factors. A code 1 anywhere in these questions means that the informant has a negative factor and if he is under 60 the doctor needs to see the screening questionnaire. (People aged 60 to 74 are automatically booked into doctor slots so the doctor does not need to see their screening questionnaire before the appointment.)

- Q14 Although there is no SPECIFY prompt here, could you establish which joints are affected.
- Q15-21 Please give full details here so that where possible the doctor can make a decision without having to see the patient.
- Q20 This is a very important question for screening purposes. Please ensure you have the correct details and ask to see the bottle if necessary.

Cigarette smoking and weight are the two extra considerations.

- Q22 Answers either in cms and kilos or feet and stones. The graph is calibrated in feet and stones so you need to convert any answers you are given in cms and kilos using the chart below.

Conversion Chart

Cms	152	157	162	167	172	178	183					
Ft Ins	5'0"	5'2"	5'4"	5'6"	5'8"	5'10"	6'0"					
Kilos	45	51	57	63	70	76	82	89	95	102	108	114
Stones	7	8	9	10	11	12	13	14	15	16	17	18

Once this questionnaire is completed, you need to decide which category the informant comes in. Ring the appropriate code on the back page and take action as described in the fieldwork strategy section.

Remember that if the informant is aged less than 60 and has negative screening factors, the questionnaire then needs to be returned to the centre as soon as possible for the doctor to assess whether he needs to be present at the appraisal.

Procedure for people aged 70 and over

Respondents who are aged 70 and over are given a modified version of the main interview. The sections are all reduced with some of the more complex questions removed. A few extra questions relating to disability have been added.

Although the questionnaire used is different, respondents aged 70 to 74 are still asked to go to the centre. In the case of women only if they refuse they can be offered a home appraisal, but as we have said earlier this is a second best.

Respondents who are aged 75 and over are asked to take part in a home appraisal. We had originally intended that all people up to the age of 74 would also be asked the main questionnaire, but it was thought it would make for a too long and burdensome interview for many 70-74 year olds, which might reduce our response rate to the appraisal. However response to the appraisal in this age group and in the 60 to 69's among the men has been so good that we want to give this older age group (70-74) the chance to attend the centre and do the full test if possible.

The questionnaire for people aged 70 and over (green)

The questionnaire is considerably shorter than the main version. It should take about three-quarters of an hour, but it could, of course, take considerably longer.

Many of the questions are identical to those used on the main questionnaire and the preceding notes apply to them. There is a separate set of cards for use with the 70+ questionnaire

Activity section

This starts with some extra questions on self care and disability

- Q1 If the respondent does not do any or some of these activities ask the question hypothetically.
- Q2 & Q3 Treat as opinion questions.
- Q4 Main Q1.
- Q5/6 These differ from the main questionnaire in two respects -
- 1) We are not using show cards.
 - 11) We are not dividing the work into light and heavy All types of gardening or DIY can be included (with the exception of any occupational work)
- All others instructions apply.
- Q7 Main Q9
- Q8-9 These check on walking ability and Q9 acts as a filter for Q's 10-12
- Q10-13 Main Q4-7
- Q14-16 Main Q10, 12, 13 As cycling is not dealt with separately you may need to record it at Q14

The question from the main questionnaire on lifetime events has been omitted as we felt it gave too much opportunity for anecdotes.

- Q17 Is a combination of main Q15/16
- Q18-20 Are equivalent to Q17, 19, 20 with the following differences -
- 1) We go back to 'when you left school' not age 14
 - 11) The activities have to have been done for AT LEAST 2 YEARS
This should reduce the number of activities considerably
 - 111) We only ask two questions about each activity
- Q22 Take what informant considers was his/her main job or most recent main job before retiring.
- Q24-25 Main Q32, 33.

Q26-28 Main Q35-37.
Q29-31 Main Q39-41a.
Q32-34 Main Q47-49.
Q35-41 Main Q52-58.
Q42-50 Main Q59-67.
Q51, 52 Main Q72, 73 modified to allow non drinkers to answer.
Q53 Main Q74.
Q54-57 Main Q77-80.
Q58/59a/b Main Q81/82a/c.

The whole health section is identical to the main questionnaire with the following exceptions. The women's section is considerably shorter and does not have a self completion option.

Q77-79 These are extra questions on falls and balance.

The attitude question from the main questionnaire is omitted (Main Q108).

Q83 This is a reduced version of main Q's 109-111.

Q93(a) Instructions should be go to Q94.

The classification section is identical.

Remember when introducing the appraisal respondents aged 75 or more have a home appraisal.

Administration

Planning of work

Your quota will consist of 28 or 29 addresses. This will mean quite an intensive workload, particularly if you are working on a quota where the portakabin is in the area for 3 weeks rather than 4. Although you will be starting interviewing in the week before the portakabin starts operating, bear in mind that your interviewing will need to be completed several days before the portakabin stops operating (otherwise your informants won't be able to have an appraisal!) So, if you are working 3 days a week on the survey, you will need to deal with a minimum of 3 addresses a day to get through the quota in the field period.

If you are unlucky enough to catch flu or have some domestic crisis which will prevent you working for more than a day, you must let the coordinator and field officer know immediately so that they can provide help to get the quota covered. As you will appreciate, no extensions are possible to the field work in this survey.

Claims

Please claim all work on the survey under S1310, stage 99.

Study time for the survey is 4½ hours to include working through the taped interview.

In addition you may claim 3 hours per quota coding occupation and industry (Q22 and Q113 on the main schedule
Q22 and Q85 on 70+ schedule)

and 2 hours per quota planning, writing up your notebook, completing calls and outcome sheets.

(Although all documents and interviewing schedules will be booked in at the portakabins, you should of course send claim forms as normal to OPCS. The coordinators will be sending weekly summary sheets of serial numbers dealt with to OPCS so that the regions can check work done against claim forms).

Interview outcome

The codes for outcome on the sample selection/outcome sheet should be self-explanatory. You will most often be using code 11 which is the code for interview achieved and informant has agreed to appraisal.

Please note that this interview is not suitable for proxy information to be taken and in cases where the selected person cannot give information in person one of codes 05 to 08 will apply.

However, you may on occasion need to interview through an interpreter, if there is someone in the household who can help the informant. In these cases should ask the following sections of the interview

Physical activity Q1 - 38

Diet Q59 to the end of the interview but omitting
Q98 - Q104 (the women's page)

Screening questionnaire

The section on attitudes to health and fitness, which consists almost entirely of opinion questions should be omitted as opinion questions are notoriously difficult to obtain unbiased answers on through an interpreter. (We appreciate that there are some asterisks questions in other sections of the questionnaire - omitting these

may effect the continuity of the schedule so we suggest you ask these, but do not press too hard for answers if you feel the interpreter and informant are having difficulty with them).

Please make a note on the front of the schedule if you have used an interpreter. When introducing the appraisal you can, of course, suggest that the interpreter may accompany the respondent.

Materials

We are sending you a starter pack of materials which should contain more than enough schedules for the first weeks interviews. Additional materials will be held at the postakabins so you should get additional supplies there (not from OPCS).

Queries: Field Office:	Anne Klepacz	ext. 2158
	Chris Goodger	ext. 2432
Research:	Alison Walker	323 6511
	Janet Lord	323 6511



SURVEY OF ACTIVITY AND HEALTH

SELECTION, CALLS AND OUTCOME SHEET

SIDE 1 SELECTION

SIDE 2 CALLS AND OUTCOME

SN 3303

ADDRESS

Unit Area Serial no.

--	--	--	--	--	--

Interviewer No.

--	--	--	--

SELECTION PROCEDURE

1. List all people in household aged 16 and over and record sex and age
2. Number males in descending order of age followed by females in descending order of age
3. Use selection table below to choose person number for interview
4. Record full name of selected person

(1.a) 'Name'	(1.b) Sex	(1.c) Age	(2) Person Number	(3) Ring for interview	(4) Full name of selected person
				1	
				1	
				1	
				1	
				1	
				1	
				1	
				1	
				1	
				1	

Total number of people aged 16 and over

SELECTION TABLE

If the total number is	1	2	3	4	5	6	7	8	9	10+
Selection number is	1	1	2	2	4	5	3	7	5	8

MULTIHOUSEHOLD ADDRESSES

- 1 Identify households and number from left to right
front to back
bottom to top
2. Total no of households
3. Select one household using selection table above

Household	No	Household	No

A. DETAILS OF CALLS MADE

RING CALL NO.	1	2	3	4	5	6	7	8
Date - Day								
- Month								
Time 24 hr clock								
Interview done	1	1	1	1	1	1	1	1
No reply	2	2	2	2	2	2	2	2
Appointment made	3	3	3	3	3	3	3	3
Interviewer withdraws	4	4	4	4	4	4	4	4

B. OUTCOME

Address ineligible - vacant, demolished, institution, business	01
No selection made - no contact at address after repeated calls	02
- household refused by letter to head office	03
- household refused prior to person selection	04
Selection made - no contact with selected person	05
no interview - selected person refused (incl. broken appointments)	06
- selected person too ill/senile	07
- selected person away after contact	08
Interview - refused appraisal	09
achieved - no suitable appointment	10
- appointment made for appraisal	11

C. APPRAISAL

FINAL OUTCOME. TO BE COMPLETED BY COORDINATOR

Appraisal appointment broken - too ill to attend	12
- refused subsequent to interview	13
- not available/no appearance	14
Home appraisal carried out	15
Centre appraisal carried out - no treadmill	16
Centre appraisal carried out - treadmill	17

D. INTERVIEWER RECORD N.H.S. NUMBER HERE

--	--	--	--	--	--	--	--

S1310/1/90



SURVEY OF ACTIVITY AND HEALTH

Unit	Area	Serial No
<input type="text"/>	<input type="text"/>	<input type="text"/>

1-6

Date	Day	Month
<input type="text"/>	<input type="text"/>	<input type="text"/>

7-10

Time started	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

11-14

Interviewer Number	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

15-18

HOME ACTIVITIES

First, I'd like to ask you about some of the things you do at home

- 1.a) Have you done any housework in the past 12 months, that's from yesterday back to . (TODAY'S DATE A YEAR AGO)?

Yes	1 (b)	19
No	2 Q.2	

IF HOUSEWORK IN PAST 12 MONTHS

- b) And have you done any housework in the past 4 weeks, that's from .. up to yesterday?

Yes	1 (c)	20
No	2 Q.2	

IF HOUSEWORK IN PAST 4 WEEKS SHOW CARD 1

- c) Some kinds of housework are heavier than others. This card gives examples of heavy housework, it does not include everything, these are just examples. Was any of the housework you did in the past 4 weeks this kind of heavy housework?

Yes	1 (d-f)	21
No	2 Q.2	

IF HEAVY HOUSEWORK IN PAST 4 WEEKS

- d) During the past 4 weeks on how many days have you done that kind of heavy housework?

No of days	<input type="text"/>	<input type="text"/>	22-23
------------	----------------------	----------------------	-------

- e) And during the last week, that's back to last day, on how many days, if any, have you done that kind of heavy housework?

No of days	<input type="text"/>	24
------------	----------------------	----

- f) On the day you most recently did some heavy housework, how long in total did you spend doing it? Please don't include any time you spent on lighter housework or any breaks you took. We want to know the actual time you spent on heavy housework.

Hours	<input type="text"/>	25
-------	----------------------	----

Minutes	<input type="text"/>	<input type="text"/>	26-27
---------	----------------------	----------------------	-------

<input type="text"/>	28
----------------------	----

183

2a) Have you done any gardening in the past 12 months, that's from yesterday back to (TODAY'S DATE A YEAR AGO)

Yes 1 (b)
No 2 Q3

IF GARDENING IN PAST 12 MONTHS SHOW CARD 2

b) Could you have a good look at this card which divides gardening jobs into heavy manual work and lighter work. The card may not include everything, these are examples to help you to separate heavy work and lighter work. Was the gardening you did in the past 12 months of the heavy manual kind, the lighter work kind or both?

Heavy manual only 1 (c)
Lighter work only 2 (g)
Both 3 (c&g)

IF HEAVY MANUAL IN PAST 12 MONTHS

c) Just thinking about the 4 weeks from up to yesterday, have you done any of this kind of heavy manual gardening in the past 4 weeks?

Yes 1 (d-f)
No 2 SEE g)

IF YES AT c)

d) During the past 4 weeks, on how many days did you do that kind of heavy manual gardening?

No. of days

32-33

e) And during the past week, that's back to last day, on how many days, if any, have you done that kind of heavy gardening?

No. of days

34

f) On the day you most recently did some heavy gardening how long in total did you spend doing it? Please don't include time spent on lighter kinds of gardening or any breaks you took. We want to know the actual time you spent on heavy gardening.

Hours

35

Minutes

36-37

IF LIGHTER WORK IN PAST 12 MONTHS

OTHERS DNA X Q3

g) (Just thinking about the 4 weeks from up to yesterday), have you done any of this kind of lighter gardening in the past 4 weeks?

Yes 1 (h-j)
No 2 Q3

IF YES AT g)

h) During the past 4 weeks, on how many days did you do that kind of lighter gardening?

No. of days

39-40

i) And during the past week (that's back to last day) on how many days, if any, have you done that kind of lighter gardening?

No. of days

41

j) On the day you most recently did some lighter gardening, how long in total did you spend doing it?

Hours

42

Minutes

43-44

3a) Have you done any DIY, building work activities, car repairs or car cleaning in the past 12 months that's from yesterday back to (TODAY'S DATE A YEAR AGO)

Yes 1 (b)
No 2 Q4

Col
Nos

45

IF DIY OR BUILDING WORK IN PAST 12 MONTHS SHOW CARD 3

b) Could you look at this card which divides this sort of work into heavy manual work and lighter work. The card may not include everything, these are examples to help you separate heavy work and lighter work.

Was the DIY or building work you did in the past 12 months of the heavy manual kind, the lighter work kind or both?

Heavy manual only 1 (c)
Lighter work only 2 (g)
Both 3 (c&g)

46

IF HEAVY MANUAL IN PAST 12 MONTHS

c) Just thinking about the 4 weeks from up to yesterday, have you done any of this kind of heavy manual work in the past 4 weeks?

Yes 1 (d-f)
No 2 SEE g)

47

IF YES AT c)

d) On how many days during the past 4 weeks did you do that kind of heavy manual work?

No. of days

48-49

e) And during the past week, that's back to last day, on how many days, if any, have you done that kind of heavy manual work?

No. of days

50

f) On the day you most recently did some heavy manual work, how long in total did you spend doing it? Please don't include any time spent on lighter work or any breaks you took, we want to know the actual time you spent doing heavy manual work.

Hours

51

Minutes

52-53

IF LIGHTER WORK IN PAST 12 MONTHS

OTHERS DNA

X Q4

g) (Just thinking about the 4 weeks from up to yesterday), have you done any of this kind of lighter work in the past 4 weeks?

Yes 1 (h-j)
No 2 Q4

54

IF YES AT g)

h) On how many days during the past 4 weeks did you do that kind of lighter work?

No. of days

55-56

i) And during the past week (that's back to last day) on how many days, if any, have you done that kind of lighter work?

No. of days

57

j) On the day you most recently did some lighter work, how long in total did you spend doing it?

Hours

58

Minutes

59-60

WALKING

I'd like you to think now about all the walking you've done in the past 4 weeks, either locally or away from here including any country walks and any walking in the course of your work, or to and from work

- 4 a) First, I'm interested in walks of 2 miles or more. These are long continuous walks that would usually take at least 40 minutes. Don't include anything shorter than that. Did you do any walks of that kind during the past 4 weeks that's from up to yesterday?
- | | | |
|-----|---------|----|
| Yes | 1 (b-d) | 61 |
| No | 2 Q 5 | |

IF ANY WALKS OF AT LEAST 2 MILES IN PAST 4 WEEKS

- b) During the past 4 weeks how many times did you do any long walks of 2 miles or more?
- | | | |
|-------------|---|-------|
| No of times | <input type="text"/> <input type="text"/> | 62-63 |
|-------------|---|-------|
- c) And during the last week, that's back to last . day, how many times did you do any long walks of 2 miles or more?
- | | | |
|-------------|---|-------|
| No of times | <input type="text"/> <input type="text"/> | 64-65 |
|-------------|---|-------|
- d) How long did you spend walking on the most recent occasion you did a long walk of 2 miles or more?
- | | | |
|---------|---|-------|
| Hours | <input type="text"/> | 66 |
| Minutes | <input type="text"/> <input type="text"/> | 67-68 |

- 5 a) Now, thinking about the past week, that's back to last . day, did you do any walks of between 1 and 2 miles? That would usually be continuous walking for about 20 to 30 minutes
- | | | |
|-----|---------|----|
| Yes | 1 (b-c) | 69 |
| No | 2 (d) | |

IF YES AT a)

- b) During the past week how many times did you do any of these walks?
- | | | |
|-------------|---|-------|
| No of times | <input type="text"/> <input type="text"/> | 70-71 |
|-------------|---|-------|
- c) And yesterday, that is ... (DAY OF WEEK), how many times did you do any of these walks?
- | | | |
|--------------|---|-------|
| No. of times | <input type="text"/> <input type="text"/> | 72-73 |
|--------------|---|-------|

ASK ALL

- d) Have you done any shorter walks which lasted at least 5 minutes in the last week, that's back to last .. day?
- | | | |
|-----|---|----|
| Yes | 1 | 74 |
| No | 2 | |

- 6 Which of the following best describes your usual walking pace
- | | | |
|----------------------------------|---|----|
| a slow pace | 1 | 75 |
| a steady average pace | 2 | |
| a fairly brisk pace | 3 | |
| or a fast pace - at least 4 mph? | 4 | |

7. If you wanted to catch a bus or train would you be willing to run to catch it ..
- | | | |
|-----------|---|----|
| . always | 1 | 76 |
| sometimes | 2 | |
| or never? | 3 | |

CYCLING

8a) Have you cycled at all during the past 12 months?

Yes	1 (b)	77
No	2 Q9	

IF YES AT a)

b) Have you cycled at all during the past 4 weeks, that is from up to yesterday?

Yes	1 (c-f)	78
No	2 Q9	

IF YES AT b)

c) During that 4 week period on how many occasions have you cycled?

No. of occasions	<input type="text"/>	<input type="text"/>	79-80
------------------	----------------------	----------------------	-------

d) And during the last week, that's back to last day, on how many occasions have you cycled?

No. of occasions	<input type="text"/>	<input type="text"/>	81-82
------------------	----------------------	----------------------	-------

On the most recent occasion that you cycled

e) How long did you spend cycling?

Hours	<input type="text"/>	83	
Minutes	<input type="text"/>	<input type="text"/>	84-85

f) Was the effort of cycling enough to make you out of breath or sweaty?

Yes	1	86
No	2	

9a) Did anything happen to you in the past 4 weeks which made it different from usual, like illness or holidays etc.?

Yes	1 (b-c)	87
No	2 Q10	

IF YES AT a)

b) What happened in the past 4 weeks that made it different from usual?

	88
--	----

* c) So overall were you more active, less active or the same as usual?

More active	1	89
Less active	2	
The same	3	

SPORTS AND EXERCISE ACTIVITIES
SHOW BOOKLET

10a) Now I'd like you to think about any sport or exercise activities you do.
Can you look through this booklet and tell me which, if any, you've done
during the past year, that's back to (TODAY'S DATE A YEAR AGO)

WRITE
NAME OF
ACTIVITY

b) Can I just check, are there any other sports or exercise
activities you've done in the past year?

WRITE
IN AS
NECESSARY

ASK Q11a) AND b) FOR EACH ACTIVITY IN TURN

ASK a1) FOR FIRST LISTED ACTIVITY THEN a11) FOR ALL OTHER ACTIVITIES

11a1) Thinking first about (FIRST LISTED ACTIVITY)

Let's work backwards through the year starting
with the last calendar month that's

Did you (FIRST LISTED ACTIVITY) in (MONTH)

REPEAT FOR EACH MONTH IN TURN

WORKING BACKWARDS THROUGH THE YEAR

ASK a11) FOR ALL OTHER ACTIVITIES

a11) In which months during the past year
did you (ACTIVITY)

December
November
October
September
August
July
June
May
April
March
February
January

b) During the months that you (ACTIVITY),
how many times a month on average did you do it?

No. of times

Now I want to ask you about the activities you have done in the
past 4 weeks that's the period from up to yesterday.

Yes

ASK FOR EACH ACTIVITY LISTED

No

12. Can I just check, did you (ACTIVITY) in the past 4 weeks

ASK Q.13a) TO f) FOR EACH ACTIVITY DONE IN PAST 4 WEEKS

13a) First (ACTIVITY), can you tell me on how many separate
occasions you did that during the past 4 weeks?

No. of
occasions in
past 4 weeks

b) And during the last week that's back to last, on how
many separate occasions did you (ACTIVITY)?

No. of
occasions in
past week

c) Thinking about the most recent occasion, how long
did you (ACTIVITY) for, please don't include travel
time, time getting changed or any breaks you took.
We want to know the actual time you were

Time in
hours &
minutes

d) Was that less or more time than usual, or
was it about average?

Less
More
Average

IF LESS OR MORE TIME ASK e)

OTHERS GO TO f)

188 e) So how much time did you usually spend
.... on each occasion?

Time in
hours &
minutes

ASK ALL

f) During the past 4 weeks was the effort of
usually enough to make you out of breath or sweaty?

Yes
No

91

92-93

[illegible][illegible]

1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2

94

95

[illegible][illegible][illegible][illegible]

1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3

[illegible][illegible]

1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2

PAST PARTICIPATION

The kinds of activities that people do often change as they go through life so I'd like to talk a little about your teens and early twenties. It may help you to remember that time if we identify some landmarks.

14. Now I'd like you to think about the changes in your life between the ages of 14 and 24.
(CURRENT AGE IF LESS THAN 24)

	(YEAR)	AGE
Age 14		14
a) First how old were you when you left school?	Left school	
b) Did you start work then or go on to further education (how old were you when you finished full time education?)	Finished F/T ed.	
	Started work	
c) Can you think of any other important things that happened to you between the time you were aged 14 to 24.	.....
	
	
	
NO MORE THAN 3		
WRITE IN AND ESTABLISH AGE	Age 24	24

* 15a) When you were aged 14 to 19 (CURRENT AGE IF LESS) how much sport or exercise did you take part in? Would you say ...

RUNNING PROMPT

... a lot,
a moderate amount,
very little,
or none at all?

1
2
3
4

96

* b) So compared to the other 14 to 19 year olds at that time, would you describe yourself as ...

RUNNING PROMPT

... very physically active
fairly physically active
not very physically active
or not at all physically active?

1
2
3
4

97

NOT YET AGED 20 YEARS DNA

X Q.17

* 16a) And when you were aged 20 to 24 (CURRENT AGE IF LESS) how much sport and exercise did you take part in then? Would you say ...

RUNNING PROMPT

... a lot,
a moderate amount,
very little,
or none at all,

1
2
3
4

98

* b) So compared with other 20 to 24 year olds at that time would you describe yourself as ...

RUNNING PROMPT

... very physically active
fairly physically active
not very physically active
or not at all physically active?

1
2
3
4

99

Now I'd like to talk about any sports or exercise activities you've done regularly at any time since you were 14

- 17 a) First, long walks Thinking about the time from when you were 14 up to the present, during these years have you, at any time, walked for 2 miles or more on a regular basis By regular I mean at least once a week for a period of a few months or more

Yes 1 (b-d)
No 2 Q 18

100

IF YES AT a)

- b) At what age did you start doing these regular long walks?

Age started

101-102

- c) At what age did you stop doing long walks regularly or do you still do long walks at least once a week for a few months of the year?

Age stopped

103-104

Still regular

01

- d) During this period of years were there any years when you didn't do any regular long walks?

Yes - breaks

1 (e)

105

No - continuous

2 } SEE f)
3 }

Regular for less than a year

IF YES AT d)

- e) For how many of those years did you not do them regularly?

No of years

106-107

IF STOPPED REGULAR LONG WALKS AT c)

OTHERS DNA

X Q.18

SHOW CARD 4

- f) Could you look at this card and tell me the main reason why you stopped doing long walks regularly?

CODE FROM
CARD

108-109

IF MORE THAN ONE STOP TAKE MOST RECENT OCCASION

- 18 a) During the years from when you were 14 up to the present, have you at any time cycled on a regular basis. By regular I mean at least once a week for a period of a few months or more

Yes 1 (b-d)
No 2 Q 19

110

IF YES AT a)

- b) At what age did you start cycling regularly?

Age started

111-112

- c) At what age did you stop cycling regularly or do you still cycle at least once a week for a few months a year?

Age stopped

113-114

Still regular

01

- d) During this period of years were there any years when you didn't cycle regularly?

Yes - breaks

1 (e)

115

No - continuous

2 } SEE f)
3 }

Regular for less than a year

IF YES AT d)

- e) For how many of those years did you not do it regularly?

No of years

116-117

IF STOPPED REGULAR CYCLING AT c)

OTHERS DNA

X Q.19

SHOW CARD 4

- f) Could you look at this card and tell me the main reason why you stopped cycling regularly?

CODE FROM
CARD

118-119

IF MORE THAN ONE STOP TAKE MOST RECENT OCCASION

19a) And again, during these years from when you were 14 up to the present, have you, at any time, done any of these activities on a regular basis. Please don't include any activities you only did in school time, but do include any activities you may already have mentioned. By regular I mean at least once a week for a few months or more

GO THROUGH THE BOOKLET AND CODE EACH ACTIVITY EVER DONE REGULARLY

b) Can I just check, are there any other sports or exercise activities you've done on a regular basis? CODE OR SPECIFY

IF NO REGULAR ACTIVITIES AT ALL RING CODE → 1 GO TO Q.21

122

Office use ASK Q.20 FOR EACH ACTIVITY AND d) AND e) IF APPLICABLE

Q19 Regular at any time since age 14		Q20a At what age did you start (ACTIVITY) regularly? Age started	Q20b At what age did you stop regularly or do you still at least once a week for a few months a year? Age stopped	Q20c During this period of . . . years were there any years when you did not regularly? Yes, breaks No, cont. <1 yr	Q20d IF YES AT Q20c OTHERS SEE Q20e For how many of those years did you not regularly? No. of years	Q20e IF STOPPED (Q20b) SHOW CARD 4 Could you look at this card & tell me why you stopped regularly? CODE FROM CARD
Swimming	01		01	1 2 X		
Tennis	02		01	1 2 X		
Table tennis	03		01	1 2 X		
Squash	04		01	1 2 X		
Badminton	05		01	1 2 X		
Football	06		01	1 2 X		
Rugby	07		01	1 2 X		
Cricket	08		01	1 2 X		
Rounders	09		01	1 2 X		
Hockey	10		01	1 2 X		
Netball	11		01	1 2 X		
Volleyball	12		01	1 2 X		
Basketball	13		01	1 2 X		
Golf	14		01	1 2 X		
Bowls	15		01	1 2 X		
Boxing	16		01	1 2 X		
Martial Arts	17		01	1 2 X		
Weight training	18		01	1 2 X		
Weight lifting	19		01	1 2 X		
Yoga	20		01	1 2 X		
Gymnastics	21		01	1 2 X		

	Q19 Regular at any time since age 14	Q20a At what age did you start (ACTIVITY) regularly? Age started	Q20b At what age did you stop regularly or do you still... at least once a week for a few months a year? Age stopped	Still reg.	Q20c During this period of.... years were there any years when you did not regularly? Yes, No, breaks cont. <1 yr	Q20d IF YES AT Q20c OTHERS SEE Q20e For how many of those years did you not... regularly? No. of years	Q20e IF STOPPED (Q20b) SHOW CARD 4 Could you look at this card & tell me why you stopped regularly? CODE FROM CARD
Exercises	22			01	1 2 X		
Keep fit	23			01	1 2 X		
Aerobics	24			01	1 2 X		
Dancing for fitness	25			01	1 2 X		
Jogging/ running	26			01	1 2 X		
Athletics	27			01	1 2 X		
Rambling	28			01	1 2 X		
Hiking/ Backpacking	29			01	1 2 X		
Climbing	30			01	1 2 X		
Social dancing	31			01	1 2 X		
Snooker	32			01	1 2 X		
Darts	33			01	1 2 X		
Ten pin bowling	34			01	1 2 X		
Skittles	35			01	1 2 X		
Shooting	36			01	1 2 X		
Fishing	37			01	1 2 X		
Horse riding	38			01	1 2 X		
Skiing	39			01	1 2 X		
Motor sports	40			01	1 2 X		
Ice skating	41			01	1 2 X		
Roller skating	42			01	1 2 X		
Sailing	43			01	1 2 X		
Rowing	44			01	1 2 X		
Canoeing	45			01	1 2 X		
Other specify	46						
				01	1 2 X		
				01	1 2 X		
				01	1 2 X		

EMPLOYMENT

Now I'd like to talk about your activity at work.

21a) Are you in paid employment at the moment?

Yes 1 (b-c) 123
No 2 (d-e)

IF YES AT a)

b) How many hours a week do you work
(on average)?

No. of hours

--	--

 124-125

c) Do you do shift work?

Yes 1 } Q.22 126
No 2 }

IF NO AT a)

d) Are you ...

... seeking work	1 }	127
unable to seek work because of temporary sickness or injury	2 }	
permanently sick or disabled	3 (e)	
retired	4 }	
keeping house	5 }	
or a full-time student?	6 Q.22	
Other (SPECIFY)	7 (e)	

e) How long ago did you last have
paid employment?

Less than 3 months	1 }	128
3, less than 6 months	2 }	
6 months, less than 1 year	3 Q.22	
1 year, less than 5 years	4 }	
5 years or more	5 }	
Never worked	6 Q.32	

22. DESCRIPTION OF MAIN JOB/LAST MAIN JOB

(FOR STUDENTS: ENTER TITLE AND DESCRIPTION OF COURSE, c-e DNA)

Occ

--	--	--

 129-131
Ind

--	--	--

 132-134

a) OCCUPATION

Job title

Description

INTERVIEWER
CODE

b) INDUSTRY

Employee 1 (c-d) 135

Self-employed 2 (e)

IF EMPLOYEE

c) Ask or record

Manager	1	136
Foreman/supervisor	2	
Other employee	3	

d) How many employees work(ed) in
this establishment?

Under 25	1 }	137
25 or more	2 } SEE Q23	

IF SELF-EMPLOYED

e) Do (did) you employ any other people?
(PROBE FOR NUMBER)

Yes, under 25	1	138
Yes, 25 or more	2	
No	3	

		Col Nos
PEOPLE CURRENTLY IN FULL OR PART TIME EMPLOYMENT ONLY	OTHERS DNA	X Q.32
23. When you're at work are you mainly sitting down, standing up or walking about?	Sitting down Standing up Walking about	1 2 3 139
24a) Does your work involve you moving between floors?	Yes No	1 (b) 2 Q.25 140
IF YES AT a)		
b) Do you mainly take the lift or climb the stairs?	Lift Stairs	1 2 141
25. Do you do any (other) climbing in the course of your work (ladders, scaffolding etc.)?	Yes SPECIFY No	1 2 142
IF YES SPECIFY TYPE AND FREQUENCY		143-144
26. Do you usually have to lift or carry things at work which you find heavy? IF YES,PROMPT Is that just lifting or lifting and carrying?	Lift heavy loads Lift & carry heavy loads No	1 2 3 145
* 27. So overall, would you say that in terms of physical effort your work is ...	... very demanding fairly demanding or not very demanding	1 2 3 146
		195

SHOW CARD 5

- * 28. Would you look at this card and tell me how often the following statements apply to you at work. Please give me a number from '1' to '5'.
'1' means it never applies to you, through 2, 3, and 4 up to '5' which means it always applies to you.

What number on the card would you choose to show how often the following statements apply to you at work .

I don't have enough time to do
everything at work

My work needs a high level of
skill and expertise

I have to do the same things
over and over again

I have a say in the way things are run
at work

My working time can be flexible

I am able to work in my own way

My job provides me with variety

My job is boring

Never					Always
1	2	3	4	5	147
1	2	3	4	5	148
1	2	3	4	5	149
1	2	3	4	5	150
1	2	3	4	5	151
1	2	3	4	5	152
1	2	3	4	5	153
1	2	3	4	5	154

29. How do you normally travel to work?

RING ALL THAT APPLY

Bus/train/tube	1	155
Car/motorcycle/scooter	2	156
Bicycle	3	157
Walk	4	158
Works at home	5	159
No regular place of work	6	160

30a) Do you do any other paid work in addition to the work you've been telling me about?

Yes

No

1 (b)
2 Q.32

161

IF YES AT a)

b) During the last 4 weeks how many hours have you spent doing other paid work?

No. of hours

--	--

162-163

31. DESCRIPTION OF 2nd JOB

OCCUPATION

INDUSTRY

Occ

Ind

164-166

167-169

INTERVIEWER
CODE

ASK ALL

Finally in this section on activities I'd like to talk briefly about other things that may involve you in physical activity

- 32 a) First, stairs Do you go up and down stairs at home?

Yes 1 (b-c)
No 2 Q.33

170

IF YES AT a)

- b) About how many times a day do you climb the stairs?

No of times

171-172

- c) And how many steps are there in your stairs?

No of steps

173-174

- 33.a) In an average week on how many days, if any, do you usually climb stairs at work or elsewhere other than your home?

None 0 Q 34

175

No. of days (b-c)

IF SOME AT a)

- b) About how many times a day do you climb up stairs at work or elsewhere?

No of times

176-177

- c) And, on average, how many steps do you go up each time?

No of steps

178-179

- 34 Do you run up stairs

. rarely or never

180

RUNNING PROMPT

sometimes

2

or often?

3

And now, caring for others

- 35 In an average week on how many days, if any, do you carry a child around? Would you say rarely or never, 1-2 days, 3-5 days or most days?

REPEAT FOR b) AND c)

- a) 'Carry a child around'

Rarely/ never	1-2 days	3-5 days	Most days
------------------	-------------	-------------	--------------

1	2	3	4
---	---	---	---

181

- b) Push a child in a pram or pushchair

1	2	3	4
---	---	---	---

182

- c) Play games with a young child that involve you in physical effort

1	2	3	4
---	---	---	---

183

- 36 a) Do you help care for anyone who is disabled or has difficulty walking?

Yes 1 (b)
No 2 Q 37

184

IF YES AT a)

- b) In an average week on how many days, if any, do you lift or carry a disabled adult? Would you say rarely or never, 1 to 2 days, 3 to 5 days or most days?

REPEAT FOR c) AND d)

- b) 'Lift or carry a disabled adult'

Rarely/ never	1-2 days	3-5 days	Most days
------------------	-------------	-------------	--------------

1	2	3	4
---	---	---	---

185

- c) Give walking support to a disabled adult

1	2	3	4
---	---	---	---

186

- d) Push a wheelchair

1	2	3	4
---	---	---	---

187

197

OTHER ACTIVITY

37. Can I just check, is there anything else that you've done in the past 4 weeks which involved physical activity?

NO OTHER ACTIVITIES

0 Q.38 188

IF YES ASK (a-f) FOR EACH ACTIVITY AND RECORD IN GRID BELOW

- a) Name of activity
- b) On how many separate occasions did you do that during the past 4 weeks?
- c) Thinking about the most recent occasion, how long did you (ACTIVITY) for?
- d) Was that less or more time than usual or was it about average?
- IF LESS OR MORE TIME ASK e)
- e) So how much time did you usually spend on each occasion?
- f) During the past 4 weeks was the effort of usually enough to make you out of breath or sweaty?

a) Name of activity	b) No. of occasions	c) Last time		d) Usual?		If L/M e) Usually		f) Out of breath		
		Hrs	Mins	L/M	Av	Hrs	Mins	Yes	No	
				1	2			1	2	189-199
				1	2			1	2	200-210

38. We've talked a lot about the physical activities that people do in their spare time but there are many other ways people spend their leisure time.

211-212

a) Of all the activities that you do in your spare time, which do you spend the most time doing?

213-214

* b) And which, if any, is the most important to you?

ATTITUDES TO ACTIVITY AND HEALTH

Column
numbers

* 39	Compared to other people of your age would you describe yourself as			
	RUNNING PROMPT	.. very physically active	1	215
		fairly physically active	2	
		not very physically active	3	
		or not at all physically active?	4	
* 40	Compared to other people of your age, would you say you are .	. very fit	1	216
	RUNNING PROMPT	fairly fit	2	
		not very fit	3	
		or not at all fit?	4	
* 41 a)	Do you think you get enough exercise at present to keep you fit?	Yes	1	217
		No	2	
		Don't know	3	
* b)	Do you think most people get enough exercise in everyday life to keep themselves fit?	Yes	1	218
		No	2	
		Don't know	3	
* 42	I'm going to show you a list of things that people say stops them getting more exercise and I'd like you to tell me which, if any, apply to you			
	SHOW CARD 6			
	REPEAT AS NECESSARY			
		Applies to me	Does not	
	I'm not the sporty type	1	2	219
	I haven't got the time	1	2	220
	I've got young children to look after	1	2	221
	I'm too shy or embarrassed	1	2	222
	There's no-one to do it with	1	2	223
	I'm too old	1	2	224
	I have an injury or disability that stops me	1	2	225
	My health is not good enough	1	2	226
	There's no suitable facilities nearby	1	2	227
	I need to rest and relax in my spare time	1	2	228
	I don't have time because of my work	1	2	229
	I might get injured or damage my health	1	2	230
	I haven't got the right clothes or equipment	1	2	231
	I'd never keep it up	1	2	232
	I'm too fat	1	2	233
	I haven't got the energy	1	2	234
	I can't afford it	1	2	235
	I don't enjoy physical activity	1	2	236

43	Do your close family or friends encourage or discourage you to do physical activity or do they do neither?	Encourage a lot	1	237				
		Encourage a little	2					
		Neither	3					
	IF ENCOURAGE OR DISCOURAGE ASK	Discourage a little	4					
	Do they encourage/discourage you a lot or a little?	Discourage a lot	5					
		No close family/friends	6					
44	When people talk about vigorous exercise they often mean different things I'd like you to think about vigorous exercise as something which makes you out of breath or sweaty							
45	a) Do you do this kind of vigorous exercise three times a week or more for at least 20 minutes per occasion?	Yes	1 Q 45	238				
		No	2 (b)					
	IF NO AT a)							
	b) Do you do this kind of vigorous exercise at least once a week?	Yes	1	239				
		No	2					
SHOW CARD 7								
45	Could you look at this card and tell me how much you would say vigorous exercise could help you in the following things Please give me a number from 1 to 5 '1' means you would say it could not help you at all and '5' means you think it could help you a great deal							
	What number on the card would you choose to show how much you think regular vigorous exercise could help you .	Not at all	Great deal	Don't know				
	To relax, forget about your cares	1	2	3	4	5	6	240
	To get together and meet other people	1	2	3	4	5	6	241
	To have fun	1	2	3	4	5	6	242
	To get out of doors	1	2	3	4	5	6	243
	To feel a sense of achievement	1	2	3	4	5	6	244
	To feel independent	1	2	3	4	5	6	245
	What number on the card would you choose to show how much you think regular vigorous exercise could help you .							
	To feel in good shape physically	1	2	3	4	5	6	246
	To learn new things	1	2	3	4	5	6	247
	To look good	1	2	3	4	5	6	248
	To control or lose weight	1	2	3	4	5	6	249
	To seek adventure and excitement	1	2	3	4	5	6	250
	To improve or maintain your health	1	2	3	4	5	6	251

200

Now I'd like to talk about other things to do with health.

SHOW CARD 8

- * 46. First I'm going to read out advice that people often give to those who want to be healthy. I'd like you to look at this card and tell me how important you think each is by giving me a number from '1' to '5'. '1' means you think it is not at all important, '5' means you think it is very important with 2, 3 and 4 in between.

What number would you choose to show how important it is for a person of your age who wants to be healthy ...

	Not at all important					Very important	Don't know	
... to get out and about	1	2	3	4	5	6		252
... to get a good night's sleep	1	2	3	4	5	6		253
... to avoid getting overweight	1	2	3	4	5	6		254
... to avoid worrying too much	1	2	3	4	5	6		255
... not to smoke	1	2	3	4	5	6		256
... to exercise regularly	1	2	3	4	5	6		257
... not to drink much alcohol	1	2	3	4	5	6		258
... to avoid fatty foods	1	2	3	4	5	6		259

- | | | | |
|---|----------------|---|-----|
| * 47. In general do you think you worry more than other people, do you worry less or do you worry about the same as other people? | Worry more | 1 | 260 |
| | Worry less | 2 | |
| | About the same | 3 | |

- | | | | |
|--|----------------------|---------|-----|
| 48a) Over the last year was there any period when you suffered from lack of sleep because you were worrying? | Yes | 1 (b-c) | 261 |
| | No | 2 Q.49 | |
| IF YES AT a) | | | |
| b) Was this one period or more than one period? | One period | 1 | 262 |
| | More than one | 2 | |
| c) How long in total did this happen for .. | | | |
| RUNNING PROMPT | .. less than a month | 1 | 263 |
| | 1 up to 3 months | 2 | |
| | 3 up to 6 months | 3 | |
| | or 6 months or more? | 4 | |

- | | | | |
|--|-----|---|-----|
| 49. Do you usually take pills to help you sleep? | Yes | 1 | 264 |
| | No | 2 | |

* 50. How easily do you lose your temper these days? Would you say ...		... very easily	1	265	
RUNNING PROMPT		fairly easily	2		
		not very easily	3		
		or not at all?	4		
* 51. And how impatient are you these days? Would you say ...		... very impatient	1	266	
RUNNING PROMPT		fairly impatient	2		
		not very impatient	3		
		or not at all impatient?	4		
SHOW CARD 9					
* 52. I am going to read some descriptions of the way people feel at different times. Could you look at this card and tell me during the past few weeks have you felt ... often, sometimes or never?					
ASK FOR EACH STATEMENT		Often	Sometimes	Never	
Particularly excited or interested in something		1	2	3	267
So restless you could not sit long in a chair		1	2	3	268
Proud because someone complimented you on something you had done		1	2	3	269
Very lonely or remote from other people		1	2	3	270
Pleased about having accomplished something		1	2	3	271
Bored		1	2	3	272
On top of the world		1	2	3	273
Depressed or very unhappy		1	2	3	274
That things were going your way		1	2	3	275
Upset because someone criticised you		1	2	3	276
53. Major events and day to day problems can cause stress in people's lives. Would you say in the last year your life has been ...					
RUNNING PROMPT		... very stressful	1	277	
		fairly stressful	2		
		not very stressful	3		
		or not at all stressful?	4		

		Col Nos
54. Is there someone among your family and friends who you could talk to in times of difficulty?	Yes	1 278
	No	2
55. How often do you see any of your friends or relations not counting those who live with you. Would you say ...	... almost daily	1 279
	at least once a week	2
	at least once a month	3
	or less often than that?	4
RUNNING PROMPT	No friends/relatives outside household	5
56a) Do you have any relatives or friends who you don't see often but who keep in contact by phone or letter?	Yes	1 (b) 280
	No	2 Q.57
IF YES AT a)		
b) How often are you in contact with any of those relatives or friends. Would you say ...	... almost daily	1 281
	at least once a week	2
	at least once a month	3
	or less often than that?	4
RUNNING PROMPT		
57a) Do you belong to any clubs or organisations?	Yes	1 (b) 282
	No	2 Q.58
IF YES AT a)		
b) How often do you join in any of their activities? Would you say ...	... almost daily	1 283
	at least once a week	2
	at least once a month	3
	or less often than that?	4
RUNNING PROMPT		
58a) Do you ever go to religious services?	Yes	1 (b) 284
	No	2 Q.59
IF YES AT a)		
b) How often do you go to religious services? Would you say ...	... at least once a week	1 285
	at least once a month	2
	or less often than that?	3
RUNNING PROMPT		
		203

DIET

Now I'd like to talk about what you eat and drink

59. On weekdays (workdays) how soon after you get up do you usually have something to eat?

Would you say ...

... within 1 hour

1

286

RUNNING PROMPT

1 hour but less than 2 hours

2

or 2 hours or more?

3

60a) How often have you eaten breakfast cereal in the past few weeks ...

... daily

1

287

more than twice a week

2

(b)

once or twice a week

3

less than once a week

4

or never?

5

Q.61

IF ONCE A WEEK OR MORE AT a)

b) What kind of cereal do you usually have?

(TYPE OR BRAND)

288

61. What kind of bread do you mainly eat?

White

1

289

IF BROWN CHECK

High fibre white

2

Is that wholemeal or some other sort of brown bread?

Granary/wheatmeal/brown

3

Wholemeal

4

IF NAN, PITTA, ETC. CHECK

Other (SPECIFY)

5

Is that white or brown?

Does not eat bread

6

Q.63

62a) What do you usually spread on your bread?

Butter

1

290

Hard margarine

2

PROMPT AS NECESSARY

Soft margarine (BRAND)

3

(b)

Low fat spread (BRAND)

4

Other (SPECIFY)

5

Does not use fat on bread

6

IF SOFT MARGARINE OR LOW FAT SPREAD

b) What brand?

291

63. Can I just check, are you vegetarian (or vegan)?

Yes

1

Q.65

292

No

2

Q.64

64. When you have meat with fat on do you generally ...

DOES NOT EAT MEAT DNA

X

Q.65

293

... eat the fat and the lean meat

1

cut the fat off

2

RUNNING PROMPT

or do you never have meat with fat on ?

3

ASK ALL

65a) How often do you eat fried food of any kind, including chips ...

RUNNING PROMPT

... daily 1 }
more than twice a week 2 } (b)
once or twice a week 3 }
less than once a week 4 }
or never? 5 Q.66

IF CODES 1-4 AT a)

b) When you have fried food what sort of fat is mainly used?

Fat such as lard, dripping, butter or hard margarine 1
CODE ONE ONLY Mixed or blended vegetable oil 2
Corn oil, sunflower oil, or other polyunsaturated oil or margarine 3
Low fat margarine or low fat butter 4
Other (Specify) 5
Don't know 6

Col
Nos

294

295

66a) How often do you have grilled food ...

RUNNING PROMPT

... daily 1 }
more than twice a week 2 } (b)
once or twice a week 3 }
less than once a week 4 }
or never? 5 Q.67

IF CODES 1-4 AT a)

DOES NOT EAT MEAT DNA X Q.67

b) When you have grilled meat is it generally grilled with added fat or oil, or not?

Grilled with added fat/oil 1
Grilled without added fat/oil 2
Does not eat grilled meat 3

296

297

67a) How much milk do you usually have each day including milk used in drinks, on cereals and in cooking ...

RUNNING PROMPT

... none 0 Q.68
less than 1/2 pint 1 }
1/2 but less than 1 pint 2 } (b)
1 but less than 2 pints 3 }
2 pints or more? 4 }

IF HAS MILK

b) What type of milk do you mainly use?

Gold top/Channel Islands 1
Silver top/Red top/ Other wholemilk 2
Semi skimmed 3
Skimmed 4
Other (SPECIFY) 5

298

299

205

SHOW CARD 10

68. I'd like you to look at this card and tell me how often you have eaten the following foods in the last few weeks. Please include food you eat at work or elsewhere and takeaway meals.

First, chips, have you eaten these daily, more than twice a week, once or twice a week, less than once a week or rarely or never in the past few weeks?

REPEAT AS NECESSARY

READ OUT	Daily	More than twice a week	Once or twice a week	Less than once a week	Rarely or never	
Chips	1	2	3	4	5	300
Potatoes (not incl chips)	1	2	3	4	5	301
Green vegetables	1	2	3	4	5	302
Carrots, turnips, parsnips and so on	1	2	3	4	5	303
Baked beans	1	2	3	4	5	304
Peas, other beans, lentils, etc	1	2	3	4	5	305
Other cooked vegetables including onions and mushrooms	1	2	3	4	5	306
Salad and raw vegetables	1	2	3	4	5	307
Fresh fruit	1	2	3	4	5	308
Tinned fruit	1	2	3	4	5	309
Nuts	1	2	3	4	5	310
Potato crisps or similar snacks	1	2	3	4	5	311
Chocolates, chocolate bars and other sweets	1	2	3	4	5	312
Pasta (spaghetti, noodles) or rice	1	2	3	4	5	313
Biscuits/cakes of any kind	1	2	3	4	5	314
Ice cream, mousse, yoghurt or milk puddings	1	2	3	4	5	315
Fruit pies, flans, tarts or puddings	1	2	3	4	5	316

Q.68 continued

And how often have you eaten these foods?

READ OUT	Daily	More than twice a week	Once or twice a week	Less than once a week	Rarely or never	
Cheese	1	2	3	4	5	317
Eggs	1	2	3	4	5	318
Cream	1	2	3	4	5	319
Fried fish, fish in batter and fish fingers	1	2	3	4	5	320
Other fish	1	2	3	4	5	321
Poultry	1	2	3	4	5	322
Sausages, burgers, tinned meat, pate, meat pies and so on	1	2	3	4	5	323
Beef, lamb, pork, ham or bacon	1	2	3	4	5	324
Jam, marmalade, honey	1	2	3	4	5	325
Pure fruit juice	1	2	3	4	5	326
Soft drinks	1	2	3	4	5	327
Is there any other food which you eat regularly? Yes (SPECIFY)	1					328
No	2					
	1	2	3	4	5	329
	1	2	3	4	5	330

ASK a) AND b) FOR TEA THEN COFFEE

69.a) How many cups of ... do you usually drink in a day ...

... 1 or 2

3 or 4

RUNNING PROMPT

5 or 6

7 or more?

Doesn't drink

Tea	Coffee	
1	1	331- 332
2	2	
3	3	
4	4	
5	5	Q70
0	0	333- 334
1	1	
2	2	
3	3	

IF DRINK TEA/COFFEE

b) How much sugar do you usually have in tea/coffee

None

Less than 1 teaspoon

1 but less than 2 teaspoons

2 or more teaspoons

SHOW CARD 11

70a) Can you look at this card and tell me whether you've had any of the kind of drinks in Group A in the past 4 weeks?

REPEAT FOR GROUPS B AND C AND CODE IN GRID BELOW

CHECK FOR ANY OTHER DRINKS

ASK b) - c) FOR EACH DRINK TYPE HAD IN PAST 4 WEEKS

SHOW CARD 12

b) Now could you look at this card and tell me how often you have had a drink of (DRINK TYPE) during the past 4 weeks.

c) How much, on average, did you drink on each occasion?

d) CONVERT TO UNITS

Drink type	a) Past 4 weeks		b) Most days 3-4 1-2 1-2 per per in past week week 4 weeks				c) Quantity	d) Units
	Yes	No						
GROUP A Beer, Lager Shandy, Stout, Cider (bottles, cans, draught, homebrew)	1	2	1	2	3	4	pints x2	<input type="text"/> <input type="text"/> 335-338
GROUP B Wine, Sherry, Champagne, Port, Babysham, Vermouth, Cinzano, Dubonnet, Martini etc.	1	2	1	2	3	4	glasses x1	<input type="text"/> <input type="text"/> 339-342
GROUP C Spirits eg Gin, Whisky, Rum, Brandy, Vodka, Liqueurs, Advocaat	1	2	1	2	3	4	measures x1	<input type="text"/> <input type="text"/> 343-346
Anything else SPECIFY	1	2	1	2	3	4		<input type="text"/> <input type="text"/> 347-350

			Column numbers
* 71	Would you describe yourself as	. a regular drinker 1 an occasional drinker 2 } Q 72 you only ever have a drink on special occasions 3 or a non-drinker 4 Q 74	351
72.	How often do you usually have an alcoholic drink of <u>any</u> kind? Would you say it is	every day 1 almost every day 2 3-4 times a week 3 1-2 times a week 4 about once a fortnight 5 about once a month 6 or less often than that 7	352
READ OUT AS APPROPRIATE			
* 73.	And thinking of the amount you drink now Would you say that you are	. a light drinker 1 } Q 74 a moderate drinker 2 or a heavy drinker 3 Q 75	353
IF LIGHT OR MODERATE OR NON-DRINKER		HEAVY DRINKER DNA	X Q.75
74 a)	Have you ever drunk heavily on a regular basis?	Yes 1 (b) No 2 Q 75	354
IF YES AT a)			
b)	How long ago did you stop drinking heavily on a regular basis?	Less than 1 year 00 No. of years <input type="text"/> <input type="text"/>	355-356
ASK ALL			
75	Has a doctor or anyone else ever said that you should cut down on drinking or that you should not drink at all?	No 1 Yes, doctor 2 Yes, spouse 3 Yes, other (SPECIFY) 4	357
IF YES: Who suggested it?			
* 76 a)	Have you ever felt that you ought to cut down on your drinking or that you should not drink at all?	Yes 1 (b) No 2 Q.77	358
IF YES AT a)			
b)	Why did you decide you ought to cut down on your drinking or that you should not drink at all?		
(PROBE IF NOT CLEAR - Was it for health reasons?)		Health 1 Non-health 2	359
			209

SMOKING

77	Now I'd like to ask you a few questions about smoking Have you <u>ever</u> smoked a cigarette or cigar or pipe?	Yes	1	Q 78	360
		No	2	Page 30	
78.a)	Do you smoke cigarettes at all nowadays?	Yes	1	(b-e)	361
		No	2	Q 79	
IF YES AT a)					
b)	How many cigarettes <u>a day</u> do you usually smoke on weekdays?	No smoked per day	<input type="text"/>		362-363
		Less than 1 per day	00	} If both coded Q 79 applies	
c)	How many cigarettes <u>a day</u> do you usually smoke at weekends?	Less than 1 per day	00		
		No. smoked per day	<input type="text"/>		364-365
d)	Do you mainly smoke	.. filter tipped cigarettes	1		366
		plain or untipped cigarettes	2		
		or hand rolled cigarettes	3		
e)	What is the tar level of the cigarettes you usually smoke?	High	1		367
		Middle to high	2		
		Middle	3		
		Low to middle	4		
		Low	5		
		Don't know	6		
IF DOES NOT SMOKE NOWADAYS OR SMOKES LESS THAN 1 PER DAY			OTHERS DNA	X Q.80	
79.a)	Have you ever smoked cigarettes regularly, by that I mean one or more a day for a year?	Yes	1	(b-d)	368
		No	2	Q 81	
IF YES AT a)					
b)	How long ago did you stop smoking cigarettes regularly?	No of years	<input type="text"/>		369-370
		IF LESS THAN ONE YEAR. No of months	<input type="text"/>		371-372
c)	How many cigarettes did you smoke a day when you last smoked regularly?	No. smoked per day	<input type="text"/>		373-374
d)	What were the main reasons for you giving up smoking?	Expense	1		375
CODE ALL THAT APPLY		Concern for future ill health	2		376
		Ill health at time of giving up	3		377
		Social pressure/to please someone else	4		378
		Pregnancy	5		379
		Just wanted to give up	6		380
		Other reason (SPECIFY)	7		381

IF SMOKES CIGARETTES NOWADAYS OR HAS SMOKED REGULARLY

80	How old were you when you started to smoke cigarettes regularly?	Age in years	<input type="text"/> <input type="text"/>	382-383
----	--	--------------	---	---------

CIGARS

81 a)	Have you ever smoked cigars regularly, that is one cigar a day for a year?	Yes	1 (b-d)	384
		No	2 Q.82	

IF YES AT a)

b)	How old were you when you started to smoke cigars regularly	Age in years	<input type="text"/> <input type="text"/>	385-386
----	---	--------------	---	---------

c)	Do you still smoke cigars regularly?	Yes	1	387
		No	2	

d)	How many cigars do/did you usually smoke in a week?	No. per week	<input type="text"/> <input type="text"/>	388-389
----	---	--------------	---	---------

IF NO AT c)	OTHERS DNA	X Q.82		
--------------------	-------------------	--------	--	--

e)	How long ago did you stop smoking cigars regularly?	Less than 1 year	00	
		No of years	<input type="text"/> <input type="text"/>	390-391

PIPE SMOKING

82 a)	Have you ever smoked a pipe regularly, that is at least one bowl of tobacco a day for a year?	Yes	1 (b-d)	392
		No	2 Q.83	

IF YES AT a)

b)	How old were you when you started to smoke a pipe regularly?	Age in years	<input type="text"/> <input type="text"/>	393-394
----	--	--------------	---	---------

c)	Do you still smoke a pipe regularly?	Yes	1	395
		No	2	

d)	How many ounces of pipe tobacco do/did you usually smoke in a week?	Ounces per week	<input type="text"/> <input type="text"/>	396-397
----	---	-----------------	---	---------

IF NO AT c)	OTHERS DNA	X Q.83		
--------------------	-------------------	--------	--	--

e)	How long ago did you stop smoking a pipe regularly?	Less than 1 year	00	
		No of years	<input type="text"/> <input type="text"/>	398-399

ASK ALL

*83 Now, your height and weight, do you think
that for your height you are

RUNNING PROMPT

about the right weight
too heavy
or too light
Don't know

1
2
3
4

400

84 a) What is the least you've ever weighed
since you were eighteen?

AGE 16-17 DNA

X Q 85

(Stones Pounds)
() () () ()

Kilos

(401-
404)

Don't know

888

405-407

b) How old were you when you were last this
weight?

Under 20

1

408

READ OUT AS APPROPRIATE

20-29

2

CODE OLDEST AGE AT THAT WEIGHT

30-39

3

40-49

4

50-59

5

60 or more

6

Don't know

7

85 a) What is the most you've ever weighed
(excluding during pregnancy)?

(Stones Pounds)
() () () ()

Kilos

(409-
412)

Don't know

888

413-415

b) How old were you when you were last this
weight?

Under 20

1

416

READ OUT AS APPROPRIATE

20-29

2

CODE OLDEST AGE AT THAT WEIGHT

30-39

3

40-49

4

50-59

5

60 or more

6

Don't know

7

SHOW CARD 13

*86 I'm going to read out three statements about health and I'd like
you to look at this card and tell me how strongly you agree or
disagree with each one by giving me a number from 1 to 5. '1'
means you disagree strongly, '2' means you just disagree and so
on to '5' which means you agree strongly

What number on the card would
you choose to show how strongly
you agree or disagree with the
statements

Disagree strongly					Agree strongly					Don't know
1	2	3	4	5						6
1	2	3	4	5						6
1	2	3	4	5						6

Good health is largely a
matter of chance

1 2 3 4 5 6

417

My health depends mainly on
the way I choose to live

1 2 3 4 5 6

418

Regular visits to the doctor
are the best way to avoid illness

1 2 3 4 5 6

419

HEALTH STATUS

And now I'd like you to think about your health

* 87 Compared to other people of your age would
you say you are in .

- . excellent health 1
- good health 2
- fair health 3
- or poor health? 4

420

88 a) Have you ever had any of the following?

READ OUT

	(a)		(b)	(c)		
	Had	Not		Still has	Not	
Angina	1	2	,	1	2	421-424
Arthritis	1	2	,	1	2	425-428
Asthma	1	2	,	1	2	429-432
Back trouble	1	2	,	1	2	433-436
Bronchitis	1	2	,	1	2	437-440
Diabetes	1	2	,	1	2	441-444
Emphysema	1	2	,	1	2	445-448
Persistent foot trouble (bunions, ingrowing toenails etc)	1	2	,	1	2	449-452
Hay fever	1	2	,	1	2	453-456
High blood pressure	1	2	,	1	2	457-460
Hernia	1	2	,	1	2	461-464
Migraine	1	2	,	1	2	465-468
Persistent skin trouble (eczema, psoriasis etc)	1	2	,	1	2	469-472
Varicose veins	1	2	,	1	2	473-476

ASK b) AND c) FOR EACH PROBLEM MENTIONED

b) How old were you when you first had . ?

c) Do you still suffer from ?

**CODE IN GRID
ABOVE**

89 a) Have you ever had a stroke?

- Yes 1 (b-c)
- No 2 Q 90

477

IF YES AT a)

b) How old were you when you first had one?

Age in years

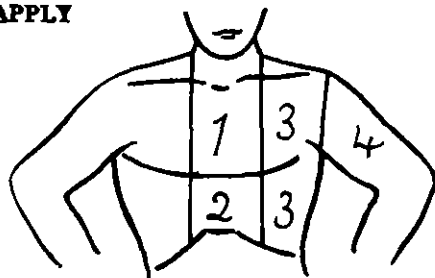
478-479

c) Are you currently attending a hospital or
doctor because of your stroke?

- Yes 1
- No 2

480

90 a) Have you ever had heart trouble, suspected or confirmed?	Yes	1 (b-e)	481
	No	2 Q 91	
IF YES AT a)			
b) How old were you when you first experienced it?	Age in years	<input type="text"/>	482-483
c) What was the diagnosis?	Heart attack	1	484
CODE ALL THAT APPLY			
	Heart strain	2	485
	High blood pressure	3	486
	Valve disease	4	487
	Hole in the heart	5	488
	Other (SPECIFY)	6	489
d) Did you attend a hospital?	Yes	1	490
	No	2	
e) Are you still attending a hospital or doctor for heart trouble?	Yes	1	491
	No	2	
91 a) Have you ever had any pain or discomfort in your chest?	Yes	1 (b)	492
	No	2 Q 93	
IF YES AT a)			
b) Do you get it now when you walk uphill or hurry?	Yes	1 (c-g)	493
	No	2 Q 92	
	Never hurries or walks uphill	3 (c-g)	
IF YES AT b)			
c) Do you get it when you walk at an ordinary pace on the level?	Yes	1	494
	No	2	
d) What do you do if you get it while walking?	Stop	1	495
READ OUT			
	Slow down	2	
	Carry on	3	
e) If you stand still does the pain go away?	Goes away	1	496
	Does not	2	
f) How soon does the pain go away?	10 minutes or less	1	497
READ OUT			
	More than 10 minutes	2	
g) Where do you get this pain or discomfort?			
CODE ALL THAT APPLY			
	Sternum (upper or middle)	1	498
	Sternum (lower)	2	499
	Left anterior chest	3	500
	Left arm	4	501
	Other	5	502



				Column numbers
IF EVER HAD PAIN/DISCOMFORT IN CHEST				
92 a) Have you ever had a severe pain across the front of your chest lasting for half an hour or more?	OTHERS	DNA	X Q 93	
	Yes	1	(b)	503
	No	2	Q 93	
IF YES AT a)				
b) Did you see a doctor about it?	Yes	1	(c-d)	504
	No	2	Q.93	
IF YES AT b)				
c) What did he say it was?				505
d) How many of these attacks have you had?	Number	<div><div></div><div></div></div>		506-507
ASK ALL				
93.a) Are you troubled by shortness of breath when hurrying on level ground or walking up a slight hill?	Yes	1	(b-d)	508
	No	2	Q 94	
	Never hurries or walks uphill	3	(b-d)	
IF YES AT a)				
b) Do you get short of breath walking with other people of your own age on level ground?	Yes	1		509
	No	2		
c) Do you have to stop for breath when walking at your own pace on level ground?	Yes, stop	1		510
	No	2		
d) Are you short of breath when washing or dressing?	Yes	1		511
	No	2		
94 a) Do you usually cough first thing in the morning in winter?	Yes, cough	1	} (b)	512
	No	2		
b) Do you usually cough during the day or at night in the winter?	Yes	1	} See c)	513
	No	2		
IF YES AT a) OR b) NO AT BOTH a) AND b) DNA				X Q 95
c) Do you cough like this on most days for as much as three months each winter?	Yes	1		514
	No	2		
95 a) Do you usually bring up any phlegm from your chest first thing in the morning in the winter?	Yes	1	} (b)	515
	No	2		
b) Do you usually bring up any phlegm from your chest during the day or night in the winter?	Yes	1	} See c)	516
	No	2		
IF YES AT a) OR b) NO AT BOTH a) AND b) DNA				X Q.96
c) Do you bring up phlegm like this on most days for as much as three months each winter?	Yes	1		517
	No	2		
d) In the past 3 years have you had a period of increased cough and phlegm lasting for 3 weeks or more?	Yes	1		518
	No	2		215

96 a) Do you suffer from any recurrent or continuous pain, swelling or stiffness in any of your joints, your neck or your back?

Yes 1 (b-c)
No 2 Q 97

IF YES AT a) SHOW CARD 14

b) Please look at this card and tell me which joints trouble you?

CODE IN GRID

	Left	Right
Shoulder	1	1
Elbow	2	2
Wrist	3	3
Hand or fingers	4	4
Hip	5	5
Knee	6	6
Ankle	7	7
Foot or toes	8	8
Neck	9	
Back	0	

520-521
522-523
524-525
526-527
528-529
530-531
532-533
534-535
536
537

c) Does this pain, stiffness or swelling in your joints tend to

Yes No

limit your walking or climbing stairs

1 2 538

. interfere with your sleeping

1 2 539

. make it difficult for you to grip, turn or hold things

1 2 540

. . make it difficult for you to reach up for things

1 2 541

97.a) Do you currently have any long-standing physical or health problems as a result of taking part in sports or exercise activities or from other types of injuries or accidents?

Yes 1 (b-f)
No 2 See Q 98

IF YES AT a) OBTAIN DETAILS FOR MAX. 3 MOST SERIOUS

b) What is the problem?

c) Was it caused by taking part in sports or exercise or was it some other type of injury or accident?

d) How long ago did the injury/accident happen?

e) Does this problem restrict you from taking part in sports or other physical activity?

f) Are you currently receiving medical treatment for this problem?

(b) What is problem	(c) Spts. Not	(d) No yrs	(e) Restr. No	(f) Trt. Not
	1 2		1 2	1 2
	1 2		1 2	1 2
	1 2		1 2	1 2

543-549
550-556
557-563

WOMEN ONLY
OFFER SELF COMPLETION PAGE

MEN DNA

X Q 105

Column
numbers

98 a) Have you ever had any major gynaecological problems?

Yes

1 (b-c)

564

No

2 Q 99

IF YES AT a)

b) How old were you when you first experienced them? Age in years

565-566

c) Do you still suffer from them?

Yes

1 } Q 99

567

No

2 }

99 Do you currently have any (other) problems with your periods, the menopause or its after effects?

Yes

1

568

No

2

100 How old were you when your menstrual periods began?

Age in years

569-570

101a) Do you have regular periods?

Yes

1 Q 102

571

No

2 (b)

IF NO AT a)

b) Do you still have periods or have they stopped now?

Still have

1 Q 102

572

Stopped

2 (c)

IF STOPPED AT b)

c) How old were you when you had your last period?

Age in years

573-574

102a) Have you ever been pregnant?

Yes

1 (b)

575

No

2 Q 103

IF YES AT a)

b) Are you pregnant at the moment?

Yes

1 } (c)

576

No

2 }

c) (Not counting your current pregnancy) How many pregnancies have you had which lasted for

. 28 weeks or more

577

REPEAT

less than 28 weeks

578

INCLUDE ANY MISCARRIAGES ETC.

103a) Have you ever taken oral contraceptives (the pill)?

Yes

1 (b-c)

579

No

2 Q 104

IF YES AT a)

b) For how long in total have you taken the pill?

ADD TOGETHER ANY SEPARATE PERIODS

Years

580-581

Months

582-583

c) Are you currently taking the pill?

Yes

1 } Q 104

584

No

2 }

104a) Have you ever had hormone replacement therapy (HRT)?

Yes

1 (b)

585

No

2 Q 105

IF YES AT a)

b) For how long were you having the treatment?

No of months

586-587

217

TO ALL

105a) Have you ever had any other major illnesses or health problems?

Yes 1 (b-c) 588
No 2 Q.106

IF YES AT a) LIST PROBLEMS AND ASK b) AND c)

b) How old were you when you first had?

c) Do you still suffer from?

PROBLEM	AGE AT ONSET	STILL HAS	NOT
		1	2
		1	2
		1	2
		1	2

589-59

594-59

599-60.

604-608

106. Now, just thinking about the last four weeks, that's back to have you had any of the following?

READ OUT

A cold or flu

A cough, catarrh or sinus trouble

Shortness of breath

Feeling tired for no apparent reason

Indigestion or other stomach trouble

Diarrhoea or constipation

Kidney or bladder trouble

Pains in the chest

Headaches or migraine

Trouble with eyes or ears

A bad back

Painful joints

Dizziness or fainting

Been nervy, tense or depressed

Rashes, itches or other skin trouble

Yes	No
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2

609

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621

622

623

107. Health problems, either big or small, can affect people's lives in many different ways. I'd like you to look at this card and tell me whether your present state of health is causing problems with any of these things.

READ OUT FIRST ITEM

REPEAT QUESTION AS NECESSARY

Looking after the home

Going shopping

Doing paid work

Looking after children

Gardening

Going out socially

Relationships with people you live with

Your sex life

Taking part in sports/exercise activities

Your interests and hobbies

Going away for weekends or longer holidays

Getting out and about as much as you want to

Yes	No	Does not apply	Most affected
1	2	3	01
1	2	3	02
1	2	3	03
1	2	3	04
1	2	3	05
1	2	3	06
1	2	3	07
1	2	3	08
1	2	3	09
1	2	3	10
1	2	3	11
1	2	3	12

624
625
626
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631
632
633
634
635

IF MORE THAN ONE MENTIONED AS A PROBLEM

b) Which of those you have mentioned (READ OUT)
is most affected by your health?

CODE IN GRID ABOVE.

636-63

SHOW CARD 16

* 108. Could you look at this card and tell me how important are the following things to you by giving me a number from '1' which means it is not at all important, through 2, 3, 4 to '5' which means it is very important.

What number on the card would you choose to show how important you think the following things are to you

To relax, forget about your cares

To get together and meet other people

To have fun

To get out of doors

To feel a sense of achievement

To feel independent

To feel mentally alert

What number on the card would you choose to show how important you think the following things are to you

To feel in good shape physically

To learn new things

To look good

To control or lose weight

To seek adventure and excitement

To improve or maintain your health

Not at all important					Very important	Don't know	
1	2	3	4	5	6		638
1	2	3	4	5	6		639
1	2	3	4	5	6		640
1	2	3	4	5	6		641
1	2	3	4	5	6		642
1	2	3	4	5	6		643
1	2	3	4	5	6		644
1	2	3	4	5	6		645
1	2	3	4	5	6		646
1	2	3	4	5	6		647
1	2	3	4	5	6		648
1	2	3	4	5	6		649
1	2	3	4	5	6		650

Family factors are important to people's health so now I'd like to talk a little about your own mother and father.

109a) Can I just check, is your own father still alive? (TAKE NATURAL FATHER)

Yes 1 }
No 2 } (b)
Don't know 3 }

651

b) Has/had your father ever suffered from

Angina

Yes	No	Don't know
1	2	3
1	2	3
1	2	3
1	2	3
1	2	3

652

Heart attack

653

Stroke

654

High blood pressure

655

Diabetes

656

IF FATHER HAS DIED

OTHERS DNA

X Q.110

c) What did he die from?

Heart attack/coronary

1 657

Stroke

2 658

Other heart condition

3 659

Cancer

4 660

Other (SPECIFY)

5 661

Don't know

6 662

d) How old was your father when he died?

Age of father

663-664

Don't know

99

e) How old were you when he died?

Age

665-666

Don't know

99

110a) How old was your father when he finished full time education?

Age in years

667-668

Don't know

99

b) What was your father's job when you were born?

Don't know

99 Q.111 669-670

OCCUPATION

INDUSTRY

Employed

1 671

Self employed

2

Don't know

3

111a) Is your own mother still alive?
(TAKE NATURAL MOTHER)

Yes	1	} (b)
No	2	
Don't know	3	

b) Has/had your mother ever suffered from

Angina	1	2	3
Heart attack	1	2	3
Stroke	1	2	3
High blood pressure	1	2	3
Diabetes	1	2	3

Yes	No	Don't know
1	2	3
1	2	3
1	2	3
1	2	3
1	2	3

IF MOTHER HAS DIED

OTHERS DNA X Q.112

c) What did she die from?

Heart attack/coronary	1	678
Stroke	2	679
Other heart condition	3	680
Cancer	4	681
Other (SPECIFY)	5	682
Don't know	6	683

CODE ALL THAT APPLY

d) How old was your mother when she died?

Age of mother	<input type="text"/>	<input type="text"/>	684-685
Don't know	99		

e) How old were you when she died?

Age	<input type="text"/>	<input type="text"/>	686-687
Don't know	99		

Col
Nos

672

673

674

675

676

677

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686-687

CLASSIFICATION

INTRODUCE CLASSIFICATION SECTION

112a) LIST ALL PERSONS IN HOUSEHOLD AND RECORD DETAILS

PERSON NO.	RELATIONSHIP TO RESPONDENT	CODE SEE BELOW	RING HOH	AGE	SEX		EMPLOYMENT		
					M	F	F/t	P/t	None
1	RESPONDENT	<input checked="" type="checkbox"/>	1		1	2	1	2	3
2			1		1	2	1	2	3
3			1		1	2	1	2	3
4			1		1	2	1	2	3
5			1		1	2	1	2	3
6			1		1	2	1	2	3
7			1		1	2	1	2	3
8			1		1	2	1	2	3
9			1		1	2	1	2	3

CODES: Spouse 1, parent 2, child 3, other relative 4, non-relative 5

b) IS THE RESPONDENT HOH?

Respondent HOH
Not

1 Q.114
2 Q.113

688-69
694-70
701-70
708-71
715-72
722-72
729-73
736-74
743-74

750

DESCRIPTION OF MAIN /LAST JOB OF HOH

Occ

113a) OCCUPATION

Ind

Job title

Description.

INTERVIEWER
CODE

b) INDUSTRY

Employee
Self employed

1 (c-d)
2 (e)

751-753

754-756

IF EMPLOYEE

c) ASK OR RECORD

Manager
Foreman/supervisor
Other employee

1
2
3

758

d) How many employees work(ed)
in this establishment?

Under 25
25 or more

1
2

759

IF SELF EMPLOYED

e) Does(did) he/she employ any other people?

Yes under 25
25 or more
No

1
2
3

760

PROBE NUMBER

222

114. Are you ...	... married single or divorced, separated, widowed	1 2 3	Col Nos 761
115a) In which country were you born?	UK Other	1 2	762
b) For how long have you lived in this neighbourhood?	Less than 1 year No. of years	00 <input type="text"/> <input type="text"/>	763-76
c) And for how long altogether have you lived in the United Kingdom?	Less than 1 year No. of years Always lived in UK	00 <input type="text"/> <input type="text"/> 88	765-76
SHOW CARD 17			
* 116a) To which of the groups listed on this card do you consider you belong?	White Black - Caribbean Black - African Black - other Indian Pakistani Bangladeshi Chinese Any other ethnic group	1 2 3 4 5 6 7 8 9 (b)	767
IF OTHER AT a)			
* b) How would you describe the racial or ethnic group to which you belong?			768
117. Do you hold a current driving licence?	Yes No	1 2	769
118. Do you have regular use, either as a driver or passenger, of a car, van or motorcycle?	Car or van Motorcycle Both Neither	1 2 3 4	770
			223

SHOW CARD 18

119a) Do you have any of the qualifications shown on this card or any other educational qualifications?	Yes	1 (b)	771
	No	2 Q.120	

IF YES AT a)

b) What is the highest qualification you have obtained either while at school or gained after you left school?

CODE ONE ONLY

CODE QUALIFICATION
RESPONDENT THINKS IS
HIGHEST. IF TWO
OR MORE ARE EQUAL
TAKE MOST RECENT
OF THESE. IF STILL
STUDYING TAKE
HIGHEST TO DATE.

CSE Grades 2-5 01

CSE Grade 1

GCE 'O' level

School Certificate

Scottish (SCE) lower

City and Guilds Craft/Ordinary level

GCSE

02

GCE 'A' level/'S' level

Higher Certificate

Matriculation

Scottish (SCE) Higher

03

Overseas School Leaving Exam/Certificate

04

ONC/OND/City & Guilds Advanced/Final level

05

HNC/HND/City & Guilds Full Technological Certificate

06

RSA/Other clerical and commercial

07

Teachers training qualification

08

Nursing qualification

09

Professional qualification (membership awarded by professional institute)

10

Degree, including higher degree

11

Other work-related qualifications/certificate

12

Other (SPECIFY) _____

13

120. Do you have use of a telephone within your accommodation?

Yes

1

774

No

2

121a) Is your accommodation owned or rented?

Owned

1

Q.122

775

Rented

2

(b)

IF RENTED

b) Do you rent ...

... from the local authority

1

776

privately furnished

2

privately unfurnished

3

Other (SPECIFY)

4

122. ASK OR RECORD

Is your accommodation all on one floor?

Yes

1

777

No

2

INTRODUCE APPRAISAL

COMPLETE SCREENING QUESTIONNAIRE

MAKE (PROVISIONAL) APPOINTMENT FOR APPRAISAL

COMPLETE APPOINTMENT SLIP AND LEAVE WITH RESPONDENT

This survey is being carried out with the support of your local health district and as a matter of courtesy, with your permission we are telling the local GP's the names of those who have taken part. Could you tell me your full name, the name and address of your GP and your National Health Service Number - that's the number on your medical card.

IF NOT AVAILABLE ASK SUBJECT TO BRING DETAILS TO THE CENTRE

GP's name
address
.....

RECORD NHS NUMBER AND FULL NAME ON SELECTION SHEET

RETURN ALL DOCUMENTS TO CENTRE AND CONFIRM APPOINTMENT WITH COORDINATOR



SN 3303

S1310/1/90

3 1

Unit	Area	Serial No

2-7

Date	Day	Month

8-11

Time started

12-15

Interviewer Number

16-19

SURVEY OF ACTIVITY AND HEALTH PEOPLE AGED 70 AND OVER

HOME ACTIVITIES

First I'd like to talk a little about how you get on at home

- 1 a) How difficult is it for you to make a cup of tea? Would you say .

*

RUNNING PROMPT

Not difficult at all	1	20
Quite difficult	2	
Very difficult	3	
or Impossible	4	

- b) How difficult is it for you to wash up and dry dishes? Would you say .

*

RUNNING PROMPT

Not difficult at all	1	21
Quite difficult	2	
Very difficult	3	
or Impossible	4	

- c) How difficult is it for you to do the household shopping on your own? Would you say

*

RUNNING PROMPT

Not difficult at all	1	22
Quite difficult	2	
Very difficult	3	
or Impossible	4	

IF ANY OF THESE ACTIVITIES NOT NORMALLY DONE ASK HOW DIFFICULT IT WOULD BE IF RESPONDENT HAD TO

2 a) Do you have difficulty using your arms to
* reach and stretch for things?

Yes 1 (b-d)
No 2 Q 3

23

IF YES AT a)

b) Can you stretch both arms above your
head at the same time to reach for
something above you?

DEMONSTRATE IF NECESSARY

Yes 1
No 2

24

c) Do you have difficulty putting one arm
above your head to reach for something
above you?

Yes 1
No 2

25

d) Do you have difficulty putting one hand
behind your back to tuck in a blouse/shirt?

Yes 1
No 2

26

3 a) Do you have great difficulty holding,
* gripping or turning things?

Yes 1 (b-d)
No 2 Q 4

27

IF YES AT a)

b) Would you have any difficulty in picking
up and carrying a 5lb bag of potatoes?

Yes 1
No 2

28

c) Do you have difficulty turning a tap on
and off?

Yes 1
No 2

29

d) Do you have difficulty picking up and
pouring from a full kettle?

Yes 1
No 2

30

Now I'd like to ask you about some of the things you do at home

- 4 a) Have you done any housework in the past 12 months, that's from yesterday back to (TODAY'S DATE A YEAR AGO)?

Yes 1 (b)
No 2 Q 5

31

IF HOUSEWORK IN PAST 12 MONTHS

- b) And have you done any housework in the past 4 weeks, that's from up to yesterday?

Yes 1 (c)
No 2 Q 5

32

IF HOUSEWORK IN PAST 4 WEEKS SHOW CARD E1

- c) Some kinds of housework are heavier than others. This card gives examples of heavy housework, it does not include everything, these are just examples. Was any of the housework you did in the past 4 weeks this kind of heavy housework?

Yes 1 (d-f)
No 2 Q.5

33

IF HEAVY HOUSEWORK IN PAST 4 WEEKS

- d) During the past 4 weeks on how many days have you done that kind of heavy housework?

No of days

34-35

- e) And during the last week, that's back to last . . day, on how many days, if any, have you done that kind of heavy housework?

No of days 0

36-37

- f) On the day you most recently did some heavy housework, how long in total did you spend doing it? Please don't include any time you spent on lighter housework or any breaks you took. We want to know the actual time you spent on heavy housework.

Hours

38

Minutes

39-40

- 5 a) Have you done any gardening in the past 12 months, that's from yesterday back to .. (TODAY'S DATE A YEAR AGO)?

Yes 1 (b)
No 2 Q.6

41

IF GARDENING IN PAST 12 MONTHS

- b) Just thinking about the 4 weeks from .. up to yesterday, have you done any gardening in the past 4 weeks?

Yes 1 (c-e)
No 2 Q 6

42

IF YES AT b)

- c) During the past 4 weeks, on how many days did you do any gardening?

No of days

43-44

- d) And during the past week, that's back to last day, on how many days, if any, have you done any gardening?

No of days

45

- e) On the day you most recently did some gardening how long in total did you spend doing it? Please don't include any breaks you took. We want to know the actual time you spent gardening.

Hours

46

Minutes

47-48

- 6 a) Have you done any DIY, building work activities, car repairs or car cleaning in the past 12 months, that's from yesterday back to (TODAY'S DATE A YEAR AGO)?

Yes 1 (b) 49
No 2 Q 7

IF DIY ETC. IN PAST 12 MONTHS

- b) Just thinking about the 4 weeks from up to yesterday, have you done any of this kind of work in the past 4 weeks?

Yes 1 (c-e) 50
No 2 Q 7

IF YES AT b)

- c) On how many days during the past 4 weeks did you do that kind of work?

No of days 51-52

- d) And during the past week, that's back to last day, on how many days, if any, have you done that kind of work?

No of days 53

- e) On the day you most recently did some DIY, building work or work on the car, how long in total did you spend doing it? Please don't include any breaks you took, we want to know the actual time you spent doing this work

Hours 54

Minutes 55-56

- 7 a) Did anything happen to you in the past 4 weeks which made it different from usual, like illness or holidays etc ?

Yes 1 (b-c) 57
No 2 Q 8

IF YES AT a)

- b) What happened in the past 4 weeks that made it different from usual?

58

- * c) So overall were you more active, less active or the same as usual?

More active 1 59
Less active 2
The same 3

				Column Numbers
WALKING				
Now, walking				
8	Can you walk for a quarter of a mile on your own without stopping and without severe discomfort?	Yes	1	60
		No	2	
9	For how long can you walk on your own without stopping or without severe discomfort? Would you say	less than 5 minutes	1 Q 13	61
		5, but less than 10 minutes	2 } Q 12	
		10, but less than 15 minutes	3 }	
	RUNNING PROMPT	15, but less than 30 minutes	4 Q 11	
		30 minutes or more?	5 Q 10	
IF CAN WALK FOR 30 MINUTES OR MORE (Q.9 CODE 5)			OTHERS DNA	X SEE Q.11
10.a)	I'd like you to think now about all the walking you've done in the past 4 weeks, either locally or away from here including any country walks First, I'm interested in walks of 2 miles or more These are long <u>continuous</u> walks that would usually take <u>at least 40 minutes</u> Don't include anything shorter than that Did you do any walks of that kind during the past 4 weeks, that's from up to yesterday?			
		Yes	1 (b-d)	62
		No	2 Q 11	
IF ANY WALKS OF AT LEAST 2 MILES IN PAST 4 WEEKS				
b)	During the past 4 weeks how many times did you do any long walks of 2 miles or more?	No of times	<input type="text"/> <input type="text"/>	63-64
c)	And during the last week, that's back to last . day, how many times did you do any long walks of 2 miles or more?	No of times	<input type="text"/> <input type="text"/>	65-66
d)	How long did you spend walking on the most recent occasion you did a long walk of 2 miles or more?	Hours	<input type="text"/>	67
		Minutes	<input type="text"/> 0 <input type="text"/>	68-69
IF CAN WALK FOR 15 MINUTES OR MORE (Q.9 CODES 4 & 5)			OTHERS DNA	X SEE Q.12
11 a)	Now, I'd like you to think about all the walking you've done in the <u>past week</u> , that's back to last . day Did you do any walks either locally or away from here of between 1 and 2 miles? That would usually be <u>continuous</u> walking for about <u>20 to 30 minutes</u>			
		Yes	1 (b-c)	70
		No	2 Q 12	
IF YES AT a)				
b)	During the past week how many times did you do any of these walks?	No of times	<input type="text"/> <input type="text"/>	71-72
c)	And yesterday, that is . (DAY OF WEEK), how many times did you do any of these walks?	No of times	<input type="text"/> 0 <input type="text"/>	73-74
IF CAN WALK FOR 5 MINUTES OR MORE (Q.9 CODES 2-5)			OTHERS DNA	X Q.13
12	Have you done any (shorter) walks which lasted at least 5 minutes in the last week, that's back to last . day?	Yes	1	75
		No	2	
ASK ALL				
13	Which of the following best describes your usual walking pace	a slow pace	1	76
*		a steady average pace	2	
	RUNNING PROMPT	a fairly brisk pace	3	
		or a fast pace - at least 4 mph?	4	

SPORTS AND EXERCISE ACTIVITIES
SHOW CARD E2



14a) Now I'd like you to think about any sport or exercise activities you do.
Can you look at this card and tell me which, if any, you've done during
the past year, that's back to (TODAY'S DATE A YEAR AGO)

WRITE
NAME OF
ACTIVITY

b) Can I just check, are there any other sports or exercise
activities you've done in the past year?

WRITE
IN AS
NECESSARY

DNA

Now I want to ask you about the activities you have done in the
past 4 weeks that's the period from . . . up to yesterday.

Yes
No

ASK FOR EACH ACTIVITY LISTED

15. Can I just check, did you (ACTIVITY) in the past 4 weeks

ASK Q. 16a) TO f) FOR EACH ACTIVITY DONE IN PAST 4 WEEKS

16a) First (ACTIVITY), can you tell me on how many separate
occasions you did that during the past 4 weeks?

No. of
occasions in
past 4 weeks

b) And during the last week that's back to last, on how
many separate occasions did you (ACTIVITY)?

No. of
occasions in
past week

c) Thinking about the most recent occasion, how long
did you (ACTIVITY) for, please don't include travel
time, time getting changed or any breaks you took.
We want to know the actual time you were

Time in
hours &
minutes

d) Was that less or more time than usual, or
was it about average?

Less
More
Average

IF LESS OR MORE TIME ASK e)

OTHERS GO TO f)

e) So how much time did you usually spend
... on each occasion?

Time in
hours &
minutes

ASK ALL

f) During the past 4 weeks was the effort of
usually enough to make you out of breath or sweaty?

Yes
No

		Office Use		IF 2nd PAGE USED RING CODE → 2		77
1-10	IF NO ACTIVITIES IN PAST YEAR RING CODE → 1 GO TO Q.17					78
					Office Use	79-80

3-26
blank

DNA

7	1	1	1	1	1	1	1	1	1	1
	2	2	2	2	2	2	2	2	2	2
IF NO ACTIVITIES IN PAST 4 WEEKS RING CODE → 1 GO TO Q.17										81
									Office Use	82
29	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
31	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins
34	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	1	1	1	1	1	1	1	1	1	1
	2	2	2	2	2	2	2	2	2	2
	3	3	3	3	3	3	3	3	3	3
	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins	hrs mins
38	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
	1	1	1	1	1	1	1	1	1	1
	2	2	2	2	2	2	2	2	2	2

PAST PARTICIPATION

The kinds of activities that people do often change as they go through life, so I'd like to talk a little about activities you've done in the past

- 17 a) From the time you left school to when you were about 25, how much sport and exercise did you take part in? Would you say

RUNNING PROMPT

- a lot 1
a moderate amount 2
very little 3
or none at all? 4

83

- b) So compared to other people of the same age at that time would you describe yourself as

RUNNING PROMPT

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

84

Now I'd like to talk about any sports or exercise activities you've done regularly at any time since you left school

- 18 a) First, long walks During the time from when you left school up to the present, have you, at any time, walked for 2 miles or more on a regular basis, for a period of at least 2 years?

- Yes 1 (b-c) 85
No 2 Q 19

IF YES AT a)

- b) For about how many years in total did you do these long walks regularly?

No. of years

86-87

- c) At what age did you stop doing long walks regularly or do you still do long walks at least once a week for a few months of the year?

Age stopped

88-89

Still regular

01

**SHOW BOOKLET AND
CODE ANSWERS IN GRID ON OPPOSITE PAGE**

- 19 a) And again, during these years from when you left school up to the present, have you, at any time, done any of these activities on a regular basis, for a period of at least 2 years? Please include any activities you may already have mentioned

IF YES CODE OR SPECIFY EACH REGULAR ACTIVITY MENTIONED.

- b) Can I just check, are there any other sports or exercise activities you've ever done on a regular basis for 2 years or more?
CODE OR SPECIFY

IF NO REGULAR ACTIVITIES

RING CODE →

1 Q 21

90

**ASK Q20a-b (AT TOP OF GRID) FOR EACH ACTIVITY EVER
DONE REGULARLY FOR 2 YEARS OR MORE**

233

Activity	Q19 Regular at any time since left school	Q20a For about how many years in total did you regularly?	Q20b At what age did you stop regularly, or do you still at least once a week for a few months a year?		Activity (continued)	Q19 Regular at any time since left school	Q20a For about how many years in total did you regularly?	Q20b At what age did you stop regularly, or do you still at least once a week for a few months a year?	
			No of years	Age stopped				No of years	Age stopped
Swimming	01			01	Jogging/ running	26			01
Tennis	02			01	Athletics	27			01
Table tennis	03			01	Rambling	28			01
Squash	04			01	Hiking/ Backpacking	29			01
Badminton	05			01	Climbing	30			01
Football	06			01	Social dancing	31			01
Rugby	07			01	Snooker	32			01
Cricket	08			01	Darts	33			01
Rounders	09			01	Ten pin bowling	34			01
Hockey	10			01	Skittles	35			01
Netball	11			01	Shooting	36			01
Volleyball	12			01	Fishing	37			01
Basketball	13			01	Horse riding	38			01
Golf	14			01	Skiing	39			01
Bowls	15			01	Motor sports	40			01
Boxing	16			01	Ice skating	41			01
Martial Arts	17			01	Roller skating	42			01
Weight training	18			01	Sailing	43			01
Weight lifting	19			01	Rowing	44			01
Yoga	20			01	Canoeing	45			01
Gymnastics	21			01	Other specify	46			
Exercises	22			01					01
Keep fit	23			01					01
Aerobics	24			01					01
Dancing for fitness	25			01					01

10-11

12-13

14-15

10-11

12-13

14-15

Now I would like to talk a little about any work you used to do

21 a) How long ago did you last have paid employment?

- Still in paid employment 1 }
Less than 1 year 2 }
1 year, less than 5 years 3 } b)
5 years, less than 10 years 4 }
10 years or more 5 }
Never worked 6 Q 24

93

IF EVER WORKED AT a)

b) How many hours a week did you work (on average)?

No of hours

--	--

94-95

22 **DESCRIPTION OF MAIN JOB/LAST MAIN JOB**

Occ

Ind

96-98

99-101

a) **OCCUPATION**
Job title

INTERVIEWER
CODE

Description

b) **INDUSTRY**

- Employee 1 (c-d)
Self-employed 2 (e)

102

IF EMPLOYEE

c) Ask or record

- Manager 1
Foreman/supervisor 2
Other employee 3

103

d) How many employees work(ed) in this establishment?

- Under 25 1 } Q 23
25 or more 2 }

104

IF SELF-EMPLOYED

e) Do (did) you employ any other people?
(PROBE FOR NUMBER)

- Yes, under 25 1
Yes, 25 or more 2
No 3

105

23. Overall, would you say that in terms of physical effort your work was

- . very demanding 1
fairly demanding 2
or not very demanding? 3

106

ASK ALL

Finally in this section on activities I'd like to talk briefly about other things that may involve you in physical activity.

- 24 a) First, stairs Do you go up and down stairs at home?

Yes 1 (b-c)
No 2 Q.25

107

IF YES AT a)

- b) About how many times a day do you climb the stairs?

No of times

--	--

108-109

- c) And how many steps are there in your stairs?

No of steps

--	--

110-111

- 25 a) In an average week on how many days, if any, do you usually climb stairs elsewhere?

None 0 Q 26

112

No. of days

--

 (b-c)

IF SOME AT a)

- b) About how many times a day do you climb up stairs elsewhere?

No of times

--	--

113-114

- c) And, on average, how many steps do you go up each time?

No of steps

--	--

115-116

And now, caring for others

- 26 In an average week on how many days, if any, do you carry a child around? Would you say rarely or never, 1-2 days, 3-5 days or most days?

REPEAT FOR b) AND c)

- a) Carry a child around
b) Push a child in a pram or pushchair
c) Play games with a young child that involve you in physical effort

Rarely/ never	1-2 days	3-5 days	Most days
1	2	3	4
1	2	3	4
1	2	3	4

117

118

119

- 27 a) Do you help care for anyone who is disabled or has difficulty walking?

Yes 1 (b)
No 2 Q 28

120

IF YES AT a)

- b) In an average week on how many days, if any, do you lift or carry a disabled adult? Would you say rarely or never, 1 to 2 days, 3 to 5 days or most days?

REPEAT FOR c) AND d)

- b) Lift or carry a disabled adult
c) Give walking support to a disabled adult
d) Push a wheelchair

Rarely/ never	1-2 days	3-5 days	Most days
1	2	3	4
1	2	3	4
1	2	3	4

121

122

123

OTHER ACTIVITY

28 Can I just check, is there anything else that you've done in the past 4 weeks which involved physical activity?

NO OTHER ACTIVITIES

0 Q.29

124

IF YES ASK (a-f) FOR EACH ACTIVITY AND RECORD IN GRID BELOW

- a) Name of activity
- b) On how many separate occasions did you do that during the past 4 weeks?
- c) Thinking about the most recent occasion, how long did you (ACTIVITY) for?
- d) Was that less or more time than usual or was it about average?

IF LESS OR MORE TIME ASK e)

e) So how much time did you usually spend on each occasion?

ASK ALL

f) During the past 4 weeks was the effort of usually enough to make you out of breath or sweaty?

a) Name of activity	b) No of occasions	c) Last time		d) Usual?		If L/M e) Usually		f) Out of breath	
		Hrs	Mins	L/M	Av	Hrs	Mins	Yes	No
				1	2			1	2
				1	2			1	2

125-135

136-146

29 Compared to other people of your age would you describe yourself as

RUNNING PROMPT

- very physically active
- fairly physically active
- not very physically active
- or not at all physically active?

1
2
3
4

147

30 Compared to other people of your age, would you say you are

RUNNING PROMPT

- very fit
- fairly fit
- not very fit
- or not at all fit?

1
2
3
4

148

31 Do you think you get enough exercise at present to keep you fit?

- Yes
- No
- Don't know

1
2
3

149

Now I'd like to talk about other things to do with health

32	In general do you think you worry more than other people, do you worry less or do you worry about the same as other people?	Worry more	1	150
		Worry less	2	
		About the same	3	

33 a)	Over the last year was there any period when you suffered from lack of sleep because you were worrying?	Yes	1 (b-c)	151
		No	2 Q 34	

IF YES AT a)

b)	Was this one period or more than one period?	One period	1	152
		More than one	2	

c) How long in total did this happen for

RUNNING PROMPT	less than a month	1	153
	1 up to 3 months	2	
	3 up to 6 months	3	
	or 6 months or more?	4	

34	Do you usually take pills to help you sleep?	Yes	1	154
		No	2	

SHOW CARD E3

35	I am going to read some descriptions of the way people feel at different times. Could you look at this card and tell me during the past few weeks have you felt often, sometimes or never?			
----	--	--	--	--

ASK FOR EACH STATEMENT

	Often	Sometimes	Never	
Particularly excited or interested in something	1	2	3	155
So restless you could not sit long in a chair	1	2	3	156
Proud because someone complimented you on something you had done	1	2	3	157
Very lonely or remote from other people	1	2	3	158
Pleased about having accomplished something	1	2	3	159
Bored	1	2	3	160
On top of the world	1	2	3	161
Depressed or very unhappy	1	2	3	162
That things were going your way	1	2	3	163
Upset because someone criticised you	1	2	3	164

36	Major events and day to day problems can cause stress in people's lives Would you say in the last year your life has been .	. very stressful	1	165
		fairly stressful	2	
		not very stressful	3	
RUNNING PROMPT	or not at all stressful?		4	

37 * Is there someone among your family and friends
who you could talk to in times of difficulty?

Yes 1
No 2

166

38 How often do you see any of your friends or
relations not counting those who live with
you Would you say

RUNNING PROMPT

almost daily 1
at least once a week 2
at least once a month 3
or less often than that? 4
No friends/relatives outside household 5

167

39 a) Do you have any relatives or friends who you don't
see often but who keep in contact by phone or letter?

Yes 1 (b)
No 2 Q 40

168

IF YES AT a)

b) How often are you in contact with any of those
relatives or friends? Would you say

RUNNING PROMPT

almost daily 1
at least once a week 2
at least once a month 3
or less often than that? 4

169

40 a) Do you belong to any clubs or organisations?

Yes 1 (b)
No 2 Q 41

170

IF YES AT a)

b) How often do you join in any of their
activities? Would you say

RUNNING PROMPT

almost daily 1
at least once a week 2
at least once a month 3
or less often than that? 4

171

41 a) Do you ever go to religious services?

Yes 1 (b)
No 2 Q 42

172

IF YES AT a)

b) How often do you go to religious
services? Would you say

RUNNING PROMPT

at least once a week 1
at least once a month 2
or less often than that? 3

173

DIET

Now I'd like to talk about what you eat and drink

- 42 On weekdays (workdays) how soon after you get up do you usually have something to eat?
Would you say .

RUNNING PROMPT

within 1 hour
1 hour but less than 2 hours
or 2 hours or more?

1
2
3

174

- 43 a) How often have you eaten breakfast cereal in the past few weeks

RUNNING PROMPT

. daily
more than twice a week
once or twice a week
less than once a week
or never?

1 }
2 } (b)
3 }
4 } Q 44
5 }

175

IF ONCE A WEEK OR MORE AT a)

- b) What kind of cereal do you usually have?
(TYPE OR BRAND)

176

- 44 What kind of bread do you mainly eat?

IF BROWN CHECK:

Is that wholemeal or some other sort of brown bread?

White
High fibre white
Granary/wheatmeal/brown
Wholemeal

1
2
3
4

177

IF MAN, PITTA, ETC. CHECK

Is that white or brown?

Other (SPECIFY)
Does not eat bread

5
6 Q 46

- 45 a) What do you usually spread on your bread?

PROMPT AS NECESSARY

Butter
Hard margarine
Soft margarine (BRAND)
Low fat spread (BRAND)
Other (SPECIFY)
Does not use fat on bread

1
2
3 } (b)
4 }
5
6

178

IF SOFT MARGARINE OR LOW FAT SPREAD

- b) What brand?

179

- 46 Can I just check, are you vegetarian (or vegan)?

Yes
No

1 Q 48
2 Q 47

180

DOES NOT EAT MEAT DIA

X Q 48

- 47 When you have meat with fat on eat the fat and the lean meat do you generally cut the fat off
RUNNING PROMPT
or do you never have meat with fat on?

1
2
3

181

ASK ALL

- 48 a) How often do you eat fried food of any kind, including chips

daily

1

182

RUNNING PROMPT

more than twice a week

2

(b)

once or twice a week

3

less than once a week

4

or never?

5

Q 49

IF CODES 1-4 AT a)

- b) When you have fried food what sort of fat is mainly used?

CODE ONE ONLY

Fat such as lard, dripping, butter or hard margarine

1

183

Mixed or blended vegetable oil

2

Corn oil, sunflower oil, or other polyunsaturated oil or margarine

3

Low fat margarine or low fat butter

4

Other (SPECIFY)

5

Don't know

6

- 9 a) How often do you have grilled food

daily

1

184

RUNNING PROMPT

more than twice a week

2

(b)

once or twice a week

3

less than once a week

4

or never?

5

Q 50

IF CODES 1-4 AT a)

DOES NOT EAT MEAT DNA

X

Q 50

- b) When you have grilled meat is it generally grilled with added fat or oil, or not?

Grilled with added fat/oil

1

185

Grilled without added fat/oil

2

Does not eat grilled meat

3

- a) How much milk do you usually have each day including milk used in drinks, on cereals and in cooking

none

0

Q 51

186

RUNNING PROMPT

less than 1/2 pint

1

1/2 but less than 1 pint

2

(b)

1 but less than 2 pints

3

2 pints or more?

4

IF HAS MILK

- b) What type of milk do you mainly use?

Gold top/Channel Islands

1

187

Silver top/Red top/Other wholemilk

2

Semi skimmed

3

Skimmed

4

Other (SPECIFY)

5

ALCOHOL

51	How often do you usually have an alcoholic drink of <u>any</u> kind? Would you say it is	every day	1	188
	RUNNING PROMPT	almost every day	2	
		3-4 times a week	3	
		1-2 times a week	4	
		about once a fortnight	5	
		about once a month	6	
		less often than that or never?	7	
52	And thinking of the amount you drink now. Would you say that you are	a non drinker	4	189
	RUNNING PROMPT	a light drinker	1 } Q 53	
		a moderate drinker	2 } Q 54	
		or a heavy drinker?	3	
	IF LIGHT OR MODERATE OR NON-DRINKER	HEAVY DRINKER DNA	X Q 54	
53 a)	Have you ever drunk heavily on a regular basis?	Yes	1 (b)	190
		No	2 Q.54	
	IF YES AT a)			
b)	How long ago did you stop drinking heavily on a regular basis?	Less than 1 year	00	191-196
		No. of years	<input type="text"/>	
	SMOKING			
54	Now I'd like to ask you a few questions about smoking	Yes	1 Q 55	193 ✓
	Have you <u>ever</u> smoked a cigarette or cigar or pipe?	No	2 Q.60	
55 a)	Do you smoke cigarettes at all nowadays?	Yes	1 (b-e)	194
		No	2 Q.56	
	IF YES AT a)			
b)	How many cigarettes <u>a day</u> do you usually smoke on weekdays?	No smoked per day	<input type="text"/>	195-196
		Less than 1 per day	00 } If both coded Q 56 applies	
c)	How many cigarettes <u>a day</u> do you usually smoke at weekends?	Less than 1 per day	00	197-198
		No smoked per day	<input type="text"/>	
d)	Do you mainly smoke	filter tipped cigarettes	1	199
		plain or untipped cigarettes	2	
		or hand rolled cigarettes	3	
e)	What is the tar level of the cigarettes you usually smoke?	High	1	200
		Middle to high	2	
		Middle	3	
		Low to middle	4	
		Low	5	
		Don't know	6	

**IF DOES NOT SMOKE NOWADAYS OR SMOKES LESS THAN
1 PER DAY**

OTHERS DMA

X Q 57

56 a) Have you ever smoked cigarettes regularly,
by that I mean one or more a day for a year?

Yes

1 (b-d)

201

No

2 Q 58

IF YES AT a)

b) How long ago did you stop smoking cigarettes
regularly?

No of years

202-21

IF LESS THAN ONE YEAR: No. of months

204-21

c) How many cigarettes did you smoke a day
when you last smoked regularly?

No smoked per day

206-20

* d) What were the main reasons for you giving
up smoking?

CODE ALL THAT APPLY

Expense

1

208

Concern for future ill health

2

209

Ill health at time of giving up

3

210

Social pressure/to please someone else

4

211

Pregnancy

5

212

Just wanted to give up

6

213

Other reason (SPECIFY)

7

214

IF SMOKES CIGARETTES NOWADAYS OR HAS SMOKED REGULARLY

57 How old were you when you started to smoke
cigarettes regularly?

Age in years

215-21

CIGARS

58 a) Have you ever smoked cigars regularly, that
is one cigar a day for a year?

Yes

A (b)

217

No

1 Q 59

IF YES AT a)

b) Do you still smoke cigars regularly?

Yes

3

No

2

PIPE SMOKING

59 a) Have you ever smoked a pipe regularly, that is
at least one bowl of tobacco a day for a year?

Yes

A (b)

218

No

1 Q.60

IF YES AT a)

b) Do you still smoke a pipe regularly?

Yes

3

No

2

ASK ALL

50 Now, your height and weight, do you think
that for your height you are

RUNNING PROMPT

. about the right weight
too heavy
or too light
Don't know

1
2
3
4

219

51 a) What is the least you've ever weighed
since you were eighteen?

(Stones Pounds)
[][] [][]

Kilos

(220-223)
224-226

Don't know 888

b) How old were you when you were last this
weight?

Under 20

1

227

READ OUT AS APPROPRIATE

20-29

2

CODE OLDEST AGE AT THAT WEIGHT

30-39

3

40-49

4

50-59

5

60 or more

6

Don't know

7

52 a) What is the most you've ever weighed
(excluding during pregnancy)?

(Stones Pounds)
[][] [][]

Kilos

(228-231)
232-234

Don't know 888

b) How old were you when you were last this
weight?

Under 20

1

235

READ OUT AS APPROPRIATE

20-29

2

CODE OLDEST AGE AT THAT WEIGHT

30-39

3

40-49

4

50-59

5

60 or more

6

Don't know

7

SHOW CARD E4

53. I'm going to read out three statements about health and I'd like
* you to look at this card and tell me how strongly you agree or
disagree with each one by giving me a number from 1 to 5 '1'
means you disagree strongly, '2' means you just disagree and so
on to '5' which means you agree strongly

What number on the card would you
choose to show how strongly you
agree or disagree with the state-
ments ..

Disagree Agree Don't
strongly strongly know

. good health is largely a matter
of chance

1 2 3 4 5 6

236

my health depends mainly on the
way I choose to live

1 2 3 4 5 6

237

regular visits to the doctor
are the best way to avoid illness

1 2 3 4 5 6

238

HEALTH STATUSAnd now I'd like you to think about your health

4	Compared to other people of your age would you say you are in	excellent health	1	239
		good health	2	
		fair health	3	
		or poor health?	4	

5 a) Have you ever had any of the following?

READ OUT

	(a) Had Not	(b) Age	(c) Still Not has	
Angina	1 2	,	1 2	240-243
Arthritis	1 2	,	1 2	244-247
Asthma	1 2	,	1 2	248-251
Back trouble	1 2	,	1 2	252-255
Bronchitis	1 2	,	1 2	256-259
Diabetes	1 2	,	1 2	260-263
Emphysema	1 2	,	1 2	264-267
Persistent foot trouble (bunions, ingrowing toenails etc)	1 2	,	1 2	268-271
Hay fever	1 2	,	1 2	272-275
High blood pressure	1 2	,	1 2	276-279
Hernia	1 2	,	1 2	280-283
Migraine	1 2	,	1 2	284-287
Persistent skin trouble (eczema, psoriasis etc)	1 2	,	1 2	288-291
Varicose veins	1 2	,	1 2	292-295

ASK b) AND c) FOR EACH PROBLEM MENTIONED

- b) How old were you when you first had ? **CODE IN GRID ABOVE**
- c) Do you still suffer from .?

a) Have you ever had a stroke?	Yes	A (b-d)	296
	No	1 Q 67	
IF YES AT a)			
b) How long did the effect last ...	... less than 24 hours	2	
	24 hours or more	3	
c) How old were you when you first had one?	Age in years	<input type="text"/> <input type="text"/>	297-298
d) Are you currently attending a hospital or doctor because of your stroke?	Yes	1	299
	No	2	

			Column Numbers
67 a)	Have you ever had heart trouble, suspected or confirmed?	Yes	1 (b-e) 300
		No	2 Q 68
IF YES AT a)			
b)	How old were you when you first experienced it?	Age in years	<div style="border: 1px solid black; width: 40px; height: 20px; display: inline-block;"></div> 301-302
c)	What was the diagnosis?	Heart attack	1 303
		Heart strain	2 304
		High blood pressure	3 305
		Valve disease	4 306
		Hole in the heart	5 307
		Other (SPECIFY)	6 308
CODE ALL THAT APPLY			
d)	Did you attend a hospital?	Yes	1 309
		No	2
e)	Are you still attending a hospital or doctor for heart trouble?	Yes	1 310
		No	2
68 a)	Have you ever had any pain or discomfort in your chest?	Yes	1 (b) 311
		No	2 Q 70
IF YES AT a)			
b)	Do you get it now when you walk uphill or hurry ?	Yes	1 (c-g) 312
		No	2 Q 69
	Never hurries or walks uphill		3 (c-g)
IF YES AT b)			
c)	Do you get it when you walk at an ordinary pace on the level?	Yes	1 313
		No	2
d)	What do you do if you get it while walking?	Stop	1 314
		Slow down	2
		Carry on	3
READ OUT			
e)	If you stand still does the pain go away?	Goes away	1 315
		Does not	2
f)	How soon does the pain go away?	10 minutes or less	1 316
		More than 10 minutes	2
READ OUT			
g)	Where do you get this pain or discomfort?		
		Sternum (upper or middle)	1 317
		Sternum (lower)	2 318
		Left anterior chest	3 319
		Left arm	4 320
		Other	5 321
CODE ALL THAT APPLY			

			Column Numbers
IF EVER HAD PAIN/DISCOMFORT IN CHEST			
69 a)	Have you ever had a severe pain across the front of your chest lasting for half an hour or more?	OTHERS DNA	X Q 70
		Yes	1 (b)
		No	2 Q 70
IF YES AT a)			
b)	Did you see a doctor about it?	Yes	1 (c-d)
		No	2 Q.70
IF YES AT b)			
c)	What did he say it was?		
			324
d)	How many of these attacks have you had?	Number	<input type="text"/> <input type="text"/>
			325-326
ASK ALL			
70.a)	Are you troubled by shortness of breath when hurrying on level ground or walking up a slight hill?	Yes	1 (b-d)
		No	2 Q 71
	Never hurries or walks uphill		3 (b-d)
IF YES AT a)			
b)	Do you get short of breath walking with other people of your own age on level ground?	Yes	1
		No	2
c)	Do you have to stop for breath when walking at your own pace on level ground?	Yes, stop	1
		No	2
d)	Are you short of breath when washing or dressing?	Yes	1
		No	2
1 a)	Do you usually cough first thing in the morning in winter?	Yes, cough	1 } (b)
		No	2 }
b)	Do you usually cough during the day or at night in the winter?	Yes	1 } See c)
		No	2 }
IF YES AT a) OR b) NO AT BOTH a) AND b) DNA			X Q 72
c)	Do you cough like this on most days for as much as three months each winter?	Yes	1
		No	2
2.a)	Do you usually bring up any phlegm from your chest first thing in the morning in the winter?	Yes	1 } (b)
		No	2 }
b)	Do you usually bring up any phlegm from your chest during the day or night in the winter?	Yes	1 } See c)
		No	2 }
IF YES AT a) OR b) NO AT BOTH a) AND b) DNA			X Q 73
c)	Do you bring up phlegm like this on most days for as much as three months each winter?	Yes	1
		No	2
d)	In the past 3 years have you had a period of increased cough and phlegm lasting for 3 weeks or more?	Yes	1
		No	2
			247

73 a) Do you suffer from any recurrent or continuous pain, swelling or stiffness in any of your joints, your neck or your back?

Yes 1 (b-c) 338
No 2 See Q 74

IF YES AT a) SHOW CARD E5

b) Please look at this card and tell me which joints trouble you?

CODE IN GRID

	Left	Right	
Shoulder	1	1	339-340
Elbow	2	2	341-342
Wrist	3	3	343-344
Hand or fingers	4	4	345-346
Hip	5	5	347-348
Knee	6	6	349-350
Ankle	7	7	351-352
Foot or toes	8	8	353-354
Neck	9		355
Back	0		356

c) Does this pain, stiffness or swelling in your joints tend to

. limit your walking or climbing stairs	Yes 1	No 2	357
. interfere with your sleeping	1	2	358
. make it difficult for you to grip, turn or hold things	1	2	359
. make it difficult for you to reach up for things	1	2	360

WOMEN ONLY

MEN DNA

4 a) Have you ever had any major gynaecological problems?

Yes 1 (b-c) 361
No 2 Q 75

IF YES AT a)

b) How old were you when you first experienced them?

Age in years

--	--

362-363

c) Do you still suffer from them?

Yes 1 } Q 75 364
No 2 }

5 a) Have you ever had hormone replacement therapy (HRT)?

Yes 1 (b) 365
No 2 Q 76

IF YES AT a)

b) For how long were you having the treatment?

No of months

--	--

366-367

ASK ALL

76 a) Do you currently have any long-standing physical or health problems as a result of taking part in sports or exercise activities or from other types of injuries or accidents?

Yes

1 (b-f)

368

No

2 Q 77

IF YES AT a) OBTAIN DETAILS FOR MAX. 3 MOST SERIOUS

b) What is the problem?

c) Was it caused by taking part in sports or exercise or was it some other type of injury or accident?

d) How long ago did the injury/accident happen?

e) Does this problem restrict you from taking part in sports or other physical activity?

f) Are you currently receiving medical treatment for this problem?

(b) What is problem	(c)		(d)	(e)		(f)	
	Spts	Not	No yrs	Restr.	No	Trt	Not
	1	2		1	2	1	2
	1	2		1	2	1	2
	1	2		1	2	1	2

369-375

376-382

383-389

7 Do you suffer from falls or have great difficulty in keeping your balance?

Yes

1

390

No

2

8 a) During the past year have you ever lost your balance and fallen?

Yes

1 b)

391

No

2 Q 79

IF YES AT a)

b) How many times have you fallen during the past year?

No of times

--	--

392-393

9 Do you need to hold on to something to help you keep your balance

RUNNING PROMPT

all the time

1

394

quite often

2

only occasionally

3

or not at all?

4

30 a) Have you ever had any other major illnesses or health problems?

Yes 1 (b-c)
No 2 Q 81

395

IF YES AT a) LIST PROBLEMS AND ASK b) AND c)

b) How old were you when you first had .?

c) Do you still suffer from ..?

PROBLEM	AGE AT ONSET	STILL HAS	NOT	
		1	2	396-400
		1	2	401-405
		1	2	406-410
		1	2	411-415

31 Now, just thinking about the last four weeks, that's back to have you had any of the following?

READ OUT

A cold or flu

A cough, catarrh or sinus trouble

Shortness of breath

Feeling tired for no apparent reason

Indigestion or other stomach trouble

Diarrhoea or constipation

Kidney or bladder trouble

Pains in the chest

Headaches or migraine

Trouble with eyes or ears

A bad back

Painful joints

Dizziness or fainting

Been nervy, tense or depressed

Rashes, itches or other skin trouble

Yes	No
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2
1	2

416

417

418

419

420

421

422

423

424

425

426

427

428

429

430

SHOW CARD E6

82 Health problems, either big or small, can affect people's lives in many different ways I'd like you to look at this card and tell me whether your present state of health is causing problems with any of these things.

**READ OUT FIRST ITEM
REPEAT QUESTION AS NECESSARY**

	Yes	No	Does not apply	Most affected	
Looking after the home	1	2	3	01	431
Going shopping	1	2	3	02	432
Doing paid work	1	2	3	03	433
Looking after children	1	2	3	04	434
Gardening	1	2	3	05	435
Going out socially	1	2	3	06	436
Relationships with people you live with	1	2	3	07	437
Your sex life	1	2	3	08	438
Taking part in sports/exercise activities	1	2	3	09	439
Your interests and hobbies	1	2	3	10	440
Going away for weekends or longer holidays	1	2	3	11	441
Getting out and about as much as you want to	1	2	3	12	442

IF MORE THAN ONE MENTIONED AS A PROBLEM

b) Which of those you have mentioned (**READ OUT**) is most affected by your health? **CODE IN GRID ABOVE**

443-444

Family factors are important in people's health

ASK FOR FATHER FIRST THEN MOTHER

83 Can you tell me, did your _____ ever suffer from ..

READ LIST

	Father			Mother			
	Yes	No	Don't know	Yes	No	Don't know	
Angina	1	2	3	1	2	3	445-446
Heart attack	1	2	3	1	2	3	447-448
Stroke	1	2	3	1	2	3	449-450
High blood pressure	1	2	3	1	2	3	451-452
Diabetes	1	2	3	1	2	3	453-454

CLASSIFICATION

INTRODUCE CLASSIFICATION SECTION

84 a) **LIST ALL PERSONS IN HOUSEHOLD AND RECORD DETAILS**

PERSON NO	RELATIONSHIP TO RESPONDENT	CODE SEE BELOW	RING HOH	AGE	SEX M F	EMPLOYMENT F/T P/T None
1	RESPONDENT	<input checked="" type="checkbox"/>	1		1 2	1 2 3
2			1		1 2	1 2 3
3			1		1 2	1 2 3
4			1		1 2	1 2 3
5			1		1 2	1 2 3
6			1		1 2	1 2 3
7			1		1 2	1 2 3
8			1		1 2	1 2 3
9			1		1 2	1 2 3
CODES: Spouse 1, parent 2, child 3, other relative 4, non-relative 5						

b) **IS THE RESPONDENT HOH?**

Respondent HOH
Not

1 Q.86
2 Q.85

517

DESCRIPTION OF MAIN/LAST JOB OF HOH

OCC

518-520

85 a) **OCCUPATION**

IND

521-523

Job title

Description

**INTERVIEWER
CODE**

b) **INDUSTRY**

Employee
Self-employed

1 (c-d)
2 (e)

524

IF EMPLOYEE

c) **ASK OR RECORD:**

Manager
Foreman/supervisor
Other employee

1
2
3

525

d) How many employees work(ed) in this establishment?

Under 25
25 or more

1 } Q.86
2 }

526

IF SELF EMPLOYED

e) Does (did) he/she employ any other people?

Yes under 25
25 or more
No

1
2
3

527

PROBE NUMBER

		Column Numbers
86	Are you married single or divorced, separated, widowed?	1 2 3 528
87 a)	In which country were you born? UK Other	1 2 529
b)	For how long have you lived in this neighbourhood? Less than 1 year No of years	00 <input type="text"/> <input type="text"/> 530-531
c)	And for how long altogether have you lived in the United Kingdom? Less than 1 year No of years Always lived in UK	00 <input type="text"/> <input type="text"/> 532-533 88
SHOW CARD E7		
88 a)	To which of the groups listed on this card do you consider you belong? White Black - Caribbean Black - African Black - other Indian Pakistani Bangladeshi Chinese Any other ethnic group	1 2 3 4 5 6 7 8 9 (b) 534
IF OTHER AT a)		
* b)	How would you describe the racial or ethnic group to which you belong?	535
89	Do you hold a current driving licence? Yes No	1 2 536
90	Do you have regular use, either as a driver or passenger, of a car, van or motorcycle? Car or van Motorcycle Both Neither	1 2 3 4 537
		253

SHOW CARD E8

91 a) Do you have any of the qualifications shown on this card or any other educational qualifications?

Yes 1 (b)
No 2 Q 92

538

IF YES AT a)

b) What is the highest qualification you have obtained either while at school or gained after you left school?

CODE ONE ONLY

CSE Grades 2-5

01

539-540

CODE QUALIFICATION
RESPONDENT THINKS IS
HIGHEST. IF TWO
OR MORE ARE EQUAL
TAKE MOST RECENT
OF THESE. IF STILL
STUDYING TAKE
HIGHEST TO DATE.

CSE Grade 1

GCE 'O' level

School Certificate

Scottish (SCE) Lower

City and Guilds Craft/Ordinary level

GCSE

02

GCE 'A' level/'S' level

Higher Certificate

Matriculation

Scottish (SCE) Higher

03

Overseas School Leaving Exam/Certificate

04

ONC/OND/City & Guilds Advanced/Final level

05

HNC/HND/City & Guilds Full Technological Certificate

06

RSA/Other clerical and commercial

07

Teachers training qualification

08

Nursing qualification

09

Professional qualification (membership awarded by professional institute)

10

Degree, including higher degree

11

Other work-related qualifications/certificate

12

Other (SPECIFY) _____

13

92 Do you have use of a telephone within your accommodation?

Yes 1
No 2

541

93 a) Is your accommodation owned or rented?

Owned 1 Q.93
Rented 2 (b)

542

IF RENTED

b) Do you rent

from the local authority

1

543

privately furnished

2

privately unfurnished

3

Other (SPECIFY)

4

94 ASK OR RECORD:

Is your accommodation all on one floor?

Yes 1
No 2

544

Time Finished

545-548

INTRODUCE APPRAISAL

COMPLETE SCREENING QUESTIONNAIRE

MAKE (PROVISIONAL) APPOINTMENT FOR APPRAISAL

70-74 - CENTRE

75 OR OVER - HOME

COMPLETE APPOINTMENT SLIP AND LEAVE WITH RESPONDENT

This survey is being carried out with the support of your local health district and as a matter of courtesy, with your permission we are telling the local GP's the names of those who have taken part. Could you tell me your full name, the name and address of your GP and your National Health Service Number - that's the number on your medical card.

IF NOT AVAILABLE ASK SUBJECT TO HAVE DETAILS AT THE APPRAISAL

GP's name
address

RECORD NHS NUMBER AND FULL NAME ON SELECTION SHEET

CONFIRM APPOINTMENT WITH COORDINATOR

CENTRE APPRAISAL - RETURN DOCUMENTS TO CENTRE BEFORE APPRAISAL

HOME APPRAISAL - RETURN DOCUMENTS TO CENTRE AFTER APPRAISAL

RETURN ALL DOCUMENTS TO CENTRE AFTER APPRAISAL IS COMPLETED



SURVEY OF ACTIVITY AND HEALTH SCREENING QUESTIONNAIRE

S1310/1 /90

Column
numbers

Unit	Area	Serial no.
<input type="text"/>	<input type="text"/>	<input type="text"/>

800-805

Date	Day	Month
<input type="text"/>	<input type="text"/>	<input type="text"/>

806-809

Interviewer no.
<input type="text"/>

810-813

The next few questions cover things you may have told me already but I need to note them separately for the appraisal team.

1a) First you are ...

Male

1

814

Female

2

b) What is your exact date of birth?

Day Mth Year

<input type="text"/>	<input type="text"/>	<input type="text"/>
----------------------	----------------------	----------------------

815-822

c) So your age is ...

Age in years

<input type="text"/>	<input type="text"/>
----------------------	----------------------

823, 824

2. Compared with other people of your age would you say you are ...

... very physically active

1

fairly physically active

2

RUNNING PROMPT

not very physically active

3

825

or not at all physically active

4

3a) Do you think you could walk continuously for a mile without stopping?

Yes

1 (b-c)

826

No

2 Q.4

IF YES AT a)

b) Do you think you could run or jog continuously for a mile without stopping?

Yes

1

827

No

2

c) What do you think is the shortest time you could cover a mile on foot?

Hours

<input type="text"/>

828

Minutes

<input type="text"/>	<input type="text"/>
----------------------	----------------------

829, 830

Now stairs

4. If I asked you to walk at a normal pace up a flight of, say, 20 steps, would you be able to do so ...

... easily

1

fairly easily

2

831

RUNNING PROMPT

with difficulty

3

or not at all?

4

5a) Do you have difficulty following a conversation with background noise?

Yes

1

832

No

2

b) Do you have difficulty reading ordinary newspaper print even if glasses or contact lenses are worn?

Yes

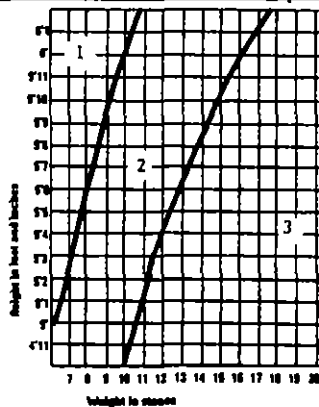
1

833

No

2

		Column num rs
6. Are you able to get out and about on foot outside the house ...	... unaided	1
	with stick/support only	2
RUNNING PROMPT	with help only	3
	or can't you get out at all?	4
834		
7. Do you have difficulty doing any of the following things?	Yes No	
a) Walking about the house without the aid of a stick or other support?	1 2	835
b) Dressing or undressing without help?	1 2	836
c) Getting in or out of bed without help?	1 2	837
8. Has a doctor or nurse ever told you that you have high blood pressure?	1 2	838
IF YES GIVE SOME DETAILS (CHECK IF ONLY DURING PREGNANCY)		
9. Have you had any history of heart trouble?	1 2	839
IF YES GIVE SOME DETAILS		
10. Do you suffer from Asthma?	1 2	840
11. Do you suffer from a wheezy chest?	1 2	841
12. Do you frequently have pains in your heart or chest?	1 2	842
13. Do you frequently feel faint or have spells of dizziness?	1 2	843
14. Has a doctor told you that you have a bone or joint problem which could be made worse by exercise?	1 2	844
15. Do you have any physical disabilities of any kind?	1 2	845
IF YES GIVE DETAILS		
WOMEN UNDER 45 YEARS	OTHERS DNA	X Q.17
16. Can I just check, are you pregnant at the moment?	1 2	846
IF YES NO. OF WEEKS <input type="text"/> <input type="text"/>		847, 848
257		

	yes	no	numbers
17. Have you been in hospital in the last 2 years? IF YES GIVE REASON AND OUTCOME	1	2	849
18. Have you had any operations or major illness in the past 6 months? IF YES GIVE DETAILS	1	2	850
19. Are you undergoing treatment or having any regular checks made for anything at the doctors, or a hospital or a clinic at the moment? IF YES GIVE DETAILS	1	2	851
20. Are you taking any pills or medication regularly for any of the following - <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> IF YES GIVE FULL DETAILS (ASK TO SEE BOTTLE LABELS) </div> <div> ... for heart trouble, angina? ... chest pains, or blood pressure? ... or for anything else? </div> </div>	1	2	852 853 854
21. Are there any (other) health reasons which restrict the amount of exercise you do these days? IF YES GIVE FULL DETAILS	1	2	855
22a) How tall are you (approximately)?			856-858
b) And about how much do you weigh in ordinary clothes?	<div style="display: flex; justify-content: space-around;"> <div> cm (feet <input type="text"/>) </div> <div> inches <input type="text"/> <input type="text"/> </div> </div> <div style="display: flex; justify-content: space-around;"> <div> kilos (stones <input type="text"/>) </div> <div> lbs <input type="text"/> <input type="text"/> </div> </div>		(859-861) 862-864 865-868
c) Weight/height ratio	Under OK Over	1 2 3	869
23a) Do you smoke cigarettes or have you done so regularly in the past 5 years? IF CIGARETTE SMOKER OR EX-SMOKER	Yes - current Yes - ex-smoker No	1 } (b) 2 } 3 Q.24	870
b) About how much do (did) you smoke (or a week if infrequent)?	Number per day Number per week	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	871, 872 873, 875

24a) NEGATIVE FACTORS

	Yes	No	
Any code 1's between Q.7 and Q.21	1	2	876
Coded over/under weight	1	2	877
Currently smokes 20+ cigarettes a day	1	2	878

b) SCREENING STRATEGY

RING ONE
CODE ONLY

CATEGORY

PROCEDURE

5	All ages Outdoor mobility impaired (coded 2-4 at Q.6)	Home measurements
4	75 years and over	Home measurements
3	60 - 74 years	Centre measurements doctor in attendance
X	60 - 74 female (refused centre appt.)	Home measurements
2	Under 60 but some negative factors (any code 1's at Q24a)	Doctor to examine screening questionnaire to decide strategy
1	Under 60 years and no negative factors	No screening required Proceed with centre measurements

879

DOCTOR'S DECISION FOR CATEGORY 2

Please ring code 1 or 2

Doctor attendance necessary
Doctor attendance not necessary

1
2

880

Doctor's notes
.....
.....
.....
.....
.....
Doctor's signature
Date

OFFICE USE

Centre appt./home appt.

Day _____

Date _____

Time _____

Doctor _____

No doctor X

Women's Health Questionnaire

<p>1. Have you ever had any major gynaecological problems?</p> <p style="text-align: right;">If yes, ring _____</p> <p style="text-align: right;">If no, ring _____</p>	<p>1</p> <p>2</p>	<p>Answer Q2</p> <p>Answer Q4</p>
<p>2. If you have had problems</p> <p>How old were you when you first experienced them?</p> <p style="text-align: right;">Enter age in years _____</p>		<p>Answer Q3</p>
<p>3 Do you still suffer from them?</p> <p style="text-align: right;">If yes, ring _____</p> <p style="text-align: right;">If no, ring _____</p>	<p>1</p> <p>2</p>	<p>} Answer Q4</p>
<p>4 Do you currently have any (other) problems with your periods, the menopause or its after effects?</p> <p style="text-align: right;">If yes, ring _____</p> <p style="text-align: right;">If no, ring _____</p>	<p>1</p> <p>2</p>	<p>} Answer Q5</p>
<p>5 How old were you when you when your menstrual periods began?</p> <p style="text-align: right;">Enter age in years _____</p>		<p>Answer Q6</p>
<p>6 Do you have regular periods?</p> <p style="text-align: right;">If yes, ring _____</p> <p style="text-align: right;">If no, ring _____</p>	<p>1</p> <p>2</p>	<p>Answer Q9</p> <p>Answer Q7</p>
<p>7. If you do not have regular periods</p> <p>Do you still have periods or have they stopped now?</p> <p style="text-align: right;">I still have periods _____</p> <p style="text-align: right;">My periods have stopped _____</p>	<p>1</p> <p>2</p>	<p>Answer Q9</p> <p>Answer Q8</p>
<p>8. If your periods have stopped</p> <p>How old were you when you had your last period?</p> <p style="text-align: right;">Enter age in years _____</p>		<p>Answer Q9</p>
<p>9 Have you ever been pregnant?</p> <p style="text-align: right;">If yes, ring _____</p> <p style="text-align: right;">If no, ring _____</p>	<p>1</p> <p>2</p>	<p>Answer Q10</p> <p>Answer Q13</p>

10 Are you pregnant at the moment?

If yes, ring

If no, ring

1

2

} Answer Q11

11. How many pregnancies have you had which lasted for 28 weeks or more?
(Please do not count your current pregnancy if you are pregnant now)

Enter number 28 weeks or more

Answer Q12

12 How many pregnancies have you had which lasted for less than 28 weeks?
(Please do not count your current pregnancy if you are pregnant now)

Enter number less than 28 weeks

Answer Q13

13 Have you ever taken oral contraceptives (the pill)?

If yes, ring

If no, ring

1

2

Answer Q14

Answer Q16

14. If you have taken the pill

For how long altogether have you taken the pill?
(If you have had breaks between taking the pill, please add together the separate periods)

Years

Months

Enter time in years and months

Answer Q15

15. Are you currently taking the pill?

If yes, ring

If no, ring

1

2

} Answer Q16

16 Have you ever had hormone replacement therapy (HRT)?

If yes, ring

If no, ring

1

2

Answer Q17

Thank you
Please return
the form

17 If you have had HRT

For how long were you having the treatment?

Years

Months

Enter time in years and months

Thank you. Please return the form



PHYSICAL APPRAISAL RESULTS SHEET

SURVEY OF ACTIVITY AND HEALTH

Unit Area Serial no.

--	--	--	--	--	--

Appointment Details

Day _____ Date _____ Time _____

Information to be entered from screening questionnaire

Q.1.a)	<u>Sex</u>	Male	1			
		Female	2			
c)	<u>Age in years</u>		<table border="1"><tr><td></td><td></td></tr></table>			
Q.2.	Compared with other people of your age would you say you are ...	very physically active	1			
		fairly physically active	2			
		not very physically active	3			
		or not at all physically active?	4			
Q.3.a)	Do you think you could walk continuously for a mile without stopping?	Yes	1			
	IF YES AT a)	No	2			
b)	Do you think you could run or jog continuously for a mile without stopping?	Yes	1			
		No	2			
Q.15	Do you have any physical disabilities of any kind?	Yes	1			
	IF YES GIVE DETAILS	No	2			
Q.23.a)	Do you smoke cigarettes or have you done so regularly in the past 5 years?	Yes - current	1			
		Yes - ex-smoker	2			
		No	3			
	IF CIGARETTE SMOKER OR EX-SMOKER		<table border="1"><tr><td></td><td></td></tr></table>			
b)	About how much do (did) you smoke a day (or week if infrequent)?	Number per day	<table border="1"><tr><td></td><td></td></tr></table>			
		Number per week	<table border="1"><tr><td></td><td></td><td></td></tr></table>			

PHYSICAL APPRAISAL RESULTS

	Day	<table border="1"><tr><td></td><td></td></tr></table>			
	Month	<table border="1"><tr><td></td><td></td></tr></table>			
	Time	<table border="1"><tr><td></td><td></td><td></td></tr></table>			
Doctor Name _____	Ring if present	1			
Assessor 1 _____					
Assessor 2 _____					
Assessor 3 _____					

1. ANTHROPOMETRY

a) Height in cmb) Weight in kg

WT/HT ²	kg.m ²
--------------------	-------------------

ASK ALL

2. Are you left or right handed?

Left	1
Right	2
Ambidexterous	3

3. DEMI-SPAN Only for subjects aged 60 years and over.

a) Do you have any deformities to your (dominant) arm at the shoulder, elbow or wrist which prevent you from straightening the arm?

Yes	1
No	2 (measure dominant a

If yes, check other arm

b) Do you have any deformities to your other arm at the shoulder, elbow or wrist which prevent you from straightening the arm?

Yes	1
No	2 (measure other arm)

If a problem with both sides, measure better side and note problem

Measured arm

Left	1
Right	2

Tick highest score

c) Demi-span in cm

1st Measurement			
2nd Measurement			
(3rd Measurement)			

4. SKINFOLDS

Right side	Yes	1
	No	2

a) Biceps in mm

Mean *

1st Measurement			
2nd Measurement			
(3rd Measurement)			

b) Triceps in mm

Mean *

1st Measurement			
2nd Measurement			
(3rd Measurement)			

c) Subscapular in mm

Mean *

1st Measurement			
2nd Measurement			
(3rd Measurement)			

d) Suprailiac in mm

Mean *

1st Measurement			
2nd Measurement			
(3rd Measurement)			

Total Skinfold % Body fat *

* For hand calculation in case of equipment failure.
Take mean of 2 closest measurements in each case.

GIRTHS

W/H *

a) Waist circumference in cm

b) Hip circumference in cm

5. SHOULDER ABDUCTION

	<u>Dominant arm</u>	Left	1
		Right	2
		Ambidexterous	3
a) Have you had any surgery to or dislocated your shoulder, on your (<u>dominant</u>) side within the last 6 months?		Yes	1
		No	2 (measure dominant side)
If "yes", check other side			
b) Have you had any surgery to or dislocated your shoulder on your other side within the last 6 months?		Yes	1
		No	2 (measure other side)
If problems on both sides, exclude from measurement			
	<u>Measured arm</u>	Left	1
		Right	2
		Excluded from test	3
			Tick highest score
c) <u>Shoulder abduction</u> in degrees	1st Measurement		
	2nd Measurement		
	3rd Measurement		
	(4th Measurement)		
	(5th Measurement)		

7. BLOOD PRESSURE

1st Measurement

Systolic in mm Hg

Diastolic in mm Hg

Heart rate in b/min

2nd Measurement

Systolic in mm Hg

Diastolic in mm Hg

Heart rate in b/min

3rd Measurement

Systolic in mm Hg

Diastolic in mm Hg

Heart rate in b/min

(4th Measurement)

Systolic in mm Hg

Diastolic in mm Hg

Heart rate in b/min

Tick scores with lowest diastolic

or hand calculation in case of equipment failure

8. LUNG FUNCTION

FEV1/FVC x 100 _____ %)

FVC in litres
FEV1 in litres

9. POWER

a) Are you currently receiving treatment for back pain?

Yes

1 (exclude from test)

No

2 (continue)

b) Which do you consider your dominant leg?

(If unable to choose take same)
(side as dominant hand/arm)

Dominant leg

Left

1

Right

2

c) Are you unable to fully extend your (dominant) leg at the knee or hip when standing or have you had any injuries or surgery on your (dominant) leg within the last 6 months?

Yes

1

No

2 (measure dominant leg)

If "yes", check other leg

d) Are you unable to fully extend your other leg at the knee or hip when standing or have you had any injuries or surgery on your other leg in the last 6 months?

Yes

1

No

2 (measure other leg)

If "yes", i.e. both legs affected, exclude from test

Measured leg

Left

1

Right

2

Excluded from test

3

Tick highest score

e) Power in watts

1st Measurement

2nd Measurement

3rd Measurement

4th Measurement

5th Measurement

6th Measurement

7th Measurement

8th Measurement

9th Measurement

10th Measurement

* For hand calculation in case of equipment failure

HAND GRIP

Dominant hand

Left
Right

1
2

- a) Do you have any swelling, inflammation, or severe pain in your (dominant) hand or have you injured this hand or had surgery on it within the last 6 months?

Yes
No

1
2 (measure dominant hand)

If "yes", check other hand

- b) Do you have any swelling, inflammation, or severe pain in your other hand or have you injured this hand or had surgery on it within the last 6 months?

Yes
No

1
2 (measure other hand)

If "yes" (both hands affected) exclude from test

Measured hand

Left
Right

1
2
3

Excluded from test

Tick highest score

- c) Hand grip in kg

1st Measurement

2nd Measurement

3rd Measurement

(4th Measurement)

(5th Measurement)

11. LEG EXTENSION

- a) Excluded from power rig test

Yes
No

1 (excluded from test)
2 (continue)

- b) Have you had any surgery affecting your (dominant) knee within the last 6 months or do you suffer from ulcers, or a susceptibility to ulcers around that ankle?

Yes
No

1
2 (measure dominant leg)

If "yes" check other leg

- c) Have you had any surgery affecting your other knee within the last 6 months or do you suffer from ulcers, or a susceptibility to ulcers around that ankle?

Yes
No

1
2 (measure other leg)

If "yes" exclude from test

Measured leg

Left
Right

1
2
3

Excluded from test

Tick highest score

- d) Leg extension in newtons

1st Measurement

2nd Measurement

3rd Measurement

4th Measurement

5th Measurement

6th Measurement

Best score _____ N *
Corrected for weight _____ N/kg

12. CARDIORESPIRATORY

Excluded from test

3

a) Estimated maximum heart rate _____ b/min

b) Target heart rate _____ b/min

c) End heart rate in b/min

d) End $\dot{V}O_2$ in litres/min

Last stage _____
Nomogram $\dot{V}O_2$ _____ l/min
Age correction _____
$\dot{E}VO_2$ max _____ l/min
$\dot{E}VO_2$ max _____ ml/kg.min

*

* For hand calculation in case of equipment failure

COMMENTS



SURVEY OF ACTIVITY AND HEALTH

Physical Appraisal Information Sheet

You have been invited to take part in a physical appraisal. The purpose of the appraisal is to assess several factors which contribute to your overall fitness. The measurements include height, weight, half body-span, skinfold thicknesses (to estimate how much fat you have), waist and hip girths (to estimate the distribution of fat between your waist and your hips), shoulder flexibility, hand-grip strength, leg strength, explosive power of the leg, blood pressure, lung function, and a walking test on a motorised walkway (you will get more information on this test later). If you do not wish to take part in any of the tests, you can ask to stop at any time, and need not give your reason for doing so.

The complete series of tests should take about one and a half hours, including some time we have allowed at the end for you to ask questions and hear about your results.

Do not hesitate to ask any questions that you may have at this stage, then complete the consent form and relax and enjoy the appraisal.

Thank you for your co-operation.



SURVEY OF ACTIVITY AND HEALTH

Physical Appraisal Consent Form

Name _____

Address _____

The physical appraisal tests and measures have been explained to me, and I am willing to take part. I understand that I can withdraw from the tests at any time, and need not give my reason for doing so.

I agree/do not agree* to Activity and Health Research informing my GP of my blood pressure measurement.

I agree/do not agree* to Activity and Health Research informing my GP of any results which may require further investigation.

* please delete as appropriate

Signed _____

Witness _____

Date _____



SURVEY OF ACTIVITY AND HEALTH

Treadmill Test Information Sheet

The aim of this test is to measure your aerobic fitness - that is the combined performance of your heart, lungs and circulation. The test is performed on the motorised walkway, and you will be walking throughout (no running is involved).

The test has been designed to start fairly easily (walking slowly on the flat) and gets a little harder each minute by slowly increasing the speed and later by gradually increasing the slope.

Throughout the test we will be measuring your heart rate (using 5 electrodes placed on your chest), and your breathing (by your exhalations through the tubing). Both walking on the treadmill and breathing normally through the tubing will take a little getting used to, but most people find it easy after a few minutes of practice.

Because you will be breathing through a tube you will not be able to talk, so a few basic hand signals will be discussed with you. The most important of these are "thumbs up" ("Yes, I'm fine"), and "thumbs down" ("Something's wrong"). If you want to stop, you can do so at any time by pressing either of the red buttons on the handrails.

The test can last anything from a few minutes to about 15 minutes and will be followed by a couple of minutes of cooling off.

Please ask any questions you may have, and then sign the consent form before beginning the test.



SURVEY OF ACTIVITY AND HEALTH

Treadmill Test Consent Form

Name

Address

The treadmill walking test has been explained to me. I understand that I can stop the test at any time, and need not give my reason for doing so.

Signed

Witness

Date



SURVEY OF ACTIVITY AND HEALTH

FOLLOW-UP CONSENT

As time goes by, the information that we are collecting on this survey will get out of date and will become less useful. It would help a great deal in planning future health education if we could update this information.

Would you be willing for us to contact you possibly in a few years time to bring us up to date?

Yes

☐

Signature _____

No

☐

If people move it is sometimes difficult to contact them so it would help us to have the names and addresses of two close friends or family who are likely to know where you are if you change address. These names and addresses will only be used if we have difficulty contacting you.

Would you be willing to give us the names and addresses of two such people?

Yes

☐

No

☐

Name _____

Address _____

Name _____

Address _____



SURVEY OF ACTIVITY AND HEALTH

Unit Area Serial no.

--	--	--	--	--	--

Appointment Details

Day _____ Date _____ Time _____

Information to be entered from screening questionnaire

Q.1.a)

Sex	Male	1
	Female	2

c)

Age in years

--	--

Q.2. Compared with other people of your age
would you say you are ...

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

Q.3.a) Do you think you could walk continuously for a mile
without stopping?

Yes	1
No	2

IF YES AT a)

b) Do you think you could run or jog continuously for a
mile without stopping?

Yes	1
No	

Q.15 Do you have any physical disabilities of any kind?

Yes	1
No	2

IF YES GIVE DETAILS

Q.23.a) Do you smoke cigarettes or have you done so
regularly in the past 5 years?

Yes - current	1
Yes - ex-smoker	2
No	3

IF CIGARETTE SMOKER OR EX-SMOKER

b) About how much do (did) you smoke
a day (or week if infrequent)?

Number per day			
Number per week			

HOME APPRAISAL RESULTS

Day			
Month			
Time			

Assessor _____

Interviewer _____

No

--	--	--	--

1. ANTHROPOMETRY

Measured height

subtract

Actual height

273

0	0	0	7

cms

cms

cms

a) Height in cm

b) Weight in kg

ASK ALL

2. Are you left or right handed?

Left	1
Right	2
Ambidexterous	3

3. DEMI-SPAN

a) Do you have any deformities to your (dominant) arm at the shoulder, elbow or wrist which prevent you from straightening the arm?

Yes	1
No	2 (measure dominant arm)

If yes, check other arm

b) Do you have any deformities to your other arm at the shoulder, elbow or wrist which prevent you from straightening the arm?

Yes	1
No	2 (measure other arm)

If a problem with both sides, measure better side and note problem

Measured arm

Left	1
Right	2

Tick highest score

c) Demi-span in cm

1st Measurement

2nd Measurement

(3rd Measurement)

4. SKINFOLDS

Right side	Yes	1
	No	2

a) Biceps in mm

1st Measurement

2nd Measurement

(3rd Measurement)

b) Triceps in mm

1st Measurement

2nd Measurement

(3rd Measurement)

c) Subscapular in mm

1st Measurement

2nd Measurement

(3rd Measurement)

d) Suprailiac in mm

1st Measurement

2nd Measurement

(3rd Measurement)

5. SHOULDER ABDUCTION

	<u>Dominant arm</u>	Left	1															
		Right	2															
		Ambidexterous	3															
a) Have you had any surgery to or dislocated your shoulder, on your (<u>dominant</u>) side within the last 6 months?		Yes	1															
		No	2 (measure dominant side)															
If "yes", check other side																		
b) Have you had any surgery to or dislocated your shoulder on your other side within the last 6 months?		Yes	1															
		No	2 (measure other side)															
If problems on both sides, exclude from measurement																		
	<u>Measured arm</u>	Left	1															
		Right	2															
		Excluded from test	3															
			Tick highest score															
c) <u>Shoulder abduction</u> in degrees	1st Measurement	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>																
	2nd Measurement	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>																
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	(4th Measurement)	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>																
	(5th Measurement)	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td></tr></table>																

6. BLOOD PRESSURE

		Tick scores with lowest diastolic												
1st Measurement	Systolic in mm Hg	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>												
Diastolic in mm Hg	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>													
Heart rate in b/min	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>													
2nd Measurement	Systolic in mm Hg	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>												
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3rd Measurement	Systolic in mm Hg	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>												
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(4th Measurement)	Systolic in mm Hg	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td></tr></table>												
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7. HAND GRIP

- a) Do you have any swelling, inflammation, or severe pain in your (dominant) hand or have you injured this hand or had surgery on it within the last 6 months?

Dominant hand Left 1
Right 2

Yes 1
No 2 (measure dominant hand)

Yes 1
No 2 (measure other hand)

If "yes", check other hand

- b) Do you have any swelling, inflammation, or severe pain in your other hand or have you injured this hand or had surgery on it within the last 6 months?

If "yes" (both hands affected) exclude from test

Measured Hand Left 1
Right 2
Excluded from test 3

Tick highest score

- c) Hand grip in kg

1st Measurement
2nd Measurement
3rd Measurement
(4th Measurement)
(5th Measurement)

8. I would like you now to show me how you perform a few everyday tasks.

- a). First, are you able to cut your own toenails?

Yes 1 (skip to c)
No 2 (ask b)

IF 'NO'

- b). Are you able to touch your toes?

Yes 1
No 2 (skip to Q.9)

- c). Would you please show me how you would do that on the foot opposite to your (dominant) hand.

1st Attempt Success 1
Fail 2

UP TO THREE ATTEMPTS ALLOWED IF
SUBJECT FAILS AT EARLIER ATTEMPT

2nd Attempt Success 1
Fail 2

3rd Attempt Success 1
Fail 2

- d). Now can you touch your toes on your other foot with your opposite hand?

1st Attempt Success 1
Fail 2

2nd Attempt Success 1
Fail 2

3rd Attempt Success 1
Fail 2

9. Would you please pick up this plug, put it into the socket and then take it out again. I will just show you what I mean. You may wear your glasses if you need to.

ASSESSOR TO DEMONSTRATE TEST
SECOND ATTEMPT ALLOWED IF 'UNABLE'
OR 'WITH DIFFICULTY' AT FIRST
ATTEMPT

<u>1st Attempt</u>	No difficulty	1 (skip to Q.10)
	With difficulty	2
	Unable	3
<u>2nd Attempt</u>	No difficulty	1
	With difficulty	2
	Unable	3

10. Would you please pick up this key, put it into the lock, turn it around once and then take it out. I will show you what I mean.

ASSESSOR TO DEMONSTRATE TEST
SECOND ATTEMPT ALLOWED IF 'UNABLE'
OR 'WITH DIFFICULTY' AT FIRST
ATTEMPT

<u>1st Attempt</u>	No difficulty	1 (skip to Q.11)
	With difficulty	2
	Unable	3
<u>2nd Attempt</u>	No difficulty	1
	With difficulty	2
	Unable	3

11. Would you please sit on the stool, fold your arms in front of you, place your feet flat on the floor slightly apart with your heels just under the stool. Then keeping your arms folded I want you to stand up. Let me show you what I mean.

ASSESSOR TO DEMONSTRATE TEST
SECOND ATTEMPT ALLOWED IF 'UNABLE'
OR 'WITH DIFFICULTY' AT FIRST
ATTEMPT

<u>1st Attempt</u>	No difficulty	1 (End)
	With difficulty	2
	Unable	3
<u>2nd Attempt</u>	No difficulty	1
	With difficulty	2
	Unable	3

IF SUBJECT HAS DIFFICULTY RISING WITH ARMS FOLDED
AT SECOND ATTEMPT

12. Could you try again with your arms hanging freely down by your side, but don't use your arms to help you to get up.

<u>1st Attempt</u>	No difficulty	1 (End)
	With difficulty	2
	Unable	3
<u>2nd Attempt</u>	No difficulty	1
	With difficulty	2
	Unable	3

12th September 1990

ACTIVITY AND HEALTH
Coding Instructions

1. Handling documents

Check serial numbers on all documents match.

Detach physical appraisal results sheets and printout. Staple together and store separately in batches of twenty serial numbers.

If womens self completion page has been used check serial numbers match and answers have been transferred to main questionnaire. If not, transfer answers. Detach self completion sheet. Store separately.

Tag Main questionnaire (with inserted continuation page if used) and screening questionnaire together - main questionnaire first.

2. Missing answers

As a general rule if a question should have been answered but hasn't, code 9 or 99 should be used as appropriate.

If possible fill in missing answers by back coding e.g. if a subsidiary question is answered but the main question has been missed.

If this is not possible use code 9 or 99 as appropriate. Exceptions: Q96b, parts of Q109-Q111. Questions that do not apply should be left blank.

***** If interpreter has been involved delete all * questions and recode 9**

3. Main Questionnaire

Check serial number, date, time and interviewer number. Serial number must never be blank or missing.

If anything else is missing or incorrect, correct it if possible or delete and code 9999.

Add leading zeros where necessary to all questions that have numeric answers.

Q1-8. Check correctly answered - follow filters.
Note: number of days in last 4 weeks range 01-28
number of days in last week 0-7

Q5d) Applies to all.

Q9a) If (a) coded 1 (b) and (c) should be answered.

Q9b) Code from frame Q9b)
If more than one answer take main reason (or first given if main not known).

Page 7

If no activities listed for past year check code 1 ringed at top of the page.

If continuation sheet used check code 2 ringed at top of page.

Check number in top left Office use box is correct (serial number, 1, number of activities in past year, number of activities in past 4 weeks).

Check number in top right Office use box equals number of activities listed including those on continuation sheet if used. Use 00 if no activities. Code correctly if box has been missed.

Delete any columns where activity has been written in and deleted. Delete any blank columns in between listed activities.

Check sports are coded correctly (from codes on pages 10/11).

Check each month has code ringed. Use 9 for missing codes. Check 'no. of times' has been completed. Use 99 for missing values.

Count number of '1's' coded at Q12 and check this is number entered in Office use box. If no code '1's' in the columns check the main code 1 is ringed and '0' entered in Office use box. Note: (c) and (e) have one digit for hours and 2 digits for minutes.

(e) only applies if (d) is coded 1 or 3 but (f) applies to each activity.

Q14 This will not be punched.

Q15-16 Check completed correctly.

Q17-18 Check completed correctly.

Note: (e) applies if (d) coded 1 (f) applies if (c) has 'age stopped' coded.

Check code from card has been entered. Range 01-14.

Pages 10/11

Check office use box at top of page equals total number of lines completed. Use 00 for no regular activities.

Check office use box at top of grid contains serial number, '2' and number of lines.

Make any deletions clear if necessary.

If a code is ringed at Q19 then Q20a, b, c, all apply.

(d) applies if (c) is coded 1

(e) applies if (b) coded 'age stopped'. Check code at

(e) is within range and has leading zero if necessary (01-14).

If other sports listed delete code 46.

Try to add them into existing list:

pool - snooker

motor bikes - motor sports

rowing machine - rowing

exercise bike - cycling (on previous page).

Keep a note of what sports added in with serial numbers.

Remember to move all the codes and delete the additional line.

If this is not possible add new codes as you come to new sports.
List sport, code, serial number.

- Q21. Check completed correctly. b) 98 = 98 or more.
- Q22. If Occ or Ind code missing but answer is written in, code from OPCS instructions.
- e) only applies if b) coded 2.
- Q23-31 Apply if Q21a) coded 1. Check coded correctly. Code school student 076 786 and college students 076 785.
- Q23. If more than one coded, priority code 3,2,1.
- Q25. Use written answer to check coded answer. If less than 3 times a week recode as 2. If three or more times a week or frequency not specified leave as code 1.
- Q28. Check this by following grids carefully. If a line has been missed code '9' after the '5'. If whole question missed code 9 on each line.
- Don't know = 8.
- Q29. If all missing code 9 by each.
- Q31. If not coded but answer written in, code from OPCS instructions.
- Q32-33 Applies to all.
- Q34-36 Check coded correctly.
- Q37. If no other activities check '0' coded.
- Transfer data if at all possible i.e. if the information fits into a specific category and that category is not already coded e.g. if it is a new sport, add it to the end of the list, but if heavy gardening etc. and that is already coded leave extra data at Q37.
- If data is transferred remember to delete the code and recode 0 at the top of the page.
- If data is not transferred code from frame for Q37.
- Q38. Code a) and b) from frame Q38. Two double digit codes required.

- Q39-41 Check coded correctly.
- Q42. If whole question missed code 9 on each line.
- Q43-58 Check correctly coded. If whole scales missed, code 9 on each line. Check only one code per line ringed.
- Q60. Code from coding frame Q60.
- Q61. Check only one code ringed. If more than one priority code 4,3,2,1.
- Q62. Code answer at b) from coding frame Q60b.
- Q63-65 Check coded correctly.
- Q65b). Recode olive oil into code 3. Try to recode any 'other' answers.
- Q66a-67 Check correctly coded. Add code 9 where necessary.
- Q68. See notes in coding frames.
- Q69. If Tea column coded at a) tea column at b) applies similarly with coffee.
- Q70. Check completed correctly. Column c) will not be punched. Delete with slash through whole column. Add leading zero where necessary.
- Code any low alcohol drinks as 00 in units column.
- Delete alcohol-free wine/beer.
- Q71-75 Check completed correctly.
- Q76b). Check 'health code' used correctly. If not, amend code. Add new code 'weight problems' - code 3. If other health problems mentioned code 1 should be used - if only weight use code 3.
- Q77-82 If 'no' at Q77 pages 28-29 should be blank. Check completed correctly. Check filter at Q78c) followed correctly - if both '00' are coded, d) and e) and Q79 apply.
- Q83. Check completed correctly.
- Q84-85 If informant aged 16/17 code 777 kilos. if informant aged 18+ either stones/lbs or kilos should be completed but if both have been completed do not amend.
- Note Q85 applies to all.

- Q86. Check each line has one code only. Add '9' where code missing.
- Q88b) If a) coded 1 b) and c) apply. Check age has two digits.
- Q89-90 Check completed correctly.
- Q91. If b) coded 1 or 3 c) to g) all apply.
- Q92c). Code from frame.
- Q93-95 Check completed correctly. Note filters at 94/95.
- Q96b). If a) coded '1' (b-c) apply - otherwise b) and c) should be blank.
If b) applies, check at least one code at b). If no codes at b) code 9 at left shoulder.
If c) applies check each line coded at c).
Recode 'back' as 1.
- Q97. Code from frame. If more than 3 listed delete 4th and above with all their codes.
- Q98-104 This will have been checked already if self-completion form used. Otherwise check.
- Q105. If more than 4 answers, first delete any minor illnesses, if still more than 4, give priority in order of listing.
Code from frame.
- Q106. Check each line coded.
- Q107. Check each line coded. If more than one yes, one code only should be ringed in 'most affected' column.
- Q108. Check each line coded.
- Q109d)e))
110a)b)) At these questions missing answers should be coded 99
111d)e))
- Q109c-111c Can have more than one answer. if all missing and question applies, code 9 at each line.
- Q109d-111d If 98 or 99 is written in the boxes, recode as 97.
- Q110a) 98 = no education.
- Q110b) Code from coding frame Q110b (double digit).
- Q112. Check correctly coded. Note that relationship should be to respondent not to HOH.

Q113/
Q85(E) If not coded but answer written in, code from OPCS instructions. If never worked, code 998 and leave second line blank.

Q114-115 Check completed correctly.

Q116. If '9' coded, delete and recode '0'. If answer is missing code '9'.

Time finished. Check to see this is completed.

Q117-118 Check completed correctly.

Q119-121 If 'other' coded, check to see if it can be coded in existing frame. if not, leave as other.

IF NHS NO. ON QUESTIONNAIRE, CHECK IT HAS BEEN
TRANSFERRED TO SAMPLE SELECTION SHEET AND OBLITERATE.

CODING FRAMES

Q9b	<u>Code</u>
Holidays	1
Family reasons	2
Moved house	3
Work/college/school	4
Injury	5
Other health problems	6
Change in team/playing partner	7
Other (specify)	8

Q.19 LIST OTHER SPORTS

<u>CODE</u>	<u>SPORT</u>
49	Lacrosse
50	Windsurfing, surfing
51	Bird watching
52	Pitch and put, golf ranges
53	Cycling <u>NB; FOR ELDERLY QUESTIONNAIRE ONLY</u> Main q when not cycled in past 12 months
54	Diving
55	Marathon running/training (over 10k)
56	Skirmish, active war games
57	Caving
58	Flying aircraft
59	Water skiing
60	Fencing
61	Parachuting
62	Archery
63	Tobogganing, sledging
64	Refereeing football, netball etc
65	Shuffleboard & Bar billiards (pub games)
66	Hang gliding/para gliding
67	Shinty + hurling (like ice hockey).
68	AquaFit
69	Orienteering
70	Pulling a bus + tug of war + anything involving strenuous pulling!
71	Absailing
72	Water polo
73	Clay shooting
74	Ball games
75	Marching
76	Defense training
77	Quoits
78	Beagling
79	Ballet
80	Bell ringing

NB Circuit training to be recorded as Keep Fit
Scottish country dancing/Tap dancing to be recorded as Dancing for fitness
Exercise bike to be recorded where possible as cycling

Q37	Heavy housework	1
	Heavy gardening	2
	Light gardening	3
	Heavy DIY	4
	Light DIY	5
	Other - list	6

Q38 a & b

Leisure activities - most time doing and most important to you.

<u>Activity</u>	<u>Code</u>
Watching TV & videos	1
Social interaction - friends & relatives	2
Leisure pursuits including <u>no</u> physical activity eg knitting reading, music etc	3
Leisure pursuits including physical activity (incl. fishing)	4
Sports and exercise (incl walking)	5
Other: list & specify serial no.	6
Housework	7
Church, voluntary, charity	8
Work/no answer	9

Q60b

What kind of cereal do you usually have?

<u>Type</u>	<u>Example</u>	<u>Code</u>
High fibre	Porridge	1
	Muesli	
	Puffed Wheat	
	Wheatflakes	
	Bran cereals	
Med. fibre	Shreddies	2
	Shredded Wheat	
	Weetabix	
Low fibre	Other cereals eg	3
	Corn Flakes	
	Rice Crispies	
	Coco Pops	
	Frosties etc	

Q62b

"If soft margarine or low fat spread"

b) What brand? (Also includes Q62a(5) other: specify)

If the code from 62a) is 5. First try and check and recode if possible. If not fit into coding frame at b) as below:

	<u>Code</u>
Low fat spreads eg Gold, Delight Outline, Floralite (but <u>not</u> Flora) all own brand & other low fat spreads	1
Soft margarine - polyunsaturated eg Flora Kraft polyunsat Vitalite Vitaquelle Sunflower Soya CWS goodlife own brands labelled polyunsaturated	2
Soft margarine - non polyunsaturated eg Stork SB Kraft superfine Carousel Banquet Blue Brand Luxury Soft Safeway label Sainsbury's red & green label	3
Yellow spreads Clover Meadowcup Golden Vale Golden Churn (only)	4
Others	5

Code 8 - Don't know

Code 9 - Brand not given following codes 3-5 at 62a)

NB: Check recode the following as hard margarines:

Echo, Freshfields, Krona, Stork, Summer Country,
Tomor

Q68 (column 238) OTHER FOODS

Firstly, always try and backcode into the list of foods already given:-

eg. seafood = other fish

peanut butter = nuts

sunflower seeds = nuts

vegetable burgers = peas, other beans, lentils etc.

Code 2 remains as "No"

The rest should be fitted into the following frame

- 1 Curries, indian takeaways
- 2 No
- 3 Chinese foods, takeaways
- 4 Pizza
- 5 Crispbreads, savoury biscuits etc
- 6 Marmite, bovril, vegemite
- 7 Other - list with serial number

Q.92c Have you ever had a severe pain across the front of your chest last for half an hour or more?
What did the doctor say it was

Heart attack	1
Angina	2
Other (list)	3

Any queries to be listed with serial numbers and checked with George Davey Smith.

Q97b Long standing physical or health problems?

Code by site of injury

Back	1
Neck	2
Knees	3
Hips	4
Shoulder	5
Elbow	6
Wrist	7
Hand/finger	8
Foot/toes	9
Ankle	10
Head	11
Eyes	12
Other (face)	13
Other (leg)	14
Other (body)	15
Joints (nothing else specified)	16
Collar bones	17
Other	18

Q.105 Have you had any other major illnesses or health problems?

Check if should have been coded elsewhere (eg Q88). If so code as appropriate and delete answer at Q105.

Code

- 1 Infections & parasitic diseases (GDS 19 and our code 22)
- 2 Neoplasms (GDS 005 - most of 10)
- 3 Endocrine, nutritional & metabolic diseases & immunity disorders (GDS 19)
- 4 Diseases of blood and blood forming organs (GDS 015)
- 5 Mental disorders (GDS 14)
- 61 Diseases of nervous system (GDS 16)
- 62 Ear complaints (GDS 05 - part of 13)
- 63 Eye complaints (GDS 04 - part of 13)
- 7 Diseases of circulatory system (GDS 11)
- 8 Diseases of the respiratory system (GDS 17 & our code 20)
- 9 Diseases of the digestive system (GDS part code 12)
- 10 Diseases of the genitourinary system (GDS part code 12)
- 11 Complications of pregnancy, childbirth & puerperium (GDS 19)
- 12 Diseases of skin and subcutaneous tissue (GDS 18)
- 13 Diseases of musculoskeletal system and connective tissue (GDS 15)
- 14 Congenital abnormalities
- 15 Injuries (our code 24)
- 16 Other

Frequent answers

Polio	-	code 1
Pneumonia	-	code 8
Thyroid prob	-	code 3
Appendicitis	-	code 9
Gall bladder prob/surgery	-	code 9

GDS - coding frame used by George Davey Smith.

Q110b)

Code using classification of occupations 1980 OPCS.

		<u>Code</u>
I	Professional	01
II	Intermediate	02
IIInm	Skilled-non-manual	03
IIIm	Skilled-manual	04
IV	Partly skilled	05
V	Unskilled	06
Other	(incl. armed services)	07

Questionnaire data - file 1

Allied Dunbar National Fitness Survey

4316 cases 81 variables File=ADQRE1.POR
File size: 9885 records, 790800 characters

Health Education Authority National Survey of Activity & Health

2837 cases 82 variables * File=HEAQRE1.POR
File size: 6532 records, 522560 characters

* extra variable at end of list

Missing values coded 9, 99, 999 etc. unless otherwise stated

Questions not answered (NA) coded blank unless otherwise stated

Variables names are taken from the questionnaire numbers. Those names starting with Q are asked on both the main (white) and the elderly (green) questionnaire and the question number is taken from the main questionnaire. Names beginning with M are asked only on the main (white) questionnaire and the question number is taken from the main questionnaire. Names beginning with E are asked only on the elderly questionnaire and the question numbers are taken from the elderly (green) questionnaire. Answers to all questions are as coded on the questionnaire.

List of variables on the file:-

<u>Name</u>	<u>Label</u>	<u>Missing value</u>
ID	IDENTIFICATION NUMBER	
INTDAY	DATE OF INTERVIEW - DAY	
INTMONTH	DATE OF INTERVIEW - MONTH	
STARTHRS	START TIME OF INTERVIEW - HOURS	
STARTMIN	START TIME OF INTERVIEW - MINUTES	
INTNO	ADNFS - INTERVIEWER NUMBER HEANSAH - SCPR BATCH NUMBER	

Q1A	ANY HSWK IN 12 MNTHS	
	Value	Label
	1	YES
	2	NO
Q1B	HSWK 4 WKS	
	Value	Label
	1	YES
	2	NO
Q1C	H.HSWK 4 WKS	
	Value	Label
	1	YES
	2	NO
Q1D	DAYS H.HSWK IN 4 WKS	
Q1E	DAYS H.HSWK IN 1 WK	NA=8
Q1FHRS		NA=98
Q1FMIN		NA=98
Q2A	ANY GARD. 12 MNTHS	
	Value	Label
	1	YES
	2	NO
M2B	WHAT GARD. 12 MNTHS	
	Value	Label
	1	H.GARD
	2	L.GARD
	3	BOTH
M2C	H.GARD IN 4 WKS	
	Value	Label
	1	YES
	2	NO
M2D	DAYS H.GARD IN 4 WKS	
M2E	DAYS H.GARD IN 1 WK	NA=8
M2FHRS		NA=98
M2FMIN		NA=98

M2G	L.GARD IN 4 WKS	
	Value Label	
	1 YES	
	2 NO	
M2H	DAYS L.GARD IN 4 WKS	
M2I	DAYS L.GARD IN 1 WK	NA=8
M2JHRS		NA=98
M2JMIN		NA=98
Q3A	ANY DIY IN 12 MNTHS	
	Value Label	
	1 YES	
	2 NO	
M3B	WHAT DIY IN 12 MNTHS	
	Value Label	
	1 H.DIY	
	2 L.DIY	
	3 BOTH	
M3C	ANY H.DIY IN 4 WKS	
	Value Label	
	1 YES	
	2 NO	
M3D	DAYS H.DIY IN 4 WKS	
M3E	DAYS H.DIY IN 1 WK	NA=8
M3FHRS		NA=98
M3FMIN		NA=98
M3G	ANY L.DIY IN 4 WKS	
	Value Label	
	1 YES	
	2 NO	
M3H	DAYS L.DIY IN 4 WKS	
M3I	DAYS L.DIY IN 1 WK	NA=8
M3JHRS		NA=98

M3JMIN

NA=98

NOTE : Question 4 (question 10 on elderly questionnaire) was only asked of those elderly respondents who could walk for 30 minutes or more (code 5 at question 9 on elderly questionnaire)

Q4A 2 MILE+ WALKS IN 4 WKS

Value	Label
1	YES
2	NO

Q4B NO. 2 MILE+ WALKS 4 WKS

Q4C NO. 2 MILE+ WALKS 1 WK

NA=98

Q4DHRS

NA=98

Q4DMIN

NA=98

Q5A 1-2 MILE WALKS 1 WK

Value	Label
1	YES
2	NO

Q5B NO. 1-2 MILE WALKS 1 WK

Q5C NO. 1-2 MILE WALKS YESTERDAY

NA=98

Q5D SHORT WALKS 1 WK

Value	Label
1	YES
2	NO

Q6 WALKING PACE

Value	Label
1	SLOW
2	AVERAGE
3	BRISK
4	> 4MPH.

M7 RUN FOR BUS/TRAIN

Value	Label
1	ALWAYS
2	S.TIMES
3	NEVER

M8A CYCLING IN 12 MNTHS

Value	Label
1	YES

	2	NO	
M8B	CYCLING IN 4 WKS		
	Value	Label	
	1	YES	
	2	NO	
M8C	OCCS CYCLING IN 4 WKS		
M8D	OCCS CYCLING IN 1 WK		NA=98
M8EHRS			NA=9
M8EMIN			NA=98
M8F	INTENSIVE CYCLING		
	Value	Label	
	1	YES	
	2	NO	
Q9A	UNUSUAL 4 WKS		
	Value	Label	
	1	YES	
	2	NO	
Q9B	WHAT WAS UNUSUAL		
	Value	Label	
	1	HOLIDAYS	
	2	FAMILY REASONS	
	3	MOVED HOUSE	
	4	WORK/SCHOOL	
	5	INJURY	
	6	OTHER HEALTH PROBS.	
	7	CHANGE IN TEAM/PARTN	
	8	OTHER	
Q9C	ACTIVITY LEVEL 4 WKS		
	Value	Label	
	1	MORE	
	2	LESS	
	3	SAME	
E1A	HOW DIFFICULT TO MAKE CUP OF TEA?		
	Value	Label	
	1	NOT DIFFICULT AT ALL	

	2	QUITE DIFF.
	3	VERY DIFF.
	4	IMPOSSIBLE
E1B	HOW DIFFICULT TO WASH UP?	
	Value	Label
	1	NOT DIFFICULT AT ALL
	2	QUITE DIFF.
	3	VERY DIFF.
	4	IMPOSSIBLE
E1C	HOW DIFFICULT TO SHOP?	
	Value	Label
	1	NOT DIFFICULT AT ALL
	2	QUITE DIFF.
	3	VERY DIFF.
	4	IMPOSSIBLE
E2A	DIFF. TO REACH & STRETCH ARMS?	
	Value	Label
	1	YES
	2	NO
E2B	BOTH ARMS REACH ABOVE HEAD?	
	Value	Label
	1	YES
	2	NO
E2C	DIFF. TO REACH ONE ARM ?	
	Value	Label
	1	YES
	2	NO
E2D	DIFF. TO PUT ONE ARM BEHIND BACK?	
	Print Format: F1	
	Write Format: F1	
	Value	Label
	1	YES
	2	NO
E3A	DIFF. TO HOLD/GRIP/TURN?	
	Value	Label
	1	YES
	2	NO
E3B	DIFF TO PICK UP & CARRY 5LB.	
	Value	Label
	1	YES
	2	NO
E3C	DIFF. TURNING TAP ON/OFF?	

	Value	Label	
	1	YES	
	2	NO	

E3D	DIFF. PICKING UP FULL KETTLE?	
	Value	Label
	1	YES
	2	NO

E5B	ANY GARD IN PAST 4 WKS?	
	Value	Label
	1	YES
	2	NO

E5C	DAYS GARD. IN PAST 4 WKS	
-----	--------------------------	--

E5D	DAYS GARD. IN PAST 1 WK	NA=8
-----	-------------------------	------

E5EHRS	HOURS SPENT ON LAST OCC.	NA=8
--------	--------------------------	------

E5EMIN	MINS SPENT ON LAST OCC.	NA=98
--------	-------------------------	-------

E6B	ANY DIY IN PAST 4 WKS?	
	Value	Label
	1	YES
	2	NO

E6C	DAYS DIY IN 4 WKS	
-----	-------------------	--

E6D	DAYS DIY IN 1 WK	NA=8
-----	------------------	------

E6EHRS	HOURS SPENT ON LAST OCC.	NA=98
--------	--------------------------	-------

E6EMIN	MINS SPENT ON LAST OCC.	NA=98
--------	-------------------------	-------

E8	WALK FOR 1/4 MILE ON OWN?	
	Value	Label
	1	YES
	2	NO

E9	FOR HOW LONG CAN YOU WALK ALONE?	
	Value	Label
	1	< 5 MINS.
	2	5 BUT < 10 MINS.
	3	10 BUT < 15 MINS.
	4	15 BUT < 30 MINS.
	5	30 MINS. OR MORE

Extra variable on HEAQRE1.POR

M45FX VIGOROUS EXERCISE HELPS TO FEEL MENTALLY ALERT

Questionnaire data - file 2

Allied Dunbar National Fitness Survey

File=ADQRE2.POR
4316 cases 101 variables
File size: 11811 records, 944880 characters

Health Education Authority National Survey of Activity & Health

File=HEAQRE2.POR
2837 cases 97 variables
File size: 7682 records, 614560 characters

Missing values coded 9, 99, 999 etc. unless otherwise stated

Questions not answered (NA) coded blank unless otherwise stated

Variables names are taken from the questionnaire numbers. Those names starting with Q are asked on both the main (white) and the elderly (green) questionnaire and the question number is taken from the main questionnaire. Names beginning with M are asked only on the main (white) questionnaire and the question number is taken from the main questionnaire. Names beginning with E are asked only on the elderly questionnaire and the question numbers are taken from the elderly (green) questionnaire. Answers to all questions are as coded on the questionnaire.

A list of questions which are the same on both questionnaires and details of the identification numbers on both surveys are included in the documentation.

List of variables on the file:-

<u>Name</u>	<u>Labels</u>	<u>Missing values</u>
ID	IDENTIFICATION NUMBER	(NA=not asked)
PAGE2	SECOND PAGE USED FOR ACTIVITIES	
NONEYR	NO ACTIVITIES IN PAST YEAR	
NUMACTYR	NUMBER OF ACTIVITIES IN PAST YEAR	
NONE4W	NO ACTIVITIES IN PAST 4 WEEKS	
NUMACT4W	NUMBER OF ACTIVITIES IN PAST 4 WEEKS	

M15A AGE 14-19 HOW MUCH EXERCISE?
Value Label
1 A LOT
2 MOD.AMOUNT
3 V.LITTLE
4 NONE

M15B SELF-COMPARED TO PEERS
Value Label
1 V.PHYS.ACTIVE
2 FAIRLY PHYS.ACTIVE
3 NOT V.PHYS.ACTIVE
4 NOT AT ALL PHYS.ACT

M16A AGE 20-24 HOW MUCH EXERCISE?
Value Label
1 A LOT
2 MOD.AMOUNT
3 V.LITTLE
4 NONE

M16B SELF-COMPARED TO PEERS
Value Label
1 V.PHYS.ACTIVE
2 FAIRLY PHYS.ACTIVE
3 NOT V.PHYS.ACTIVE
4 NOT AT ALL PHYS.ACT

M17A REGULAR WALKS 2+MILES
Value Label
1 YES
2 NO

M17B AGE STARTED REG LONG WALKS

M17C AGE STOPPED REG LONG WALKS
Value Label
1 STILL REGULAR

M17D BREAKS IN REG LONG WALKS?
Value Label
1 YES-BREAKS
2 NO-CONTINUOUS
3 REG. FOR < 1 YR

M17E NO. OF YEARS NO LONG WALKS

M17F	REASON STOP REG. LONG WALKS
Value	Label
1	MARRIAGE/NEW PARTNER
2	CHILD CARE
3	MOVED HOUSE
4	WORK REASEONS
5	SPORTS INJURY
6	OTHER INJURY/HEALTH
7	TOO OLD
8	COULD NOT AFFORD
9	NO TIME
10	HARD TO GET THERE
11	TEAM/PARTNER GONE
12	CLOSED FACILITIES
13	LOST INTEREST
14	OTHER

M18A	REGULAR CYCLING
Value	Label
1	YES
2	NO

M18B	AGE STARTED REG. CYCLING
------	--------------------------

M18C	AGE STOPPED REG. CYCLING
Value	Label
1	STILL REGULAR

M18D	
Value	Label
1	YES-BREAKS
2	NO-CONTINUOUS
3	REG. FOR < 1 YR

M18E	NO. OF YRS NO CYCLING
------	-----------------------

M18F	REASON STOP REG.CYCLING
Value	Label
1	MARRIAGE/NEW PARTNER
2	CHILD CARE
3	MOVED HOUSE
4	WORK REASEONS
5	SPORTS INJURY
6	OTHER INJURY/HEALTH
7	TOO OLD
8	COULD NOT AFFORD
9	NO TIME
10	HARD TO GET THERE
11	TEAM/PARTNER GONE
12	CLOSED FACILITIES
13	LOST INTEREST
14	OTHER

M19A	NO. OF REGULAR ACTIVITIES
M19B	NO REGULAR ACTIVITIES
M21A	PAID EMPLOYMENT NOW?
	Value Label
	1 YES
	2 NO
M21B	HRS/WK WORKED
M21C	SHIFT WORK
	Value Label
	1 YES
	2 NO
M21D	ARE YOU?
	Value Label
	1 SEEKING WORK
	2 SICK INJURED -TEMP
	3 SICK INJURED -PERM
	4 RETIRED
	5 KEEP HOUSE
	6 STUDENT
	7 OTHER
M21E	HOW LONG SINCE PAID EMP
	Value Label
	1 <3 MNTHS
	2 3, < 6 MNTHS
	3 6 MNTHS, <1 YR
	4 1 YR < 5 YR
	5 5 YRS OR MORE
	6 NEVER WORKED

ADNFS VARIABLES FOR QUESTION 22

Q22A	OCCUPATION - SEE DOCUMENTATION	NA=998
Q22B	INDUSTRY - SEE DOCUMENTATION	
Q22C1	EMPLOYEE STATUS	
	Value Label	
	1 EMPLOYEE	
	2 SELF-EMP.	
Q22C2	EMPLOYEE LEVEL	
	Value Label	
	1 MANAGER	
	2 SUPERVISOR	
	3 OTHER	
Q22D	NO. OF EMPLOYEES	

Value	Label
1	<25
2	25 OR MORE

Q22E DO YOU EMPLOY OTHERS?

Value	Label
1	<25
2	25 OR MORE
3	NO

HEANSAH VARIABLES FOR QUESTION 22

Q22A OCCUPATION - SEE DOCUMENTATION NA=99888

Q22B INDUSTRY - SEE DOCUMENTATION Missing=90
Unable to classify=89

STATUS EMPLOYMENT STATUS CODING

Value	Description
1	SELF EMPLOYED (25+ EMPLOYEES)
2	SELF EMPLOYED (1-24 EMPLOYEES)
3	SELF EMPLOYED (NO EMPLOYEES)
4	SELF EMPLOYED (NA HOW MANY EMPLOYEES)
5	MANAGER (ESTABLISHMENT OF 25+ EMPLOYEES)
6	MANAGER (ESTABLISHMENT OF 1-24 EMPLOYEES)
7	MANAGER (NA SIZE OF ESTABLISHMENT)
8	FOREMAN/SUPERVISOR
9	OTHER EMPLOYEE
10	EMPLOYEE (NA IF MANAGER/FOREMAN/OTHER)
11	NA/INSUFFICIENT INFORMATION TO CODE

ADNFS AND HEANSAH VARIABLES

M23 MAIN ACTIVITY AT WORK

Value	Label
1	SITTING
2	STANDING
3	WALKING

M24A MOVE BTWEEN FLOORS AT WORK

Value	Label
1	YES
2	NO

M24B LIFT OR STAIRS?

Value	Label
1	LIFT
2	STAIRS

M25 OTHER CLIMBING AT WORK

	Value	Label
	1	YES
	2	NO
M26	CARRYING AT WORK?	
	Value	Label
	1	LIFT H.LOADS
	2	LIFT & CARRY H.LOADS
	3	NO
Q27	PHYSICAL EFFORT AT WORK	
	Value	Label
	1	V.DEMANDING
	2	FAIRLY DEMANDING
	3	NOT V.DEMANDING
M28A	SHORT OF TIME AT WORK	
	Value	Label
	1	NEVER
	5	ALWAYS
M28B	WORK - HIGHLY SKILLED	
	Value	Label
	1	NEVER
	5	ALWAYS
M28C	REPETITIVE WORK	
	Value	Label
	1	NEVER
	5	ALWAYS
M28D	AUTHORITY AT WORK	
	Value	Label
	1	NEVER
	5	ALWAYS
M28E	FLEXIBLE HOURS	
	Value	Label
	1	NEVER
	5	ALWAYS
M28F	WORK IN OWN WAY	
	Value	Label
	1	NEVER
	5	ALWAYS
M28G	VARIED WORK	
	Value	Label
	1	NEVER
	5	ALWAYS
M28H	BORING WORK	

	Value	Label
	1	NEVER
	5	ALWAYS
M29A	BUS/TRAIN TO WORK	
	Value	Label
	0	NO
	1	YES
M29B	CAR/MOTORCYCLE TO WORK	
	Value	Label
	0	NO
	2	YES
M29C	BICYCLE TO WORK	
	Value	Label
	0	NO
	3	YES
M29D	WALK TO WORK	
	Value	Label
	0	NO
	4	YES
M29E	WORK AT HOME	
	Value	Label
	0	NO
	5	YES
M29F	NO FIXED WORKPLACE	
	Value	Label
	0	NO
	6	YES
M30A	OTHER PAID WORK?	
	Value	Label
	1	YES
	2	NO
M30B	HRS OTHER WORK	

ADNFS VARIABLES FOR QUESTION 31

M31A SECOND JOB -OCCUPATION
M31B SECOND JOB-INDUSTRY

HEANSAH VARIABLES FOR QUESTION 31

M31A SECOND JOB - 5 DIGIT OCCN CODE

ADNFS AND HEANSAH VARIABLES

Q32A STAIRS USED AT HOME

Value	Label
1	YES
2	NO

Q32B STAIRS, TIMES/DAY

Q32C NO. OF STEPS /TIME

Q33A DAYS/WK CLIMB STAIRS OTHER THAN AT WORK

Q33B TIMES/DAY CLIMB STAIRS OTHER THAN AT WOR

Q33C NO. STEPS EACH TIME

M34 RUN UP STAIRS?

Value	Label
1	RARELY
2	S.TIMES
3	OFTEN

Q35A DAYS/WK -CARRY A CHILD

Value	Label
1	RARELY
2	1-2 DAYS
3	3-5 DAYS
4	MOST DAYS

Q35B DAYS/WK -PUSHCHAIR

Value	Label
1	RARELY
2	1-2 DAYS
3	3-5 DAYS
4	MOST DAYS

Q35C PLAY GAMES WITH CHILD -PHYSICAL

Value	Label
1	RARELY
2	1-2 DAYS
3	3-5 DAYS
4	MOST DAYS

Q36A DO YOU CARE FOR DISABLED ADULT?

Value	Label
1	YES
2	NO

Q36B DAYS/WK -LIFT ADULT

Value	Label
1	RARELY

2	1-2 DAYS
3	3-5 DAYS
4	MOST DAYS

Q36C DAYS/WK-SUPPORT WALKING ADULT

Value	Label
1	RARELY
2	1-2 DAYS
3	3-5 DAYS
4	MOST DAYS

Q36D DAYS/WK -PUSH WHEELCHAIR

Value	Label
1	RARELY
2	1-2 DAYS
3	3-5 DAYS
4	MOST DAYS

Q37 OTHER PHYSICAL ACT.IN 4 WKS OTHER ACTIVITIES=1

Q37A1 NAME ACTIVITY

Q37B1 NO.OF OCCS.

Q37C1H HOURS NA=98

Q37C1M MINS NA=98

Q37D1 USUAL?
Q37E1H HOURS NA=7

Q37E1M MINS NA=98

Q37F1 OUT OF BREATH
Value Label
1 YES
2 NO

Q37A2 NAME ACTIVITY

Q37B2 NO.OF OCCS.

Q37C2H HOURS NA=8

Q37C2M MINS NA=98

Q37D2 USUAL?
Q37E2H HOURS
Q37E2M MINS
Q37F2 OUT OF BREATH
Value Label
1 YES
2 NO

M38A

Value	Label
1	TV
2	SOCIAL
3	LEISURE-NO P.A.
4	LEISURE-P.A.
5	SPORTS & EXERCISE
6	OTHER
7	HSWORK
8	VOLUNTARY
9	WORK/NO ANSWER

M38B

Value	Label
1	TV
2	SOCIAL
3	LEISURE-NO P.A.
4	LEISURE-P.A.
5	SPORTS & EXERCISE
6	OTHER
7	HSWORK
8	VOLUNTARY
9	WORK/NO ANSWER

E17A AGE 14-25, HOW MUCH EXERCISE?

Value	Label
1	A LOT
2	A MOD. AMOUNT
3	VERY LITTLE
4	NONE AT ALL

E17B AGE 14-25, SELF COMPARED TO PEERS

Value	Label
1	V.PHYS.ACTIVE
2	FAIRLY PHYS.ACTIVE
3	NOT V.PHYS.ACTIVE
4	NOT AT ALL PHYS.ACTI

E18A AGE 14+ EVER WAKED 2+ MILES REG.?

Value	Label
1	YES
2	NO

E18B HOW MANY YEARS REG. LONG WALKS FOR?

E18C AGE STOPPED REG. LONG WALKS

Value	Label
1	STILL REGULAR

E19B SPORTS DONE REG. FOR 2+ YEARS

Value	Label
1	NO REGULAR ACTIVITIE

E19A NO. OF REG. SPORTS NA=98

E21A HOW LONG SINCE REG. PAID EMPLOYMENT?

Value	Label
1	STILL EMPLOYED
2	< 1 YEAR
3	1 YEAR < 5 YEARS
4	5 YEARS, < 10 YRS
5	10 YEARS +
6	NEVER WORKED

E21B HOURS/WEEK WORKED

Questionnaire data - file 3

Allied Dunbar National Fitness Survey

File=ADQRE3.POR

4316 cases 72 variables
File size: 7967 records, 637360 characters

Health Education Authority National Survey of Activity & Health

File=HEAQRE3.POR

2837 cases 72 variables
File size: 5250 records, 420000 characters

Missing values coded 9, 99, 999 etc. unless otherwise stated.

Questions not answered (NA) coded blank unless otherwise stated.

Variables names are taken from the questionnaire numbers. Those names starting with Q are asked on both the main (white) and the elderly (green) questionnaire and the question number is taken from the main questionnaire. Names beginning with M are asked only on the main (white) questionnaire and the question number is taken from the main questionnaire. Names beginning with E are asked only on the elderly questionnaire and the question numbers are taken from the elderly (green) questionnaire. Answers to all questions are as coded on the questionnaire.

A list of questions which are the same on both questionnaires and details of the identification numbers on both surveys are included in the documentation.

List of variables on the file:-

<u>Name</u>	<u>Labels</u>	<u>Missing values</u>
ID	IDENTIFICATION NUMBER	(NA=not asked)
Q39	COMPARED TO OTHERS OF YOUR AGE ,ARE YOU?	
Q40	COMPARED TO OTHERS OF YOUR AGE ,ARE YOU?	
Q41A	ENOUGH EXERCISE TO KEEP YOU FIT?	
M41B	DO OTHERS GET ENOUGH EXERCISE TO KEEP FI	
M42A	I AM NOT THE SPORTY TYPE	
M42B	HAVE NOT GOT TIME	

M42C	GOT YOUNG CHILD TO CARE FOR
M42D	TOO SHY/EMBARASSED
M42E	NO SPORTS PARTNER
M42F	TOO OLD
M42G	INJURY/DISABILITY STOPS ME
M42H	POOR HEALTH
M42I	NO FACILITIES NEARBY
M42J	NEED TO RELAX IN SPARE TIME
M42K	NO TIME DUE TO WORK
M42L	MIGHT GET INJURED
M42M	HAVE NOT GOT RIGHT CLOTHES
M42N	NEVER KEEP IT UP
M42O	TOO FAT
M42P	NO ENERGY
M42Q	CANNOT AFFORD
M42R	DO NOT ENJOY PHYSICAL ACTIVITY
M43	FAMILY AND FRIENDS ENCOURAGE PHYSICAL AC
M44A	VIGOROUS EXE. 3 */WK FOR 20 MINS?
M44B	VIGOROUS EXE. 1 */WK FOR 20 MINS?
M45A	RELAX FORGET CARES
M45B	MEET OTHER PEOPLE
M45C	HAVE FUN
M45D	GET OUTOF DOORS
M45E	FEEL A SENSE OF ACHIEVEMENT
M45F	FEEL INDEPENDENT
<u>HEANSAH ONLY M45FX 'TO FEEL MENTALLY ALERT' ON FILE HEAORE1.POR</u>	
M45G	GOOD SHAPE PHYSICALLY
M45H	LEARN NEW THINGS
M45I	LOOK GOOD
M45J	CONTROL OR LOSE WEIGHT
M45K	SEEK ADVENTURE AND EXCITEMENT
M45L	IMPROVE OR MAINTAIN HEALTH
M46A	TO GET OUT AND ABOUT
M46B	TO GET A GOOD NIGHT'S SLEEP
M46C	TO AVOID GETTING OVERWEIGHT

M46D	TO AVOID WORRYING TOO MUCH
M46E	NOT TO SMOKE
M46F	TO EXERCISE REGULARLY
M46G	NOT TO DRINK TOO MUCH ALCOHOL
M46H	TO AVOID FATTY FOODS
Q47	WORRY MORE OR LESS THAN OTHERS
Q48A	LACK OF SLEEP THROUGH WORRY
Q48B	NUMBER OF OCCASIONS
Q48C	LENGTH OF TIME
Q49	PILLS TO HELP SLEEP
M50	EASILY LOSE TEMPER
M51	IMPATIENT
Q52A	EXCITED OR INTERESTED
Q52B	RESTLESS
Q52C	PROUD WHEN COMPLIMENTED
Q52D	LONELY OR REMOTE
Q52E	PLEASED AT ACCOMPLISHMENT
Q52F	BORED
Q52G	ON TOP OF THE WORLD
Q52H	DEPRESSED OR VERY UNHAPPY
Q52I	THAT THINGS ARE GOING YOUR WAY
Q52J	UPSET WHEN CRITICISED
Q53	HOW STRESSFUL IN LAST YEAR
Q54	SOMEONE TO TALK TO IN TIMES OF DIFFICULTY
Q55	HOW OFTEN SEE FRIENDS OR RELATIVES
Q56A	ANY CONTACT WITH FRIENDS OR RELATIVES BY PHONE/LETTER?
Q56B	HOW OFTEN IN CONTACT WITH THOSE FRIENDS OR RELATIVES?

Q57A BELONG TO CLUBS OR ORGANISATIONS

Q57B HOW OFTEN JOIN IN THEIR ACTIVITIES?

Q58A ATTEND RELIGIOUS SERVICES

Q58B HOW OFTEN ATTEND RELIGIOUS SERVICES?

Questionnaire data - file 4

Allied Dunbar National Fitness Survey

File=ADQRE4.POR

4316 cases 112 variables

File size: 12789 records, 1023120 characters

Health Education Authority National Survey of Activity & Health

File=HEAQRE4.POR

2837 cases 112 variables

File size: 8355 records, 668400 characters

Missing values coded 9, 99, 999 etc. unless otherwise stated.

Questions not answered (NA) coded blank unless otherwise stated.

Variables names are taken from the questionnaire numbers. Those names starting with Q are asked on both the main (white) and the elderly (green) questionnaire and the question number is taken from the main questionnaire. Names beginning with M are asked only on the main (white) questionnaire and the question number is taken from the main questionnaire. Names beginning with E are asked only on the elderly questionnaire and the question numbers are taken from the elderly (green) questionnaire. Answers to all questions are as coded on the questionnaire.

A list of questions which are the same on both questionnaires and details of the identification numbers on both surveys are included in the documentation.

List of variables on the file:-

<u>Name</u>	<u>Labels</u>	<u>Missing values</u>
-------------	---------------	-----------------------

(NA=not asked)

ID	IDENTIFICATION NUMBER	
Q59	BREAKFAST-TIME AFTER RISING	
	Value Label	
	1 WITHIN 1 HR	
	2 1 HR BUT < 2 HRS	
	3 2 HRS +	
Q60A	BREAKFAST CEREAL EATEN	
	Value Label	
	1 DAILY	
	2 > TWICE / WEEK	
	3 ONCE OR TWICE/WEEK	
	4 < ONCE / WEEK	
	5 NEVER	
Q60B	TYPE OF CEREAL	

Value	Label
1	HIGH FIBRE
2	MED. FIBRE
3	LOW FIBRE

Q61 TYPE OF BREAD

Value	Label
1	WHITE
2	H.FIBRE WHITE
3	GRANARY/BROWN
4	WHOLEMEAL
5	OTHER
6	DOES NOT EAT BREAD

Q62A SPREAD ON BREAD

Value	Label
1	BUTTER
2	HARD MARG.
3	SOFT MARG.
4	LOW FAT SPREAD
5	OTHER
6	NO FAT ON BREAD

Q62B FAT CONTENT OF SPREAD

Value	Label
1	LOW FAT SPREADS
2	SOFT MARGE.-POLYUNSA
3	SOFT MARGE.-NON-POLY
4	YELLOW SPREADS
5	OTHERS

Q63 VEGETARIAN?

Value	Label
1	YES
2	NO

Q64 GENERALLY WHEN EAT MEAT

Value	Label
1	EAT FAT + LEAN MEAT
2	CUT FAT OFF
3	NEVER HAVE FATTY MEAT

Q65A FRIED FOODS EATEN

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE OR TWICE/WEEK
4	< ONCE / WEEK
5	NEVER

Q65B FAT USED FOR FRYING

Value	Label
1	FAT ,LARD, BUTTER
2	VEG. OIL
3	POLYUNSATURATED OIL
4	LOW FAT MARG./BUTTER
5	OTHER
6	DO NOT KNOW

Q66A GRILLED FOOD EATEN

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE OR TWICE/WEEK
4	< ONCE / WEEK
5	NEVER

Q66B GRILLED MEAT WITH ADDED FAT?

Value	Label
1	WITH ADDED FAT/OIL
2	WITHOUT ADDED FAT/OI
3	NOT EAT GRILLED MEAT

Q67A MILK/DAY

Value	Label
0	NONE
1	< 0.5 PINT
2	0.5 BUT < 1 PINT
3	1 BUT < 2
4	2 PINTS +

Q67B TYPE OF MILK

Value	Label
1	GOLD TOP
2	WHOLEMILK
3	SEMI-SKIMMED
4	SKIMMED
5	OTHER

M68A CHIPS

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68B POTATOES (NOT INC.CHIPS)

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68C GREEN VEG

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68D CARROTS/TURNIPS/PARSNIPS

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68E BAKED BEANS

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68F PEAS,LENTILS/BEANS ETC.

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68G OTHER COOKED VEG.

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68H SALAD & RAW VEG.

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68I FRESH FRUIT

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68J TINNED FRUIT

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68K NUTS

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68L CRISPS/SNACKS

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68M CHOCOLATE/SWEETS

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68N PASTA/RICE

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68O BISCUITS/CAKES

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68P ICE-CREAM ETC.

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68Q FRUIT PIES/FLANS

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68R CHEESE

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68S EGGS

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68T CREAM

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68U FRIED FISH

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68V OTHER FISH

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68W POULTRY

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68X PROCESSED MEAT

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68Y BEEF/LAMB/PORK/ETC.

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68Z JAMS

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68AA FRUIT JUICE

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68AB

SOFT DRINKS

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68AC

OTHER REGULAR FOODS?

Value	Label
1	CURRIES/INDIAN
2	NO OTHER FOODS
3	CHINESE TAKEAWAYS
4	PIZZA
5	SAVOURY BISCUITS
6	MARMITE,BOVRIL ETC.
7	OTHER

M68AD

WHAT OTHER FOODS?

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M68AE

WHAT OTHER FOODS?

Value	Label
1	DAILY
2	> TWICE / WEEK
3	ONCE /TWICE/WEEK
4	< ONCE / WEEK
5	RARELY/NEVER

M69AT

CUPS OF TEA/DAY

Value	Label
1	1 OR 2
2	3 OR 4
3	5 OR 6
4	7 OR MORE
5	DO NOT DRINK

M69AC

CUPS OF COFFEE/DAY

Value	Label
1	1 OR 2
2	3 OR 4
3	5 OR 6
4	7 OR MORE
5	DO NOT DRINK

M69BT SUGAR IN TEA? NA=8

Value	Label
0	NONE
1	< 1 TEASPOON
2	1-2 TEASPOONS
3	2+ TEASPOONS

M69BC SUGAR IN COFFEE? NA=8

Value	Label
0	NONE
1	< 1 TEASPOON
2	1-2 TEASPOONS
3	2+ TEASPOONS

M70A1 BEER/LAGER/SHANDY IN PAST 4 WKS

Value	Label
1	YES
2	NO

M70B1 HOW OFTEN IN PAST 4 WKS

Value	Label
1	MOST DAYS
2	3-4/WK
3	1-2/WK
4	1-2 IN PAST 4 WKS

M70D1 UNITS CONSUMED ON EACH OCC.

M70A2 WINES & FORTIFIED WINES IN PAST 4 WKS

Value	Label
1	YES
2	NO

M70B2 HOW OFTEN IN PAST 4 WKS

Value	Label
1	MOST DAYS
2	3-4/WK
3	1-2/WK
4	1-2 IN PAST 4 WKS

M70D2 UNITS CONSUMED ON EACH OCC.

M70A3 SPIRITS IN PAST 4 WKS

Value	Label
1	YES
2	NO

M70B3 HOW OFTEN IN PAST 4 WKS

Value	Label
1	MOST DAYS
2	3-4/WK
3	1-2/WK
4	1-2 IN PAST 4 WKS

M70D3 UNITS CONSUMED ON EACH OCC.

M70A4 ANYTHING ELSE IN PAST 4 WKS

Value	Label
1	YES
2	NO

M70B4 HOW OFTEN IN PAST 4 WKS

Value	Label
1	MOST DAYS
2	3-4/WK
3	1-2/WK
4	1-2 IN PAST 4 WKS

M70D4 UNITS CONSUMED ON EACH OCC. NA=98

M71 WOULD YOU DESCRIBE YOURSELF AS?

Value	Label
1	REGULAR DRINKER
2	OCC. DRINKER
3	SPECIAL OCCS DRINKER
4	NON-DRINKER

Q72 HOW OFTEN DRINK ALCOHOL

Value	Label
1	EVERY DAY
2	ALMOST DAILY
3	3-4 TIMES/WK
4	1-2 TIMES/WK
5	ONCE/FORTNIGHT
6	ONCE/MONTH
7	LESS OFTEN THAN THAT

Q73 WOULD YOU SAY YOU ARE (CODE 4 ON GREEN
QUESTIONNAIRE
=NON DRINKER)

Value	Label
1	LIGHT DRINKER
2	MOD.DRINKER
3	HEAVY DRINKER

Q74A EVER DRUNK HEAVILY?

Value	Label
1	YES
2	NO

Q74B HOW LONG SINCE STOPPPED HEAVY DRINKING NA=98

	Value	Label	
	0	< 1 YEAR	
M75	EVER ADVISED TO STOP DRINKING?		
	Value	Label	
	1	NO	
	2	YES/DOCTOR	
	3	YES/SPOUSE	
	4	YES,OTHER	
M76A	EVER FELT YOU SHOULD CUT OUT DRINK?		
	Value	Label	
	1	YES	
	2	NO	
M76B	REASON YOU WANT TO CUT OUT DRINK		
	Value	Label	
	1	HEALTH	
	2	NON-HEALTH	
	3	WEIGHT	
Q77	HAVE YOU EVER SMOKED?		
	Value	Label	
	1	YES	
	2	NO	
Q78A	SMOKE NOWADAYS?		
	Value	Label	
	1	YES	
	2	NO	
Q78B	NO. OF CIGARETTES/WEEK DAY		NA=97
	Value	Label	
	0	<1 / DAY	
Q78C	NO. OF CIGARRETER/WEEKENDS		NA=98
	Value	Label	
	0	<1 / DAY	
Q78D	TYPE USUALLY SMOKED		
	Value	Label	
	1	FILTER TIPPED	
	2	PLAIN OR UNTIPP.	
	3	HAND ROLLED	
Q78E	TAR LEVEL OF USUAL CIGARRETES		
	Value	Label	
	1	HIGH	
	2	MIDDLE-HIGH	
	3	LOW-MIDDLE	
	4	LOW	
	5	DO NOT KNOW	
Q79A	EVER SMOKED REGULARLY-1+/DAY FOR 1 YEAR		

	Value	Label	
	1	YES	
	2	NO	
Q79BY	YEARS SINCE STOPPED SMOKING?		NA=98
Q79BM	MONTHS SINCE STOPPED?		NA=98
Q79C	NO.OF CIGARRETES/DAY WHEN LAST SMOKED		
Q79D1	GAVE UP BECAUSE EXPENSE		
	Value	Label	
	1	YES	
Q79D2	CONCERN FOR FUTURE HEALTH		
	Value	Label	
	2	YES	
Q79D3	ILL HEALTH		
	Value	Label	
	3	YES	
Q79D4	SOCIAL PRESSURE		
	Value	Label	
	4	YES	
Q79D5	PREGNANCY		
	Value	Label	
	5	YES	
Q79D6	WANTED TO		
	Value	Label	
	6	YES	
Q79D7	OTHER REASON		
	Value	Label	
	7	YES	
Q80	AGE STARTED TO SMOKE REGULARLY		
M81A	EVER SMOKED CIGARS REG.?		
	Value	Label	
	1	YES	
	2	NO	
M81B	AGE STARTED SMOKE CIGARS REG.		
M81C	STILL SMOKE CIGARS REG.?		
	Value	Label	
	1	YES	
	2	NO	
M81D	OUNCES TOBACCO/WK		
M81E	HOW LONG SINCE GAVE UP CIGARS		NA=98

	Value	Label	
	0	<1 YEAR	
M82A	EVER SMOKED PIPE REG.?		
	Value	Label	
	1	YES	
	2	NO	
M82B	AGE STARTED TO PIPE SMOKE		
M82C	STILL SMOKE PIPE REG.?		
	Value	Label	
	1	YES	
	2	NO	
M82D	OUNCES TOBACCO/WK		
M82E	HOW LONG SINCE GAVE UP PIPE		NA=98
	Value	Label	
	0	<1 YEAR	
Q83	FOR YOUR HEIGHT/WEIGHT ARE YOU?		
	Value	Label	
	1	ABOUT RIGHT	
	2	TOO HEAVY	
	3	TOO LIGHT	
	4	DO NOT KNOW	
Q84AST	LEAST WEIGHED SINCE 18-STONES		
Q84ALB	POUNDS		NA=98
Q84AK	KILOS		
Q84B	AGE LAST THIS WEIGHT		
	Value	Label	
	1	UNDER 20	
	2	20-29	
	3	30-39	
	4	40-49	
	5	50-59	
	6	60+	
	7	DO NOT KNOW	
Q85AST	MOST EVER WEIGHED-STONES		
Q85ALB	POUNDS		NA=98
Q85AK	KILOS		
Q85B	HOW OLD WHEN LAST THIS WEIGHT		
	Value	Label	
	1	UNDER 20	

2	20-29
3	30-39
4	40-49
5	50-59
6	60+
7	DO NOT KNOW

Q86A GOOD HEALTH MATTER OF CHANCE

Value	Label
1	DISAGREE STRONGLY
5	AGREE STRONGLY
6	DO NOT KNOW

Q86B HEALTH DEPENDS ON LIFE

Value	Label
1	DISAGREE STRONGLY
5	AGREE STRONGLY
6	DO NOT KNOW

Q86C REG. DOCTOR VISITS AVOIDS ILLNESS

Value	Label
1	DISAGREE STRONGLY
5	AGREE STRONGLY
6	DO NOT KNOW

E58 EVER SMOKED CIGARS REGULARLY?

Value	Label
1	NO
2	YES & STILL SMOKE
3	YES BUT NO LONGER

E59 EVER SMOKED A PIPE REG.?

Value	Label
1	NO
2	YES & STILL SMOKE
3	YES BUT NO LONGER

Questionnaire data - file 5

Allied Dunbar National Fitness Survey

File=ADQRE5.POR

4316 cases 123 variables

File size: 14027 records, 1122160 characters

Health Education Authority National Survey of Activity & Health

File=HEAQRE5.POR

2837 cases 123 variables

File size: 9240 records, 739200 characters

Missing values coded 9, 99, 999 etc. unless otherwise stated.

Questions not answered (NA) coded blank unless otherwise stated.

Variables names are taken from the questionnaire numbers. Those names starting with Q are asked on both the main (white) and the elderly (green) questionnaire and the question number is taken from the main questionnaire. Names beginning with M are asked only on the main (white) questionnaire and the question number is taken from the main questionnaire. Names beginning with E are asked only on the elderly questionnaire and the question numbers are taken from the elderly (green) questionnaire. Answers to all questions are as coded on the questionnaire.

A list of questions which are the same on both questionnaires and details of the identification numbers on both surveys are included in the documentation.

List of variables on the file:-

<u>Name</u>	<u>Labels</u>	<u>Missing values</u>
ID	IDENTIFICATION NUMBER	(NA=not asked)
Q87	COMPARED TO PEERS ARE YOU IN?	
	Value Label	
	1 EXCELLENT HEALTH	
	2 GOOD HEALTH	
	3 FAIR HEALTH	
	4 POOR HEALTH	
Q88A01		
	Value Label	
	1 HAD ANGINA	
	2 NEVER HAD ANGINA	
Q88B01	AGE FIRST SUFFERED	
Q88C01		

	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A02	Value	Label	
	1	HAD ARTHRITIS	
	2	NEVER HAD ARTHRITIS	
Q88B02	AGE FIRST SUFFERED		
Q88C02	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A03	Value	Label	
	1	HAD ASTHMA	
	2	NEVER HAD ASTHMA	
Q88B03	AGE FIRST SUFFERED		NA=98
Q88C03	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A04	Value	Label	
	1	HAD BACK TROUBLE	
	2	NEVER HAD BACK TROUB	
Q88B04	AGE FIRST SUFFERED		
Q88C04	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A05	Value	Label	
	1	HAD BRONCHITIS	
	2	NEVER HAD BRONCHITIS	
Q88B05	AGE FIRST SUFFERED		NA=98
Q88C05	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A06	Value	Label	

	1	HAD DIABETES	
	2	NEVER HAD DIABETES	
Q88B06	AGE FIRST SUFFERED		
Q88C06	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A07	Value	Label	
	1	HAD EMPHYSEMA	
	2	NEVER HAD EMPHYSEMA	
Q88B07	AGE FIRST SUFFERED		
Q88C07	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A08	Value	Label	
	1	HAD FOOT TROUBLE	
	2	NEVER HAD FOOT TROUB	
Q88B08	AGE FIRST SUFFERED		NA=98
Q88C08	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A09	Value	Label	
	1	HAD HAY FEVER	
	2	NEVER HAD HAY FEVER	
Q88B09	AGE FIRST SUFFERED		NA=98
Q88C09	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A10	Value	Label	
	1	HAD H.B.PRESSURE	
	2	NEVER HAD H.B.PRESSU	
Q88B10	AGE FIRST SUFFERED		
Q88C10	Value	Label	
	1	STILL HAS	

	2	NO LONGER	
Q88A11			
	Value	Label	
	1	HAD HERNIA	
	2	NEVER HAD HERNIA	
Q88B11	AGE FIRST SUFFERED		NA=98
Q88C11			
	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A12			
	Value	Label	
	1	HAD MIGRAINE	
	2	NEVER HAD MIGRAINE	
Q88B12	AGE FIRST SUFFERED		NA=98
Q88C12			
	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A13			
	Value	Label	
	1	HAD SKIN TROUBLE	
	2	NEVER HAD SKIN TROUB	
Q88B13	AGE FIRST SUFFERED		NA=98
Q88C13			
	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
Q88A14			
	Value	Label	
	1	HAD VARICOSE VEINS	
	2	NEVER HAD VARICOSE V	
Q88B14	AGE FIRST SUFFERED		
Q88C14			
	Value	Label	
	1	STILL HAS	
	2	NO LONGER	
M89A	EVER HAD A STROKE?		
	Value	Label	
	1	YES	

	2	NO	
Q89B	AGE FIRST HAD A STROKE		
Q89C	SEEING DOCTOR NOW ABOUT STROKE?		
	Value	Label	
	1	YES	
	2	NO	
Q90A	SUSPECTED/CONFIRMED HEART TROUBLE?		
	Value	Label	
	1	YES	
	2	NO	
Q90B	HOW OLD WHEN EXPERIENCED?		NA=98
Q90C1	HEART ATTACK		
	Value	Label	
	0	NO	
	1	YES	
Q90C2	HEART STRAIN		
	Value	Label	
	0	NO	
	2	YES	
Q90C3	HIGH BLOOD PRESSURE		
	Value	Label	
	0	NO	
	3	YES	
Q90C4	VALVE DISEASE		
	Value	Label	
	0	NO	
	4	YES	
Q90C5	HOLE IN HEART		
	Value	Label	
	0	NO	
	5	YES	
Q90C6	OTHER		
	Value	Label	
	0	NO	
	6	YES	
Q90D	DID YOU ATTEND HOSPITAL?		
	Value	Label	
	1	YES	
	2	NO	
Q90E	STILL UNDER CARE FOR HEART TROUBLE?		
	Value	Label	
	1	YES	

2 NO

Q91A EVER PAIN IN CHEST

Value	Label
1	YES
2	NO

Q91B GET IT WHEN WALK UPHILL/HURRY

Value	Label
1	YES
2	NO

Q91C GET IT WHEN WALK ON LEVEL?

Value	Label
1	YES
2	NO

Q91D WHAT DO YOU DO?

Value	Label
1	STOP
2	SLOW DOWN
3	CARRY ON

Q91E DOES PAIN GO IF STAND STILL?

Value	Label
1	GOES AWAY
2	DOES NOT

Q91F HOW SOON?

Value	Label
1	10 MINS OR LESS
2	> 10 MINS

Q91G1 PAIN IN STERNUM-UPPER

Q91G2 PAIN IN STERNUM -LOWER?

Q91G3 PAIN IN LEFT ANT.CHEST?

Q91G4 PAIN IN LEFT ARM?

Q91G5 OTHER PAIN?

Q92A SEVERE CHEST PAIN EVER

Value	Label
1	YES
2	NO

Q92B DID YOU SEE A DOCTOR?

Value	Label
1	YES
2	NO

Q92C	DIAGNOSIS
	Value Label
	1 HEART ATTACK
	2 ANGINA
	3 OTHER
Q92D	NO. OF ATTACKS
Q93A	SHORT OF BREATH WHEN HURRY?
	Value Label
	1 YES
	2 NO
Q93B	SHORT OF BREATH ON LEVEL GROUND?
	Value Label
	1 YES
	2 NO
Q93C	EVER HAVE TO STOP FOR BREATH?
	Value Label
	1 YES
	2 NO
Q93D	SHORT OF BREATH WHEN WASH/DRESS?
	Value Label
	1 YES
	2 NO
Q94A	MORNING COUGH IN WINTER?
	Value Label
	1 YES
	2 NO
Q94B	DAY/NIGHT COUGH USUAL IN WINTER?
	Value Label
	1 YES
	2 NO
Q94C	PERIOD OF 3 MNTH COUGH IN WINTER?
	Value Label
	1 YES
	2 NO
Q95A	PHLEGM IN MORNING IN WINTER?
	Value Label
	1 YES
	2 NO
Q95B	PHLEGM DAY/NIGHT USUAL IN WINTER?
	Value Label
	1 YES
	2 NO

Q95C	PERIOD OF 3 MNTH PHLEGM IN WINTER?
Value	Label
1	YES
2	NO
Q95D	INCREASE IN PHELM IN PAST 3 YEARS?
Value	Label
1	YES
2	NO
Q96A	SUFFER RECURRENT JOINT PROBLEMS?
Value	Label
1	YES
2	NO
Q96B01L	LEFT SHOULDER
Value	Label
0	NO
1	YES
Q96B01R	RIGHT SHOULDER
Value	Label
0	NO
1	YES
Q96B02L	LEFT ELBOW
Value	Label
0	NO
2	YES
Q96B02R	RIGHT ELBOW
Value	Label
0	NO
2	YES
Q96B03L	LEFT WRIST
Value	Label
0	NO
3	YES
Q96B03R	RIGHT WRIST
Value	Label
0	NO
3	YES
Q96B04L	LEFT HAND
Value	Label
0	NO
4	YES
Q96B04R	RIGHT HAND
Value	Label
0	NO
4	YES

Q96B05L	LEFT HIP	
	Value	Label
	0	NO
	5	YES

Q96B05R	RIGHT HIP	
	Value	Label
	0	NO
	5	YES

Q96B06L	LEFT KNEE	
	Value	Label
	0	NO
	6	YES

Q96B06R	RIGHT KNEE	
	Value	Label
	0	NO
	6	YES

Q96B07L	LEFT ANKLE	
	Value	Label
	0	NO
	7	YES

Q96B07R	RIGHT ANKLE	
	Value	Label
	0	NO
	7	YES

Q96B08L	LEFT FOOT	
	Value	Label
	0	NO
	8	YES

Q96B08R	RIGHT FOOT	
	Value	Label
	0	NO
	8	YES

Q96B09	NECK	
	Value	Label
	0	NO
	9	YES

Q96B10	BACK	
	Value	Label
	0	NO
	1	YES

NA=98

Q96C1	DOES THIS LIMIT WALKING/CLIMBING?	
	Value	Label
	1	YES
	2	NO

Q96C2 DOES THIS INTERFERE WITH SLEEP?

Value	Label
1	YES
2	NO

Q96C3 DOES THIS MAKE IT HARD TO GRIP/HOLD?

Value	Label
1	YES
2	NO

Q96C4 DOES THIS MAKE IT HARD TO REACH THINGS?

Value	Label
1	YES
2	NO

Q97A ANY LONG-STANDING HEALTH PROBLEMS?

Value	Label
1	YES
2	NO

Q97B1

Value	Label
1	BACK
2	NECK
3	KNEES
4	HIPS
5	SHOULDERS
6	ELBOW
7	WRIST
8	HAND
9	FOOD
10	ANKLE
11	HEAD
12	EYES
13	OTHER (FACE)
14	OTHER (LEG)
15	OTHER (BODY)
16	JOINTS (NON-SPECIFIC
17	COLLAR BONES
18	OTHER

Q97C1

Value	Label
1	SPORTS INJURY
2	OTHER INJURY

Q97D1 YEARS SINCE INJURY/ACCIDENT

NA=98

Q97E1

Value	Label
1	RESTRICTS PHYSICAL A
2	NO RESTRICTION

Q97F1

Value	Label
1	TREATMENT
2	NO TREATMENT

Q97B2

Value	Label
1	BACK
2	NECK
3	KNEES
4	HIPS
5	SHOULDERS
6	ELBOW
7	WRIST
8	HAND
9	FOOD
10	ANKLE
11	HEAD
12	EYES
13	OTHER (FACE)
14	OTHER (LEG)
15	OTHER (BODY)
16	JOINTS (NON-SPECIFIC
17	COLLAR BONES
18	OTHER

Q97C2

Value	Label
1	SPORTS INJURY
2	OTHER INJURY

Q97D2

YEARS SINCE INJURY/ACCIDENT

NA=98

Q97E2

Value	Label
1	RESTRICTS PHYSICAL A
2	NO RESTRICTION

Q97F2

Value	Label
1	TREATMENT
2	NO TREATMENT

Q97B3

Value	Label
1	BACK
2	NECK

3	KNEES
4	HIPS
5	SHOULDERS
6	ELBOW
7	WRIST
8	HAND
9	FOOD
10	ANKLE
11	HEAD
12	EYES
13	OTHER (FACE)
14	OTHER (LEG)
15	OTHER (BODY)
16	JOINTS (NON-SPECIFIC
17	COLLAR BONES
18	OTHER

Q97C3

Value	Label
1	SPORTS INJURY
2	OTHER INJURY

Q97D3 YEARS SINCE INJURY/ACCIDENT

Q97E3

Value	Label
1	RESTRICTS PHYSICAL A
2	NO RESTRICTION

Q97F3

Value	Label
1	TREATMENT
2	NO TREATMENT

E66A EVER HAD A STROKE?-HOW LONG DID EFFECTS

Value	Label
1	NO
2	YES, FOR <24 HRS
3	YES, FOR 24 HRS+

Questionnaire data - file 6

Allied Dunbar National Fitness Survey

File=ADQRE6.POR

4316 cases 108 variables
File size: 12027 records, 962160 characters

Missing values coded 9, 99, 999 etc. unless otherwise stated.

Questions not answered (NA) coded blank unless otherwise stated.

Variables names are taken from the questionnaire numbers. Those names starting with Q are asked on both the main (white) and the elderly (green) questionnaire and the question number is taken from the main questionnaire. Names beginning with M are asked only on the main (white) questionnaire and the question number is taken from the main questionnaire. Names beginning with E are asked only on the elderly questionnaire and the question numbers are taken from the elderly (green) questionnaire. Answers to all questions are as coded on the questionnaire.

A list of questions which are the same on both questionnaires and details of the identification numbers on both surveys are included in the documentation.

List of variables on the file:-

<u>Name</u>	<u>Labels</u>	<u>Missing values</u>
ID	IDENTIFICATION NUMBER	(NA=not asked)
Q98A	MAJOR GYNAECOLOGICAL PROBLEMS	
	Value Label	
	1 YES	
	2 NO	
Q98B	AGE EXPERIENCED THEM	
Q98C	STILL SUFFER?	
	Value Label	
	1 YES	
	2 NO	
M99	ANY OTHER CURRENT GYNAECOLOGICAL PROBS?	
	Value Label	
	1 YES	
	2 NO	
M100	MENARCH AGE	

M101A	REGULAR PERIODS?	
	Value	Label
	1	YES
	2	NO
M101B	STILL HAVE PERIODS?	
	Value	Label
	1	STILL HAVE
	2	STOPPED
M101C	AGE HAD LAST PERIOD	
M102A	EVER PREGNANT?	
	Value	Label
	1	YES
	2	NO
M102B	PREGNANT NOW?	
	Value	Label
	1	YES
	2	NO
M102C1	NO. OF PREGNANCIES 28 WKS +	NA=98
M102C2	NO. OF PREGNANCIES < 28 WKS	NA=98
M103A	EVER TAKEN ORAL CONTRACEPTIVE?	
	Value	Label
	1	YES
	2	NO
M103BY	NO. YRS TAKEN PILL	NA=98
M103BM	NO.MNTHS TAKEN PILL	NA=98
M103C	CURRENTLY TAKING PILL?	
	Value	Label
	1	YES
	2	NO
Q104A	EVER HAD H.R.T.?	
	Value	Label
	1	YES
	2	NO
Q104B	NO.OF MNTHS HAD TREATMENT	
Q105A	HAD ANY OTHER MAJOR ILLNESS/HEALTH PROBS	
	Value	Label
	1	YES
	2	NO
Q105A1		

Q105B1 AGE AT ONSET? NA=98

Q105C1

Value	Label
1	STILL HAS
2	NO LONGER HAS

Q105A2
Q105B2 AGE AT ONSET? NA=98

Q105C2

Value	Label
1	STILL HAS
2	NO LONGER HAS

Q105A3

Q105B3 AGE AT ONSET?

Q105C3

Value	Label
1	STILL HAS
2	NO LONGER HAS

Q105A4

Q105B4 AGE AT ONSET?

Q105C4

Value	Label
1	STILL HAS
2	NO LONGER HAS

Q106A LAST 4 WKS-COLD/FLU

Value	Label
1	YES
2	NO

Q106B COUGH/CATARRH

Value	Label
1	YES
2	NO

Q106C SHORTNESS OF BREATH

Value	Label
1	YES
2	NO

Q106D INEXPLICABLE FATIGUE

Value	Label
-------	-------

	1	YES
	2	NO
Q106E	INDIGESTION/STOMACH PROBS	
	Value	Label
	1	YES
	2	NO
Q106F	DIARRHOEA/CONSTIPATION	
	Value	Label
	1	YES
	2	NO
Q106G	KIDNEY/BLADDER PROBS.	
	Value	Label
	1	YES
	2	NO
Q106H	CHEST PAINS	
	Value	Label
	1	YES
	2	NO
Q106I	HEADACHES,MIGRAINES	
	Value	Label
	1	YES
	2	NO
Q106J	EYE OR EAR TROUBLE	
	Value	Label
	1	YES
	2	NO
Q106K	BAD BACK	
	Value	Label
	1	YES
	2	NO
Q106L	PAINFUL JOINTS	
	Value	Label
	1	YES
	2	NO
Q106M	DIZZINESS	
	Value	Label
	1	YES
	2	NO
Q106N	NERVY/TENSE/DEPRESSED	
	Value	Label
	1	YES
	2	NO
Q106O	RASHES/ITCHES/SKIN PROBS	
	Value	Label

1 YES
2 NO

Q107A01 PROB. HOUSEKEEPING
Value Label
1 YES
2 NO
3 DOES NOT APPLY

Q107A02 PROB. SHOPPING
Value Label
1 YES
2 NO
3 DOES NOT APPLY

Q107A03 PROB. WORKING
Value Label
1 YES
2 NO
3 DOES NOT APPLY

Q107A04 PROB. CARING FOR CHILD
Value Label
1 YES
2 NO
3 DOES NOT APPLY

Q107A05 PROB. GARDENING
Value Label
1 YES
2 NO
3 DOES NOT APPLY

Q107A06 PROB. GOING OUT
Value Label
1 YES
2 NO
3 DOES NOT APPLY

Q107A07 PROB. WITH RELATIONSHIPS
Value Label
1 YES
2 NO
3 DOES NOT APPLY

Q107A08 PROB. WITH SEX LIFE
Value Label
1 YES
2 NO
3 DOES NOT APPLY

Q107A09 PROB. SPORTS

Value	Label
1	YES
2	NO
3	DOES NOT APPLY

Q107A10 PROB.WITH HOBBIES

Value	Label
1	YES
2	NO
3	DOES NOT APPLY

Q107A11 PROB.WITH HOLIDAYS

Value	Label
1	YES
2	NO
3	DOES NOT APPLY

Q107A12 PROB.GETTING OUT & ABOUT

Value	Label
1	YES
2	NO
3	DOES NOT APPLY

Q107B WHICH IS MOST AFFECTED BY HEALTH?

M108A RELAX, FORGET CARES

M108B MEET OTHER PEOPLE

M108C HAVE FUN

M108D GET OUT OF DOORS

M108E FEEL A SENSE OF ACHIEVEMENT

M108F FEEL INDEPENDENT

M108G FEEL MENTALLY ALERT

M108H FEEL IN GOOD SHAPE PHYSICALLY

M108I LEARN NEW THINGS

M108J LOOK GOOD

M108K CONTROL OR LOSE WEIGHT

M108L SEEK ADVENTURE & EXCITEMENT

M108M IMPROVE OR MAINTAIN HEALTH

M109A FATHER STILL ALIVE?

Value	Label
3	DO NOT KNOW

Q109B1	FATHER-ANGINA?
Value	Label
1	YES
2	NO
3	DO NOT KNOW
Q109B2	FATHER-HEART ATTACK?
Value	Label
1	YES
2	NO
3	DO NOT KNOW
Q109B3	FATHER STROKE
Value	Label
1	YES
2	NO
3	DO NOT KNOW
Q109B4	FATHER-HIGH B.P.
Value	Label
1	YES
2	NO
3	DO NOT KNOW
Q109B5	FATHER-DIABETES
Value	Label
1	YES
2	NO
3	DO NOT KNOW
M109C1	DEATH-HEART ATTACK
Value	Label
0	NO
1	YES
M109C2	DEATH-STROKE
Value	Label
0	NO
2	YES
M109C3	DEATH-OTHER HEART COND.
Value	Label
0	NO
3	YES
M109C4	DEATH-CANCER
Value	Label
0	NO
4	YES
M109C5	DEATH-OTHER
Value	Label

	0	NO	
	5	YES	
M109C6	DEATH-DO NOT KNOW		
	Value	Label	
	0	NO	
	6	YES	
M109D	AGE OF FATHER AT DEATH		
	Value	Label	
	99	DO NOT KNOW	
M109E	YOUR AGE AT DEATH OF FATHER		NA=98
	Value	Label	
	99	DO NOT KNOW	
M110A	FATHER -AGE LEFT EDUCATION		
	Value	Label	
	99	DO NOT KNOW	
M110B1	FATHER -JOB WHEN YOU WERE BORN		NA=8
	Value	Label	
	1	PROFESSIONAL	
	2	INTERMEDIATE	
	3	SKILLED NON-MANUAL	
	4	SKILLED MANUAL	
	5	PARTLY SKILLED	
	6	UNSKILLED	
	7	OTHER	
	0,9,99	DO NOT KNOW	
M110B2	EMP.STATUS OF FATHER		
	Value	Label	
	0,3,9,99	DO NOT KNOW	
M111A	MOTHER STILL ALIVE		
	Value	Label	
	3	DO NOT KNOW	
Q111B1	MOTHER-ANGINA?		
	Value	Label	
	1	YES	
	2	NO	
	3	DO NOT KNOW	
Q111B2	MOTHER-HEART ATTACK?		
	Value	Label	
	1	YES	
	2	NO	
	3	DO NOT KNOW	
Q111B3	MOTHER-STROKE		

	Value	Label	
	1	YES	
	2	NO	
	3	DO NOT KNOW	
Q111B4	MOTHER-HIGH B.P.?		
	Value	Label	
	1	YES	
	2	NO	
	3	DO NOT KNOW	
Q111B5	MOTHER-DIABETES?		
	Value	Label	
	1	YES	
	2	NO	
	3	DO NOT KNOW	
M111C1	DEATH-HEART ATTACK		
	Value	Label	
	0	NO	
	1	YES	
M111C2	DEATH -STROKE?		
	Value	Label	
	0	NO	
	2	YES	
M111C3	DEATH-OTHER HEART COND?		
	Value	Label	
	0	NO	
	3	YES	
M111C4	DEATH-CANCER?		
	Value	Label	
	0	NO	
	4	YES	
M111C5	DEATH-OTHER?		
	Value	Label	
	0	NO	
	5	YES	
M111C6	DEATH-DO NOT KNOW?		
	Value	Label	
	0	NO	
	6	YES	
M111D	AGE OF MOTHER AT DEATH		
	Value	Label	
	99	DO NOT KNOW	
M111E	YOUR AGE AT DEATH OF FATHER		
	Value	Label	NA=98
	99	DO NOT KNOW	

E77 SUFFER FROM FALLS/POOR BALANCE?

Value	Label
-------	-------

1	YES
---	-----

2	NO
---	----

E78A LOST BALANCE IN PAST YR?

Value	Label
-------	-------

1	YES
---	-----

2	NO
---	----

E78B NO.OF TIMES LOST BALANCE

E79 HOLD ON TO S.THING TO KEEP BALANCE?

Value	Label
-------	-------

1	ALL TIME
---	----------

2	QUITE OFTEN
---	-------------

3	OCCASIONALLY
---	--------------

4	NOT AT ALL
---	------------

Questionnaire data - file 7

Allied Dunbar National Fitness Survey

File=ADQRE7.POR

4316 cases 77 variables
File size: 9081 records, 726480 characters

Health Education Authority National Survey of Activity & Health

File=HEAQRE7.POR

2837 cases 74 variables
File size: 5799 records, 463920 characters

Missing values coded 9, 99, 999 etc. unless otherwise stated.

Questions not answered (NA) coded blank unless otherwise stated.

Variables names are taken from the questionnaire numbers. Those names starting with Q are asked on both the main (white) and the elderly (green) questionnaire and the question number is taken from the main questionnaire. Names beginning with M are asked only on the main (white) questionnaire and the question number is taken from the main questionnaire. Names beginning with E are asked only on the elderly questionnaire and the question numbers are taken from the elderly (green) questionnaire. Answers to all questions are as coded on the questionnaire.

A list of questions which are the same on both questionnaires and details of the identification numbers on both surveys are included in the documentation.

List of variables on the file:-

<u>Name</u>	<u>Labels</u>	<u>Missing values</u>
		(NA=not asked)
ID	IDENTIFICATION NUMBER	
Q112AP1	PERSON NUMBER 1	
Q112AH1	PERSON 1 = HOH	
Q112AA1	AGE OF PERSON 1	
Q112AS1	SEX OF PERSON 1	
Q112AE1	EMPLOYMENT PERSON 1	
Q112AP2	PERSON NUMBER 2	
Q112AR2	PERSON 2 RELATIONSHIP TO RESPONDENT	
Q112AH2	PERSON 2 = HOH	

Q112AA2	AGE OF PERSON 2	NA=98
Q112AS2	SEX OF PERSON 2	
Q112AE2	EMPLOYMENT PERSON 2	
Q112AP3	PERSON NUMBER 3	
Q112AR3	PERSON 3 RELATINSHIP TO RESPONDENT	
Q112AH3	PERSON 3=HOH	
Q112AA3	AGE OF PERSON 3	NA=98
Q112AS3	SEX OF PERSON 3	
Q112AE3	EMPLOYMENT PERSON 3	
Q112AP4	PERSON NUMBER 4	
Q112AR4	PERSON 4 RELATIONSHIP TO RESPONDENT	
Q112AH4	PERSON 4=HOH	
Q112AA4	AGE OF PERSON 4	NA=98
Q112AS4	SEX OF PERSON 4	
Q112AE4	EMPLOYMENT PERSON 4	
Q112AP5	PERSON NUMBER 5	
Q112AR5	PERSON 5 RELATIONSHIP TO RESPONDENT	
Q112AH5	PERSON 5 = HOH	
Q112AA5	AGE OF PERSON 5	NA=98
Q112AS5	SEX OF PERSON 5	
Q112AE5	EMPLOYMENT PERSON 5	
Q112AP6	PERSON NUMBER 6	
Q112AR6	PERSON 6 RELATIONSHIP TO RESPONDENT	
Q112AH6	PERSON 6 = HOH	
Q112AA6	AGE OF PERSON 6	NA=98
Q112AS6	SEX OF PERSON 6	
Q112AE6	EMPLOYMENT PERSON 6	

Q112AP7	PERSON NUMBER 7	
Q112AR7	PERSON 7 RELATIONSHIP TO RESPONDENT	
Q112AH7	PERSON 7 = HOH	
Q112AA7	AGE OF PERSON 7	NA=98
Q112AS7	SEX OF PERSON 7	
Q112AE7	EMPLOYMENT PERSON 7	
Q112AP8	PERSON NUMBER 8	
Q112AR8	PERSON 8 RELATIONSHIP TO RESPONDENT	
Q112AH8	PERSON 8 = HOH	
Q112AA8	AGE OF PERSON 8	NA=98
Q112AS8	SEX OF PERSON 8	
Q112AE8	EMPLOYMENT PERSON 8	
Q112AP9	PERSON NUMBER 9	
Q112AR9	PERSON 9 RELATIONSHIP TO RESPONDENT	
Q112AH9	PERSON 9 = HOH	
Q112AA9	AGE OF PERSON 9	
Q112AS9	SEX OF PERSON 9	
Q112AE9	EMPLOYMENT PERSON 9	
Q112B	IS RESPONDENT HOH?	
<u>ADNFS VARIABLES FOR QUESTION 113</u>		
Q113AOCC	OCCUPATION - SEE DOCUMENTATION	NA=998
Q113AIND	INDUSTRY - SEE DOCUMENTATION	
Q113B	EMPLOYEE STATUS	
	Value Label	
	1 EMPLOYEE	
	2 SELF-EMP.	
Q113C	EMPLOYEE LEVEL	
	Value Label	

1	MANAGER
2	SUPERVISOR
3	OTHER

Q113D	NO. OF EMPLOYEES
	Value Label
	1 <25
	2 25 OR MORE

Q113E	DO YOU EMPLOY OTHERS?
	Value Label
	1 <25
	2 25 OR MORE
	3 NO

HEANSAH VARIABLES FOR QUESTION 113

Q113AOCC	OCCUPATION - SEE DOCUMENTATION	NA=99888
Q113AIND	INDUSTRY - SEE DOCUMENTATION	Missing=90 Unable to classify=89
Q113STAT	EMPLOYMENT STATUS CODING	
	Value Label	
	1 SELF EMPLOYED (25+ EMPLOYEES)	
	2 SELF EMPLOYED (1-24 EMPLOYEES)	
	3 SELF EMPLOYED (NO EMPLOYEES)	
	4 SELF EMPLOYED (NA HOW MANY EMPLOYEES)	
	5 MANAGER (ESTABLISHMENT OF 25+ EMPLOYEES)	
	6 MANAGER (ESTABLISHMENT OF 1-24 EMPLOYEES)	
	7 MANAGER (NA SIZE OF ESTABLISHMENT)	
	8 FOREMAN/SUPERVISOR	
	9 OTHER EMPLOYEE	
	10 EMPLOYEE (NA IF MANAGER/FOREMAN/OTHER)	
	11 NA/INSUFFICIENT INFORMATION TO CODE	
	98 NA	

ADNFS AND HEANSAH VARIABLES

Q114	MARITAL STATUS	
Q115A	COUNTRY OF BIRTH	
Q115B	HOW LONG LIVED IN NEIGHBOURHOOD?	
Q115C	HOW LONG LILVED IN UK?	
Q116A	ETHNIC GROUP	MISSING=0
Q116B	OTHER ETHNIC GROUP	
Q117	CURRENT DRIVING LICENCE	

Q118	REGULAR USE OF CAR/VAN/MOTOR CYCLE
Q119A	ANY EDUCATIONAL QUALIFICATIONS?
Q119B	HIGHEST EDUCATIONAL QUALIFICATION
Q120	USE OF TELEPHONE
Q121A	ACCOMMODATION OWNED OR RENTED
Q121B	TYPE OF RENTED ACCOMMODATION
Q122	ACCOMMODATION ALL ON ONE FLOOR
ENDHRS	TIME AT END OF INTERVIEW - HOURS
ENDMINS	TIME AT END OF INTERVIEW - MINUTES

ALLIED DUNBAR NATIONAL FITNESS SURVEY

SPSS PORTABLE FILE

ACTIVITY DATA FOR HOUSEWORK, GARDENING, DIY AND LONG WALKS

Variables created from questions 1, 2, 3, 4 & 5 on the white questionnaire in a format equivalent to questions 10-13. Data are included where available on the green questionnaire - for questions 1 & 4 see questions 4 & 10 on the green questionnaire.

File=ADACTS.POR

Data for all respondents 15843 records
(1 record for each activity for each respondent)

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Respondent) identification) number)	ID	Constituency number (101-309) Respondent number (001-200)
Activity done in past year	AQ10A	111=heavy housework 121=heavy gardening 122=light gardening 131=heavy DIY 132=light DIY 141=long walks - 2 miles or more
Activity done in past 4 weeks	AQ12	1=yes 2=no 9=not answered
Number of occasions in past 4 weeks	AQ13A	99=missing Blank=not asked
Number of occasions in past week	AQ13B	99=missing
Time in minutes on most recent occasion	AQ13TIME	Blank=missing
Kilocalorie value for activity done (1 dp) in past 4 weeks	KCAL4WK	9=missing

ALLIED DUNBAR NATIONAL FITNESS SURVEY

SPSS PORTABLE FILE

ACTIVITY DATA FOR CYCLING

Variables created by combining data from question 8 and 10-13 on cycling (code 53) on the white questionnaire and questions 14-16 on the green questionnaire

File=ADCYC.POR

Data for all respondents

1114 records

(1 record for each respondent reporting cycling)

Question number shown in brackets

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Respondent) identification) number)	ID	Constituency number (101-309) Respondent number (101-200)
Activity done in past year (q10a)	AQ10A	53=cycling
Activity done in past 4 weeks (q12)	AQ12	1=yes 2=no 9=not answered
Number of occasions in past 4 weeks (q13a)	AQ13A	99=missing Blank=not answered
Number of occasions in past week (q13b)	AQ13B	99=missing 98=not answered
Time in minutes on most recent or usual occasion	AQ13TIME	Blank=missing
Out of breath or sweaty (q13f)	AQ13F	1=yes 2=no 9=missing Blank=not answered
Kilocalorie value for activity done (1 dp) in past year	KCAL1YR	
Kilocalorie value for activity done (1 dp) in past 4 weeks	KCAL4WK	99=missing Blank=not answered

ALLIED DUNBAR NATIONAL FITNESS SURVEY

SPSS PORTABLE FILE

ACTIVITY DATA FOR WHITE & GREEN QUESTIONNAIRES QUESTIONS 10-13
(Excluding cycling - code 53)

File=ADACT1.POR

Data for all respondents 12962 records
(1 record for each activity for each respondent)

Question numbers for white and green questionnaires shown in brackets

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Respondent) identification) number)	ID	Constituency number (101-309) Respondent number (001-200)
Number of activities in the past year	NUMYR	Blank=missing
Number of activities in the past 4 weeks	NUMWK	98=missing
Activity done in past year (q10a & q14a)	AQ10A	See sports coding list (Excludes cycling - code 53) Blank=missing
Month activity done (q11a) (white questionnaire only)		
December	M01	1=yes 2=no 9=missing Blank=over 70 yrs - green gre
November	M02	Coding as December
October	M03	"
September	M04	"
August	M05	"
July	M06	"
June	M07	"
May	M08	"
April	M09	"
March	M10	"
February	M11	"
January	M12	"

File=ADACT1.DAT

Average occasions in each month (q11b)	AQ11B	99=missing Blank=over 70 yrs - green gre
Activities done in past 4 weeks (q12 & q15)	AQ12	9=missing Blank=not answered
Number of occasions in past 4 weeks (q13a & q16a)	AQ13A	99=missing Blank=not answered
Number of occasions in past week (q13b & q16b)	AQ13B	99=missing 98=not answered
Time spent in activity on most recent occasion (hours) (q13c & q16c)	AQ13CHRS	98=not answered
Time spent in activity on most recent occasion (minutes) (q13c & q16c)	AQ13CMIN	98=not answered
Less or more than usual time (q13d & q16d)	AQ13D	9=not answered
Time spent in activity on most recent occasion (hours) (q13e & q16e)	AQ13EHRS	98=not answered
Time spent in activity on most recent occasion (minutes) (q13e & q16e)	AQ13EMIN	99=missing 98=not answered
Out of breath or sweaty (q13f & q16f)	AQ13F	9=missing Blank=not answered

File=ADACT1.DAT

Kilocalorie KCALS1YR 99=missing
value for 1 dp Range=2-10.5
past year

Kilocalorie KCALS4WK 99=missing
value for 1 dp Range=2-13
past 4 weeks

Time in minutes AQ13TIME
on most recent
or usual occasion

Energy AQENLEV 1=high (kcal value >=7.5)
expenditure 2=medium (kcal value >=5 and <7.5)
level 3=low (kcal value >=2 and <5)

ALLIED DUNBAR NATIONAL FITNESS SURVEY

SPSS PORTABLE FILE

ACTIVITY DATA FOR WHITE (MAIN) QUESTIONNAIRE QUESTIONS 19 & 20

File=ADACT2W.POR

Data for respondents aged 16-69 years 18506 records
(1 record for each activity for each respondent)
Question number shown in brackets

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Respondent) identification) number)	ID	Constituency number (101-309) Respondent number (001-200)
Number of regular activities since left school	NUMREG	99=missing
Activity done regularly since age 14 years (q19)	AM19	See sports coding list Blank=not answered
Age at which activity started (q20a)	AM20A	99=missing Blank=not answered
Age stopped regularly (q20b)	AM20B	1=still regular 99=missing Blank=not answered
Any years when not regular? (q20c)	AM20C	1=yes 2=no 3=less than 1 year 9=missing Blank=not answered
Number of years not regular (q20d)	AM20D	99=missing Blank=not answered
Reason for stopping (q20e)	AM20E	99=missing Blank=not answered
Kilocalorie value for activity	KCAL5 1 dp	99=missing

ALLIED DUNBAR NATIONAL FITNESS SURVEY

SPSS PORTABLE FILE

ACTIVITY DATA FOR GREEN (ELDERLY) QUESTIONNAIRE QUESTIONS 19 & 20

File=ADACT2G.POR

Data for respondents aged 70 yrs & over 1683 records
(1 record for each activity for each respondent)

Question number shown in brackets

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Respondent) identification) number)	ID	Constituency number (101-309) Respondent number (001-200)
Number of regular activities since left school	NUMREG	99=missing
Activity done regularly since left school (q19)	AE19	See sports coding list Blank=not answered
Number of yrs done regularly (q20a)	AE20A	99=missing Blank=not answered
Age stopped regularly (q20b)	AE20B	1=still regular 99=missing Blank=not answered

ALLIED DUNBAR NATIONAL FITNESS SURVEY

SPSS PORTABLE FILE

DERIVED ACTIVITY VARIABLES FOR OCCASIONS OF AT LEAST 20 MINUTES IN THE PAST 4 WEEKS

Variables created from sport & exercise, cycling, home activities (DIY+housework+gardening), walking and occupation questions on the white and green questionnaires.

File=ADACTVAR.POR

Data for all respondents

4316 records

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Respondent) identification) number)	ID	Constituency number (101-309) Respondent number (001-200)
Occupation activity summary	Q21SUM1	0=none 1=Some heavy 2=Moderate only 3=light only 4=Sedentary 99=missing
Number of vigorous days work	VOCCQ21	99=missing
Number of moderate days work	MOCCQ21	99=missing
Number of light days work	LOCCQ21	99=missing

All 'occasion' variables based on occasions lasting 20 minutes or more.

Number of vigorous sport & exercise occasions	SEVOCC20
Number of moderate sport & exercise occasions	SEMOCC20
Number of vigorous cycling occasions	CYVOCC20

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Number of moderate cycling occasions	CYMOCC20	
Number of moderate home occasions	HOMOCC20	
Number of moderate walking occasions	WAMOCC20	
Total number of vigorous occasions	VOCC20P	999=missing
Total number of moderate occasions	MOCC20P	999=missing
Total number of vigorous & moderate occasions	VMOCC20P	999=missing
Total number of vigorous & moderate occasions of sport & exercise	SEVMOC20	
Total number of vigorous & moderate occasions of cycling	CYVMOC20	
Total number of vigorous & moderate days working	VMOCCQ21	99=missing

Coding for 2 summary variables

Summary of all vigorous & moderate occasions	OC20SUM1	1 = 12 or more occasions of vigorous activity 2 = 12 or more occasions of moderate or vigorous activity
Summary of all vigorous & moderate sport & exercise occasions	SE20SUM1	3 = 12 or more occasions of moderate activity 4 = 5-11 occasions of moderate or vigorous activity 5 = 1-4 occasions of moderate or vigorous activity 6 = no vigorous or moderate activity 9 = missing

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Summary of highest intensity level reached	ACTSUM1	1=vigorous 2=moderate 3=light 4=none

Allied Dunbar National Fitness Survey
and
Health Education Authority National Survey of Activity & Health

Questions which are the same on both the main (white) and elderly (green) questionnaires.

Question numbers

Main (white) Elderly (green)

1a to 1f	4a to 4f
2a	5a
3a	6a
4a to 4d	10a to 10d
5a to 5c	11a to 11c
5d	12
6	13
9a to 9c	7a to 7c
10	14
No sports & exercise activities in the past year	
Number of sports & exercise activities in the past year	
12	15
Number of activities in the past 4 weeks	
22a to 22e	22a to 22c
27	23
32a to 32c	24a to 24c
33a to 33c	25a to 25c
35a to 35c	26a to 26c
36a to 36d	27a to 27d
37a to 37f	28a to 28f
47	32
48a to 48c	33a to 33c
49	34
52	35
53	36
54	37
55	38
56a & 56b	39a & 39b
57a & 57b	40a & 40b
58a & 58b	41a & 41b
59	42
60a & 60b	43a & 43b
61	44
62a & 62b	45a & 45b
63	46
64	47
65a & 65b	48a & 48b
66a & 66b	49a & 49b
67a & 67b	50a & 50b
72	51
73	52
74a & 74b	53a & 53b

Question which are the same on both questionnaires (continued)

Main (white) Elderly (green)

77	54	
78a to 78e	55a to 55e	
79a to 79d	56a to 56d	
80	57	
83	60	
84a & 84b	61a & 61b	
85a & 85b	62a & 62b	
86	63	
87	64	
88a to 88c	65a to 65c	
89b & 89c	66b & 66c	
90a to 90e	67a to 67e	
91a to 91g	68a to 68g	
92a to 92d	69a to 69d	
93a to 93d	70a to 70d	
94a to 94c	71a to 71c	
95a to 95d	72a to 72d	
96a to 96c	73a to 73c	
97a to 97f	76a to 76f	
98a to 98c	74a to 74c	
104a & 104b	75a & 75b	
105a to 105c	80a to 80c	
106	81	
107	82	
112a & 112b	84a & 84b	
113a to 113e	85a to 85e	
114	86	
115a to 115c	87a to 87c	
116a & 116b	88a & 88b	
117	89	
118	90	
119a & 119b	91a & 91b	
120	92	
121a & 121b	93a & 93b	
122	94	

Allied Dunbar National Fitness Survey

and

Health Education Authority National Survey of Activity & Health

Relationship between areas and Regional Health Authorities for the 2 surveys.

Identification codes in columns 1-6

ADNFS

Column	Variable	Codes
1-3	Constituency number	101-309
4-6	Respondent number	001-200

HEANSAH

1-2	Regional Health Authority (RHA)	71-84
3	Constituency number within RHA	1-8
4	Ward within constituency	1-2
4-6	Respondent number	01-42

Relationship between Area codes and RHA's

RHA	ADNFS Columns 1-3	HEANSAH Columns 1-2
Northern	303 305 309	71
Yorkshire	301 308	72
North Western	302 304	73
Mersey	306 307	74
Trent	101 105 109	75
West Midlands	102 106 108	76
East Anglia	104	77
N E Thames	203 204 210	78
S E Thames	205 208	79
S W Thames	202 209	80
N W Thames	201 206	81
Oxford	111 207	82
Wessex	103	83
South Western	107 110	84

Allied Dunbar National Fitness Survey

Physical Appraisal Data - Formulae for derived variables

Variable 136 - PCFAT - percentage body fat

$PCFAT = ((\text{weight} - \text{fat free mass}) / \text{weight}) \times 100$

weight=variable 59 - PA1B

fat free mass=variable 144 - FFM

Variable 137 - BMI - body mass index

$BMI = \text{weight} / (\text{height} \times \text{height})$

weight=variable 59 - PA1B

height=variable 58 - PA1A

Variable 138 - WBYH - waist/hip ratio

$WBYH = \text{waist} / \text{hip}$

waist=variable 74 - PA5A

hip=variable 75 - PA5B

Variable 139 - CENTRE - centre or home appraisal

1=centre appraisal

2=home appraisal

Variable 140 - FVC - forced vital capacity corrected for temperature and pressure in the portakabin

Variable 141 - FEV1 - forced expiratory volume in one second corrected for temperature and pressure in the portakabin

Variable 142 - LUNGRAT - lung ratio corrected for temperature and pressure in the portakabin

$LUNGRAT = FEV1 / FVC \times 100$

FEV1=variable 141

FVC=variable 142

Variable 143 - TOTSKIN - sum of skinfold measurements

TOTSKIN = biceps+triceps+subscapular+superiliac

biceps = (variable 66 + variable 67)/2 = mean biceps measurement

triceps = (variable 68 + variable 69)/2 = mean triceps measurement

subscapular = (variable 70 + variable 71)/2 = mean subscapular measurement

supriliac = (variable 72 + variable 73)/2 = mean supriliac measurement

Variable 144 - FFM - fat free mass

See enclosed paper.

Variable 145 - MAXHR - maximum heart rate

MAXHR = 210 - 0.65 x age

Age will be found on file ADSEXAGE.DAT

ALLIED DUNBAR NATIONAL FITNESS SURVEY

CODING OF OCCUPATION AND INDUSTRY

1. Occupation coding

Question 22 columns 129-131 and question 113 columns 751-753

The occupation codes are taken from the 'Classification of Occupation 1980 (OPCS/HMSO)', as used for the 1981 Census. They are the 350 operational codes used in the alphabetical index.

2. Industry coding

Question 22 columns 132-134 and question 113 columns 754-756

These 3 digit codes are the Census Industry Codes converted from the 'Standard Industrial Classification 1980' (OPCS/CSO) appendix D.

3. S E G

The categories of the socio-economic groups (on file ADSCSEG) are derived from the above occupation coding and the employment status codes in columns 135 to 138 for question 22 and columns 757 to 760 for question 113.

Code	Description
01	employers and managers - large establishments
02	employers and managers - small establishments
03	professional workers - self employed
04	professional workers - employee
05	intermediate non manual workers
06	junior non manual workers
07	personal service workers
08	foreman and supervisors - manual
09	skilled manual workers
10	semi-skilled manual workers
11	unskilled manual workers
16	inadequately described and not stated occupation

4. Social class

The social class groups (on file HEASC) are derived from the occupation and employment status codings.

Code	Description
1	professional
2	intermediate
3	skilled non manual
4	skilled manual
5	partly skilled
6	unskilled
8	not classified

ALLIED DUNBAR NATIONAL FITNESS SURVEY DATA DESCRIPTION

SPSS PORTABLE FILE

SCREENING QUESTIONNAIRE

File=ADSCR.POR

Data for all respondents 4056 records
(Screening questionnaire not completed for all subjects)

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
		As questionnaire unless otherwise stated.
		9,99,999=missing
		Blank=not answered
Respondent) identification) number)	ID	Constituency number (101-309) Respondent number (001-200)
Date of interview		
Day	SDAY	
Month	SMONTH	
Interview number	INTNO	
q1a		Excluded
q1b	S1BDAY S1BMTH S1BYR	Date of birth - day month year
q1c		Excluded
q2	S2	
q3a	S3A	
q3b	S3B	
q3c (hours)	S3CHR	8=not answered
q3c (mins)	S3CMIN	98=not answered
q4	S4	
q5a	S5A	
q5b	S5B	
q6	S6	
q7a	S7A	
q7b	S7B	
q7c	S7C	
q8	S8	
q9	S9	
q10	S10	
q11	S11	
q12	S12	
q13	S13	
q14	S14	
q15	S15	
q16	S16	
q16(weeks)	S16WKS	
q17	S17	
q18	S18	
q19	S19	
q20(heart)	S20HT	

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
		As questionnaire unless otherwise stated.
		9,99,999=missing
		Blank=not answered
q20(bp)	S20BP	
q20(other)	S20OTH	
q21	S21	
q22a(cm)	S22ACM	
q22a(ft)	S22AFT	
q22a(inches)	S22A1NS	98=not answered
q22b(kg)	S22BKG	
q22b(st)	S22BST	
q22b(lbs)	S22BLBS	98=not answered
q22c	S22C	
q23a	S23A	
q23b(day)	S23BDAY	
q23b(week)	S23BWK	
q24a(any 1's)	S24AQS	
q24a(wt)	S24AWT	
q24a(smokes)	S24ACIG	
q24b	S24B	0=females aged 60-74 8=not answered
Doctor's decision	SDOCTOR	

ALLIED DUNBAR NATIONAL FITNESS SURVEY

PHYSICAL APPRAISAL DATA FROM THE SPSS PORTABLE FILE

Data from the questionnaire used for the physical appraisal in the portakabin, from the home appraisal questionnaire, from the apparatus monitoring the treadmill test and variables derived during the analysis are included on this datafile.

Data for all respondents	Files=ADPA1.POR	963 records
2768 records	ADPA2.POR	874 records
	ADPA3.POR	931 records

Variable
Number Name Columns Content

1	ID	1-6	SURVEY IDENTIFICATION NUMBER
---	----	-----	------------------------------

VARIABLES FROM BREATH BY BREATH DATA RECORDED BY THE QUINTON

VARIABLES 2-14 USE ALL THE BREATH BY BREATH DATA.

Format F8.2 for each variable - 13 variables in columns 7-110
Blank=missing

2	IVOHRB	INTERCEPT FOR REGRESSION Y=VO2 X=HR
3	SVOHRB	SLOPE FOR REGRESSION Y=VO2 X=HR
4	SEVOHRB	STANDARS ERROR FOR REGRESSION Y=VO2 X=HR
5	RSVOHRB	R ² FOR REGRESSION Y=VO2 X=HR
6	NOVOHRB	NUMBER OF OBSERVATIONS FOR ABOVE REGRESSION
7	IHRVOB	INTERCEPT FOR REGRESSION Y=HR X=VO2
8	SHRVOB	SLOPE FOR REGRESSION Y=HR X=VO2
9	SEHRVOB	STANDARD ERROR FOR REGRESSION Y=HR X=VO2
10	IVEVOB	INTERCEPT FOR REGRESSION Y=VE X=VO2
11	SVEVOB	SLOPE FOR REGRESSION Y=VE X=VO2
12	SEVEVOB	STANDARD ERROR FOR REGRESSION Y=VE X=VO2
13	RSVEVOB	R ² FOR REGRESSION Y=VE X=VO2
14	NOVEVOB	NUMBER OF OBSERVATIONS FOR ABOVE REGRESSION

VARIABLES 15-27 USE 15 SECOND DATA.

Format F8.2 for each variable - 13 variables in columns 111-214
Blank=missing

15	IVOHRS	AS VARIABLE	2
16	SVOHRS	"	3
17	SEVOHRS	"	4
18	RSVOHRS	"	5
19	NOVOHRS	"	6
20	IHRVOS	"	7
21	SHRVOS	"	8
22	SEHRVOS	"	9
23	IVEVOS	"	10
24	SVEVOS	"	11
25	SEVEVOS	"	12
26	RSVEVOS	"	13
27	NOVEVOS	"	14

VARIABLES 28-40 USE ALL BREATH BY BREATH DATA BUT EXCLUDE THE FIRST 2 MINUTES.

Format F8.2 for each variable - 13 variables in columns 215-318

Blank=missing

28	IVOHRBT	AS VARIABLE	2
29	SVOHRBT	"	3
30	SEVOHRBT	"	4
31	RSVOHRBT	"	5
32	NOVOHRBT	"	6
33	IHRVOBT	"	7
34	SHRVOBT	"	8
35	SEHRVOBT	"	9
36	IVEVOBT	"	10
37	SVEVOBT	"	11
38	SEVEVOBT	"	12
39	RSVEVOBT	"	13
40	NOVEVOBT	"	14

VARIABLES 41-53 USE 15 SECOND DATA BUT EXCLUDE THE FIRST 2 MINUTES

Format F8.2 for each variable - 13 variables in columns 319-422

Blank=missing

41	IVOHRST	"	15
42	SVOHRST	"	16
43	SEVOHRST	"	17
44	RSVOHRST	"	18
45	NOVOHRST	"	19
46	IHRVOST	"	20
47	SHRVOST	"	21
48	SEHRVOST	"	22
49	IVEVOST	"	23
50	SVEVOST	"	24
51	SEVEVOST	"	25
52	RSVEVOST	"	26
53	NOVEVOST	"	27

VARIABLES 54-119 ARE FROM THE QUESTIONNAIRE DATA COLLECTED IN THE PORTAKABIN DURING THE PHYSICAL APPRAISAL. DETAILS OF THE METHODS USED CAN BE FOUND IN THE TECHNICAL REPORT.

The variable names indicate that the data are taken from the Physical Appraisal questionnaire by the prefix PA followed by the question number. Home appraisal data are added to the portakabin appraisal data where appropriate. * indicates that the question was also asked on the home appraisal questionnaire. Data from questions on the screening questionnaire are on file ADSCR.DAT

All data are coded as printed on the questionnaire and not answered (NA) coded blank unless otherwise stated. Missing values are coded 9, 99, 999, 9999, 99.9 unless otherwise stated.

Variable d.p = decimal places
Number Name Columns d.p

54	* PADAY	423-424	DAY OF PHYSICAL APPRAISAL
55	* PAMONTH	425-426	MONTH OF PHYSICAL APPRAISAL
56	* PATIME	427-430	TIME OF PHYSICAL APPRAISAL
57	DOCTOR	431	DOCTOR PRESENT
58	* PA1A	432-439 2	HEIGHT IN CMS
59	* PA1B	440-447 2	WEIGHT IN KG
60	* PA2	448	LEFT OR RIGHT HANDED

QUESTION 3 (VARIABLES 61-64) ONLY ASKED OF SUBJECTS 60 YRS AND OVER

61	* PA3A	449	DEFORMITIES OF DOMINANT ARM
62	* PA3B1	450	DEFORMITIES OF OTHER ARM
63	* PA3B2	451	MEASURED ARM
64	* PA3C	452-459 2	DEMI-SPAN IN CMS
65	* PA4	460	SKINFOLDS - SIDE MEASURED
66	* PA4A1	461-468 2	1ST BICEPS IN CMS
67	* PA4A2	469-476 2	2ND "
68	* PA4B1	477-484 2	1ST TRICEPS IN CMS
69	* PA4B2	485-492 2	2ND "
70	* PA4C1	493-500 2	1ST SUBSCAPULAR IN CMS
71	* PA4C2	501-508 2	2ND "
72	* PA4D1	509-516 2	1ST SUPERILIAC IN CMS
73	* PA4D2	517-524 2	2ND "
74	PA5A	525-532 2	WAIST IN CMS
75	PA5B	533-540 2	HIP IN CMS
76	* PA6	541	SHOULDER - DOMINANT ARM
77	* PA6A	542	INJURY TO DOMINANT ARM
78	* PA6B1	543	INJURY TO OTHER ARM
79	* PA6B2	544	MEASURED ARM
80	* PA6C	545-547	SHOULDER IN DEGREES
81	* PA7A	548-550	SYSTOLIC BP IN MM HG
82	* PA7B	551-553	DIASTOLIC BP IN MM HG
83	* PA7C	554-546	HEART RATE IN B/MIN
84	PA8TEMP	557-564 2	TEMPERATURE IN THE PORTAKABIN
85	PA8PRESS	565-572 2	PRESSURE IN THE PORTAKABIN

For FVC & FEV1 corrected for temperature and pressure see variables 140 & 141

86	PA9A	573	TREATMENT FOR BACK PAIN
87	PA9B	574	DOMINANT LEG
88	PA9C	575	INJURY TO DOMINANT LEG
89	PA9D1	576	INJURY TO OTHER LEG
90	PA9D2	577	MEASURED LEG - LEG POWER TEST
91	PA9E	578-585	2 LEG POWER
92	PA10	586	DOMINANT HAND
93	PA10A	587	INJURY TO DOMINANT HAND
94	PA10B1	588	INJURY TO OTHER HAND
95	PA10B2	589	MEASURED HAND - HAND GRIP
96	PA10C	590-597	2 HAND GRIP IN KG
97	PA11A	598	EXCLUDED FROM POWER RIG TEST
98	PA11B	599	INJURY TO DOMINANT KNEE
99	PA11C1	600	INJURY TO OTHER KNEE
100	PA11C2	601	MEASURED LEG - LEG EXTENSION TEST
101	PA11D1	602-609	2 LEG EXTENSION IN NEWTONS
102	PA11D2	610-617	2 POSITIVE GRADIENT
103	PA11D3	618-625	2 NEGATIVE GRADIENT

DATA FROM SUPPLEMENTARY SHEET FOR CARDIORESPIRATORY TEST

				Missing/NA
104	PAX12	626	REASON FOR EXCLUSION	Zero=no reason 8=NA ? code 6
105		627	BLANK	
106	PAX12C	628-630	END HEART RATE IN B/MIN	
107	PAX12D	631-635	END VO2 IN LITRES/MIN	
108	PAX12E	636-637	END RATING ON BORG SCALE	
109	PAX12F	638-639	NUMBER OF LAST STAGE COMPLETED	
110	PAX12G	640	PROTOCOL	
111	PAX13	641	REASON TEST DISCONTINUED	Zero=no reason 8=NA
112	PAX14	642	RESPIRATORY DATA IMPERFECT	Zero=data OK 8=NA
113	PAX15	643	HOLDING HANDRAILS	Zero=not hold 8=NA
114	PAX16A	644-649	2 QPLEX -VE PNEUMOTACH ERROR	8=NA
115	PAX16B	650-655	2 QPLEX +VE PNEUMOTACH ERROR	88=NA
116	PAX16C	656-661	2 QPLEX PRETEST LOW O ₂	
117	PAX16D	662-667	2 QPLEX PRETEST HIGH O ₂	
118	PAX16E	668-673	2 QPLEX PRETEST LOW CO ₂	98=NA
119	PAX16F	674-679	2 QPLEX PRETEST HIGH CO ₂	98=NA

HOME APPRAISAL DATA

The variable names indicate that the data are taken from the Home Appraisal questionnaire by the use of the prefix HA, followed by the question number.

(QUESTIONS 1-7 ARE THE SAME AS QUESTIONS 1-4, 6, 7 & 10 ON THE PORTAKABIN QUESTIONNAIRE AND ARE STORED WITH THOSE DATA)

120	HA8A	680	ABLE TO CUT OWN TOENAILS
121	HA8B	681	ABLE TO TOUCH OWN TOES
122	HA8C1	682	1ST ATTEMPT - DOMINANT HAND
123	HA8C2	683	2ND ATTEMPT - DOMINANT HAND
124	HA8C3	684	3RD ATTEMPT - DOMINANT HAND
125	HA8D1	685	1ST ATTEMPT - OTHER HAND
126	HA8D2	686	2ND ATTEMPT - OTHER HAND
127	HA8D3	687	3RD ATTEMPT - OTHER HAND
128	HA91	688	PLUG IN SOCKET - 1ST ATTEMPT
129	HA92	689	PLUG IN SOCKET - 2ND ATTEMPT
130	HA101	690	KEY IN LOCK - 1ST ATTEMPT
131	HA102	691	KEY IN LOCK - 2ND ATTEMPT
132	HA111	692	STAND UP ARMS FOLDED - 1ST ATTEMPT
133	HA112	693	STAND UP ARMS FOLDED - 2ND ATTEMPT
134	HA121	694	STAND UP ARMS AT SIDE - 1ST ATTEMPT
135	HA122	695	STAND UP ARMS AT SIDE - 2ND ATTEMPT

DERIVED VARIABLES Details given on separate documentation.

Format F8.2 for each variable - 10 variables in columns 696-768

136	PCFAT	PERCENT BODY FAT
137	BMI	BODY MASS INDEX - kg/m^2
138	WBH	WAIST/HIP RATIO
139	CENTRE	CENTRE APPRAISAL
140	FVC	PA8FVC CORRECTED FOR TEMP & PRESSURE - litres
141	FEV1	PA8FEV1 CORRECTED FOR TEMP & PRESSURE - litres
142	LUNGRAT	LUNG RATIO CORRECTED FOR TEMP & PRESSURE
143	TOTSKIN	SUM OF SKINFOLD MEASUREMENTS - mms
144	FFM	FAT FREE MASS - kg
145	MAXHR	MAXIMUM HEART RATE - b/min

PREDICTION OF VO2MAX (l/min) BY EXTRAPOLATION TO MAX HEART RATE
FROM EQUATION $\text{MAX HR} = 210 - 0.65 \times \text{AGE}$

Format F8.2 for each variable - 4 variables in columns 769-800

146	VO2MAXB	VO2MAX - PREDICTED FROM VARS 2 & 3
147	VO2MAXS	VO2MAX - PREDICTED FROM VARS 15 & 16
148	VO2MAXBT	VO2MAX - PREDICTED FROM VARS 28 & 29
149	VO2MAXST	VO2MAX - PREDICTED FROM VARS 41 & 42

INTERPOLATION OF HEART RATE (l/min) AT VO₂ OF 1.0 & VO₂ OF 1.5 L/MIN

Format F8.2 for each variable - 18 variables in columns 801-944

150	HRVOB10	HEART RATE AT VO ₂ 1.0 USING VARS 7 & 8
151	HRVOB15	HEART RATE AT VO ₂ 1.5 USING VARS 7 & 8
152	HRVOS10	HEART RATE AT VO ₂ 1.0 USING VARS 21 & 22
153	HRVOS15	HEART RATE AT VO ₂ 1.5 USING VARS 21 & 22
154	HRVOBT10	HEART RATE AT VO ₂ 1.0 USING VARS 33 & 34
155	HRVOBT15	HEART RATE AT VO ₂ 1.5 USING VARS 33 & 34
156	HRVOST10	HEART RATE AT VO ₂ 1.0 USING VARS 47 & 48
157	HRVOST15	HEART RATE AT VO ₂ 1.5 USING VARS 47 & 48
158	VEVOB10	VENTILATION AT VO ₂ 1.0 USING VARS 10 & 11
159	VEVOB15	VENTILATION AT VO ₂ 1.5 USING VARS 10 & 11
160	VEVOS10	VENTILATION AT VO ₂ 1.0 USING VARS 23 & 24
161	VEVOS15	VENTILATION AT VO ₂ 1.5 USING VARS 23 & 24
162	VEVOBT10	VENTILATION AT VO ₂ 1.0 USING VARS 36 & 37
163	VEVOBT15	VENTILATION AT VO ₂ 1.5 USING VARS 36 & 37
164	VEVOST10	VENTILATION AT VO ₂ 1.0 USING VARS 47 & 48
165	VEVOST15	VENTILATION AT VO ₂ 1.5 USING VARS 47 & 48
166	HRBT10MX	HR AT VO ₂ 1.0 USING VARS 33 & 34/MAXHR
167	HRBT15MX	HR AT VO ₂ 1.5 USING VARS 33 & 34/MAKHR

DERIVED VARIABLES Details of the derivation of variables 168 to 175 and 179 to 183 are not available and have been excluded from the data sent to the Essex Archive.

Format F8.2 for each variable - 8 variables in columns 945-1008

168	VO2M	VO ₂ MAX/BODY MASS - mlO ₂ /min/kg
169	VO2MBT	VO ₂ MAXBT/BODY MASS - mlO ₂ /min/kg
170	VO85MHR	VO ₂ AT 85% MAXIMUM HEART RATE - l/min
171	KGVO85MH	KG VO ₂ AT 85% MAXIMUM HEART RATE - kg
172	V65MAXBT	65% OF VO ₂ MAXBT - l/min
173	KGV65MAX	KG VO ₂ 65% OF VO ₂ MAXBT - kg
174	VO2FFM	VO ₂ MAX/FFM - l/min/kg
175	VO2FFMBT	VO ₂ MAXBT/FFM - l/min/kg

Format F2.0 for each variable - 2 variables in columns 1009-1012

176	PAX12FDX	LAST STAGE COMPLETED
177	PAX12EDX	FINAL BORG RATING

Format F8.2 for each variable - 6 variables in columns 1013-1060

178	VO2MAX	CORRECTED VO ₂ FROM QRE DATA lO ₂ /min
179	ENDHR	
180	NEWBLAIR	VO ₂ BLAIR CATEGORIES
181	BQSMHR	BLAIRS QUINTILE SEX MAX HEART RATE
182	VMXBQS	VO ₂ MAX USING BQSMHR - l/min
183	VMXBQSW	WEIGHT CORRECTED VO ₂ MAX USING BQSMHR - l/min

ALLIED DUNBAR NATIONAL FITNESS SURVEY DATA DESCRIPTION

SPSS PORTABLE FILE

SEX AND AGE DATA

File=ADSEXAGE.POR

Data for all respondents

4316 records

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Respondent) identification) number)	ID	Constituency number (101-309) Respondent number (001-200)
Sex	SEX	1=male 2=female
Age in yrs	AGE	

ALLIED DUNBAR NATIONAL FITNESS SURVEY

SPSS PORTABLE FILE

SOCIO-ECONOMIC DATA

File=ADSCSEG.POR

Data for all respondents

4316 records

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Respondent) identification) number)	ID	Constituency number (101-309) Respondent number (001-200)
Social class of respondent	SC	1=Group I - Professional 2=Group II - Intermediate 3=Group IIIInm - Skilled non manual 4=Group IIIIm - Skilled manual 5=Group IV - Partly skilled 6=Group V - Unskilled 8=Unclassified Blank=missing
Social class of head of household	SCHH	As for social class of respondent
Socio economic group of respondent	SEG	1=Employer/manager large firm 2=Employer/manager small firm 3=Professional 4=Intermediate non-namual 5=Own account 6=Junior manager 7=Personal service 8=Foreman/supervisor 9=Skilled manual 10=Partly skilled 11=Unskilled 16=Unclassifiable Blank=missing
Socio economic group of head of household	SEGHH	As for socio economic group of respondent

ALLIED DUNBAR NATIONAL FITNESS SURVEY

SPSS PORTABLE FILE

SMOKING HABITS

File=ADSMOKE.POR

Data for all respondents

4316 records

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Respondent identification) number	) ID	Constituency number (101-309) Respondent number (001-200)
Smoking habits	SMOKING	1 = 20+ cigarettes per day 2 = 10-19 cigarettes per day 3 = less than 10 cigarettes per day 4 = Ex-smoker (past 10 yrs) 20+ per day 5 = Ex-smoker (past 10 yrs) less than 20 6 = Ex smoker 11-20 years ago 7 = Currently smoke cigar/pipe 8 = Non smoker

ALLIED DUNBAR NATIONAL FITNESS SURVEY DATA DESCRIPTION

SPSS PORTABLE FILE

AVERAGE STAIRS PER DAY

File=ADSTAIR.POR

Data for all respondents

4316 records

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Respondent) identification) number)	ID	Constituency number (101-309) Respondent number (001-200)
Average number of stairs climbed per day	STAIRS	

ALLIED DUNBAR NATIONAL FITNESS SURVEY

SPSS PORTABLE FILE

CARING ACTIVITIES

File=ADCARE.POR

Data for all respondents

4316 records

<u>Variable</u>	<u>Name</u>	<u>Coding</u>
Respondent identification) number	) ID	Constituency number (101-309)
	)	Respondent number (001-200)
Childcare summary	Q35SUM1	2 = Carry or push a child most days 3 = Carry or push a child some days 4 = Carry or push a child never or very little 9 = missing
Disabled care summary	Q36SUM1	2 = Lift & support most days 3 = Lift & support some days 4 = Lift & support never or very little 9 = Missing
Overall caring summary	CARING	1 = Caring most days 2 = Caring some or no days 9 = Missing

Allied Dunbar National Fitness Survey

SPSS programs used to derive activity variables

Derived kilocalorie variables on files ADOCT1.DAT, ADCYC.DAT AND ADOCT2W.DAT.

```
COMMENT .....KCAL VALUES FOR SPORTS
COMMENT
COMMENT .....A=SPORT CODE
COMMENT .....B=KCAL VALUE FOR PARTICIPATION IN PAST YEAR
COMMENT .....C=KCAL VALUE FOR PARTICIPATION IN PAST 4 WEEKS
COMMENT .....D=INCREASED KCAL VALUE IF OUT OF BREATH OR SWEATY
COMMENT      WHEN PARTICIPATING IN PAST 4 WEEKS
COMPUTE KCALS1YR=99
COMPUTE KCALS4WK=99
DO REPEAT A=1 TO 80/
    B=6.5 6.5 4 10.5 6.5 8 8 5 5 8 8 6.5 8 4 3 10.5 10.5 8
        6.5 2 6.5 5 6.5 6.5 6.5 10.5 6.5 4 6.5 8 5 2 2 3 3 2
        3 4 8 2 6.5 6.5 5 6.5 6.5 4 4 4 8 8 2 3 6.5 8 10.5 8
        6.5 2 8 8 5 3 6.5 8 2 5 8 6.5 8 6.5 5 8 2 5 6 6.5 3 5
        6.5 4/
    C=5 5 3 8 5 6 6 4 4 5 6 5 6 3 3 8 8 6 5 2 5 4 5 5 5 8 5 3 5
        6 4 2 2 3 3 2 3 3 6 2 5 5 4 5 5 4 4 4 6 5 2 3 5 6 8 6 5 2
        6 6 4 3 5 6 2 4 6 5 6 5 4 6 2 4 6 5 3 4 5 3 /
    D=8 8 5 13 8 10 10 6 6 8 10 8 10 5 3 13 13 10 8 2 8 6 8 8 8
        13 8 5 8 10 6 2 2 3 3 2 3 5 10 2 8 8 6 8 8 6 6 6 10 8 2 3
        8 10 13 10 8 2 10 10 6 3 8 10 2 6 10 8 10 8 6 10 2 6 6 8 3
        6 8 5/
IF (AQ10A EQ A)KCALS1YR=B
IF (AQ10A EQ A AND AQ12 EQ 1)KCALS4WK=C
IF (AQ10A EQ A AND AQ12 EQ 1 AND AQ13F EQ 1)KCALS4WK=D
END REPEAT
```

Derived variables for cycling - 20 minute occasions of vigorous or moderate activity.

Uses cycling data file ADCYC.DAT and creates variables CYVOCC20 and CYMOCC20 on file ADACTVAR.DAT and AQ13TIME and AQENLEV on file ADCYC.DAT.

```
COMPUTE AQ13TIME=AQ13CHRS*60+AQ13CMIN
RECODE AQ13A AQ13TIME (SYSMIS=0)
MISSING VALUES AQ13A (99)
COMPUTE AQENLEV=99
IF (KCALS4WK GE 7.5 AND KCALS4WK LT 99)AQENLEV=1
IF (KCALS4WK GE 5.0 AND KCALS4WK LT 7.5)AQENLEV=2
IF (KCALS4WK GE 2.0 AND KCALS4WK LT 5.0)AQENLEV=3
IF (KCALS4WK EQ 99)AQENLEV=0
COMPUTE AQ13AV=AQ13A
IF (AQENLEV GT 1)AQ13AV=0
TEMPORARY
SELECT IF (AQ13TIME GE 20)
AGGREGATE OUTFILE='ADCYV20 SFL A'/BREAK=ID/CYVOCC20=SUM(AQ13AV)
COMPUTE AQ13AM=AQ13A
IF (AQENLEV EQ 1 OR AQENLEV EQ 3)AQ13AM=0
TEMPORARY
SELECT IF (AQ13TIME GE 20)
AGGREGATE OUTFILE='ADCYM20 SFL A'/BREAK=ID/CYMOCC20=SUM(AQ13AM)
```

Derived variables for walking - 20 minute occasions of moderate activity.

Uses activity data file ADACTS.DAT and creates variable WAMOCC20 on file ADACTVAR.DAT and AQ13TIME on file ADACTS.DAT.

```
SELECT IF (AQ10A EQ 141)
COMPUTE AQ13TIME=AQ13CHRS*60+AQ13CMIN
RECODE AQ13A AQ13TIME (SYSMIS=0)
MISSING VALUES AQ13A (99)
COMPUTE AQENLEV=99
IF (KCALS4WK GE 7.5 AND KCALS4WK LT 99)AQENLEV=1
IF (KCALS4WK GE 5.0 AND KCALS4WK LT 7.5)AQENLEV=2
IF (KCALS4WK GE 2.0 AND KCALS4WK LT 5.0)AQENLEV=3
IF (KCALS4WK EQ 99)AQENLEV=0
COMPUTE AQ13AM=AQ13A
IF (AQENLEV EQ 1 OR AQENLEV EQ 3)AQ13AM=0
TEMPORARY
SELECT IF (AQ13TIME GE 20)
AGGREGATE OUTFILE='ADWAM20 SFL A'/BREAK=ID/WAMOCC20=SUM(AQ13AM)
```

Derived variables for home activities - 20 minute occasions of moderate activity.

Uses activity data file ADACTS.DAT and creates variable HOMOCC20 on file ADACTVAR.DAT and AQ13TIME on file ADACTS.DAT.

```
SELECT IF (AQ10A LT 141)
COMPUTE AQ13TIME=AQ13CHRS*60+AQ13CMIN
RECODE AQ13A AQ13TIME (SYSMIS=0)
MISSING VALUES AQ13A (99)
COMPUTE AQENLEV=99
IF (KCALS4WK GE 7.5 AND KCALS4WK LT 99)AQENLEV=1
IF (KCALS4WK GE 5.0 AND KCALS4WK LT 7.5)AQENLEV=2
IF (KCALS4WK GE 2.0 AND KCALS4WK LT 5.0)AQENLEV=3
IF (KCALS4WK EQ 99)AQENLEV=0
COMPUTE AQ13AM=AQ13A
IF (AQENLEV EQ 1 OR AQENLEV EQ 3)AQ13AM=0
TEMPORARY
SELECT IF (AQ13TIME GE 20)
AGGREGATE OUTFILE='ADHOM20 SFL A'/BREAK=ID/HOMOCC20=SUM(AQ13AM)
```

Derived variables for sport & exercise - 20 minute occasions of vigorous or moderate activity.

Uses sport & exercise data file ADACT1.DAT and creates variables SEVOCC20 and SEMOCC20 on file ADACTVAR.DAT and AQ13TIME and AQENLEV on file ADACT1.DAT.

```
COMPUTE EXCLUDE=1
IF (AQ10A EQ 53 OR AQ10A EQ 19)EXCLUDE=2
SELECT IF (EXCLUDE EQ 1)
COMPUTE AQ13TIME=AQ13CHRS*60+AQ13CMIN
IF (AQ13D EQ 1 OR AQ13D EQ 2)AQ13TIME=AQ13EHRS*60+AQ13EMIN
RECODE AQ13A AQ13TIME (SYSMIS=0)
MISSING VALUES AQ13A (99)
COMPUTE AQENLEV=99
IF (KCALS4WK GE 7.5 AND KCALS4WK LT 99)AQENLEV=1
IF (KCALS4WK GE 5.0 AND KCALS4WK LT 7.5)AQENLEV=2
IF (KCALS4WK GE 2.0 AND KCALS4WK LT 5.0)AQENLEV=3
IF (KCALS4WK EQ 99)AQENLEV=0
COMPUTE AQ13AV=AQ13A
IF (AQENLEV GT 1)AQ13AV=0
TEMPORARY
SELECT IF (AQ13TIME GE 20)
AGGREGATE OUTFILE='ADSEV20 SFL A'/BREAK=ID/SEVOCC20=SUM(AQ13AV)
COMPUTE AQ13AM=AQ13A
IF (AQENLEV EQ 1 OR AQENLEV EQ 3)AQ13AM=0
TEMPORARY
SELECT IF (AQ13TIME GE 20)
AGGREGATE OUTFILE='ADSEM20 SFL A'/BREAK=ID/SEMOCC20=SUM(AQ13AM)
```

Derived activity variables on file ADACTVAR.DAT.

Uses files AD1.DAT, AD2.DAT & AD3.DAT, and the variables derived in the previous programs for vigorous and moderate occasions of 20 minutes or more.

Creates variables Q21SUM1, VOCCQ21, MOCCQ21, LOCCQ21, VOCC20P, MOCC20P, VMOCC20P, SEVMOCC20, CYVMOC20, VMOCCQ21, OC20SUM1 & SE20SUM1 on file ADACTVAR.DAT.

```
COMMENT .....OCCUPATION ACTIVITY
COMMENT
GET FILE=SFL1/KEEP=ID M21A TO Q27 E21A TO E21B
COMMENT .....OCCUPATION SUMMARY 1
COMPUTE JOB=2
DO REPEAT X=138 170 171 231 232 233 261 262 263 264 269
           302 303 304 305 306 307 308 309 313 314 315 316
           334 335 336 337 338 339 340 341 342 343 344 345 346/
IF (Q22A EQ X) JOB=1
END REPEAT
COMMENT ....ACTIVITY BASED ON ACTIVITY QUESTIONS
COMPUTE Q21SUM1=99
IF (E21A GE 2) Q21SUM1=0
IF (E21A EQ 1) Q21SUM1=4
IF (M21A EQ 2) Q21SUM1=0
IF (M23 EQ 1 OR M26 EQ 3) Q21SUM1=4
IF (M26 EQ 2) Q21SUM1=3
IF (M23 EQ 2) Q21SUM1=3
IF (M23 EQ 2 AND M25 EQ 2 AND M26 EQ 3) Q21SUM1=4
IF (M23 EQ 3 AND M25 EQ 1 AND M26 EQ 3) Q21SUM1=3
IF (M23 EQ 3 AND M25 EQ 2 AND M26 EQ 1) Q21SUM1=3
IF (M23 EQ 3 AND M26 EQ 2) Q21SUM1 =2
IF (M23 EQ 3 AND M25 EQ 1 AND M26 EQ 1) Q21SUM1=2
COMMENT .....ADDING IN JOB TITLE INFO.
IF (Q21SUM1 EQ 2 AND JOB EQ 1) Q21SUM1=1
IF (M23 NE 1 AND Q21SUM1 EQ 3 AND JOB EQ 1) Q21SUM1=2
IF (M23 EQ 1 AND M25 EQ 1 AND M26 EQ 1 AND JOB EQ 1) Q21SUM1=3
IF (M23 EQ 2 AND M25 EQ 1 AND M26 EQ 2 AND JOB EQ 1) Q21SUM1=1
VARIABLE LABELS Q21SUM1 'OCCUPATION ACTIVITY SUMMARY 1'
VALUE LABELS Q21SUM1 1 'Some heavy'
                  2 'Moderate only'
                  3 'Light only'
                  4 'Sedentary'
                  0 'None'
COMMENT .....JOB FREQUENCY 'OCCASIONS'
COMPUTE VOCCQ21 = 0
COMPUTE MOCCQ21 = 0
COMPUTE LOCCQ21 = 0
COMPUTE M21DAYS = M21B
COMPUTE E21DAYS = E21B
RECODE M21DAYS E21DAYS (1 THRU 7=1) (8 THRU 14=2) (15 THRU 21=3)
                  (22 THRU 28=4) (29 THRU 50=5) (51 THRU 69=6)
                  (70 THRU 98=7) (SYSMIS=0)
```

```

MISSING VALUES M21DAYS E21DAYS (99)
COMPUTE Q21DAYS4=(M21DAYS+E21DAYS)*4
IF (Q21SUM1 EQ 1)VOCCQ21= Q21DAYS4
IF (Q21SUM1 EQ 2)MOCCQ21 = Q21DAYS4
IF (Q21SUM1 EQ 3)LOCCQ21 = Q21DAYS4
VARIABLE LABELS VOCCQ21 'Vig days working'/
                 MOCCQ21 'Mod days working'/
                 LOCCQ21 'Light days working'
RECODE SEVOCC20 SEMOCC20 CYVOCC20 CYMOCC20 HOMOCC20 WAMOCC20
      (SYSMIS=0)
COMPUTE VOCC20P=SEVOCC20+CYVOCC20+VOCCQ21
COMPUTE MOCC20P=SEMOCC20+CYMOCC20+MOCCQ21+HOMOCC20+WAMOCC20
COMPUTE VMOCC20P=VOCC20P+MOCC20P
COMPUTE SEVMOC20=SEVOCC20+SEMOCC20
COMPUTE CYVMOC20=CYVOCC20+CYMOCC20
COMPUTE VMOCCQ21=VOCCQ21+MOCCQ21
COMPUTE OC20SUM1=9
IF (VMOCC20P EQ 0) OC20SUM1=6
IF (VMOCC20P GE 1) OC20SUM1=5
IF (VMOCC20P GE 5) OC20SUM1=4
IF (VMOCC20P GE 12) OC20SUM1=3
IF (VMOCC20P GE 12 AND VOCC20P GE 1) OC20SUM1=2
IF (VOCC20P GE 12) OC20SUM1=1
COMMENT .....CREATE SIMILAR SUMMARY BASED ON S/R ONLY
COMPUTE SE20SUM1=9
IF (SEVMOC20 EQ 0) SE20SUM1=6
IF (SEVMOC20 GE 1) SE20SUM1=5
IF (SEVMOC20 GE 5) SE20SUM1=4
IF (SEVMOC20 GE 12) SE20SUM1=3
IF (SEVMOC20 GE 12 AND SEVOCC20 GE 1) SE20SUM1=2
IF (SEVOCC20 GE 12) SE20SUM1=1

```

Derived variables for vigorous, moderate and light sports and exercise occasions.

Uses file ADACT1.DAT and creates variables VOCCAQ, MOCCAQ & LOCCAQ used in the creation of summary variable ACTSUM1 on file ADACTVAR.DAT.

```
COMPUTE EXCLUDE=1
IF (AQ10A EQ 53 OR AQ10A EQ 19)EXCLUDE=2
SELECT IF (EXCLUDE EQ 1)
RECODE AQ13A (SYSMIS=0)
MISSING VALUES AQ13A (99)
COMPUTE AQENLEV=99
IF (KCALS4WK GE 7.5 AND KCALS4WK LT 99)AQENLEV=1
IF (KCALS4WK GE 5 AND KCALS4WK LT 7.5)AQENLEV=2
IF (KCALS4WK GE 2 AND KCALS4WK LT 5)AQENLEV=3
IF (KCALS4WK EQ 99)AQENLEV=0
COMPUTE AQ13AV=AQ13A
IF (AQENLEV GT 1)AQ13AV=0
AGGREGATE OUTFILE='ADVOC' /BREAK=ID/VOCCAQ=SUM(AQ13AV)
COMPUTE AQ13AM=AQ13A
IF (AQENLEV EQ 1 OR AQENLEV EQ 3)AQ13AM=0
AGGREGATE OUTFILE='ADMOCC' /BREAK=ID/MOCCAQ=SUM(AQ13AM)
COMPUTE AQ13AL=AQ13A
IF (AQENLEV NE 3)AQ13AL=0
AGGREGATE OUTFILE='ADLOCC' /BREAK=ID/LOCCAQ=SUM(AQ13AL)
```

Derived summary activity variable ACTSUM1 on file ADACTVAR.DAT

Uses AD1.DAT, AD2.DAT, AD3.DAT & ADCYC.DAT and variables LOCCAQ, MOCCAQ & VOCCAQ derived in the previous program.

Also creates variable STAIRS on file ADSTAIR.DAT and caring variables Q35SUM1, Q36SUM1 & CARING on file ADCARE.DAT.

```
COMMENT .....KILOCALORIE VALUES FOR ALL ACTIVITIES
COMMENT
compute kcalhswk=5
compute kcalhgar=7
compute kcalhdiy=7
compute kcalmgar=5
compute kcalmdiy=5
compute kcallgar=4
compute kcalldiy=4
compute kcalsta=8
compute kcalwlk=0
if (q6 eq 4) kcalwlk=6
if (q6 eq 3) kcalwlk=5
if (q6 eq 2 or q6 eq 1) kcalwlk=4
variable labels kcalhswk 'heavy hswk kcal value'/
      kcalhgar 'heavy gar kcal value'/
      kcalhdiy 'heavy diy kcal value'/
      kcalmgar 'heavy gar 2 hours+ kcal value'/
      kcalmdiy 'heavy diy 2 hours+ kcal value'/
```

```

kcallgar 'light gar kcal value'/
kcalldiy 'light diy kcal value'/
kcalsta 'stairs kcal value'/
kcalwlk 'walking kcal values'
value labels kcalwlk 4 'slow/av' 5 'brisk' 6 'fast'

```

COMMENTHOUSEWORK SUMMARY

COMMENT

```

compute qlcsum1=9
recode qlc (sysmis=-1)
if (qlc eq 1) qlcsum1=2
if (qlc eq 2 or qlc eq -1) qlcsum1=4
recode qlc (-1 =sysmis)
variable labels qlcsum1 'housework summary 1'
value labels qlcsum1 2 'some heavy'
                  4 'no heavy'

```

COMMENTWALKING SUMMARY

COMMENT

```

compute q4asum1=9
recode q4a (sysmis=-1) (0=-1)
if (q4a eq 1 and kcalwlk ge 5) q4asum1=2
if (q4a eq 1 and kcalwlk eq 4) q4asum1=3
if (q4a eq 2 or q4a eq -1) q4asum1=4
recode q4a (-1 =sysmis) (0=sysmis)
variable labels q4asum1 'walking summary 1'
value labels q4asum1 2 'fast/brisk 2mile+' 3 'slow/av 2 mile+'
                  4 'no 2 mile+'

```

COMMENTGARDENING SUMMARY AND DIY SUMMARY

COMMENT

```

compute q2cgsum1=9
recode m2c m2g m3c m3g (sysmis=-1)
if (m2c eq 1) q2cgsum1=2
if (m2c ne 1 and m2g eq 1) q2cgsum1=3
if (m2c eq 2 and m2g ne 1) q2cgsum1=4
if (m2c ne 1 and m2g eq 2) q2cgsum1=4
if (q2a eq 2) q2cgsum1=4
if (e5b eq 2) q2cgsum1=4
if (e5b eq 1) q2cgsum1=5
compute q3cgsum1=9
if (m3c eq 1) q3cgsum1=2
if (m3c ne 1 and m3g eq 1) q3cgsum1=3
if (m3c eq 2 and m3g ne 1) q3cgsum1=4
if (m3c ne 1 and m3g eq 2) q3cgsum1=4
if (q3a eq 2) q3cgsum1=4
if (e6b eq 2) q3cgsum1=4
if (e6b eq 1) q3cgsum1=5
variable labels q2cgsum1 'gardening: summary 1'/
                  q3cgsum1 'diy: summary 1'
value labels q2cgsum1 q3cgsum1 2 'some heavy'
                  3 'light only' 4 'none' 5 'some unspec 70+'

```

COMMENTWALKS INCLUDING 1 MILE

COMMENT

```
compute q4aq5aq6=0
recode q5a q5d q4asum1 (sysmis=-1)
compute q4aq5aq6=q4asum1-1
if (q4asum1 eq 4 and (q5a eq 2 or q5a eq -1)) q4aq5aq6=4
if (q4asum1 eq 4 and (q5a eq 2 or q5a eq -1)
    and (q5d eq 2 or q5d eq -1)) q4aq5aq6=5
if (q4asum1 eq 4 and (q5a eq 9 or q5d eq 9)) q4aq5aq6=9
recode q5a q5d q4asum1 (-1=sysmis)
recode q4aq5aq6 (8=9)
variable labels q4aq5aq6 'walking summary including 1-2 miles'
value labels q4aq5aq6 1 'brisk/fast 2 mile' 2 'slow/av 2 mile'
                    3 '1-2 mile only' 4 '5mins+ only'
                    5 'less than that'
```

COMMENTSTAIRS SUMMARY - STAIRS - (average stairs per day)

COMMENT

```
compute q323sum1=9
missing value q33a (9)
missing value q32b q32c q33b q33c (99)
compute stairsh =q32b*q32c
compute stairsw =(q33a/7)*q33b*q33c
if (q32a eq 2) stairsh=0
if (q33a eq 0) stairsw=0
recode stairsh stairsw (sysmis=0)
compute q3233=stairsh+stairsw
compute q3233rnd=rnd(q3233)
compute q323sum1=q3233rnd
recode q323sum1 (1 thru 99=4) (100 thru 299=3) (300 thru 499=2) (0=0)
                    (500 thru hi=1)
recode q32b q32c q33b q33c (missing=99)
variable labels q3233 'av stairs per day'
                q323sum1 'av stairs per day grouped'
value labels q323sum1 1 '500+' 2 '300 to 499'
                    3 '100 to 299' 4 '1 to 99' 0 'NONE'
```

COMMENTCHILDCARE SUMMARY - Q35SUM1

COMMENT

```
compute q35sum1=9
recode q35a q35b q35c (1=0) (9=90)
compute childchk=q35a+q35b+q35c
if (childchk lt 3) q35sum1=4
if (childchk ge 3 and childchk lt 90) q35sum1=3
if (q35a eq 4 and q35b eq 4) q35sum1=2
if (childchk ge 180) q35sum1=9
recode q35a q35b q35c (0=1) (90=9)
variable labels q35sum1 'childcare summary1'
value labels q35sum1 2 'most days carry/push'
                    3 'some days carry or push or play'
                    4 'none or very little'
```

```

COMMENT .....DISABLED CARE SUMMARY - Q36SUM1
COMMENT
compute q36sum1=9
recode q36b q36c q36d (1=0) (9=90)
compute dischk=q36b+q36c+q36d
if (dischk lt 3) q36sum1=4
if (dischk ge 3 and dischk lt 90) q36sum1=3
if (q36b eq 4 and (q36c eq 4 or q36d eq 4)) q36sum1=2
if (dischk ge 180 or q36a eq 9) q36sum1=9
if (q36a eq 2) q36sum1=4
recode q36b q36c q36d (0=1) (90=9)
variable labels q36sum1 'disabled carer summary1'
value labels q36sum1 2 'most days lift and support/push'
                  3 'some days lift support or push'
                  4 'none or very little'

```

```

COMMENT .....OVERALL CARING SUMMARY - CARING
COMMENT
compute caring=2
if (q35sum1 eq 9 and q36sum1 eq 9)caring=9
if (q35sum1 eq 2 or q36sum1 eq 2)caring=1
value labels caring 1'most days' 2'some/no days'

```

```

COMMENT .....OCCUPATION ACTIVITY
COMMENT
COMMENT .....OCCUPATION SUMMARY 1
COMMENT
COMPUTE JOB=2
DO REPEAT X=138 170 171 231 232 233 261 262 263 264 269
           302 303 304 305 306 307 308 309 313 314 315 316
           334 335 336 337 338 339 340 341 342 343 344 345 346/
IF (Q22A EQ X) JOB=1
END REPEAT

```

```

COMMENT
COMMENT ....ACTIVITY BASED ON ACTIVITY QUESTIONS
COMMENT
COMPUTE Q21SUM1=99
IF (E21A GE 2) Q21SUM1=0
IF (E21A EQ 1) Q21SUM1=4
IF (M21A EQ 2) Q21SUM1=0
IF (M23 EQ 1 OR M26 EQ 3) Q21SUM1=4
IF (M26 EQ 2) Q21SUM1=3
IF (M23 EQ 2) Q21SUM1=3
IF (M23 EQ 2 AND M25 EQ 2 AND M26 EQ 3) Q21SUM1=4
IF (M23 EQ 3 AND M25 EQ 1 AND M26 EQ 3) Q21SUM1=3
IF (M23 EQ 3 AND M25 EQ 2 AND M26 EQ 1) Q21SUM1=3
IF (M23 EQ 3 AND M26 EQ 2) Q21SUM1 =2
IF (M23 EQ 3 AND M25 EQ 1 AND M26 EQ 1) Q21SUM1=2

```

```

COMMENT .....ADDING IN JOB TITLE INFO.
IF (Q21SUM1 EQ 2 AND JOB EQ 1) Q21SUM1=1
IF (M23 NE 1 AND Q21SUM1 EQ 3 AND JOB EQ 1) Q21SUM1=2
IF (M23 EQ 1 AND M25 EQ 1 AND M26 EQ 1 AND JOB EQ 1) Q21SUM1=3
IF (M23 EQ 2 AND M25 EQ 1 AND M26 EQ 2 AND JOB EQ 1) Q21SUM1=1
VARIABLE LABELS Q21SUM1 'OCCUPATION ACTIVITY SUMMARY 1 FINAL ATTEMPT'
VALUE LABELS Q21SUM1 1 'Some heavy'
                        2 'Moderate only'
                        3 'Light only'
                        4 'Sedentary'
                        0 'None'

COMMENT
COMMENT .....JOB FREQUENCY 'OCCASIONS'
COMMENT
COMPUTE VOCCQ21 = 0
COMPUTE MOCCQ21 = 0
COMPUTE LOCCQ21 = 0
COMPUTE M21DAYS = M21B
COMPUTE E21DAYS = E21B
RECODE M21DAYS E21DAYS (1 THRU 7=1) (8 THRU 14=2) (15 THRU 21=3)
                        (22 THRU 28=4) (29 THRU 50=5) (51 THRU 69=6)
                        (70 THRU 98=7) (SYSMIS=0)
MISSING VALUES M21DAYS E21DAYS (99)
COMPUTE Q21DAYS4=(M21DAYS+E21DAYS)*4
IF (Q21SUM1 EQ 1)VOCCQ21= Q21DAYS4
IF (Q21SUM1 EQ 2)MOCCQ21 = Q21DAYS4
IF (Q21SUM1 EQ 3)LOCCQ21 = Q21DAYS4
VARIABLE LABELS VOCCQ21 'Vig days working'/
                  MOCCQ21 'Mod days working'/
                  LOCCQ21 'Light days working'

COMMENT
COMMENT .....SECOND JOBS
COMMENT
COMPUTE JOB2=9
IF (M31A GE 1) JOB2=2
DO REPEAT X=138 261 262 263 264 269
            302 303 304 305 306 307 308 309 313
            334 335 336 337 338 339 340 341 342 343 344 345 346/
IF (M31A EQ X) JOB2=12
END REPEAT
DO REPEAT Y=170 171 231 232 233 314 315 316/
IF (M31A EQ Y) JOB2=11
END REPEAT
COMMENT
COMMENT .....ASSIGN ACTIVITY SUMMARY TO 2ND JOB
COMMENT
COMPUTE M31ASUM1=0
IF (JOB2 EQ 11) M31ASUM1=1
IF (JOB2 EQ 12) M31ASUM1=2
IF (JOB2 EQ 2) M31ASUM1=4
IF (JOB2 EQ 9) M31ASUM1=0
COMPUTE M31AQ21=0
IF (JOB2 EQ 11 AND Q21SUM1 NE 1) M31AQ21=1
IF (JOB2 EQ 12 AND (Q21SUM1 EQ 3 OR Q21SUM1 EQ 4 OR Q21SUM1 EQ 0))

```

```

M31AQ21=2
VARIABLE LABELS M31AQ21 'SECOND JOB CF FIRST'
VALUE LABELS M31AQ21 1 'J2 HEAVY J1 NOT' 2 'J2 MOD J1 NOT'
                        0 'NO J2 OR J2 EQUIV J1'
COMMENT .....2ND JOB OCCASIONS (NO OF DAYS 4 WEEKS)
COMPUTE VOCCM31=0
COMPUTE MOCCM31=0
COMPUTE VMOCCM31=0
RECODE M30B (1 THRU 7=1) (8 THRU 14=2) (15 THRU 21=3)
            (22 THRU 28=4) (29 THRU 50=5) (51 THRU 60=6)
            (61 THRU 70=7) (71 THRU 80=8) (81 THRU 98=9)
            (99=99) (SYSMIS=0) INTO M31DAYS
MISSING VALUES M31DAYS (99)
IF (M31ASUM1 EQ 1) VOCCM31=M31DAYS
IF (M31ASUM1 EQ 2) MOCCM31=M31DAYS
COMPUTE VMOCCM31=VOCCM31+MOCCM31

```

```

COMMENT .....CYCLING SUMMARY
COMMENT
compute cycsum=9
if (aq10a eq 53 and aq13f eq 1)cycsum=1
if (aq10a eq 53 and aq13f eq 2)cycsum=2
if (aq10a eq 53 and aq13f eq 9)cycsum=99
recode cycsum (9=4)
variable labels cycsum 'CYCLING SUMMARY 1'
value labels cycsum 1 'some vig' 2 'some mod/no vig' 4 'none'
missing values cycsum (99)
IF (aq10a eq 53 and aq13f eq 9)cycsum=9

```

```

COMMENT .....SPORTS EXERCISE SUMMARY
COMMENT
recode voccaq moccaq loccaq (sysmis=0)
compute aql2sum1=9
if (loccaq eq 0) aql2sum1=4
if (loccaq ge 1) aql2sum1=3
if (moccaq ge 1) aql2sum1=2
if (voccaq ge 1) aql2sum1=1
variable labels aql2sum1 'sport/exercise: summmmary1'
value labels aql2sum1 1 'some vig' 2 'some mod no vig'
                    3 'light only' 4 'none'

```

```

COMMENT .....ACTIVITY SUMMARY - ACTSUM1
COMMENT
compute actsum1=9
count ones=q1csum1, q4asum1, q2cgsum1, q3cgsum1, q323sum1,
          q35sum1, q36sum1, q2lsum1, m3lasum1, aq12sum1 , cycsum (1)
count twos=q1csum1, q4asum1, q2cgsum1, q3cgsum1, q323sum1,
          q35sum1, q36sum1, q2lsum1, m3lasum1, aq12sum1 , cycsum (2)
count threes=q1csum1, q4asum1, q2cgsum1, q3cgsum1, q323sum1,
          q35sum1, q36sum1, q2lsum1, m3lasum1, aq12sum1 (3)
count fours =q1csum1, q4asum1, q2cgsum1, q3cgsum1, q323sum1,
          q35sum1, q36sum1, q2lsum1, m3lasum1, aq12sum1 , cycsum (4,0)
if (fours eq 11) actsum1=4
if (threes ge 1) actsum1=3
if (twos ge 1) actsum1=2
if (ones ge 1) actsum1=1
recode q2lsum1 (sysmis=-1)
if (actsum1 eq 9 and (q2cgsum1 eq 5 or q3cgsum1 eq 5)) actsum1=3
if (actsum1 eq 9 and q2lsum1 eq -1) actsum1=4
recode q2lsum1 (-1=sysmis)
variable labels actsum1 'activity summary 1'
value labels actsum1 1 'some vigorous' 2 'some mod, no vig'
                    3 'light only' 4 'none'

```

Programs to create derived variables for housework, gardening, diy, walking & cycling in the same format as activity grid 1 (questions 10-13 on the white questionnaire).

Uses files AD1.DAT, AD2.DAT & AD3.DAT and creates variables AQ10A, AQ12, AQ13A, AQ13B, AQ13TIME and KCALS4WK for each activity.

```

COMMENT .....HOUSEWORK
COMPUTE KCALHSWK =5
MISSING VALUES Q1FHRS M2FHRS M2JHRS M3FHRS M3JHRS
          Q4DHRS M8EHRS (9)/Q1FMIN M2FMIN M2JMIN M3FMIN M3JMIN
          Q4DMIN M8EMIN (99)
COMPUTE Q1FTIME=Q1FHRS*60+Q1FMIN
VAR LABELS Q1FTIME 'MINUTES HEAVY HOUSEWORK ON LAST DAY'
COMPUTE AQ10A=111
COMPUTE AQ12=Q1C
COMPUTE AQ13A=Q1D
COMPUTE AQ13B=Q1E
COMPUTE AQ13TIME=Q1FTIME
COMPUTE KCALS4WK=KCALHSWK
VALUE LABELS AQ10A 111 'HEAVY HSWK'

```

```

COMMENT .....HEAVY GARDENING
COMPUTE KCALHGAR=7
RECODE M2JMIN (88=99)
MISSING VALUES Q1FHRS M2FHRS M2JHRS M3FHRS M3JHRS
      Q4DHRS M8EHRS (9)/Q1FMIN M2FMIN M2JMIN M3FMIN M3JMIN
      Q4DMIN M8EMIN (99)
COMPUTE M2FTIME=M2FHRS*60+M2FMIN
VARIABLE LABELS M2FTIME 'MINUTES HEAVY GARDENING ON LAST DAY'
COMPUTE AQ10A=121
COMPUTE AQ12=M2C
COMPUTE AQ13A=M2D
COMPUTE AQ13B=M2E
COMPUTE AQ13TIME=M2FTIME
COMPUTE KCALS4WK=KCALHGAR
VALUE LABELS AQ10A 121 'HEAVY GARDENING'

```

```

COMMENT .....LIGHT GARDENING
COMPUTE KCALLGAR=4
RECODE M2JMIN (88=99)
MISSING VALUES Q1FHRS M2FHRS M2JHRS M3FHRS M3JHRS
      Q4DHRS M8EHRS (9)/Q1FMIN M2FMIN M2JMIN M3FMIN M3JMIN
      Q4DMIN M8EMIN (99)
COMPUTE M2JTIME=M2JHRS*60+M2JMIN
VAR LABELS M2JTIME 'MINUTES LIGHT GARDENING ON LAST DAY'
MISSING VALUES E5EHRS E6EHRS (9)/
      E5EMIN E6EMIN (99)
COMPUTE E5ETIME=E5EHRS*60+E5EMIN
VAR LABELS E5ETIME 'MINUTES GARDENING ON LAST DAY'
COMPUTE AQ10A=122
COMPUTE AQ12=M2G
IF (SYSMIS(AQ12))AQ12=E5B
COMPUTE AQ13A=M2H
IF (SYSMIS(AQ13A))AQ13=E5C
COMPUTE AQ13B=M2I
IF (SYSMIS(AQ13B))AQ13B=E5D
COMPUTE AQ13TIME=M2JTIME
IF (SYSMIS(AQ13TIME))AQ13TIME=E5ETIME
COMPUTE KCALS4WK=KCALLGAR
VALUE LABELS AQ10A 122 'LIGHT GARDENING'

```

```

COMMENT .....HEAVY DIY
COMPUTE KCALHDIY=7
RECODE M2JMIN (88=99)
MISSING VALUES Q1FHRS M2FHRS M2JHRS M3FHRS M3JHRS
      Q4DHRS M8EHRS (9)/Q1FMIN M2FMIN M2JMIN M3FMIN M3JMIN
      Q4DMIN M8EMIN (99)
COMPUTE M3FTIME=M3FHRS*60=M3FMIN
VARIABLE LABELS M3FTIME 'MINUTES HEAVY DIY ON LAST DAY'
COMPUTE AQ10A=131
COMPUTE AQ12=M3C
COMPUTE AQ13A=M3D
COMPUTE AQ13B=M3E
COMPUTE AQ13TIME=M3FTIME
COMPUTE KCALS4WK=KCALHDIY
VALUE LABELS AQ10A 131 'HEAVY DIY'

```

```

COMMENT .....LIGHT DIY
COMPUTE KCALLDIY=4
RECODE M2JMIN (88=99)
MISSING VALUES Q1FHRS M2FHRS M2JHRS M3FHRS M3JHRS
      Q4DHRS M8EHRS (9)/Q1FMIN M2FMIN M2JMIN M3FMIN M3JMIN
      Q4DMIN M8EMIN (99)
COMPUTE M3JTIME=M3JHRS*60+M3JMIN
VARIABLE LABELS M3JTIME 'MINUTES LIGHT DIY ON LAST DAY'
MISSING VALUES E5EHRS E6EHRS (9)/
      E5EMIN E6EMIN (99)
COMPUTE E6ETIME=E6EHRS*60+E6EMIN
VARIABLE LABELS E6ETIME 'MINUTES DIY ON LAST DAY'
COMPUTE AQ10A=132
COMPUTE AQ12=M3G
IF (SYSMIS(AQ12))AQ12=E6B
COMPUTE AQ13A=M3H
IF (SYSMIS(AQ13A))AQ13A=E6C
COMPUTE AQ13B=M3I
IF (SYSMIS(AQ13B))AQ13B=E6D
COMPUTE AQ13TIME=M3JTIME
IF (SYSMIS(AQ13TIME))AQ13TIME=E6ETIME
COMPUTE KCALS4WK=KCALLDIY
VALUE LABELS AQ10A 132 'LIGHT DIY'
SAVE OUTFILE='Q3LAQ SFL A'/DROP=INTDAY TO Q1FTIME
      KCALHGAR TO E6ETIME

```

```

COMMENT .....WALKING
COMPUTE KCALWLK=0
IF (Q6 EQ 4)KCALWLK=6
IF (Q6 EQ 3)KCALWLK=5
IF (Q6 EQ 2 OR Q6 EQ 1)KCALWLK=4
RECODE M2JMIN (88=99)
MISSING VALUES Q1FHRS M2FHRS M2JHRS M3FHRS M3JHRS
      Q4DHRS M8EHRS (9)/Q1FMIN M2FMIN M2JMIN M3FMIN M3JMIN
      Q4DMIN M8EMIN (99)
COMPUTE Q4DTIME=Q4DHRS*60+Q4DMIN
VARIABLE LABELS Q4DTIME 'MINUTES WALKING ON LAST OCCASION'
COMPUTE AQ10A=141
COMPUTE AQ12=Q4A
COMPUTE AQ13A=Q4B
COMPUTE AQ13B=Q4C
COMPUTE AQ13TIME=Q4DTIME
COMPUTE KCALS4WK=KCALWLK
VALUE LABELS AQ10A 141 '2ML+ WALKS'

```

```

COMMENT .....CYCLING
SELECT IF (M8A EQ 1)
COMPUTE AQ10A=53
COMPUTE AQ12=M8B
COMPUTE AQ13A=M8C
COMPUTE AQ13B=M8D
COMPUTE AQ13CHRS=M8EHRS
COMPUTE AQ13CMIN=M8EMIN
COMPUTE AQ13F =M8F
COMPUTE KCALS1YR=6.5
COMPUTE KCAL4WK=99
IF (M8B EQ 1)KCAL4WK=5
IF (M8F EQ 1 AND M8B EQ 1)KCAL4WK=8

```

Derived variable for smoking

Uses files AD1.DAT, AD2.DAT & AD3.DAT and creates variable SMOKING on file ADSMOKE.DAT.

```
RECODE Q78A Q79A (9=SYSMIS)
RECODE Q78B Q79BY Q79C (99=SYSMIS)
COMPUTE SMOKING=9
IF (Q78A EQ 1 AND Q78B GE 20)SMOKING=1
IF (Q78A EQ 1 AND SMOKING EQ 9 AND Q78B GE 10)SMOKING=2
IF (Q78A EQ 1 AND SMOKING EQ 9 AND Q78B GE 0)SMOKING=3
IF (Q79A EQ 1 AND Q79BY LE 10 AND Q79C GE 20 AND SMOKING EQ 9)SMOKING=4
IF (Q79A EQ 1 AND Q79BY LE 10 AND Q79C LT 20 AND SMOKING EQ 9)SMOKING=5
IF (Q79A EQ 1 AND SMOKING EQ 9 AND Q79BY LE 20)SMOKING=6
IF (SMOKING EQ 9 AND (M81C EQ 1 OR M82C EQ 1 OR E58 EQ 2 E59 EQ 2))
SMOKING=7
RECODE SMOKING (9=8)
VALUE LABELS SMOKING 1'20+CIGARETTES/DAY' 2'10-19 CIGARETTES/DAY'
3'<10 CIGARETTES/DAY' 4'20+/DAY PAST 10 YRS' 5'<20/DAY PAST 10 YRS'
6'SMOKED 11-20 YRS AGO' 7'ONLY CIGAR OR PIPE NOW' 8'NON SMOKER'
```

110 OCT 1994

Allied Dunbar National Fitness SurveyCalculation of Fat Free Mass

Fat free mass was calculated using the method suggested by Durnin and Womersley in 1974*.

$$\text{Percent body fat} = ((4.95/\text{density}) - 4.5) \times 100$$

where density = $c - m \times \log \text{skinfold}$

and c, m and skinfold are set out in the attached table.

Density was only calculated when at least 2 skinfolds had been measured.

* Reference:- British Journal of Nutrition (1974) 32,77. Body fat assessed from total body density and its estimation from skinfold thickness: measurements on 481 men and women aged from 16 to 72 years. J V G A Durnin and J Womersley.

Table 5 *Linear regression equations for the estimation of body density $\times 10^2$ (kg/l) from the logarithm of the skinfold thickness density = $c - m \times \log \text{skinfold}$*

(a) Males			Age (years)					
Skinfold			17-19	20-29	30-39	40-49	50+	17-77
Biceps	c		1.1066	1.1015	1.0781	1.0820	1.0835	1.0907
	m		0.0686	0.0616	0.0396	0.0508	0.0617	0.0659
Triceps	c		1.1252	1.1131	1.0834	1.1041	1.1027	1.1143
	m		0.0625	0.0570	0.0361	0.0600	0.0662	0.0618
Subscapular	c		1.1312	1.1360	1.0973	1.1246	1.1334	1.1369
	m		0.0670	0.0700	0.0416	0.0686	0.0760	0.0741
Supra-iliac	c		1.1092	1.1117	1.1047	1.1029	1.1191	1.1171
	m		0.0420	0.0431	0.0432	0.0483	0.0652	0.0530
Biceps + triceps	c		1.1423	1.1397	1.0995	1.1174	1.1185	1.1356
	m		0.0687	0.0603	0.0431	0.0614	0.0683	0.0700
Biceps + subscapular	c		1.1457	1.1469	1.0753	1.1341	1.1427	1.1498
	m		0.0707	0.0709	0.0445	0.0680	0.0752	0.0739
Biceps + supra-iliac	c		1.1247	1.1259	1.1174	1.1171	1.1307	1.1331
	m		0.0501	0.0502	0.0486	0.0539	0.0678	0.0601
Triceps + subscapular	c		1.1561	1.1525	1.1165	1.1519	1.1527	1.1625
	m		0.0711	0.0687	0.0484	0.0771	0.0793	0.0797
Triceps + supra-iliac	c		1.1370	1.1362	1.1273	1.1383	1.1415	1.1463
	m		0.0545	0.0538	0.0531	0.0660	0.0713	0.0656
Subscapular + supra-iliac	c		1.1374	1.1429	1.1260	1.1392	1.1582	1.1522
	m		0.0544	0.0573	0.0497	0.0633	0.0771	0.0671
Biceps + triceps + subscapular	c		1.1643	1.1593	1.1213	1.1530	1.1569	1.1659
	m		0.0727	0.0694	0.0487	0.0730	0.0780	0.0793
Biceps + triceps + supra-iliac	c		1.1466	1.1451	1.1332	1.1422	1.1473	1.1556
	m		0.0584	0.0572	0.0542	0.0647	0.0718	0.0682
Biceps + subscapular + supra-iliac	c		1.1469	1.1508	1.1315	1.1452	1.1626	1.1605
	m		0.0583	0.0599	0.0510	0.0640	0.0768	0.0694
Triceps + subscapular + supra-iliac	c		1.1555	1.1575	1.1391	1.1604	1.1689	1.1704
	m		0.0607	0.0617	0.0544	0.0716	0.0787	0.0731
All four skinfolds	c		1.1620	1.1631	1.1422	1.1620	1.1715	1.1765
	m		0.0630	0.0632	0.0544	0.0700	0.0779	0.0744

(b) Females			Age (years)					
Skinfold			16-19	20-29	30-39	40-49	50+	16-68
Biceps	c		1.0889	1.0903	1.0794	1.0736	1.0582	1.0871
	m		0.0553	0.0601	0.0511	0.0402	0.0510	0.0593
Triceps	c		1.1159	1.1319	1.1176	1.1121	1.1160	1.1278
	m		0.0648	0.0776	0.0686	0.0691	0.0762	0.0775
Subscapular	c		1.1081	1.1184	1.0979	1.0860	1.0899	1.1100
	m		0.0621	0.0716	0.0567	0.0505	0.0590	0.0669
Supra-iliac	c		1.0931	1.0923	1.0860	1.0691	1.0656	1.0884
	m		0.0470	0.0509	0.0497	0.0407	0.0419	0.0514
Biceps + triceps	c		1.1290	1.1398	1.1243	1.1230	1.1226	1.1362
	m		0.0657	0.0738	0.0646	0.0672	0.0710	0.0740
Biceps + subscapular	c		1.1241	1.1314	1.1120	1.1031	1.1029	1.1245
	m		0.0643	0.0706	0.0581	0.0549	0.0592	0.0674
Biceps + supra-iliac	c		1.1115	1.1112	1.1020	1.0921	1.0857	1.1090
	m		0.0537	0.0568	0.0528	0.0494	0.0490	0.0577
Triceps + subscapular	c		1.1468	1.1582	1.1356	1.1230	1.1347	1.1507
	m		0.0740	0.0813	0.0680	0.0635	0.0742	0.0785
Triceps + supra-iliac	c		1.1311	1.1377	1.1281	1.1198	1.1158	1.1367
	m		0.0624	0.0684	0.0644	0.0630	0.0635	0.0704
Subscapular + supra-iliac	c		1.1278	1.1280	1.1132	1.0997	1.0963	1.1234
	m		0.0616	0.0640	0.0564	0.0520	0.0523	0.0632
Biceps + triceps + subscapular	c		1.1509	1.1603	1.1385	1.1303	1.1372	1.1543
	m		0.0715	0.0777	0.0654	0.0635	0.0710	0.0756
Biceps + triceps + supra-iliac	c		1.1382	1.1441	1.1319	1.1267	1.1227	1.1432
	m		0.0628	0.0680	0.0624	0.0626	0.0633	0.0696
Biceps + subscapular + supra-iliac	c		1.1335	1.1366	1.1212	1.1108	1.1065	1.1530
	m		0.0622	0.0648	0.0570	0.0536	0.0544	0.0727
Triceps + subscapular + supra-iliac	c		1.1517	1.1566	1.1397	1.1278	1.1298	1.1527
	m		0.0689	0.0723	0.0646	0.0609	0.0650	0.0643
All four skinfolds	c		1.1549	1.1599	1.1423	1.1333	1.1339	1.1567
	m		0.0678	0.0717	0.0632	0.0612	0.0645	0.0717



THE MEASUREMENTS EXPLAINED

ALLIED DUNBAR NATIONAL FITNESS SURVEY

This survey is being carried out for the Health Education Authority (through the Look After Your Heart Campaign) and The Sports Council. We are grateful to Allied Dunbar Assurance Plc for providing additional funds to support the survey.

Thank you most warmly for taking part in the first ever National Fitness Survey in England. Your patience and collaboration is very much appreciated. This leaflet explains the purpose of the survey in which you have participated and our reasons for carrying out each of the fitness measurements.

What's the survey for?

Quite simply the survey's aims are,

- 1 to describe the fitness of the nation, and
- 2 to find out how much physical activity, in sport, at leisure and during daily life is a part of the lives of different types and conditions of people.

These aims arise from the need for better information on which to base advice about healthy living. Both the Health Education Authority and the Sports Council among other organizations, are concerned with giving such advice.

What has fitness to do with health?

There has been increasing awareness in recent years that the way we live, our "lifestyle", profoundly affects our health. This applies particularly to the more developed countries where the major infectious diseases (such as tuberculosis) are now largely controlled, and the main causes of death are diseases, particularly heart disease, associated with deterioration of function. It is well known that smoking and excessive alcohol are linked with heart disease and other illnesses. You may also have heard that exercise is considered to be good for your health, but you may be confused as to what sort of exercise, how much, how often and what sort of benefit you may expect. In fact, there are no precise answers to these questions, despite overwhelming evidence from many studies that exercise is generally beneficial. If you are interested in knowing more about this, we suggest you look at some of the booklets referred to at the end of this leaflet.

From the very large amount of information we will have obtained from each of the several thousand people taking part in this survey, we shall be in a better position to see the relationship between lifestyle, especially physical activity, and fitness.

Prevention is so much better than cure, and so many lives and much distress could be saved if we better understood how to avoid illness. This does not just apply to heart disease. Recent evidence is coming to light that the benefits of exercise may extend to many other conditions, and particularly that maintaining fitness delays many aspects of decline associated with aging, allowing older people a better chance for full and independent lives.

The introduction of labour-saving machines, the growth of car ownership and television watching have made more of us much less active in our everyday lives. Fitness levels, revealed by smaller studies of special groups, appear to be very low. This study, of a random sample of the whole population, will give a more accurate and detailed picture - a picture of which your information is an important part.

What was each test for?

We started off with the obvious things, height and weight. Even these familiar measures tell us something about health, and you may have seen tables or charts advising on healthy weight range for your height based on Life Assurance statistics. But this relationship can be misleading - you could be very muscular indeed and so weigh a lot for your height, but you wouldn't be unhealthy because of that. The important measurement is how much fat you have, and we have used calipers to estimate this (the fat just below the skin is related to total body fat).

Fatness and health

Although extreme fatness is bad for your health, the dangers of moderate overweight are far less certain, particularly among women. Obsession with weight reduction can be harmful too. Exercise is important in maintaining a healthy body weight. Diet on its own is often unsuccessful and does little for your fitness - muscle may be lost as well as fat. With exercise muscle is maintained or increased and fat reduced - and you can enjoy your food!

Some evidence seems to show that the distribution of fat is important to health, especially among men. Too much fat around the abdomen may be particularly harmful to health - the "beer gut" profile, - this is why we measure your waist and hip girth.

Suppleness

The next measurement was of flexibility, the range of movement available at a joint or group of joints. In general, flexibility permits fluent, comfortable movement in all activity where we have to bend or stretch, whether these are the simple movements of daily life, or in recreational and sports activity; functionally in throwing and swimming for example, or aesthetically in dance, gymnastics and exercise classes.

Flexibility tends to deteriorate with age and with lack of use; joints stiffen progressively and the range of movement gets less. The extent to which this happens and the value of exercise in preventing or delaying this deterioration, has not been properly investigated.

We have chosen to measure the range of movement at the shoulder because it is so important in itself, can be measured easily and reliably, and usually gives a good indication of general flexibility.

Muscle Strength

The strength and power measures - grip, leg strength and leg power, all give information about the functional capacity of our muscles. Grip strength is important in so many everyday situations, using tools, opening jars, supporting oneself getting on a bus and so on. Loss of grip strength among the elderly makes it much harder for them to perform everyday tasks.

Leg strength, and power, as measured by the "chair" and seated pedal push, both involve one of the most powerful of our muscles, the knee extensors or quadriceps. These are employed in all activities where we bear our own weight, in running, walking, jumping and stair climbing for example. They have to be in good shape for most forms of active recreation and sport, and again are crucial for the maintenance of mobility and independence as we get older. There is evidence that a large number of elderly people are incapable of getting about because of sheer lack of strength.

Blowing into the Spirometer

The measurement of lung function, which involved blowing into the tube after filling your lungs completely, gives us information about the functional size of your lungs (called vital capacity) and the rate at which you are able to expel that full breath. Lung size is very much related to height and is not usually considered as a measure of fitness in itself, but the portion of the vital capacity that you can blow out in the first second may be less than normal if you have any impairment such as bronchitis or asthma, in which case your respiratory performance will be affected. Smokers tend to have lower scores in this test.

Blood Pressure

You will remember that we also measured your blood pressure. This is partly for screening purposes, i.e. if the values recorded were high we will not have asked you to do some of the tests. You will have already told us if we may inform your doctor of the result of this measure. If you did happen to have a high value on this occasion, it doesn't necessarily mean that you have high blood pressure. It may well have been that you were not very relaxed at the time of measurement. But for your protection we will have been obliged to 'play safe' and not submit you to some of the tests. If this was the case, you will find a visit to your doctor reassuring.

The Treadmill Test

The last measurement - walking on the treadmill - is the aspect of fitness which most researchers believe to be most necessary to good health. This is because most of the evidence we have about the value of exercise refers to heart disease (comparing its occurrence in active and sedentary sections of the population). It seems logical, then, that good function of the heart, and lungs (cardiorespiratory fitness) is what is required for this type of health benefit.

This sort of fitness, depending on the ability of the heart, lungs and circulation to supply oxygen to the working muscles (and the ability of the muscles to utilize that supply to release energy) is also called 'aerobic' fitness. Aerobic means depending on air or oxygen.

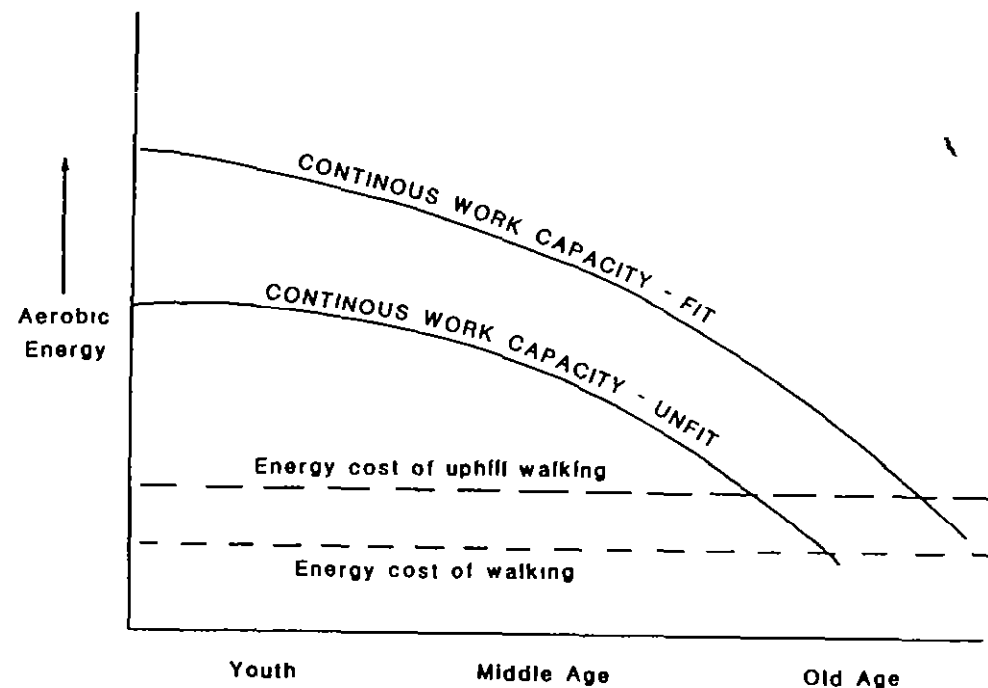
Usually, when this sort of fitness is measured, the score is given in terms of the maximum rate at which oxygen can be delivered to (and used by) the working muscles. In order to avoid discomfort or distress we do not continue the test to maximum exertion (only athletes undergo 'maximal' tests, because they need to know what happens to them during their event). Instead, for us the maximum rate is estimated from what the heart and lungs have in reserve at a moderate to fairly hard level of work. Our walking test ended when your heart rate had reached the target value for your age, indicating that you had reached this level of work. At least, that is how your body assessed the situation, - you may have given us a somewhat different rating on the card that we showed you at each stage.

In fact, for most people and in most circumstances - and even, for that matter, for athletes - the important feature of aerobic fitness is not maximum rate of oxygen supply (which can only be sustained very briefly), but the capacity for continuous aerobic work

Light aerobic exercise can be continued for long periods without exhaustion because the heart and lungs have no difficulty in maintaining the oxygen supply. The nature of exercise such as walking, jogging, cycling and swimming is such that large muscles are alternately contracted and relaxed, giving them a chance to recover and renew their oxygen supply

As the intensity of exercise is increased, it can be sustained for progressively shorter periods. After a certain level, any further increase brings rapid exhaustion. This is because your body has difficulty in meeting the muscles' demand for oxygen, and other energy resources are called upon which are only available in the short term. Our tests will give us information about your ability to cope with continuous exercise. Not only is this of obvious importance to so many recreational activities, but at least as much as strength, has a profound affect on the quality of life as people get older. What seems a fairly easy walk at 45 years of age may become difficult at 65 and perhaps impossible later on. The answer to this problem is to improve and maintain fitness so that even with the decline with age, a comfortable reserve exists to pursue an active life. Many active older people have fitness levels greater than less active people 20 years younger.

The graph below shows how the capacity for continuous aerobic work may decline below the energy requirement of walking at an early age in people with a low level of fitness. By contrast, a fitter individual will be able to cope comfortably even with uphill walking in advanced old age.



What can be done to improve fitness?

Fitness responds to demand. If you exercise it will improve, if you don't it will decline. Always, the body attempts to maintain a reserve capacity over habitual demand. The processes involved in this adjustment to a new habit level take a few weeks to become established - and unfortunately, if the new habit is not sustained, fitness will decline to a similar time scale. So keeping fit means maintaining an active lifestyle.

The good news is that:

1. Fitness can be improved at any age.
2. Fitness improves most quickly the less fit you are to start with.
3. With increased fitness exercise which was uncomfortable becomes invigorating.
4. Moderate exercise in middle age is at least as important to health as sporting achievement in youth.
5. Any sustained increase in your habitual exercise will bring about an improvement in fitness.

Thank you once again. The best of health to you all. If you are interested in following up any of the ideas expressed in this leaflet, the booklets listed below are suggested:

1. For those who want detailed information about the health value of exercise, including research references:-

P.H. Fentem, E.J. Bassey and N.B. Turnbull
 "The New Case for Exercise" published 1988 by the Health Education Authority obtainable free from our London office address for participants in the survey (usual cost £2.95)

2. For general advice about exercise and other health related topics we have given you a folder of leaflets supplied by the Health Education Authority and the Sports Council.

Allied Dunbar National fitness survey

a summary of the major findings
and messages from the Allied Dunbar
National Fitness Survey



activity and fitness matters

a unique survey

The Allied Dunbar National Fitness Survey is unique. Never before have the physical activity patterns and fitness levels of the English population been assessed in so much detail and in such a rigorous and scientific way. This summary report on 'Activity and Fitness Matters' makes no attempt to cover all the issues or report on all the findings from the Survey. Those readers interested in a more comprehensive report of the Main Findings are referred to the independent report of the Survey commissioned from Activity and Health Research, published by the Sports Council and Health Education Authority.

more than a set of statistics

The Allied Dunbar National Fitness Survey is much more than a set of statistics on the past. It provides within its rich database signposts for the future and the opportunity for change towards a more active, fit and healthy society. The Health Education Authority and Sports Council hope that all those who read this document will be motivated to act on the findings at a personal level and through the organisations in which they work and the communities in which they live or which they represent.

why does activity and fitness matter?

what are the health benefits associated with regular physical activity?

Some of the most important benefits supported by a wealth of scientific evidence include

- reduced risk of coronary heart disease
- better control of blood pressure in cases of mild hypertension

- increased stamina and reserve capacity to cope with extra physical demands
- prevention of 'brittle bone disease' – osteoporosis
- management of non-insulin dependent diabetes
- maintenance of muscle strength and joint flexibility
- management of body weight and hence reduced risk of obesity-related diseases
- alleviation of disability
- reduced stress, enhanced mood and self-esteem

In addition to the above there are other important social benefits that come from an improved quality of life. Physically active people are more likely to be able to live life to the full well into older age.

An increasingly active society will have a major impact in reducing the economic and social costs caused by chronic ill-health or premature death and improve the quality of life for **millions of people**.

the survey

why carry out a National Survey?

Prior to the Allied Dunbar National Fitness Survey, few facts were available on activity and fitness in England. The facts are required

- to assist Government in developing policies and setting targets for increasing the activity and fitness of the population
- to help agencies promoting health, fitness and sport to develop more effective policies and programmes
- to increase individual awareness of the benefits of 'active living'
- to provide a benchmark for measuring change
- to develop scientific understanding and identify possibilities for further research

who was surveyed?

The Survey was designed to measure the activity and fitness levels of the adult (16 years of age and over) English population. It did this by surveying a representative sample of 6,000 adults selected at random throughout the country. The fieldwork was carried out between February and November 1990.



A total of 4,316 people completed the home interview stage – a response rate of 75%. Seventy percent of those interviewed took part in a physical appraisal with 62% attending for tests at a specially equipped mobile laboratory and 8%, primarily the more elderly and infirm, being tested on a reduced set of measurements in their homes.

A number of people who went on to take part in the physical appraisal were unable, chiefly on medical grounds, to provide measurements of aerobic capacity, leg strength and leg power. As a consequence the Survey is likely to give too favourable a picture of those aspects in the population. It has been assessed that the Survey over-estimates average aerobic fitness by between 3% and 10% and power and strength by between 2% and 8%.

what was measured?

Many aspects of behaviour, attitudes and beliefs were measured in the home interview. These included

- levels of participation in sport and active recreation, current and past, including access to facilities and barriers to participation
- physical activity at work, in housework, DIY and gardening and in moving about, that is walking, cycling and stair-climbing
- other lifestyle and health-related behaviour, including smoking, alcohol and dietary habits
- current health status and history of illness
- sports-related injuries
- knowledge about exercise and attitudes towards physical activity, fitness and health
- psychological variables including well-being, social support, stress and anxiety

The physical appraisal measurements made in the mobile laboratory included

- **body measurements** – including height, weight, skinfold thickness, waist and hip girths
- **blood pressure** – mainly for 'screening' those who were at increased risk of cardiovascular disease
- **muscle function** – important for sport and recreation and for carrying out everyday activities which involve supporting the body weight. This included
 - **handgrip strength**: important for opening jars, using handrails to raise or lower the body and using tools,
 - **the strength of the quadriceps (thigh) muscle** because of its importance for walking, running, jumping and everyday requirements such as rising unaided from a chair or bath, and
 - **explosive power of the lower limb** important for many sports, for the take off of hurred strides, negotiating steps and kerbs and using stairs. Inadequate power increases the risk of falls, and injury
- **shoulder abduction** – flexibility of the shoulder joint, particularly important to the elderly, for example in dressing and reaching for objects above shoulder height
- **aerobic fitness** – is a central aspect of fitness relating to health, participation in vigorous leisure pursuits and is a requirement for sustaining many day to day activities. Aerobic fitness was

measured using a standard protocol. Subjects were asked to walk on a treadmill at a constant speed of about 3mph for up to 16 minutes with the gradient being increased as the test proceeded. The test was terminated after 16 minutes or when a person reached his or her target heart rate adjusted for age. A less demanding test was used by those people with very low levels of fitness. Aerobic fitness was assessed in relation to two key thresholds associated with the levels of energy expenditure required to maintain two forms of everyday exertion: the ability to sustain a reasonable walking pace (about 3mph) on level ground and up a 1 in 20 slope without having to slow down considerably or stop completely.

All of the measurements were carefully selected by scientific experts and tested in pilot studies before they were included in the Survey.

how was physical activity measured?

A central and ambitious aim of the Survey was to measure all types of physical activity that might individually, or in combination, contribute towards people's fitness, health and well-being. People were asked about their physical activity in the home, at work, in their leisure time and in the day to day activities of getting about. Information was collected on walking, cycling, sport and physical recreation, DIY, heavy housework, climbing stairs, gardening and caring for children and people with disabilities.

Many of the measures were confined to current activity – that is over the previous four weeks. For



sport and recreation activities people were asked about their regular participation over the previous 12 months and over their lifetime since the age of 14. For physical activity to be beneficial to health and fitness it must be of sufficient duration, frequency and intensity. Intensity was measured by allocating energy cost scores to different types of activities. Each activity was then classified as being either of light, moderate or vigorous intensity. Some examples are given below.

light activities – eg long walks (2 miles +) at an average or slow pace, lighter DIY (eg decorating), table tennis, golf, social dancing and 'exercises' if *not* out of breath or sweaty, bowls, fishing, darts and snooker, some occupations not entirely sedentary.

moderate activities – eg long walks (2 miles +) at a brisk or fast pace, football, swimming, tennis, aerobics and cycling if *not* out of breath or sweaty, table tennis, golf, social dancing and exercises if out of breath or sweaty, heavy DIY activities (eg mixing cement), heavy gardening (eg digging), heavy housework (eg spring cleaning), some occupations that were active but not vigorous.

vigorous activities – eg hill walking (at a brisk pace), squash, running (whenever they occurred), football, tennis, aerobics and cycling if out of breath or sweaty, some occupations that involved frequent climbing, lifting or carrying heavy loads.

A six point Activity Level scale was devised incorporating the three elements of **duration, frequency and intensity** as follows.

Activity Level scale

Level	Activity of 20 minutes duration in the previous 4 weeks
Activity Level 5	12 or more occasions of vigorous activity
Activity Level 4	12 or more occasions of a mix of moderate and vigorous activity
Activity Level 3	12 or more occasions of moderate activity
Activity Level 2	5 to 11 occasions of a mix of moderate and vigorous activity
Activity Level 1	1 to 4 occasions of a mix of moderate and vigorous activity
Activity Level 0	None

In this scale, the activity profile of the population is described according to the number of occasions



of vigorous or moderate activity, which lasted 20 minutes or more.

Further analysis was undertaken to try to define the proportion of people in England who are not sufficiently physically active to benefit their health.

Previous research evidence suggests that people should be moderately or vigorously active at least 3 times a week in order to (optimally) reduce their risk of heart disease or stroke. It therefore seems reasonable, based on what is currently known about the relationship between physical activity, fitness and disease prevention, to suggest activity levels (target levels) for each age group which ideally should be attained.

The target levels for different age groups are as follows.

Age group (men and women)	Target levels
16-34	Activity Level 5
35-54	Activity Level 4
55-74	Activity Level 3

One of the significant findings of the Survey is that the proportion of women of all ages who are active at Levels 4 and 5 is very low. For more women to reach these activity levels represents a great challenge – not only for women themselves, but also for the organisations concerned with promoting their health and improving the quality of their lives through active recreation and sport.

activity matters the facts

- strictly in terms of physical activity, over 7 out of 10 men and 8 out of 10 women fell below their age-appropriate activity level necessary to achieve a health benefit

- the profile of activity levels for all men and women is shown in Table 1

- about 1 out of every 6 people is relatively sedentary having done no activities for 20 minutes or more at a moderate or vigorous level in the previous four weeks (Activity Level 0)

- Table 2 shows activity levels for men and women of different ages

- for all age groups a substantial proportion fell below their target level. Even among 16 to 24 year olds, 70% of men and 91% of women were below the target level suggested for achieving health benefits

- the high percentage of men (81%) in the middle age category 45-54 who fell below their target level is of particular concern, given their high risk of coronary heart disease from other factors

- activity declines markedly with increasing age – less than 10% of 16 to 24 year olds were in Activity Level 0 compared to 40% of 65 to 74 year olds

- routine physical activity as an integral part of work now plays a very small part in the daily activity of most people. About 80% of men and 90% of women were not in vigorous or moderately vigorous occupations

Table 1 – activity levels for men and women

Frequency and Intensity Activity Level	MEN %	WOMEN %
■ Level 5	14	4
■ Level 4	12	10
■ Level 3	23	27
■ Level 2	18	25
■ Level 1	16	18
■ Level 0	17	16
Total	100	100

Table 2 – activity patterns and target levels for age groups

Frequency and Intensity of Activity Level						
Age group	16-24	25-34	35-44	45-54	55-64	65-74
MEN	%	%	%	%	%	%
■ Level 5	30	20	16	11	6	1
■ Level 4	23	19	16	8	4	1
■ Level 3	15	20	25	31	24	21
■ Level 2	14	19	20	19	18	15
■ Level 1	11	15	15	17	19	18
■ Level 0	7	7	8	14	29	44
Total	100	100	100	100	100	100
WOMEN	%	%	%	%	%	%
■ Level 5	9	7	4	4	2	*
■ Level 4	16	15	12	7	5	3
■ Level 3	22	28	34	31	26	16
■ Level 2	26	26	28	28	25	17
■ Level 1	18	16	14	18	20	24
■ Level 0	9	8	10	12	22	40
Total	100	100	100	100	100	100

The bold rule shows the target levels for men and women respectively

*Less than 0.5%



- activities in and around the home made a significant contribution to moderate activity levels over the previous four weeks, involving over 70% of women and 60% of men

- 44% of men and 40% of women took part in sport or active recreation at a vigorous or moderate intensity. It was sport and active recreation which gave people the greatest opportunity to take part in vigorous activities. Virtually all vigorous activities were achieved through sport and recreation

- people who exercise regularly in their youth are more likely to continue or to resume exercise in later years. 25% of those active when aged 14 to 19 years were very active now compared with 2% active now who were inactive at that earlier age

- activity levels varied according to social and economic status. 36% of men in the semi-skilled and unskilled manual group were in Activity Levels 0 and 1 (combined) compared with 30% of those in the professional and intermediate category. The differences among women were also marked. 21% of those in the semi and unskilled social classes (IV & V) were in Activity Level 0, compared with 13% in the professional and intermediate categories (I & II)

- more of those who were less active consistently reported a condition which limited one or more everyday tasks or mentioned a chronic 'disease' or injury, including particularly heart disease, angina or breathlessness

- there was a clear association between past participation in sport and physical recreation and the prevalence of heart disease, angina and breath-

lessness. Among those who had not taken part in regular sport and recreation in adult life, 21% of men and 15% of women over the age of 55 suffered from one of those chronic conditions compared with only 14% and 3% respectively who had regularly participated for over three quarters of their adult years

- men who smoked, particularly those who smoked 20 cigarettes or more a day, were found to be less active at a vigorous or moderate level compared with non-smokers. This pattern was repeated, although less strongly, among women aged 16 to 34



fitness matters the facts

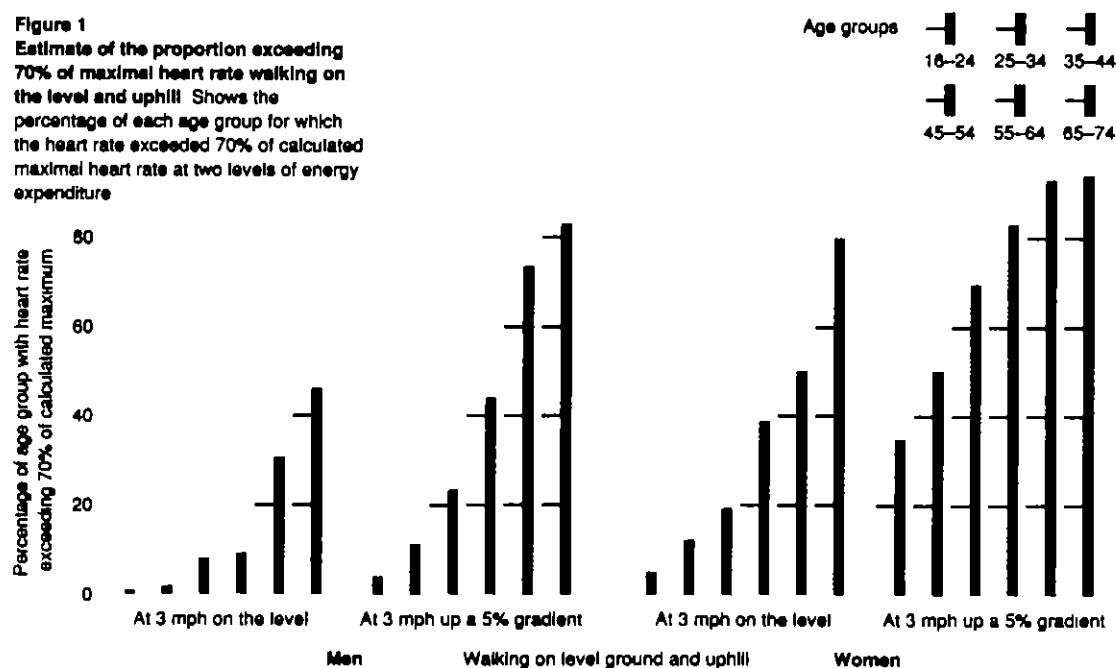
body weight

- the number of people overweight appears to be increasing. The proportion of men and women overweight (based on the definition used by the Office of Population Census and Surveys) was 48% and 40% respectively. This compares with 45% of men and 36% of women in 1986 and 39% and 32% in 1980.
- within the overweight category the proportions who were obese based on OPCS definitions were 8% of men and 13% of women compared with 8% and 12% in 1986 and 6% and 8% in 1980.
- risk of cardio-vascular disease in men appears to be related to the distribution of body fat. Studies have shown an increased risk of stroke and ischaemic heart disease for middle aged men whose waist measurement exceeds their hip size. 11% of men in the survey fell within this category.

capacity for physical activity (aerobic fitness)

- it is estimated that nearly one third of men and two thirds of women would find it difficult to sustain walking at a reasonable pace (about 3 mph) up a 1 in 20 slope. At this level of exertion, they would be likely to experience symptoms of breathlessness and fatigue, and find this pace of walking very demanding. After several minutes, they would need to slow down or rest to avoid discomfort.
- the aerobic fitness results for men and women of different ages are shown in Figure 1.
- the proportion of men and women who are unable to sustain uphill walking at 3 mph rises from 4% among 16 to 24 year old men to 81% of 65 to 74 year old men. The equivalent figures for women rise from 34% to 92%.
- even walking on level ground at 3 mph is severe exertion for a large number of older women. Over 50% of women aged 55 to 64 years are not fit enough to continue walking on the level at this speed.
- although fitness tends to decline with age, many people in the older age groups were as fit or fitter than others in their 20s, 30s and 40s. The average

Figure 1
Estimate of the proportion exceeding 70% of maximal heart rate walking on the level and uphill. Shows the percentage of each age group for which the heart rate exceeded 70% of calculated maximal heart rate at two levels of energy expenditure.



aerobic capacity of the most fit 10% of men aged 64 to 75 was higher than the least fit 10% of men aged 25 to 34. The same pattern applied to women.

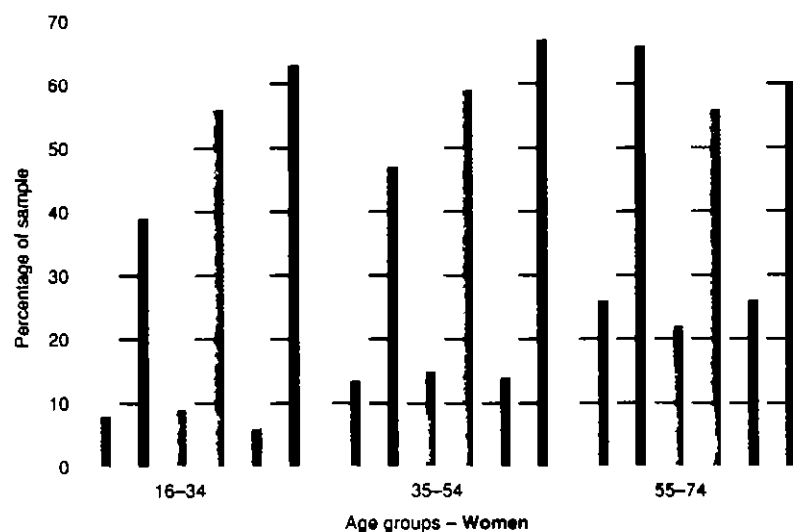
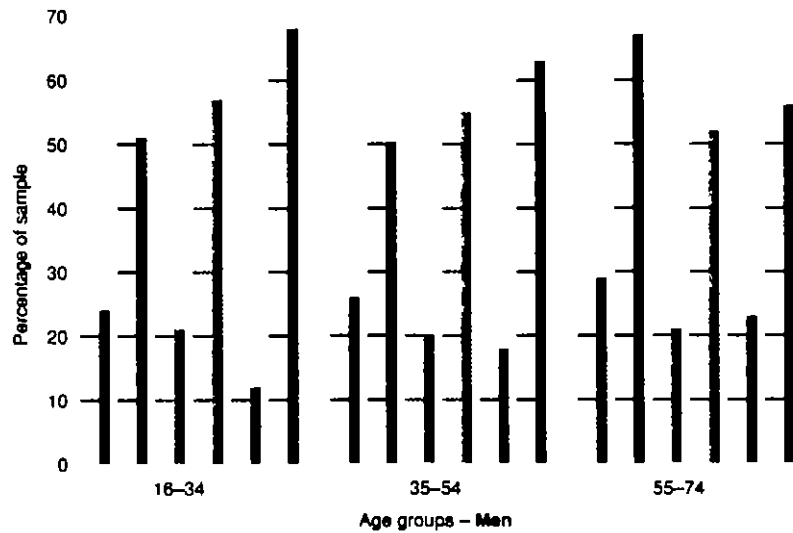
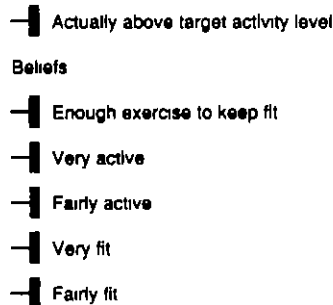
- 30% of men and 50% of women aged 65 to 74 did not have sufficient muscle strength or power to lift 50% of their body weight – and as a consequence would have difficulty doing simple things such as rising from a chair without using their arms.

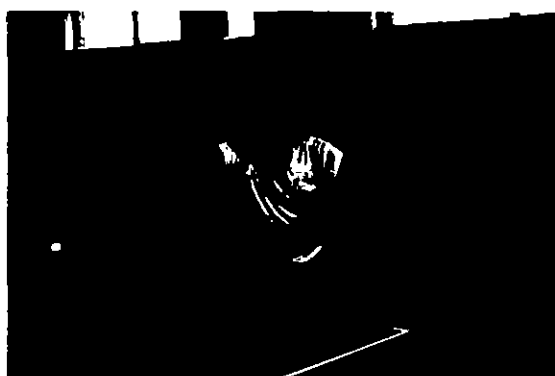
- power to extend the legs was also low among older women aged over 55 years with 50% falling below the power estimated to climb stairs without assistance.

- it is estimated that if everyone overweight or obese lost 22lbs in weight the number having problems rising from a chair unaided would decrease by over a third and the percentage having difficulties walking up a 1 in 20 slope would be reduced by 37% in men and 19% in women.



Figure 2
Comparison between people's beliefs and the facts. Shows that there are considerable differences between people's beliefs about their levels of physical activity and the facts. Many people believed they were more active than they really were, and incorrectly believed they did enough exercise to keep fit.





activity and fitness matters

beliefs and attitudes

- 80% of both men and women of all ages believed themselves to be fit and the majority incorrectly believed that they did enough exercise to keep fit
- 61% of men and 69% of women in Activity Level 0 believed they were very or fairly fit
- 47% of men and 57% of women in Activity Level 0 believed themselves to be very or fairly active
- Figure 2 shows the differences between people's beliefs and the more objective measures of physical activity
- 80% expressed a strong belief in the value of exercise to health and fitness while only a minority actually engaged regularly in physical activity of a moderate or vigorous intensity – 51% of men and 59% of women were below Activity Level 3
- the main factors which motivated people to take exercise were 'to feel in good shape physically', 'to improve or maintain health', 'to feel a sense of achievement', and 'to get out of doors'. 'Having fun' and 'relaxing' were rated the most important by men, while women rated 'looking good' and 'controlling and losing body weight' as the greatest benefits
- 24% of men and 38% of women were put off exercise because they did not regard themselves as 'sporty'. Other factors for not participating, and given particularly by women, included shyness, feeling overweight, and lack of energy

activity and fitness matters

the key messages

What are the important messages for health and sports promotion? Some of the key messages are highlighted below

- **'English people are not active enough'**
Although a small minority is active and fit, as a Nation our activity levels are well below those necessary to improve personal health and well-being and bring benefits to society. Nearly everyone can benefit from being more active.
- **'be honest with yourself, you probably aren't as fit and active as you think you are'**
Most people know physical activity is 'good for you' but many, particularly in the older age groups, believe they are fitter or more active than they really are. Bridging the belief/reality gap is a central challenge to health promotion.
- **'exercise regularly for a minimum of three times a week and for a least 20 minutes per occasion if you want to improve your fitness and maximise the health benefits'**
The majority of people don't fully understand the concept of aerobic fitness and the level of physical activity required to maintain and improve fitness.
- **'It doesn't have to hurt to get fit but you do need to get out of breath or build up a sweat'**
Activity levels need to be sufficient to raise the heart rate to between 60% and 80% of its estimated maximum (220 beats per minute minus a person's age) if fitness and health benefits are to be achieved.
- **'build up activity and fitness levels gradually'**
People need to build up their activity levels in stages, gradually moving up the Activity ladder through Activity Levels 1 to 5 until they reach or surpass their age-appropriate target Activity Level. Don't try to jump from Activity Level 0 to 5 overnight.
- **'take longer walks more often and more briskly'**
For most people the starting point of fitness is very low. Many people could quickly move up from the lowest rungs of the Activity Ladder by taking more brisk walks.

● **'being active is a way of life'** People need to make the most of the opportunities to be active in everyday life – for example by walking up stairs instead of taking the lift, walking to the shops rather than taking the bus or the car, and spending more time doing 'heavy' work in the garden or around the house

● **'exercise need not be a chore or be taken as a 'medicine'** There is a wide range of sports and active recreations which people can enjoy in their own right both indoors and outdoors and get health and fitness benefits as a 'spin off' it is often easier to be active if people join others, particularly their family. Activities people can do together include swimming, walking, cycling, aerobics, dancing and exercises, bowls, golf, table tennis or badminton

● **'give sport a chance – you don't have to be 'sporty' to take part in sport'** Too many people have the misconceived idea that they are not 'the sporty type' and, as a consequence, avoid being involved in many activities that they might find enjoyable if they gave them a chance. There are literally hundreds of different types of sports and physical recreations to choose from, to suit all levels of ability and fitness

● **'physical activity can keep you physiologically young'**. Older people who are sufficiently active can enjoy fitness levels as high as others up to 40 years younger

● **'don't get on to the downward spiral of inactivity'** People's muscle strength and aerobic fitness do decline with age but much of the decline in function is not inevitable and can be reversed. Older people must not avoid activity because it makes them breathless but must avoid the negative spiral of inactivity – where reduced activity levels lead to reduced capabilities and, in turn, to a further reduction in physical activity

● **'active living begins in childhood'** The foundation skills for sport, recreation and active living and understanding of the benefits of physical activity need to be learned at an early age

● **'if in doubt check it out'** Anyone with a medical condition or doubt about their health should contact their doctor to discuss a suitable personal programme of exercise to improve their fitness. Exercise should cease during periods of illness and then be re-started at a lower level and be built up again gradually

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The Sports Council was incorporated by Royal Charter in 1972 and its main objectives are to increase participation in sport and physical recreation, to increase the quantity and quality of sports facilities, to raise standards of performance and to provide information for and about sport.

The Health Education Authority is committed to ensure that by the year 2000 the people of England are more knowledgeable, better motivated and more able to acquire and maintain good health by providing information and advice about health directly to the public, supporting other organisations, health professionals and other people who provide health education to the public, advising the Secretary of State on matters relating to health education.

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