Health Survey for England

2008

Volume 2

Methods and documentation

A survey carried out on behalf of The NHS Information Centre

Edited by Rachel Craig, Jennifer Mindell, Vasant Hirani

Joint Health Surveys Unit

NatCen
National Centre for Social Research

Department of Epidemiology and Public Health,
UCL Medical School
Volume 2

Methods and documentation
A survey carried out on behalf of The NHS Information Centre

Volume 2

Methods and documentation

Edited by
Rachel Craig, Jennifer Mindell, Vasant Hirani

Principal authors
Maria Aresu, Laia Bécares, Soren Brage, Moushumi Chaudhury, Melanie Doyle-Francis, Dale Esliger, Elizabeth Fuller, Natalie Gunning, Julia Hall, Vasant Hirani, Dhriti Jotangia, Jennifer Mindell, Alison Moody, Tosin Ogunbadejo, Deanna Pickup, Natasha Reilly, Chloe Robinson, Marilyn Roth, Heather Wardle

Joint Health Surveys Unit
National Centre for Social Research
Department of Epidemiology and Public Health,
UCL Medical School

THE NHS INFORMATION CENTRE
Contents

Volume 2: Methodology and documentation

Foreword 7
Editors’ acknowledgements 8
Notes 9

1 Introduction 11
  1.1 The Health Survey for England series 11
  1.2 The 2008 survey 11
  1.3 Reports on the Health Survey for England 2008 12
  1.4 Availability of unpublished data 13

2 Sample design 13
  2.1 Overview of the sample design 13
  2.2 Selection of primary sampling units 13
  2.3 Sampling addresses, dwelling units and households 14
  2.4 Sampling individuals within households 14

3 Topic coverage 15
  3.1 Documentation 15
  3.2 The Stage 1 interview 15
  3.3 The Stage 2 nurse visit 17

4 Fieldwork procedures 17
  4.1 Advance letters 17
  4.2 Making contact 17
  4.3 Collecting data 17
  4.4 Interviewing and measuring children 18
  4.5 Feedback to participants 18

5 Fieldwork quality control and ethical clearance 19
  5.1 Quality control measures 19
  5.2 Ethical clearance 20

6 Survey response 20
  6.1 Introduction to response analysis 20
  6.2 General population sample: household response 20
  6.3 General population sample: individual response for adults 21
  6.4 General population sample: individual response for children aged 0-15 22
  6.5 General population and boost sample of children: individual response 23
  6.6 Variations in survey response 24
  6.7 Age and sex profile of the general population sample 24

7 Weighting the data 24
  7.1 Background 24
  7.2 Calculation of the general population sample weights 25
  7.3 Child sample weights combining general population sample and boost sample 28
8 Data analysis and reporting 30
  8.1 Introduction 30
  8.2 Weighted and unweighted data and bases in the report tables 31
  8.3 Reporting age variables 31
  8.4 Standard analysis breakdowns 32
  8.5 Logistic regression analysis 33
  8.6 Design effects and true standard errors 33

9 Quality control of blood and saliva analytes 34
  9.1 Introduction and key conclusions 34
  9.2 Methods 34
  9.3 Internal quality control (IQC) 36
  9.4 External quality assessment (EQA) 37
References and notes 38
Tables 40

Appendices 67
A Fieldwork documents 67
B Measurement protocols 171
C Glossary 195
Foreword

This report presents the findings of the eighteenth annual survey of health in England. I am pleased to present this important research which has been undertaken on behalf of The NHS Information Centre for health and social care.

The Health Survey for England is conducted annually and collects information about a representative sample of the general population. It is vital to our understanding of the health situation and behaviours of the public in England and helps to ensure that policies are informed by these data.

The survey combines information gathered through interviewing the sampled respondents, including a wealth of socio-demographic variables, with objective measures of health, such as blood pressure measurements. Thus we can study the inter-relationship of the characteristics and circumstances of adults and their children, with their health situation.

The primary focus of the Health Survey for England in 2008 was physical activity and fitness. Adults and children were asked to recall their physical activity over recent weeks, and objective measures of physical activity were also obtained. Physical activity has become an increasingly important public health issue as governments attempt to curb the levels of child and adult obesity. This report also examines cardiovascular fitness; greater physical fitness is associated with lower mortality in the general population. Increasing physical activity amongst adults has been a subject of public health promotion policies and government health strategies in England since the early 1990s. It is essential to monitor progress towards targets for increasing levels of physical activity among the population, and the Health Survey for England plays an important role as a monitoring tool.

I am honoured to welcome this valuable report and to thank all my colleagues in the Information Centre and our counterparts in the Joint Health Surveys Unit for their work. Surveys of this complexity are a team effort. The dedication of the skilled interviewing force is especially noteworthy. May I also thank the anonymous respondents across England who gave up their time to take part in the survey and who were willing to submit to various health tests. Without their help we would lose a public tool of enormous potential to benefit and protect the health of every one of us.

Tim Straughan
Chief Executive
The NHS Information Centre for health and social care
Editors’ acknowledgements

We wish to thank, first of all, all those who gave up their time to be interviewed and who welcomed interviewers and nurses into their homes. We would also like to acknowledge the debt the survey’s success owes to the commitment and professionalism of the interviewers and nurses who worked on the survey throughout the year.

We would like to thank all those colleagues who contributed to the survey and this report. In particular we would like to thank:

- The authors of all the chapters: Maria Aresu, Laia Bécares, Soren Brage, Moushumi Chaudhury, Melanie Doyle-Francis, Dale Esliger, Elizabeth Fuller, Natalie Gunning, Julia Hall, Vasant Hirani, Dhriti Jotangia, Jennifer Mindell, Alison Moody, Tosin Ogunbadejo, Deanna Pickup, Natasha Reilly, Chloe Robinson, Marilyn Roth, and Heather Wardle.
- Emily Diment, whose hard work and support has been crucial in putting this report together.
- Other research colleagues, especially Julia Hall, Kevin Pickering, Sarah Tipping and Nicola Shelton.
- Operations staff, especially Lesley Mullender, Sue Roche and the Area Managers at NatCen and Barbara Carter-Szatynska at UCL.
- The principal programmers, Jo Periam, Sven Sjodin and Colin Miceli.

We would also like to express our thanks to Professor Ian Gibb and his staff at the Department of Clinical Biochemistry at the Royal Victoria Infirmary in Newcastle upon Tyne, and to Dr Colin Feyerabend and his staff at ABS Laboratories, Welwyn Garden City, for their helpfulness and efficiency.

Last, but certainly not least, we wish to express our appreciation of the work of the staff at The NHS Information Centre at all stages of the project, and in particular the contribution made by Andy Sutherland, Julie Stroud, Bethan Thomas, Alison Crawford, Sharon Thandi, Alyson Whitmarsh, Paul Eastwood, Carol Hunter and Stephanie Gebert.

Rachel Craig, Jenny Mindell, Vasant Hirani
Notes

1. The data used in the report have been weighted. The weighting is described in Chapter 7, in Volume 2 of this report. Both unweighted and weighted sample sizes are shown at the foot of each table. The weighted numbers reflect the relative size of each group in the population, not numbers of interviews made, which are shown by the unweighted bases.

2. Children’s data each year have been weighted to adjust for the probability of selection, since a maximum of two children are selected in each household. This ensures that children from larger households are not under-represented. Since 2003, as for adults, non-response weighting has also been applied.

3. Four different non-response weights have been used: for the interview stage, for the nurse visit, for the blood sample and for the cotinine sample. In addition there are separate weights for the subsample taking part in accelerometry, reported in Chapters 3 and 6, relating to interview, nurse visit and blood sample data.

4. The following conventions have been used in tables:
   - no observations (zero value)
   - 0 non-zero values of less than 0.5% and thus rounded to zero
   - [] used to warn of small sample bases, if the unweighted base is less than 50. If a group’s unweighted base is less than 30, data are normally not shown for that group.

5. Because of rounding, row or column percentages may not add exactly to 100%.

6. A percentage may be quoted in the text for a single category that aggregates two or more of the percentages shown in a table. The percentage for the single category may, because of rounding, differ by one percentage point from the sum of the percentages in the table.

7. Values for means, medians, percentiles and standard errors are shown to an appropriate number of decimal places. Standard Error may sometimes be abbreviated to SE for reasons of space.

8. ‘Missing values’ occur for several reasons, including refusal or inability to answer a particular question; refusal to co-operate in an entire section of the survey (such as the nurse visit or a self-completion questionnaire); and cases where the question is not applicable to the participant. In general, missing values have been omitted from all tables and analyses.

9. The group to whom each table refers is stated at the upper left corner of the table.

10. The term ‘significant’ refers to statistical significance (at the 95% level) and is not intended to imply substantive importance.
Methods and documentation

Rachel Craig, Sarah Tipping, Kevin Pickering, Emily Diment, Marilyn Roth, Ian Gibb, Mira Doig

1 Introduction

1.1 The Health Survey for England series

The Health Survey for England (HSE) comprises a series of annual surveys, of which the 2008 survey is the eighteenth. All surveys have covered the adult population aged 16 and over living in private households in England. Since 1995, the surveys have also covered children aged 2-15 living in households selected for the survey, and since 2001 infants aged under two have been included as well as older children.

The Health Survey for England (HSE) is part of a programme of surveys currently commissioned by The NHS Information Centre for health and social care, and before April 2005 commissioned by the Department of Health. The surveys provide regular information that cannot be obtained from other sources on a range of aspects concerning the public’s health, and many of the factors that affect health. The series of Health Surveys for England was designed to:

1. Provide annual data from nationally representative samples to monitor trends in the nation’s health;
2. Estimate the proportion of people in England who have specified health conditions;
3. Estimate the prevalence of certain risk factors associated with these conditions;
4. Examine differences between subgroups of the population (by age, sex or income) in their likelihood of having specified conditions or risk factors;
5. Assess the frequency with which particular combinations of risk factors are found, and in which groups these combinations most commonly occur;
6. Monitor progress towards selected health targets;
7. (Since 1995) measure the height of children at different ages, replacing the National Study of Health and Growth; and
8. (Since 1995) monitor the prevalence of overweight and obesity in children.

Each survey in the series includes core questions and measurements such as blood pressure, anthropometric measurements and analysis of blood and saliva samples, as well as modules of questions on specific issues that vary from year to year. In recent years, the core sample has also been augmented by an additional boosted sample from a specific population subgroup, such as minority ethnic groups, older people or, as in 2008, children.

The Health Survey for England has been designed and carried out since 1994 by the Joint Health Surveys Unit of the National Centre for Social Research (NatCen) and the Department of Epidemiology and Public Health at the UCL Medical School.

1.2 The 2008 survey

The primary focus of the Health Survey for England in 2008 was physical activity and fitness. Adults and children were asked to recall their physical activity over recent weeks, and objective measures of physical activity and fitness were also obtained.
Physical activity has become an increasingly important public health issue as governments attempt to curb the levels of child and adult obesity. The health benefits of a physically active lifestyle have been well documented, and participation in regular physical activity can increase the quality of life and independence in older age. Physical inactivity is associated with all-cause mortality and many chronic diseases, including ischaemic heart disease, diabetes, certain cancers, and obesity.

Although the amount of habitual physical activity undertaken is closely linked with all-cause mortality risk, the majority of people in many countries do not accrue sufficient exercise to derive health related benefits. The majority of adults in England would like to do more physical activity; however, both men and women cite work commitments and not having enough leisure time as the most common barriers to doing more physical activity.

In England, physical inactivity was estimated in 2002 to cost £8.2 billion a year. Sedentary time is at least as important as moderate-intensity physical activity as a disease risk factor; sedentary behaviours are also associated with increased risk of obesity and cardiovascular disease independently of moderate to vigorous activity levels.

This report also examines cardiovascular fitness. Greater physical fitness is associated with lower mortality in the general population and mitigates the effect of metabolic syndrome on all-cause and cardiovascular death. Lack of fitness affects deaths from all causes, cardiovascular disease, and cancers. Increasing activity levels increases fitness as well as reducing obesity and risks of diseases associated with inactivity, low fitness levels or obesity.

Increasing physical activity amongst adults has been a subject of public health promotion policies and government health strategies in England since the early 1990s. Guidelines for physical activity for maintaining optimal health have been available since the mid to late 1970s. Recent National Institute for Health and Clinical Excellence (NICE) guidance highlights the contribution of regular physical activity to promoting the health of communities. It is essential to monitor progress towards targets for increasing levels of physical activity among the population, and the HSE plays an important role as a monitoring tool.

As with all previous years, the 2008 Health Survey for England involved a stratified random probability sample of households. The core sample comprised 16,056 addresses selected at random in 1,176 postcode sectors. Adults and children were interviewed at households identified at the selected addresses. The general household sampling method does not yield sufficient numbers of children for the detailed analyses required, and in 2008 a boost sample of children aged 2-15 was included to supplement the numbers of children recruited through core households. The boost sample of children was attained by randomly selecting 19,404 addresses, some in the same postcode sectors as the core sample and some in an additional 204 postcode sectors to supplement the sample obtained in the core sectors. For both the core and boost samples, where there were three or more children in a household, two of the children were selected at random to limit the respondent burden for parents. Core and boost addresses were issued over 12 months from January to December 2008. For further details on sampling see Section 2.

A total of 15,102 adults and 7,521 children were interviewed, with 3,473 children from the core sample and 4,048 from the boost. A household response rate of 64% was achieved for the core sample, and 73% for the boost sample.

Data collection involved an interview, followed by a visit from a specially trained nurse for all those in the core sample who agreed. The nurse visit included measurements and collection of blood and saliva samples, as well as additional questions.

1.3 Reports on the Health Survey for England 2008

This volume reports on the methods used in the HSE 2008, and is one of two volumes based on the survey, published as a set as ‘The Health Survey for England 2008’:
1. Physical activity and fitness
2. Methods and documentation
1.4 Availability of unpublished data

As with previous surveys, a copy of the HSE 2008 data will be deposited at the Data Archive at the University of Essex. Copies of anonymised data files can be made available for specific research projects through the Archive.\textsuperscript{14}

In addition, trend tables showing data for variables collected every year (‘core’ modules) for adults and children are available on The NHS Information Centre’s website.\textsuperscript{15}

2 Sample design

2.1 Overview of the sample design

The core sample of the Health Survey for England 2008 was designed to be representative of the population living in private households in England. People living in institutions, who are likely to be older and, on average, in poorer health than those in private households, were not covered. This should be borne in mind when considering the Health Survey’s account of the population’s health.

Like previous surveys in the Health Survey series, the 2008 survey adopted a multi-stage stratified probability sampling design. The sampling frame was the small user Postcode Address File (PAF). The very small proportion of households living at addresses not on PAF (less than 1%) was not covered.

The sample for HSE 2008 comprised two main components: the core (general population) sample and a boost sample of children aged 2-15. In addition, a sub-sample of participants was selected to wear an accelerometer, so that physical activity could be objectively measured.

2.2 Selection of primary sampling units

The sample for the HSE was drawn in two stages. At the first stage a random sample of primary sampling units (PSUs), based on postcode sectors, was selected. Within each selected PSU, a random sample of postal addresses (known as delivery points) was then drawn.

Postcode sectors with fewer than 500 PAF addresses were combined with neighbouring sectors to form the PSUs. This was done to prevent the addresses being too clustered within a PSU. To maximise the precision of the sample, it was selected using a method called stratified sampling. The list of PSUs in England was ordered by local authority and, within each local authority, by the percentage of households in the 2001 Census with a head of household in a non-manual occupation (NS-SEC groups 1-3). The sample of PSUs was then selected by sampling from the list at fixed intervals from a random starting point.

1,176 PSUs were selected with probability proportional to the total number of addresses within them. Selecting PSUs with probability proportional to number of addresses and sampling a fixed number of addresses in each ensures that an efficient (equal probability) sample of addresses is obtained. Once selected the 1,176 PSUs were randomly allocated to one of three sample groups:

- Group 1: 792 PSUs were allocated to a group with core and child boost sample and no accelerometer data collected;
- Group 2: 180 were allocated to a group with core only sample and accelerometer data collected; and
- Group 3: 204 were allocated to a group with core and child boost sample and accelerometer data collected.
Once selected, the PSUs in each group were randomly allocated to the 12 months of the year (e.g. 66 per month in Group 1 with core and child boost sample, no accelerometer) so that each quarter provided a nationally representative sample. Note that the PSUs selected for Group 3 (the core and child boost sample with accelerometry) were issued to two months. The second month was selected to be six months from that originally allocated within 2008. In one of the selected months the core addresses were issued, and in the other the child boost addresses were issued.

### 2.3 Sampling addresses, dwelling units and households

The number of addresses selected within each PSU varied for the three groups. For example, 29 addresses were sampled in Group 1. Of the 29 addresses selected, 13 were issued for the core sample and 16 were issued for the child boost sample at random. The design of the HSE 2008 sample for all three groups is summarised in Table A.

<table>
<thead>
<tr>
<th>Sample group</th>
<th>Number of PSUs</th>
<th>Addresses: core sample</th>
<th>Addresses: child boost</th>
<th>Total number of addressess</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1: Core and child boost, no accelerometer</td>
<td>792</td>
<td>13</td>
<td>16</td>
<td>22,968</td>
</tr>
<tr>
<td>Group 2: Core only, accelerometer</td>
<td>180</td>
<td>15</td>
<td>0</td>
<td>2,700</td>
</tr>
<tr>
<td>Group 3: Core and child boost, accelerometer</td>
<td>204</td>
<td>15</td>
<td>33</td>
<td>9,792</td>
</tr>
<tr>
<td>Total number of addresses issued</td>
<td>16,056</td>
<td>19,404</td>
<td>35,460</td>
<td></td>
</tr>
</tbody>
</table>

When visited by interviewers, 11.3% of the selected addresses in the core sample were found not to contain private households. Examples include businesses and institutions, vacant properties, demolished properties and those still being built. These addresses were thus ineligible and were excluded from the survey sample.

Most addresses selected from the PAF contain a single dwelling unit and/or household. However, a small proportion of addresses (about 1%) are multi-occupied. At addresses with more than one dwelling unit (with a separate entrance), one is selected at random by the interviewer to be included in the survey. For dwelling units with more than one household, interviewers were instructed to select all households up to a maximum of three. If there were four or more households, then three households were selected at random.

### 2.4 Sampling individuals within households

For the HSE core sample, all adults aged 16 years and over at each household were selected for the interview (up to a maximum of ten adults). However, a limit of two was placed on the number of interviews carried out with children aged 0-15. For households at which there were three or more children, interviewers selected two children at random.

For child boost addresses interviewers screened for households containing at least one child aged 2-15 years (i.e. the age range was different from the core). At households containing eligible children, up to two were selected by the interviewer for inclusion in the survey.

The application of weights is required to compensate for the omission of children in households with more than two children (see Section 7), otherwise children from large households would be under-represented in the survey estimates.

In the core addresses that were eligible for accelerometry, up to two individuals were selected to wear the accelerometer. The selection was as follows:

- One adult in households with one adult living alone
- Two adults in households with more than one adult and no children, and
- One adult and one child aged between 4 and 15 in households with children in this age group.
In the child boost addresses that were eligible for accelerometry, any children aged between 4 and 15 that had been selected for the interview were eligible to wear the accelerometer. Again, selection weights were required to compensate for sampling of the household members that wore the accelerometer.

## 3 Topic coverage

### 3.1 Documentation

Copies of the survey data collection documents are included in Appendix A. Protocols for measurements and for the collection of blood and saliva samples are included in Appendix B. The content of the Stage 1 interview and the Stage 2 nurse visit is summarised below.

### 3.2 The Stage 1 interview

Information was collected at household level and at individual level. Figure A summarises the content of the household and individual level interviews for all participants, by age group.

The 2008 survey for adults focused on physical activity and fitness levels. Adults were asked modules of questions on general health, alcohol consumption, smoking, and fruit and vegetable consumption, as well as questions about physical activity.

Children aged 13-15 were interviewed themselves, and parents of children aged 0-12 were asked about their children, with the interview including questions on eating habits (fat and sugar consumption) and fruit and vegetable consumption. Children were also asked detailed questions about physical activity.

In a sub-sample of households, up to two participants were selected and asked to wear an accelerometer for a week to provide an objective measure of physical activity (see Section 2.4).

Participants aged eight and over were asked to fill in a self-completion booklet during the interview. There were four booklets for different age groups as specified below. The booklet for young adults aged 16-17 asked about smoking and drinking behaviour as well as general health questions (GHQ12), and interviewers also had the option of using this booklet for those aged 18-24 if they felt that it would be difficult for anyone in this age group to give honest answers to the questions face-to-face with other household members present.

<table>
<thead>
<tr>
<th>Booklet for adults aged 18 and over</th>
<th>General health over the last few weeks (GHQ12) and general health today (first five questions of EQ5D).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Booklet for young adults aged 16-17</td>
<td>Smoking, drinking, general health over the last few weeks (GHQ12) and general health today (first five questions of EQ5D).</td>
</tr>
<tr>
<td>Booklet for children aged 13-15</td>
<td>Smoking, drinking, perception of weight, general health over the last few weeks (GHQ12).</td>
</tr>
<tr>
<td>Booklet for children aged 8-12</td>
<td>Smoking, drinking, perception of weight, cycling safety.</td>
</tr>
</tbody>
</table>

Interviewers measured the weight of all participants, and the height of all aged 2 and over.
### Health Survey for England 2008: Contents

<table>
<thead>
<tr>
<th>Household data</th>
<th>Household income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household size, composition and relationships</td>
<td>Smoking in household</td>
</tr>
<tr>
<td>Accommodation tenure and number of bedrooms</td>
<td>Type of dwelling and area</td>
</tr>
<tr>
<td>Economic status/occupation of Household Reference Person</td>
<td>Car ownership</td>
</tr>
</tbody>
</table>

#### Individual level information

<table>
<thead>
<tr>
<th>Interviewer visit</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>General health, longstanding illness, limiting longstanding illness, acute sickness</td>
<td>0-1</td>
</tr>
<tr>
<td>Fruit and vegetable consumption</td>
<td>●</td>
</tr>
<tr>
<td>Children’s eating habits (fat, sugar)</td>
<td>●</td>
</tr>
<tr>
<td>Child physical activity</td>
<td>●</td>
</tr>
<tr>
<td>Adult physical activity</td>
<td>●</td>
</tr>
<tr>
<td>Smoking</td>
<td>●</td>
</tr>
<tr>
<td>Drinking (seven day period)</td>
<td>●</td>
</tr>
<tr>
<td>Economic status/occupation, educational achievement</td>
<td>●</td>
</tr>
<tr>
<td>Ethnic origin</td>
<td>●</td>
</tr>
<tr>
<td>Height measurement</td>
<td>●</td>
</tr>
<tr>
<td>Weight measurement</td>
<td>●</td>
</tr>
<tr>
<td>Reported birth weight</td>
<td>●</td>
</tr>
<tr>
<td>Consent to linkage to NHS Central Register/Hospital Episodes Statistics</td>
<td>●</td>
</tr>
<tr>
<td>GHQ12</td>
<td>●</td>
</tr>
<tr>
<td>EQ5D</td>
<td>●</td>
</tr>
<tr>
<td>Cycling safety</td>
<td>●</td>
</tr>
<tr>
<td>Perception of weight</td>
<td>●</td>
</tr>
<tr>
<td>Accelerometer</td>
<td>●</td>
</tr>
</tbody>
</table>

#### Nurse visit

<table>
<thead>
<tr>
<th>Nurse visit</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunisations</td>
<td>●</td>
</tr>
<tr>
<td>Infant length</td>
<td>●</td>
</tr>
<tr>
<td>Prescribed medicines and vitamin supplements</td>
<td>●</td>
</tr>
<tr>
<td>Nicotine replacements</td>
<td>●</td>
</tr>
<tr>
<td>Waist and hip circumference</td>
<td>●</td>
</tr>
<tr>
<td>Blood pressure</td>
<td>●</td>
</tr>
<tr>
<td>Step test</td>
<td>●</td>
</tr>
<tr>
<td>Saliva sample (cotinine)</td>
<td>●</td>
</tr>
<tr>
<td>Blood sample</td>
<td>●</td>
</tr>
<tr>
<td>Adult eating habits</td>
<td>●</td>
</tr>
</tbody>
</table>

---

*This module was administered by self-completion.

*This module was administered by self-completion for those aged 16-17 and some aged 18-24.

*This module was administered among a sub-sample.
3.3 The Stage 2 nurse visit

Nurse visits were offered to all participants in the core sample.

At the nurse visit, questions were asked about prescribed medication, vitamin supplements and use of nicotine replacements. For infants, additional information was collected on immunisations and measurements at birth. Nurses measured infant length (for those aged six weeks to under 2 years). The nurse also took the blood pressure of those aged 5 and over, and took waist and hip measurements for those aged 11 and over.

Non-fasting blood samples were taken from adults aged 16 and over (for the analysis of total and HDL cholesterol and glycated haemoglobin), and samples of saliva (for the analysis of cotinine, a derivative of nicotine) were taken from participants aged 4 and over. Written consent was obtained for these samples.

In those households selected for the accelerometer sub-sample, nurses established eligibility among adults aged 16-74, and guided those eligible through a timed step test to assess individual fitness levels.

Nurses administered a self-completion booklet about eating habits to those aged 16 and over.

4 Fieldwork procedures

4.1 Advance letters

Each sampled address was sent an advance letter, which introduced the survey and stated that an interviewer would be calling to seek permission to interview.

4.2 Making contact

At initial contact, the interviewer established the number of dwelling units and/or households at an address, and made any selection necessary (see Section 2.3).

The interviewer then made contact with each selected household and, at a core address, attempted to interview all adults (up to a maximum of ten) and up to two children aged 0-15 (see Section 2.4). At boost addresses, interviewers screened for households with children aged 2-15, and within such households up to two children were selected for interview. The interviewer sought parents’ and children’s consent to interview selected children aged up to 15.

4.3 Collecting data

Both interviewers and nurses used computer assisted interviewing.

At each co-operating eligible household, the interviewer first completed a household questionnaire, information being obtained from the household reference person16 or their partner wherever possible. This questionnaire obtained information about all members of the household, regardless of age. If there were one or two children aged under 16, they were automatically included in the sample for an interview. If there were three or more children aged under 16, two were selected. The program created individual questionnaires for adults in core households, and for selected children in core and boost households.

An individual interview was carried out with all selected adults and children. In order to reduce the amount of time spent in a household, interviews could be carried out concurrently, the program allowing for up to four participants to be interviewed in a session.
Height and weight measurements were obtained towards the end of the interview.

In a sub-sample of households, two people (either two adults or an adult and child) were selected and invited to wear an accelerometer for a week, to provide an objective measure of their physical activity. Full details of the methods and procedures are described in Volume 1, Chapter 3 (adults) and Chapter 6 (children). Protocols for placing the accelerometer with participants are given in Appendix B to this volume.

At the end of the interview in core households, participants were asked for their agreement to the second stage of the survey, the follow-up visit by a nurse. In the case of children aged under 16, the parent’s permission was sought (see Section 4.4 for details). Wherever possible an appointment was made for the nurse to visit within a few days of the interview. At this visit the nurse carried out the measurements described in Section 3.3 and obtained saliva and urine samples from those eligible and willing to provide these samples.

In households selected for the accelerometer sub-sample, the step test was included in the nurse visit among eligible adults aged 16-74. Heart rate readings from the step test were used to estimate cardiovascular fitness. Full details of the methods and procedures are described in Volume 1, Chapter 4, Physical fitness in adults. The protocols for the step test are included in Appendix B to this volume.

In addition to the advance letter, participants were given two leaflets describing the purpose of the survey and the associated measurements. Interviewers initially handed out one leaflet describing the purpose of the interview. At the end of the interview, they handed out a second leaflet explaining the nurse visit to those who had agreed to this next stage. Copies of these two documents are included in Appendix A. Participants were also given a leaflet summarising some of the findings from previous surveys.

### 4.4 Interviewing and measuring children

Children aged 13-15 were interviewed directly, after permission was obtained from the child’s parent or guardian. Interviewers were instructed to ensure that the child’s parent or guardian was present in the home throughout the interview. Information about younger children was collected from a parent. Whenever possible, younger children were present while their parent answered questions about their health. This was partly because the interviewer had to measure their height and weight and, in the case of those aged 8 and over, to ask the child to complete a short self-completion booklet during the interview. It also ensured that the child could contribute information where appropriate.

Permission for a nurse to carry out any measurements on a child aged under 16 had to be obtained from the child’s parent or someone else with legal parental responsibility for that child. This person had to be present during the nurse visit.

Written consent to collect a saliva sample from a child was obtained from the parent.

### 4.5 Feedback to participants

Each participant was given a Measurement Record Card in which the interviewer entered the participant’s height and weight, and the nurse entered waist, hip and blood pressure measurements. Participants who saw a nurse were asked if they would like their blood pressure results sent to their GP. If they did want results to go to their GP, written consent was obtained. Written consent to send information to a child’s GP was obtained from the parent.

Nurses were issued with a set of guidelines to follow when commenting on participants’ blood pressure readings (see Appendix B for details). If an adult’s blood pressure reading was severely raised, nurses were instructed to contact the Survey Doctor at the earliest opportunity. For children, they were instructed not to comment on a high reading but to contact the Survey Doctor to assess whether any action was required. Where permission
had been given for results to be sent to a participant’s GP, the Survey Doctor contacted the GP if any blood pressure results were markedly abnormal.

5 Fieldwork quality control and ethical clearance

5.1 Quality control measures

5.1.1 Training interviewers and nurses

Interviewers were fully briefed on the administration of the survey, including screening for households with children in the boost sample. They were given training, including a practice session, on measuring height and weight.

All nurses were professionally qualified and proficient in taking blood samples before joining the NatCen team. They attended a two day training session at which they received equipment training and were briefed on the specific requirements of the survey with respect to taking blood pressure, taking anthropometric measurements, and taking blood, urine and saliva samples.

Full sets of written instructions, covering both survey procedures and measurement protocols, were provided for both interviewers and nurses (Appendix B contains the measurement protocols).

Interviewers and nurses who had worked on the previous year’s Health Survey attended full day refresher training sessions, where the emphasis was on updating them on new topic coverage, improving measurement skills and gaining respondent participation.

All interviewers and nurses new to the Health Survey were accompanied by a supervisor during the early stages of their work to ensure that interviews and protocols were being correctly administered. Routine supervision of 10% of the work of both interviewers and nurses was carried out subsequently.

5.1.2 Checking interviewer and measurement quality

A large number of quality control measures were built into the survey at both data collection and subsequent stages to check on the quality of interviewer and nurse performance.

Recalls to check on the work of both interviewers and nurses were carried out at 10% of productive households.

The computer program used by interviewers had in-built soft checks (which can be suppressed) and hard checks (which cannot be suppressed); these included messages querying uncommon or unlikely answers as well as answers out of an acceptable range. For example, if someone aged 16 or over had a height entered in excess of 1.93 metres, a message asked the interviewer to confirm that this was a correct entry (a soft check), and if someone said they had carried out an activity on more than 28 days in the last four weeks the interviewer would not be able to enter this (a hard check). For children, the checks were age specific.

At the end of each survey month, the measurements made by each interviewer and nurse were inspected. Any problems (such as higher than average proportions of measurements not obtained, insufficient samples and so on) were discussed with the relevant nurse or interviewer and their supervisor.
5.2 Ethical clearance

Ethical approval for the 2008 survey was obtained from the Oxford A Research Ethics Committee (reference number 07/H0604/102).

6 Survey response

6.1 Introduction to response analysis

This section looks at the response of sampled households in the general population sample (Section 6.2), and then at the response of eligible individuals within those households, firstly for adults (Section 6.3) and then for children (Section 6.4). Individual response for adults and children is examined in two ways: overall response for all eligible individuals in the ‘set’ sample, and response for individuals within co-operating households. Section 6.5 examines response among the total sample of children, combining the general population and boost samples.

Participants were asked to co-operate in a sequence of operations, beginning with a face-to-face interview, progressing to a nurse visit and (among adults) ending with a request for blood and saliva samples. Individual non-response is therefore accumulated through the survey stages.

Not every measurement obtained by an interviewer or a nurse was subsequently considered valid for analysis purposes. Full details of the numbers of measurements used for analysis, the numbers of exclusions and the reasons for them are given in the relevant chapters.

6.2 General population sample: household response

Table 1 shows household response by calendar quarter. The row labelled ‘Total eligible households’ shows the number of private residential households found at the selected addresses (after selection of a single dwelling unit, and up to three households when necessary).

Households described as ‘co-operating’ are those where at least one eligible person was interviewed at Stage 1, the interviewer stage. Households described as ‘all interviewed’ are those where all eligible persons were interviewed, and ‘fully co-operating’ are those where all eligible persons were interviewed, had height and weight measured and agreed to the nurse visit. Households where a participant was ineligible for a height or weight measurement because of a functional impairment or pregnancy are not counted as fully co-operating for this response analysis.

Non-respondents to the survey fall into two groups, those living in households where no one co-operated with the survey, and those living in households where at least one person was interviewed.

64% of eligible households (9,191) in the general population sample took part in the 2008 Health Survey. At 53% of households in the general population sample, all eligible adults and children were interviewed. In the boost sample, 73% of eligible households took part in the survey, and at 72% of boost households all selected children were interviewed.

It should be noted that response in the fourth quarter of the year was higher (68%) than in the previous three quarters (averaging 63%); correspondingly, the rate of refusals was lower in the final quarter (27%) than in the earlier months (averaging 31%). For the last three months of fieldwork, a £5 voucher was sent to each household with the initial advance letter, as an incentive for participation.

Table 1
6.3 General population sample: individual response for adults

6.3.1 Overall response

There were 15,102 individual interviews with adults in the general population, and 10,740 adults had a nurse visit.

To calculate the response rate for individuals, this number of interviews (the productive outcomes) should be expressed as a proportion of the total number of adults in the sampled households. However, the total number of adults in the sampled households is not known, and must be estimated. There are three groups of households to consider:

- Co-operating households (17,138 adults in 9,191 households, average 1.86 per household)
- Non co-operating households where information on the number of adults is known (5,459 adults in 3,161 households, average 1.73)
- Non co-operating households about which nothing is known (1,898 households).

The most reasonable assumption is to attribute to the last group the same average number of adults (1.83) as for all households where the number of adults is known (the sum of the first two groups). This assumption gives an estimated total of 26,069 eligible adults, known as the ‘set’ sample.

A further assumption is needed to provide separate ‘set’ samples for men and women. In non co-operating households where the number of adults was known, the numbers of men and women were not usually obtained. However, it can be assumed that the proportion of men and women in the estimated total sample is the same as for the adults in the 9,191 co-operating households. The proportions are 47.3% men and 52.7% women. Applying these proportions to the estimated total of adults gives ‘set’ samples of 12,338 men and 13,731 women.

Using the estimated total number of adults in sampled households, the adult ‘set’ sample, as a denominator, minimum response rates for adults in the general population sample were as shown in Table 4, and summarised in Table B below.

| Table B |
| Response among all adults |

<table>
<thead>
<tr>
<th></th>
<th>All adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewed</td>
<td>58</td>
</tr>
<tr>
<td>Height measured</td>
<td>52</td>
</tr>
<tr>
<td>Weight measured</td>
<td>50</td>
</tr>
<tr>
<td>Saw a nurse</td>
<td>41</td>
</tr>
<tr>
<td>Waist and hips measured</td>
<td>40</td>
</tr>
<tr>
<td>Blood pressure measured</td>
<td>40</td>
</tr>
<tr>
<td>Gave saliva sample</td>
<td>39</td>
</tr>
<tr>
<td>Gave blood sample</td>
<td>29</td>
</tr>
</tbody>
</table>

Response to the interview was 55% among men and 61% among women.

6.3.2 Adult response in co-operating households

As adults’ ages and other personal characteristics are not known in non co-operating households, indications of differences in response by these characteristics are confined to co-operating households. Tables 6 and 7 show the proportion of men and women in co-operating households who participated in the key survey stages, by age. These are summarised in Table C below.
In co-operating households, response was highest among the oldest age groups, and lowest among those aged 16-24 (70% of men and 78% of women).

It should be noted that, although a lower proportion of men than women had height or weight measured, saw a nurse or had any of the nurse measures, this difference is because a lower proportion of men than women were interviewed. Among those interviewed, co-operation rates were at least as high among men as women for each measure.

A sub-sample of households was selected for the accelerometer and step test, and individuals within these households were invited to take part in these extra elements of the survey. Response to these elements is discussed in the relevant chapters in Volume 1: Chapters 3 and 6 for accelerometry, Chapter 4 for the step test.

### 6.4 General population sample: individual response for children aged 0-15

#### 6.4.1 Overall response among children

Interviews were carried out with 3,473 children (1,725 boys and 1,748 girls) aged 0-15 in the core sample, and 2,464 children were seen by a nurse.

To calculate the response rate for children, the number of eligible children in sampled households (the ‘set sample’) is needed as the denominator. This was estimated by assuming that the households where the numbers of children were not known had the same average number of boys and girls as those where it was known, and that the proportion of boys and girls was the same. This results in a ‘set sample’ of 5,558 children. This is likely to be an over-estimate, since non-contacted households have fewer children, on average, than those contacted. Response rates computed for children are therefore conservative. Most non-responding children were in households where no-one (child or adult) co-operated with the survey.

Response to the interview was 62% among boys and 63% among girls. Height measurements were limited to those aged 2 and over, and for children aged 6 weeks to under 2, infant length was measured. On the assumption that the age distribution of children in the ‘set sample’ is the same as that of children living in interviewed households, response rates were as shown in Table 5 and summarised in Table D below.

#### 6.4.2 Response in co-operating households

Child response rates, like adult response rates, have also been calculated based on co-operating households to provide sufficient numbers for analysis by age. Among selected children aged 0-15 in co-operating households, the proportion who were interviewed was high, at 93% of eligible boys and girls. The proportion interviewed was lower among
children aged 11-15 (87% of boys and 88% of girls) than among those aged under 11 (95% for boys and 96% for girls).

Tables 8 and 9 show the proportion of boys and girls in co-operating households who participated in the key survey stages, by age. These are summarised in Table E below.

The majority of children in all age groups co-operated with the measurements, the only exception being the small number of infants aged from 6 weeks to under 2 years. Around two thirds co-operated with the nurse visit.

### Table E

**Response among children in co-operating core households**

<table>
<thead>
<tr>
<th></th>
<th>Boys</th>
<th>Girls</th>
<th>All children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewed</td>
<td>93</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>Height measured (aged 2 and over)</td>
<td>81</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Weight measured</td>
<td>78</td>
<td>77</td>
<td>77</td>
</tr>
<tr>
<td>Saw a nurse</td>
<td>67</td>
<td>65</td>
<td>66</td>
</tr>
<tr>
<td>Infant length measured (aged 6 weeks to under 2 years)</td>
<td>43</td>
<td>38</td>
<td>41</td>
</tr>
<tr>
<td>Waist and hip measured (aged 11 and over)</td>
<td>61</td>
<td>57</td>
<td>59</td>
</tr>
<tr>
<td>Blood pressure measured (aged 5 and over)</td>
<td>63</td>
<td>60</td>
<td>61</td>
</tr>
<tr>
<td>Saliva sample given (aged 4 and over)</td>
<td>58</td>
<td>56</td>
<td>57</td>
</tr>
</tbody>
</table>

6.5 **General population and boost sample of children: individual response**

A total of 4,048 children (2,006 boys and 2,042 girls) aged 2-15 were interviewed in the boost sample and, when combined with the 3,473 children from the core sample, provides a total sample of 7,521 children.

Tables 10 and 11 provide individual response rates to the interview stage for this combined sample in co-operating households; children in the boost did not have a nurse visit. The response rates for the total children’s sample are summarised in Table F.
6.6 Variations in survey response

6.6.1 Regional variations in response

As in previous years, response varied by Strategic Health Authority region. Household response in the general population sample was highest in the North East (78%) and was lowest in London (54%).

6.6.2 Response by type of dwelling

Table 3 shows household response by the type of building in which the address was found, as classified by interviewers; a small number of dwellings were not classified.

Response was highest among households living in detached houses (68%), and lowest among households living in flats on the fourth floor or above (54%).

6.7 Age and sex profile of the general population sample

Tables 12 and 13 compare the age and sex profiles of responding adults and children in the general population sample at the two survey stages (interview and nurse visit) with the mid-2007 population estimates. Overall the 2008 HSE sample over-represented women relative to men (55% and 45% respectively, compared with 51% and 49% in the mid-year population estimates). This is a response pattern found on a number of surveys. Men aged under 35 were slightly under-represented at both interview and nurse visit relative their proportions in the census population, while men aged 55 and over were slightly over-represented. Among women, those aged under 25 were slightly under-represented at both stages, while women aged 65 and over were slightly over-represented.

As Table 13 shows, among children aged 0-15, both the sex and age profiles of the achieved HSE sample were very close to the population estimates.

7 Weighting the data

7.1 Background

Before 2003, the weighting strategy for the core sample in the HSE was to apply selection weights only, and no attempt was made to reduce non-response bias through weighting. However, following a review of the weighting for the HSE, non-response weighting has been incorporated into the weighting strategy (as well as selection weights) since HSE 2003. This same strategy has been followed for weighting the HSE 2008 core general population sample data.
7.2 Calculation of the general population sample weights

7.2.1 Dwelling unit selection weights

Most addresses selected from the PAF contain a single dwelling unit, i.e. with a separate entrance. At addresses with more than one dwelling unit, only one is selected, and interviewers carry out a selection procedure to identify which dwelling unit to include in the sample using a Kish grid. The dwelling unit selection weights \( (w_{du}) \) adjust for this selection of the dwelling unit at addresses with more than one. The weights were calculated as the number of dwelling units identified at the address. The weights were trimmed at 3 to avoid any large values. The dwelling unit selection weights ensure that dwelling units in addresses containing more than one are not under-represented in the issued sample.

7.2.2 Household selection weights

Most dwelling units selected via the PAF contain a single household. At dwelling units which contain more than one household, a selection procedure is carried out by interviewers to identify which households to include in the sample. If up to three households are found at a dwelling unit, then all are included in the sample; if more than three households are found at a dwelling unit, then three are selected at random by the interviewer using a Kish grid. The household selection weights \( (w_{hh}) \) adjust for this selection of households. The weights were calculated as the number of households identified at the dwelling unit divided by the number selected. The weights were trimmed at 2 to avoid any large values. The household selection weights ensure that households in multi-occupied dwelling units are not under-represented in the issued sample.

Composite selection weights \( (w_t) \) were calculated as the product of the dwelling unit selection weights \( (w_{du}) \) and household selection weights \( (w_{hh}) \).

7.2.3 Calibration weighting

Calibration weighting was used to ensure that the weighted distribution of household members in participating households matched ONS 2007 mid-year population estimates for sex/age groups and Government Office Region (GOR) as shown in Tables G and H. The composite selection weights \( (w_t) \), described in Section 7.2.2, were used as initial values when generating the calibration weights \( (w_2) \).

The aim of the calibration weighting was to reduce non-response bias resulting from differential non-response at the household level. The calibration weights generated \( (w_2) \) were re-scaled so that the sum of the weights equalled the number of participating households to give the household weights for the core sample \( (w_{hhld}) \). Thus the final household weight \( (w_{hhld}) \) adjusts for dwelling unit and household selection, and for the age/sex and region profiles of participating households.

Note that the ONS mid-2007 population estimates were adjusted to remove people aged 65 and over living in institutions, who are not eligible for the HSE; this was estimated using data from the 2001 Census.

7.2.4 Child selection and adjustment weights in the general population sample

At participating households in the core sample with three or more children (aged 0-15), two were selected at random. In order that children in larger households were not under-represented in the sample, a selection weight was calculated as the number of children within the household divided by the number selected \( (w_3) \). This weight was trimmed at 3 to avoid any large weights.

The selection of children within the participating households and differential non-response mean that the age/sex distribution of the achieved sample of children does not match that of
all children in participating households. Unless corrected, this would result in bias for estimates. Child adjustment weights \( (w_4) \) were therefore calculated by dividing the number of children in the issued households (weighted by \( wt_{hhld} \)) by the number of children in the achieved sample (weighted by \( wt_{hhld} \times w_3 \)), within each age year for girls and boys separately.

Thus these weights both adjust for the probability of selection for children in larger households, and ensure that the profile of children selected for the survey matches the profile of all children. As the level of response for obtaining a child interview in participating households in the core sample was relatively high (93%), no additional non-response weighting was undertaken for the core sample of children. (For details of the weighting for the child sample including children from core and boost samples, see Section 7.3.)

### 7.2.5 Non-response weights for adults

There were no selection weights for adult respondents in the core sample since all adults in responding households were selected. However, non-response weights were calculated to reduce bias from adult non-response (86% of adults responded in households with more than one adult).

To obtain the non-response weights, a logistic regression model (weighted by \( wt_{hhld} \)) was fitted for all adults in participating households, excluding single-adult households. The outcome variable was whether or not the interview was completed. The following variables were entered as covariates: age group by sex, household type,\(^{21}\) Government Office Region (GOR), and social class of household reference person (HRP).\(^{16}\) The adult non-response weights \( (w_5) \) were calculated as the inverse of the predicted probabilities of response estimated from the regression model. The non-response weights for adults were trimmed at the 1% tails to remove extreme values.

Participants in single adult households were not included in the model and were given a non-response weight \( (w_5) \) of 1.

### 7.2.6 Combining the weights

The interview weights for the core sample of adults and children were then calculated as:

\[
wt_{int} = wt_{hhld} \times w_5 \quad \text{for adults;} \quad \text{and} \\
wt_{int} = wt_{hhld} \times w_5 \times w_4 \quad \text{for children.}
\]

The interview weights for all responding adults and children were re-scaled so that the weighted core sample size is the same as the achieved core sample size, for adults and children separately. Therefore, the final interview weights adjust for selection, non-response and population profile for all those interviewed.
7.2.7 Nurse visit weights

Not all those interviewed go on to have a nurse visit, and further non-response bias may be introduced. For data relating to nurse visits, two logistic regression models, weighted by wt_int, were fitted, one for children and the other for adults. The outcome variable was whether or not a nurse visit was undertaken, with the following as covariates: age group by sex, household type, GOR, social class of HRP, smoking status (for adults), and general health.

The weights for non-response to the nurse visit (\(w_n\)) were calculated as the reciprocal of the predicted probability of a nurse visit being undertaken, estimated from the regression models.

The weights were trimmed at the 1% tails to remove extreme values; this was done separately for adults and children. The weights for the nurse visit sample were calculated as \(wt\_nurse = wt\_int \times w_n\). These weights were re-scaled so that the weighted sample size for the nurse visit is the same as the achieved sample size. They adjust for selection, non-response and population profile for the sample that receives the nurse visit.

7.2.8 Blood weights

All adults that had a nurse visit were eligible to have a sample of blood taken, but not all those eligible agreed or were able to do so. A logistic regression model, weighted by wt_nurse, was fitted with the outcome variable whether or not a usable blood sample was obtained and the following were included as covariates: age group by sex; household type; GOR; social class of HRP; smoking status and general health.

The weights for non-participation for giving a blood sample (\(w_b\)) were calculated as the reciprocal of the predicted probability of blood being obtained, estimated from the regression models.

The weights were trimmed at the 1% tails to remove extreme values. The weights for the blood sample were calculated as \(wt\_blood = wt\_nurse \times w_b\). These weights were re-scaled so that the weighted blood sample size was the same as the achieved sample size.

7.2.9 Cotinine weights

All adults and children aged 4-15 that had a nurse visit were eligible to have a sample of saliva taken, but not all gave a valid sample. Two logistic regression models, weighted by wt_nurse, were fitted; one for adults and one for children. The outcome variable was whether or not a usable saliva sample was obtained and the following were used as covariates: age group by sex; household type; GOR; social class of HRP; smoking status and general health.

The weights for non-participation for the saliva sample (\(w_s\)) were calculated as the reciprocal of the predicted probability of a saliva sample being obtained, estimated from the regression models.

The weights were trimmed at the 1% tails to remove extreme values, this was done separately for adults and children. The weights for the saliva sample were calculated as \(wt\_cotinine = wt\_nurse \times w_s\). These weights were re-scaled so that the weighted cotinine sample size is the same as the achieved sample size.

7.2.10 Accelerometer weights (core sample)

Only respondents in a sub-sample of the selected core addresses were eligible to be selected to wear an accelerometer. Household weights for the accelerometer sample were generated by repeating the weighting steps in Sections 7.2.1 to 7.2.3, but only on those households that were eligible for accelerometry. This generated an additional set of calibration weights (\(wt\_hhld\_acc\)) which adjust for dwelling unit and household selection, and for the age/sex and region profiles of participating households selected for the accelerometer sample.
Within the selected households, selection weights \( (w_s) \) were calculated to correct for the selection of two respondents (either two adults in households with no children, or one adult and one child in households with children).

Calibration weighting was used to generate the weights that could be used to analyse the interview data, nurse data and blood and cotinine data for the accelerometer sample. This was done separately for adults and children, and the accelerometer subsamples were weighted to the same totals as the full sample (as described in sections 7.2.4 to 7.2.9). For adults the initial weights \( (w_{hhld\_acc} \times w_s) \) were calibrated to age group by sex, household type, GOR, social class of HRP, smoking status and general health. For children, the equivalent initial weights were calibrated to age group, sex and GOR.

The adult and child calibration weights were then scaled and combined for the interview data, nurse data and cotinine data (only adults had blood weights, as blood samples were not taken from children). This gave the accelerometer weights for:

- The interview sample \( (wt\_int\_acc) \)
- The nurse visit sample \( (wt\_nurse\_acc) \)
- The blood sample \( (wt\_blood\_acc) \) and
- The cotinine sample \( (wt\_cot\_acc) \).

### 7.3 Child sample weights combining general population and boost sample

#### 7.3.1 Background

The child sample is defined as all children aged 0-15 from the core sample and all children aged 2-15 from the boost sample addresses. The weighting approach for this child sample is different from that used for children in the core sample (described in Section 7.2.4). This different approach is needed because no household information is obtained for the many households in the boost sample that are screened out once it is established that no children live there. This means there is no population data to weight to.

There are several stages in generating the weights for the child sample: selection weights for the dwelling unit/household, selection weights for the children in the household, and calibration weighting to adjust the profile of the achieved sample.

#### 7.3.2 Dwelling unit / household selection weights

The combined weights for the selection of dwelling units and households \( (w_i) \) were generated in the same way for the child boost sample as for the core sample (see Sections 7.2.1 and 7.2.2).

#### 7.3.3 Child selection weights

At participating households with three or more eligible children, two were selected at random. For the boost sample households this meant selecting two children aged 2-15; at core sample households, two children aged 0-15 were selected.

In order that children in larger households were not under-represented in the sample, selection weights were calculated as the number of eligible children within the household divided by the number of eligible children selected \( (w_j) \). These weights were trimmed at 3 to avoid any large weights. Unlike the core sample weights, the age/sex profile of the achieved sample was not adjusted (see Section 7.2.4); this was because calibration weighting was used to correct the age and sex profile of children (see Section 7.3.4).

#### 7.3.4 Calibration weights for children

The achieved sample of children was calibrated to generate weights so that the (weighted) distributions for age/sex groups and GOR matched ONS 2007 mid-year population estimates (Tables I and J). The combined dwelling unit/household and child selection weights \( (w_i \times w_j) \) were used as initial values when generating the calibration weights \( (w_3) \).
The aim of the calibration weighting was to reduce non-response bias resulting from differential non-response at the individual interview stage, and includes adjustment for the fact that children aged 0-1 are only included in the core sample. The calibration weights generated \( (w_3) \) were re-scaled so that the weighted sample size is the same as the achieved sample size. This gave the final weight for the child sample: \( w_{\text{t}_\text{child}} \).

There were nurse visits and saliva samples for children at core addresses although not at boost addresses. Therefore, additional weights were not required for nurse visits and saliva samples for children; those derived for the core sample should be used (see sections 7.2.7 and 7.2.8).

### 7.3.5 Child accelerometer weights combining general population and boost sample

The child accelerometer sample is defined as all children aged 4-15 from core and boost sample addresses who provided usable data from an accelerometer. The weighting approach for the child accelerometer sample is the same as that used for the child sample (described in Section 7.3.1).

There are a number of stages in generating the weights for the child accelerometer sample. The first stage was to generate weights for the selection of dwelling units and households \( (w_1) \); these were generated in the same way as for the core sample (see Sections 7.2.1 and 7.2.2).

The second stage was to generate weights for the selection of eligible children in the household. At participating boost sample households with one or two children aged 2-15, each child was selected, while at households with three or more children aged 2-15, two children were selected at random for inclusion in the survey. Selected children were automatically included in the accelerometer sample if they were aged four or over. At participating core households with three or more children aged 0-15, two children were selected at random. One child aged 4-15 was selected at random from the participating children for the accelerometer sample.
In order that children in larger households were not under-represented in the sample, selection weights were calculated as the number of eligible children within the household divided by the number of eligible children selected for the accelerometer \((w_2)\). These weights were trimmed at 3 to avoid any large weights.

The final stage was calibration weighting to adjust the profile of the achieved sample. The achieved sample of children was calibrated to generate weights so that the (weighted) distributions for age/sex groups and GOR matched ONS 2007 mid-year population estimates for children aged 4-15 years (Tables K and L). The combined dwelling unit/household and child selection weights \((w_1 \times w_2)\) were used as initial values when generating the calibration weights \((w_3)\).

The aim of the calibration weighting was to reduce non-response bias resulting from differential non-response to using the accelerometer. The calibration weights generated \((w_3)\) were re-scaled so that the weighted sample size is the same as the achieved sample size. This gave the final weight for the child sample: \(w_{\text{acc\_ch}}\).

<table>
<thead>
<tr>
<th>Table K</th>
<th>2007 ONS mid-year population estimates, by age and sex</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boys</strong></td>
<td></td>
</tr>
<tr>
<td>4-5</td>
<td>581,189 8.1</td>
</tr>
<tr>
<td>6-7</td>
<td>576,009 8.0</td>
</tr>
<tr>
<td>8-9</td>
<td>604,458 8.4</td>
</tr>
<tr>
<td>10-11</td>
<td>624,173 8.7</td>
</tr>
<tr>
<td>12-13</td>
<td>634,884 8.8</td>
</tr>
<tr>
<td>14-15</td>
<td>662,927 9.2</td>
</tr>
<tr>
<td><strong>Girls</strong></td>
<td></td>
</tr>
<tr>
<td>4-5</td>
<td>553,032 7.7</td>
</tr>
<tr>
<td>6-7</td>
<td>551,508 7.7</td>
</tr>
<tr>
<td>8-9</td>
<td>578,731 8.0</td>
</tr>
<tr>
<td>10-11</td>
<td>596,898 8.3</td>
</tr>
<tr>
<td>12-13</td>
<td>602,513 8.4</td>
</tr>
<tr>
<td>14-15</td>
<td>626,722 8.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7,193,044 100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table L</th>
<th>2007 ONS mid-year population estimates by Government Office Region</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boys</strong></td>
<td></td>
</tr>
<tr>
<td>North East</td>
<td>350,763 4.9</td>
</tr>
<tr>
<td>North West</td>
<td>982,468 13.7</td>
</tr>
<tr>
<td>Yorkshire and the Humber</td>
<td>729,235 10.1</td>
</tr>
<tr>
<td>East Midlands</td>
<td>616,084 8.6</td>
</tr>
<tr>
<td>West Midlands</td>
<td>786,112 10.9</td>
</tr>
<tr>
<td>East of England</td>
<td>811,936 11.3</td>
</tr>
<tr>
<td>London</td>
<td>1,019,617 14.2</td>
</tr>
<tr>
<td>South East</td>
<td>1,194,029 16.6</td>
</tr>
<tr>
<td>South West</td>
<td>702,800 9.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7,193,044 100</td>
</tr>
</tbody>
</table>

There were no nurse visits or saliva samples for children at boost addresses, therefore additional weights were not required for nurse visits and saliva samples for the combined child accelerometer sample; those derived for the core sample should be used (see sections 7.2.10).

8 Data analysis and reporting

8.1 Introduction

The HSE is a cross-sectional survey of the population. It examines associations between health states, personal characteristics and behaviour. However, such associations do not necessarily imply causality. In particular, associations between current health states and current behaviour need careful interpretation, as current health may reflect past, rather than present, behaviour. Similarly, current behaviour may be influenced by advice or treatment for particular health conditions.
8.2 Weighted and unweighted data and bases in the report tables

Non-response weighting was introduced to the HSE in 2003, and has been used in all subsequent years. All 2008 data in this report are weighted. Both weighted and unweighted bases are given in each table in the report. The unweighted bases show the number of participants involved. The weighted bases show the relative sizes of the various sample elements after weighting, reflecting their proportions in the English population, so that data from different columns can be combined in their correct proportions. The absolute size of the weighted bases has no particular significance, since they have been scaled to the achieved sample size.

Children’s data each year have been weighted to adjust for the probability of selection, since a maximum of two children are selected in each household (see section 7.2.4 and 7.3.3). This ensures that children from larger households are not under-represented. Since 2003, as for adults, non-response weighting has also been applied. A full discussion of the effects of non-response weighting can be found in the 2003 HSE report, Volume 3, Methodology and Documentation.

In this report, most chapters focus on 2008 results. Trend data on key measures can be found in Health Survey for England – 2008 Trend Tables on The NHS Information Centre website.

8.3 Reporting age variables

8.3.1 Defining age for data collection

Some sections of the data collected in the HSE 2008 are age specific, with different questions directed to different age groups. The participant’s date of birth was ascertained. For data collection purposes, a participant’s age was defined as their age on their last birthday before the interview. The nurse, who visited later, treated the participant as being of the same age as at the interview, even if he or she had an intervening birthday.

8.3.2 Age as an analysis variable

Age is a continuous variable, and an exact age variable on the data file expresses it as such (so that, for example, someone whose 24th birthday was on January 1 2008 and was interviewed on October 1 2008 would be classified as being aged 24.75 or 24¾).

The presentation of tabular data involves categorising the sample into year bands. This can be done in two ways, age at last birthday and ‘rounded age’, that is, rounded to the nearest integer. In the present report all references to age are age at last birthday.

8.3.3 Age standardisation

Adult data have been age-standardised throughout the 2008 report to allow comparisons between groups after adjusting for the effects of any differences in their age distributions. When different sub-groups are compared in respect of a variable on which age has an important influence, any differences in age distributions between these sub-groups are likely to affect the observed differences in the proportions of interest.

It should be noted that all analyses in the report are presented separately for men and women. All age standardisation has been undertaken separately within each sex, expressing male data to the overall male population and female data to the overall female population. When comparing data for the two sexes, it should be remembered that no age standardisation has been introduced to remove the effects of the sexes’ different age distributions.

Age standardisation was carried out using the direct standardisation method. The standard population to which the age distribution of sub-groups was adjusted was the mid-year 2007 population estimates for England. The age-standardised proportion \( p \) was calculated as
follows, where \( p_i \) is the age specific proportion in age group \( i \) and \( N_i \) is the standard population size in age group \( i \):

\[
p' = \frac{\sum_i N_i p_i}{\sum_i N_i}
\]

Therefore \( p' \) can be viewed as a weighted mean of \( p_i \) using the weights \( N_i \). Age standardisation was carried out using the age groups 16-24, 25-34, 35-44, 45-54, 55-64, 65-74 and 75 and over. The variance of the standardised proportion can be estimated by:

\[
\text{var}(p') = \frac{\sum_i (N_i p_i q_i / n_i)}{(\sum_i N_i)^2}
\]

where \( q_i = 1 - p_i \), and \( n_i \) is the sample number in age-sex group \( i \).

### 8.4 Standard analysis breakdowns

For most tables in this report, three standard analysis breakdowns have been used as well as age. The first of these is Strategic Health Authority (SHA), the second is equivalised household income, and the third is Spearhead status.

#### 8.4.1 Strategic Health Authority

From July 2006 a new configuration of Strategic Health Authorities (SHAs) was introduced in England, reducing the number from 28 to 10 SHAs. (The boundaries are the same as those of Government Office Regions with the exception of South East Coast SHA and South Central SHA, which are combined into the South East GOR.)

Both observed and age-standardised data are provided by SHA in the tables. Observed data can be used to examine actual prevalence or mean values within a region; age-standardised data are required for comparisons between areas to exclude age-related effects, and are discussed in the report text.

It should be noted that base sizes for SHAs are often relatively small, and caution should be exercised in examining regional differences.

#### 8.4.2 Equivalised household income

The second standard breakdown looks at equivalised household income. Household income was established by means of a show-card (see Appendix A) on which banded incomes were presented. This can be used as an analysis variable, but there has been increasing interest recently in using measures of equivalised income that adjust income to take account of the number of persons in the household. To derive this, each household member is given a score based, for adults, on the number of adults apart from the household reference person, and for dependent children, on their age. The total household income is divided by the sum of the scores to provide the measure of equivalised household income. All individuals in each household were allocated to the equivalised household income quintile to which their household had been allocated.

Further details about equivalised household income are given in the Glossary at the back of this volume.

#### 8.4.3 Spearhead status

Spearhead PCTs are the most health deprived areas of England. They are defined as the Local Authority (LA) areas that are in the bottom fifth nationally for three or more of the following five indicators:

- Male life expectancy at birth
- Female life expectancy at birth
- Cancer mortality rate in those aged under 75
• Cardiovascular disease (CVD) mortality rate in those aged under 75
• Index of multiple deprivation 2004 (LA summary), average score.

These local authority areas have been mapped onto primary care trust boundaries to identify Spearhead PCTs. This report uses Spearhead status as designated in 2008.

8.5 Logistic regression analysis

Logistic regression modelling has been used in two chapters to examine the factors associated with selected outcome variables, after adjusting for other predictors. For instance in Volume 1, Chapter 4, regression analyses have been performed to examine the association between lack of cardiovascular fitness (the outcome variable), and a variety of predictor variables including age, participants’ self-reported and objectively measured physical activity, BMI status and income. Forward stepwise models have been used for men and women separately. A wide range of possible predictor variables were tested in each model, and any that were significant among men or women were included in the final model in both sexes, as is customary practice in HSE reports. This gives an estimate of the independent effect of each predictor variable on the outcome when all the other independent variables were included in the model.

The results of the regression analyses are presented in tables showing odds ratios for the final models, together with the probability that the association is statistically significant. The predictor variable is significantly associated with the outcome variable if \( p < 0.05 \). The models show the odds of being in the particular category of the outcome variable (i.e. lacking fitness) for each category of the independent variable (e.g. whether overweight or obese). Odds are expressed relative to a reference category, which has a given value of 1. Odds ratios greater than 1 indicate higher odds, and odds ratios less than 1 indicate lower odds. Also shown are the 95% confidence intervals for the odds ratios. Where the interval does not include 1, this category is significantly different from the reference category.

Missing values were included in the analyses, that is, people were included even if they did not have a valid answer, score or classification in one or more of the explanatory variables. Where this was a large number of people, the missing values were included as a separate category (e.g. income), and where there were few records with a missing value, these individuals were included with the category containing the largest number of participants (e.g. current smokers).

8.6 Design effects and true standard errors

The HSE 2008 used a clustered, stratified multi-stage sample design. In addition, weights were applied when obtaining survey estimates. One of the effects of using the complex design and weighting is that standard errors for survey estimates are generally higher than the standard errors that would be derived from an unweighted simple random sample of the same size. The calculations of standard errors shown in tables, and comments on statistical significance throughout the report, have taken the clustering, stratification and weighting into account.

The ratio of the standard error of the complex sample to that of a simple random sample of the same size is known as the design factor. Put another way, the design factor (or ‘deft’) is the factor by which the standard error of an estimate from a simple random sample has to be multiplied to give the true standard error of the complex design.

The true standard errors and defts for the HSE 2008 have been calculated using a Taylor Series expansion method. The deft values and true standard errors (which are themselves estimates subject to random sampling error) are shown in Tables 14-30 for selected survey estimates presented in the topic chapters.
9 Quality control of blood and saliva analytes

9.1 Introduction and key conclusions

This section describes the assay of analytes for HSE 2008 biological samples and the quality control and quality assessment procedures that were carried out during the survey period. Details of procedures used in the collection, processing and transportation of the specimens are described in Appendix B.

The overall conclusion for the data provided in this chapter is that methods and equipment used for the measurement of blood and saliva analytes produced internal quality control (IQC) and external quality assessment (EQA) results within expected limits. The results of the analyses for each of the main blood analytes and saliva cotinine levels were acceptable for the 2008 Health Survey for England.

9.1.1 Analysing laboratories

As in previous years, the Royal Victoria Infirmary (RVI) in Newcastle upon Tyne was the analysing laboratory used in the Health Survey for England 2008 for the blood sample analyses. Salivary cotinine analysis for the 2008 Health Survey for England was conducted by ABS Laboratories, now in Welwyn Garden City, Hertfordshire.

9.1.2 Samples collected

Non-fasting blood samples

Following written consent from eligible participants, non-fasting blood samples were collected for adults aged 16 and over into two tubes (6ml plain and 4ml EDTA). The order of priority for collecting samples was firstly into the 6ml plain tube (no anticoagulant) followed by the 4ml EDTA (ethylene diamine tetra-acetic acid) tube. After collection, the tubes were despatched to the Department of Clinical Biochemistry at RVI which acted as the co-ordinating department for transport of samples to the individual departments undertaking the analyses.

Samples collected in the 6ml plain tube for serum

Samples in the plain tube were used for analysis of total cholesterol, and high density lipid (HDL)-cholesterol. If written consent was given by the participant, a minimum of 0.5ml of the remaining serum was stored in a freezer at -40°C (± 5°C) for possible future analysis.

Samples collected in the 4ml EDTA tube

Samples in the EDTA tube were used for the glycated haemoglobin analyses. If written consent was given by the participant, approximately 1ml of whole EDTA blood was processed for storage (unseparated) in a freezer at -20°C (± 5°C) for possible future analysis.

Saliva

A saliva sample was obtained from participants aged four and over from the core sample only; children in the boost sample were not offered a nurse visit. Saliva samples were collected for analysis of cotinine (a metabolite of nicotine that shows recent exposure to tobacco smoke). A saliva collection tube was used for this purpose.

9.2 Method

9.2.1 Laboratory procedures

All analyses were carried out according to Standard Operating Procedures by State Registered Biomedical Scientists (BMS) under the supervision of the Senior BMS. All results were routinely checked by the duty Biochemist and highly abnormal results were
immediately notified to the Survey Doctor. The Survey Doctor notified and advised the participant and, where prior consent had been obtained, their general practitioner as appropriate.

A schedule of Planned Preventative Maintenance was used for each item of analytical equipment. These plans were carried out jointly by the manufacturers and the laboratories. Records were kept of when maintenance was due and carried out.

Table 31 shows reference ranges used for each of the blood analytes measured in the 2008 Health Survey for England. Values within these reference ranges were considered to be clinically ‘normal’ while those outside were treated as clinically ‘abnormal’ (either too high or too low). For total and HDL-cholesterol, where a large proportion of the population have values which are statistically within the normal distribution but are not ideal for good health, the term ‘desirable’ rather than ‘normal’ was used when results were sent to participants and/or their GP. There are no reference ranges for saliva cotinine.

### 9.2.2 Blood samples analytical methods and equipment

#### Total cholesterol

Measurement of total cholesterol was carried out in the Biochemistry Department at the RVI using a Cholesterol Oxidase assay method on an Olympus 640 analyser calibrated to the Centre for Disease Control (CDC) guidelines.

#### HDL-cholesterol

HDL-cholesterol analysis was carried out in the Biochemistry Department at the RVI using a direct method (no precipitation) on an Olympus 640 analyser.

#### Glycated haemoglobin

Total glycated haemoglobin (HbA1c) was carried out in the Biochemistry Department at the RVI using the Tosoh G7 analyser, which was calibrated using Diabetes Control and Complications Trial (DCCT) standards.

### 9.2.3 Saliva sample

#### Cotinine

Saliva samples received at the RVI were checked for correct identification, assigned a laboratory accession number, and stored at 4°C. Samples were checked for details and despatched weekly in polythene bags (20 samples per bag) by courier for overnight delivery to ABS Laboratories, where cotinine analysis was carried out. This laboratory specialises in accurate measurement of low levels and therefore takes special precautions to ensure no contamination by environmental tobacco smoke occurs.

At the beginning of 2008, the same method of analysis as in previous years was undertaken, a specific assay using liquid extraction and gas chromatography with nitrogen phosphorous detection (the technique known as GC-NPD). Part way through the year, a new method was introduced using high performance liquid chromatography coupled to tandem mass spectrometry with multiple reaction monitoring (LC-MS/MS). The Tomtec Quadra was used with the LC-MS/MS to allow for the automation of some of the sample preparation, where volume of reagents was non-critical; this was validated before use.

To ensure that the LC-MS/MS technique provided results which were comparable with the old GC-NPD method, these two techniques were cross-validated. This involved the analysis of previously analysed samples from more than one study using both techniques. As the results obtained for individual samples from both techniques were within ±30% of each other (equivalent to a coefficient of variation of ±15% for mean values, the quality control standard), this showed that both analytical techniques produce similar results. Therefore either method can be used to produce cotinine results, and the results from the two methods are interchangeable. In addition the samples supplied from the latest International inter-laboratory study were also analysed on both methods.
One benefit of the LC-MS/MS assay is that it is less prone to non-specific interference when assaying low levels of cotinine as seen due to passive smoking, and so is preferable for samples from non-smokers. Under the previous method, some saliva samples were too contaminated to allow accurate measurement of low cotinine levels, whereas with LC-MS/MS fewer samples do not yield results. Therefore, once cross-validation was complete, samples from smokers were assayed either by GC-NPD or LC-MS/MS depending on the availability of equipment and the number of samples to be analysed, while samples from non-smokers were assayed solely by LC-MS/MS.

Initially the LC-MS/MS method used a low range of assays from 0.1 to 100ng/mL, with samples for smokers being re-assayed using the original GC-NPD method. Later in the year, a high calibration range was introduced for the LC-MS/MS method, first measuring from 1 to 1,000ng/mL, and later adjusted to measure from 10 to 1,000ng/mL.

Analyses of cotinine were suspended between April and August 2008 while the laboratory moved premises.

9.3 Internal quality control (IQC)

The purpose of internal quality control (IQC) is to ensure reliability of an analytical run. IQC also helps to identify, and prevent the release of, any errors in an analytical run. IQC is also used to monitor trends over time.

For each analyte or group of analytes, the laboratory obtains a supply of quality control materials, usually at more than one concentration of analyte. Target (mean) values and target standard deviations (SD) are assigned for each analyte. Target assignment includes evaluation of values obtained by the laboratory from replicate measurements (over several runs) in conjunction with target values provided by manufacturers of IQC materials, if available. The standard deviation and the coefficient of variation (CV) are measures of imprecision and are presented here. Internal QC values are assessed against an acceptable range and samples are re-analysed if any of the Westgard rules have been violated.26,27,28

9.3.1 Non-fasting blood sample

Total cholesterol

Low, Medium and High control materials are assayed at 2 hourly intervals. Table 32 shows the monthly IQC results for total cholesterol.

HDL-cholesterol

Low, Medium, and High control materials are assayed at 2 hourly intervals. Table 33 shows the monthly IQC results for HDL-cholesterol.

Glycated Haemoglobin (HbA1c)

The analytical methods used for glycated haemoglobin measurement in the United Kingdom are required to be traceable to the work carried out on the DCCT part of the National Glycohemoglobin Standardisation Program (NGSP) in the USA. The Secondary Reference Laboratory (SRL) in the University of Minnesota was the main analytical laboratory for the DCCT work. The IQC results for Glycated Haemoglobin are DCCT standardised. Table 34 shows the monthly IQC results for glycated haemoglobin.

9.3.2 Saliva sample

Cotinine

For the results using the old GC-NPD technique, ABS Laboratories ran eight ICQ samples at six levels with each analytical batch of samples. For the results from any analytical batch to be acceptable, six out of the eight IQCs must have a bias of no greater than 15%. For the results using the new LC-MS/MS technique, 16 non-zero calibration standards were run for each batch of the low range assay (0.1-100ng/ml), and 12 for the high range assay (10-
Six Quality Control Samples, two each at a set concentration, to represent Low, Medium and High levels for the calibration range being used, were also analysed with each analytical batch. For the results from any analytical batch to be acceptable, four out of the six QCs must have a bias of no greater than ±15% with at least one from each QC level being within these acceptance criteria, and 75% of the calibration standards must have a bias of no greater than ±15% except at the lower limit of quantification where the bias must be no greater than ±20%. A summary of these monthly results for six levels of cotinine is presented in tables 35-37.

### 9.4 External quality assessment (EQA)

External quality assessment (EQA) permits comparison of results between laboratories measuring the same analyte. An EQA scheme for an analyte or group of analytes distributes aliquots of the same samples to participating laboratories, which are blind to the concentration of the analytes. The usual practice is to participate in a scheme for a full year during which samples are distributed at regular frequency (monthly or bimonthly for example); the number of samples in each distribution and the frequency differ between schemes. The samples contain varying concentrations of analytes. The same samples may or may not be distributed more than once.

Samples are assayed shortly after they arrive at the laboratory. Depending on the frequency of distribution, there may be weeks or months in which no EQA samples are analysed. Results are returned to the scheme organisers, who issue a laboratory specific report giving at least the following data:

- Mean values, usually for all methods and for method groups;
- A measure of the between-laboratory precision;
- The bias of the results obtained by that laboratory.

EQA is a retrospective process of assessment of performance, particularly of inaccuracy or bias with respect to mean values; unlike IQC, it does not provide control of release of results at the time of analysis.

The United Kingdom National External Quality Assessment Schemes (UKNEQAS) is a network of EQA schemes run by UK clinical laboratories. The Welsh External Quality Assessment Schemes (WEQAS), the Coulter Interlaboratory QA programme, National External Quality Assessment Scheme for Haematology, The Cambridge External Quality Assessment Schemes (EQAS) and the Central Quality Assessment Schemes (QAS) are all schemes in which the laboratories participate on a routine basis. RIQAS is an EQA scheme run by Randox Laboratories.

Each of the figures presented in Tables 38-40 corresponds with an individual EQA sample.

#### 9.4.1 Non-fasting blood sample

##### Total cholesterol

The Clinical Biochemistry laboratory participates in UKNEQAS and WEQAS schemes. Table 38 shows the monthly EQA results for total cholesterol. The target and achieved values are shown.

| Table 38 |

##### HDL-cholesterol

The Clinical Biochemistry laboratory participates in the WEQAS scheme. Table 39 shows the monthly EQA results for HDL-cholesterol. The target and achieved values are shown.

| Table 39 |

##### Glycated Haemoglobin

Table 40 shows the monthly external quality assessment results for glycated haemoglobin. The target and achieved values are shown. In October 2008, no assayed values are shown, as there was unusual chromatography; these samples contained variant haemoglobins which may or may not have interfered with the quantification of the glycated haemoglobin.

| Table 40 |
9.4.2 Saliva sample

Cotinine

There was no external quality control scheme available in 2008 to analyse cotinine but ABS Laboratories participates in inter-laboratory split analyses to ensure comparable results. The latest International inter-laboratory study was performed in 2008 and has been accepted for publication.25

References and notes

9 Metabolic syndrome is a combination of medical disorders that increase the risk of developing cardiovascular disease and diabetes. The disorders include central obesity, abnormal fat levels in the blood which can lead to arteriosclerosis (fatty plaques) on the walls of blood vessels, high blood pressure and insulin resistance or glucose intolerance.
14 http://www.data-archive.ac.uk/
15 http://www.ic.nhs.uk/pubs/hse08trends
16 The household reference person (HRP) is defined as the householder (the person in whose name the property is owned or rented); if there is more than one, the person with the highest income. If there are two householders with equal income, then the household reference person is the oldest.
17 No urine samples were collected in 2008. However, they are collected in most years and the general nurse training includes the protocol for this.
18 Mid-2007 population estimates, the most recent available at the time of weighting the sample, were obtained from: http://www.statistics.gov.uk/statbase/Product.asp?vlnk=15106
20 A Kish grid is a framework to ensure that the dwelling unit is selected without interviewer bias. The number of dwelling units is listed across the top of the grid, with a random number below to indicate which dwelling unit should be selected.
21 The household types used for the weighting were:
  One adult aged 16-59, no children
  Two adults, both 16-59, no children
  One adult, aged 60 or over, no children
  Two adults, one or both aged 60 or over, no children
  Small family: one or two adults with one or two children
  Large family: one or two adults with three or more children, or three or more adults with two children
  Large adult household: three or more adults with one child or no children.
22 In the adult trend tables, unweighted bases are provided for years up to 2002, and weighted bases for 2003 onwards (the year from which non-response weighting was introduced). In the children’s trend tables, for years up to 2002 weighted bases are shown, adjusted for probability of selection (since a maximum of two children per household is selected); from 2003 weighted bases are shown corrected for selection and non-response.


26 Westgard rules are a statistical approach to evaluation of day-to-day analytical performance. The Westgard multirule quality control procedure uses five different control rules to judge the acceptability of an analytical run (rather than the single criterion or single set of control limits used by single-rule quality control systems, such as a Levey-Jennings chart with control limits set as either the mean plus or minus 2 standard deviations or the mean plus or minus 3 standard deviations). Westgard rules are generally used with two or four control measurements per run. This means they are appropriate when two different control materials are measured once or twice per material, which is the case in many chemistry applications. Some alternative control rules are more suitable when three control materials are analyzed, which is common for applications in haematology. More detail is available at www.westgard.com/mtrule.htm#westgard.


<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Household response, by sample type and calendar quarter</td>
</tr>
<tr>
<td>2</td>
<td>Household response, by sample type and Strategic Health Authority</td>
</tr>
<tr>
<td>3</td>
<td>General population sample: Household response, by dwelling type</td>
</tr>
<tr>
<td>4</td>
<td>General population sample: Summary of adults’ individual response to the survey, by sex</td>
</tr>
<tr>
<td>5</td>
<td>General population sample: Summary of children’s individual response to the survey, by sex</td>
</tr>
<tr>
<td>6</td>
<td>General population sample: Men in co-operating households, response to the stages of the survey, by age</td>
</tr>
<tr>
<td>7</td>
<td>General population sample: Women in co-operating households, response to the stages of the survey, by age</td>
</tr>
<tr>
<td>8</td>
<td>General population sample: Boys in co-operating households, response to the stages of the survey, by age</td>
</tr>
<tr>
<td>9</td>
<td>General population sample: Girls in co-operating households, response to the stages of the survey, by age</td>
</tr>
<tr>
<td>10</td>
<td>Combined general population and boost sample: Boys in co-operating households, response to the stages of the survey, by age</td>
</tr>
<tr>
<td>11</td>
<td>Combined general population and boost sample: Girls in co-operating households, response to the stages of the survey, by age</td>
</tr>
<tr>
<td>12</td>
<td>General population sample: Age distribution of responding adult sample compared with mid-2007 population estimates for England, by sex</td>
</tr>
<tr>
<td>13</td>
<td>General population sample: Age distribution of responding child sample compared with mid-2007 population estimates for England, by sex</td>
</tr>
<tr>
<td>14</td>
<td>True standard errors and 95% confidence intervals for adult self-reported summary activity levels</td>
</tr>
<tr>
<td>15</td>
<td>True standard errors and 95% confidence intervals for adult objective summary activity levels</td>
</tr>
<tr>
<td>16</td>
<td>True standard errors and 95% confidence intervals for adult physical fitness levels</td>
</tr>
<tr>
<td>17</td>
<td>True standard errors and 95% confidence intervals for adult Body Mass Index (BMI), underweight, overweight and obesity prevalence</td>
</tr>
<tr>
<td>18</td>
<td>True standard errors and 95% confidence intervals for hypertension categories</td>
</tr>
<tr>
<td>19</td>
<td>True standard errors and 95% confidence intervals for adult blood analytes</td>
</tr>
<tr>
<td>20</td>
<td>True standard errors and 95% confidence intervals for adult fruit and vegetable consumption</td>
</tr>
<tr>
<td>21</td>
<td>True standard errors and 95% confidence intervals for adult cigarette smoking status</td>
</tr>
<tr>
<td>22</td>
<td>True standard errors and 95% confidence intervals for adult saliva cotinine levels</td>
</tr>
<tr>
<td>23</td>
<td>True standard errors and 95% confidence intervals for adult maximum alcohol consumption on any day in the last week</td>
</tr>
<tr>
<td>24</td>
<td>True standard errors and 95% confidence intervals for children’s self-reported summary activity levels</td>
</tr>
<tr>
<td>25</td>
<td>True standard errors and 95% confidence intervals for children’s objective summary activity levels</td>
</tr>
<tr>
<td>26</td>
<td>True standard errors and 95% confidence intervals for children’s BMI and BMI status</td>
</tr>
<tr>
<td>27</td>
<td>True standard errors and 95% confidence intervals for children’s fruit and vegetable consumption</td>
</tr>
<tr>
<td>28</td>
<td>True standard errors and 95% confidence intervals for children’s self-reported cigarette smoking status</td>
</tr>
<tr>
<td>29</td>
<td>True standard errors and 95% confidence intervals for children’s saliva cotinine levels</td>
</tr>
<tr>
<td>30</td>
<td>True standard errors and 95% confidence intervals for children’s self-reported experience of alcohol</td>
</tr>
<tr>
<td>31</td>
<td>Reference intervals for blood analytes</td>
</tr>
<tr>
<td>32</td>
<td>Internal quality control results for total cholesterol</td>
</tr>
<tr>
<td>33</td>
<td>Internal quality control results for HDL cholesterol</td>
</tr>
</tbody>
</table>
34 Internal quality control results for glycated haemoglobin (HbA1c)

35 Internal quality control results for saliva cotinine – Gas Chromatography (old method)

36 Internal quality control results for saliva cotinine – LC-MS/MS (new method), low calibration range

37 Internal quality control results for saliva cotinine – LC-MS/MS (new method), high calibration range

38 External quality assessment results for total cholesterol

39 External quality assessment results for HDL cholesterol

40 External quality assessment results for glycated haemoglobin (HbA1c)
### Table 1

#### Household response, by sample type and calendar quarter

<table>
<thead>
<tr>
<th>Address and household outcome</th>
<th>Survey quarter</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan-Mar</td>
<td>Apr-Jun</td>
</tr>
<tr>
<td><strong>General population sample</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected addresses</td>
<td>4014</td>
<td>4014</td>
</tr>
<tr>
<td>Ineligible addresses – type a(^a)</td>
<td>466</td>
<td>456</td>
</tr>
<tr>
<td>Addresses at which interview sought</td>
<td>3548</td>
<td>3558</td>
</tr>
<tr>
<td>Extra households sampled at multi-household addresses</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total eligible households</td>
<td>3549</td>
<td>3559</td>
</tr>
<tr>
<td><strong>Household response</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-operating households(^b)</td>
<td>2235</td>
<td>63</td>
</tr>
<tr>
<td>All interviewed</td>
<td>1869</td>
<td>53</td>
</tr>
<tr>
<td>Fully co-operating(^c)</td>
<td>1459</td>
<td>41</td>
</tr>
<tr>
<td>Non-responding households</td>
<td>1314</td>
<td>37</td>
</tr>
<tr>
<td>Non-contact/unknown eligibility</td>
<td>110</td>
<td>3</td>
</tr>
<tr>
<td>Refusal</td>
<td>1118</td>
<td>32</td>
</tr>
<tr>
<td>Other non-response</td>
<td>86</td>
<td>2</td>
</tr>
<tr>
<td><strong>Boost sample</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected addresses</td>
<td>4851</td>
<td>4851</td>
</tr>
<tr>
<td>Ineligible addresses – type a(^a)</td>
<td>321</td>
<td>277</td>
</tr>
<tr>
<td>Ineligible addresses – type b(^d)</td>
<td>3567</td>
<td>3689</td>
</tr>
<tr>
<td>Addresses at which interview sought(^b)</td>
<td>963</td>
<td>885</td>
</tr>
<tr>
<td>Extra households sampled at multi-household addresses</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total eligible households</td>
<td>963</td>
<td>885</td>
</tr>
</tbody>
</table>

**Base: all eligible households**

| General population sample | 3549 | 3559 | 3539 | 3603 | 14250 |     |     |     |     |     |     |     |     |     |     |     |
| Boost sample               | 963 | 885 | 921 | 924 | 3693 |     |     |     |     |     |     |     |     |     |     |     |

\(^a\) Addresses where no private households were found.

\(^b\) Households where at least one person was interviewed.

\(^c\) All eligible household members were interviewed, had height and weight measured and agreed to a nurse visit.

\(^d\) Boost sample addresses where no persons aged 2-15 were found.

\(^e\) Includes 96 not screened but assumed to be eligible.

\(^f\) All eligible household members were interviewed, had height and weight measured but with no nurse visit.
## Table 2

### Household response, by sample type and Strategic Health Authority region

<table>
<thead>
<tr>
<th>Address and household outcome</th>
<th>Strategic Health Authority</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>North East</td>
<td>North West</td>
</tr>
<tr>
<td></td>
<td>N %</td>
<td>N %</td>
</tr>
<tr>
<td><strong>General population sample</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected addresses</td>
<td>816</td>
<td>2226</td>
</tr>
<tr>
<td>Ineligible addresses – type a</td>
<td>80</td>
<td>319</td>
</tr>
<tr>
<td>Addresses at which interview sought</td>
<td>736</td>
<td>1907</td>
</tr>
<tr>
<td>Extra households sampled at multi-household addresses</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total eligible households</td>
<td>736</td>
<td>1907</td>
</tr>
<tr>
<td><strong>Household response</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-operating households c</td>
<td>577</td>
<td>78</td>
</tr>
<tr>
<td>All interviewed</td>
<td>463</td>
<td>63</td>
</tr>
<tr>
<td>Fully co-operating d</td>
<td>369</td>
<td>50</td>
</tr>
<tr>
<td>Non-responding households</td>
<td>159</td>
<td>22</td>
</tr>
<tr>
<td>Non-contact/unknown eligibility</td>
<td>13</td>
<td>2</td>
</tr>
<tr>
<td>Refusal</td>
<td>142</td>
<td>19</td>
</tr>
<tr>
<td>Other non-response</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td><strong>Boost sample</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Selected addresses</td>
<td>986</td>
<td>2698</td>
</tr>
<tr>
<td>Ineligible addresses – type a</td>
<td>69</td>
<td>183</td>
</tr>
<tr>
<td>Ineligible addresses – type b</td>
<td>771</td>
<td>2002</td>
</tr>
<tr>
<td>Addresses at which interview sought f</td>
<td>146</td>
<td>513</td>
</tr>
<tr>
<td>Extra households sampled at multi-household addresses</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total eligible households</td>
<td>146</td>
<td>513</td>
</tr>
<tr>
<td><strong>Household response</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-operating households c</td>
<td>119</td>
<td>82</td>
</tr>
<tr>
<td>All interviewed</td>
<td>119</td>
<td>82</td>
</tr>
<tr>
<td>Fully co-operating d</td>
<td>106</td>
<td>73</td>
</tr>
<tr>
<td>Non-responding households</td>
<td>27</td>
<td>18</td>
</tr>
<tr>
<td>Non-contact/unknown eligibility</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Refusal</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>Other non-response</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

a This table provides data for regional analysis by the configuration of Strategic Health Authorities (SHAs) in place from July 2006.

b Addresses where no private households were found.

c Households where at least one person was interviewed.

d All eligible household members were interviewed, had height and weight measured and had a nurse visit.

e Boost sample addresses where no persons aged 2-15 were found.

f Includes 96 not screened but estimated as eligible.

g All eligible household members were interviewed, had height and weight measured but with no nurse visit.
### Table 3

**General population sample: Household response, by dwelling type**

<table>
<thead>
<tr>
<th>Household response</th>
<th>Dwelling type</th>
<th>Co-operating households</th>
<th>All interviewed</th>
<th>Fully co-operating</th>
<th>Non-responding households</th>
<th>Base: all eligible households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Detached house</td>
<td>Semi-detached house</td>
<td>Terraced house</td>
<td>Purpose built flat(^b) basement-3rd floor</td>
<td>Purpose built flat(^b) 4th floor or above</td>
<td>Converted flat/rooms(^a) in a house</td>
</tr>
<tr>
<td>Co-operating households(^c)</td>
<td>68</td>
<td>66</td>
<td>65</td>
<td>60</td>
<td>54</td>
<td>59</td>
</tr>
<tr>
<td>All interviewed</td>
<td>54</td>
<td>54</td>
<td>53</td>
<td>54</td>
<td>47</td>
<td>51</td>
</tr>
<tr>
<td>Fully co-operating(^d)</td>
<td>40</td>
<td>41</td>
<td>40</td>
<td>39</td>
<td>37</td>
<td>44</td>
</tr>
<tr>
<td>Non-responding households</td>
<td>32</td>
<td>34</td>
<td>35</td>
<td>40</td>
<td>46</td>
<td>41</td>
</tr>
</tbody>
</table>

Base: all eligible households: 3157 | 4251 | 4233 | 1662 | 383 | 377 | 77 | 14250

\(^a\) Includes maisonette.
\(^b\) Includes 110 households where type of dwelling not recorded.
\(^c\) Households where at least one person was interviewed.
\(^d\) All eligible household members were interviewed, had height and weight measured and had a nurse visit.

### Table 4

**General population sample: Summary of adults' individual response to the survey, by sex**

<table>
<thead>
<tr>
<th>Individual response</th>
<th>Men</th>
<th>Women</th>
<th>All adults</th>
<th>N</th>
<th>%</th>
<th>N</th>
<th>%</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewed</td>
<td>6760</td>
<td>55</td>
<td>8342</td>
<td>61</td>
<td>15102</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non responders:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In co-operating households</td>
<td>1351</td>
<td>11</td>
<td>685</td>
<td>5</td>
<td>2036</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In non-responding households</td>
<td>4227</td>
<td>34</td>
<td>4704</td>
<td>34</td>
<td>8931</td>
<td>34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saw nurse</td>
<td>4789</td>
<td>39</td>
<td>5951</td>
<td>43</td>
<td>10740</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responded to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-completion</td>
<td>6474</td>
<td>52</td>
<td>8118</td>
<td>59</td>
<td>14592</td>
<td>56</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>6055</td>
<td>49</td>
<td>7476</td>
<td>54</td>
<td>13531</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>5978</td>
<td>48</td>
<td>7161</td>
<td>52</td>
<td>13139</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waist/hip</td>
<td>4681</td>
<td>38</td>
<td>5700</td>
<td>42</td>
<td>10381</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood pressure</td>
<td>4722</td>
<td>38</td>
<td>5761</td>
<td>42</td>
<td>10483</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saliva</td>
<td>4601</td>
<td>37</td>
<td>5560</td>
<td>40</td>
<td>10161</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood</td>
<td>3485</td>
<td>28</td>
<td>4077</td>
<td>30</td>
<td>7562</td>
<td>29</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Base: set sample\(^d\): 12338 | 13731 | 26069

\(^d\) For the method of estimating the adult 'set' sample, see section 6.3. Estimated bases have been rounded.
### Table 5

<table>
<thead>
<tr>
<th>Individual response</th>
<th>Boys</th>
<th>Girls</th>
<th>All children</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Interviewed</td>
<td>1725</td>
<td>62</td>
<td>1748</td>
</tr>
<tr>
<td>Non responders:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In co-operating households</td>
<td>136</td>
<td>5</td>
<td>132</td>
</tr>
<tr>
<td>In non-responding households</td>
<td>911</td>
<td>33</td>
<td>905</td>
</tr>
<tr>
<td>Saw nurse</td>
<td>1244</td>
<td>45</td>
<td>1220</td>
</tr>
<tr>
<td>Responded to:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1415</td>
<td>51</td>
<td>1398</td>
</tr>
<tr>
<td>Weight</td>
<td>1444</td>
<td>52</td>
<td>1439</td>
</tr>
</tbody>
</table>

**Base: set sample<sup>b</sup>**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2772</td>
<td>2785</td>
</tr>
</tbody>
</table>

<sup>a</sup> Includes infant length for those aged 6 weeks to 2 years

<sup>b</sup> For the method of estimating the child ‘set’ sample, see section 6.4. Estimated bases have been rounded.
### Table 6

**General population sample: Men in co-operating households, response to the stages of the survey, by age**

*Men aged 16 and over in co-operating households 2008*

<table>
<thead>
<tr>
<th>Individual response</th>
<th>Age group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16-24</td>
<td>25-34</td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewed</td>
<td>70</td>
<td>80</td>
</tr>
<tr>
<td>Not contacted/refused</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td><strong>Height</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>64</td>
<td>73</td>
</tr>
<tr>
<td>Refused</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Measurement not attempted</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Not contacted/not obtained</td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>63</td>
<td>72</td>
</tr>
<tr>
<td>Refused</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Measurement not attempted</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Not contacted/not obtained</td>
<td>30</td>
<td>21</td>
</tr>
<tr>
<td><strong>Nurse visit</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-operated with nurse visit</td>
<td>45</td>
<td>52</td>
</tr>
<tr>
<td>Not interviewed</td>
<td>40</td>
<td>35</td>
</tr>
<tr>
<td>Refused/no contact at nurse visit</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td><strong>Waist/hip</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>44</td>
<td>51</td>
</tr>
<tr>
<td>No nurse visit</td>
<td>56</td>
<td>48</td>
</tr>
<tr>
<td>Refused/not obtained</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Blood pressure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>44</td>
<td>51</td>
</tr>
<tr>
<td>No nurse visit</td>
<td>56</td>
<td>48</td>
</tr>
<tr>
<td>Refused/not obtained</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Saliva sample</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>44</td>
<td>50</td>
</tr>
<tr>
<td>No nurse visit</td>
<td>55</td>
<td>48</td>
</tr>
<tr>
<td>Refused/not obtained</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Blood sample</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample taken</td>
<td>28</td>
<td>37</td>
</tr>
<tr>
<td>No nurse visit</td>
<td>55</td>
<td>48</td>
</tr>
<tr>
<td>Refused</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>Unsuccessful attempt at sample</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ineligible – medical grounds</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Bases</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men aged 16 or over in co-operating households</td>
<td>1098</td>
<td>1193</td>
</tr>
</tbody>
</table>

*a* Includes non-responders to interview as well as those where measurements not obtained.

*b* Includes non-responders to interview.
### Table 7

**General population sample: Women in co-operating households, response to the stages of the survey, by age**

*Women aged 16 and over in co-operating households 2008*

<table>
<thead>
<tr>
<th>Individual response</th>
<th>Age group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>16-24</td>
<td>25-34</td>
</tr>
<tr>
<td>Interviewed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewed</td>
<td>78</td>
<td>91</td>
</tr>
<tr>
<td>Not contacted/refused</td>
<td>22</td>
<td>9</td>
</tr>
<tr>
<td>Height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>71</td>
<td>85</td>
</tr>
<tr>
<td>Refused</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Measurement not attempted</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Not contacted/not obtained&lt;sup&gt;a&lt;/sup&gt;</td>
<td>22</td>
<td>9</td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>67</td>
<td>76</td>
</tr>
<tr>
<td>Refused</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Measurement not attempted</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Not contacted/not obtained&lt;sup&gt;a&lt;/sup&gt;</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>Nurse visit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-operated with nurse visit</td>
<td>50</td>
<td>64</td>
</tr>
<tr>
<td>Not interviewed</td>
<td>34</td>
<td>23</td>
</tr>
<tr>
<td>Refused/no contact at nurse visit</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Waist/hip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>48</td>
<td>59</td>
</tr>
<tr>
<td>No nurse visit&lt;sup&gt;b&lt;/sup&gt;</td>
<td>52</td>
<td>40</td>
</tr>
<tr>
<td>Refused/not obtained</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Blood pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>47</td>
<td>59</td>
</tr>
<tr>
<td>No nurse visit&lt;sup&gt;b&lt;/sup&gt;</td>
<td>52</td>
<td>40</td>
</tr>
<tr>
<td>Refused/not obtained</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Saliva sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>46</td>
<td>57</td>
</tr>
<tr>
<td>No nurse visit&lt;sup&gt;b&lt;/sup&gt;</td>
<td>52</td>
<td>40</td>
</tr>
<tr>
<td>Refused/not obtained</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Blood sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sample taken</td>
<td>25</td>
<td>39</td>
</tr>
<tr>
<td>No nurse visit&lt;sup&gt;b&lt;/sup&gt;</td>
<td>50</td>
<td>36</td>
</tr>
<tr>
<td>Refused</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Unsuccessful attempt at sample</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Ineligible – medical grounds</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>

**Bases**

**Women aged 16 or over in co-operating households**

|            | 1174 | 1340 | 1607 | 1455 | 1446 | 1034 | 971 | 9027 |

<sup>a</sup> Includes non-responders to interview as well as those where measurements not obtained.

<sup>b</sup> Includes non-responders to interview.
### Table 8

**General population sample: Boys in co-operating households, response to the stages of the survey, by age**

<table>
<thead>
<tr>
<th>Individual response</th>
<th>Age group</th>
<th>Total</th>
<th>0-1</th>
<th>2-4</th>
<th>5-6</th>
<th>7-10</th>
<th>11-15</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><strong>Boys</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewed¹</td>
<td>Interviewed</td>
<td>94</td>
<td>97</td>
<td>95</td>
<td>95</td>
<td>87</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>Not contacted/refused</td>
<td>6</td>
<td>3</td>
<td>5</td>
<td>5</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Height²</td>
<td>Measured</td>
<td>77</td>
<td>84</td>
<td>84</td>
<td>80</td>
<td>81</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refused</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Measurement not attempted</td>
<td>12</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not contacted/not obtainedᵃ</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>13</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Weight¹</td>
<td>Measured</td>
<td>57</td>
<td>78</td>
<td>84</td>
<td>84</td>
<td>78</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>Refused</td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Measurement not attempted</td>
<td>26</td>
<td>9</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Not contacted/not obtainedᵃ</td>
<td>9</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>13</td>
<td>8</td>
</tr>
<tr>
<td>Nurse visit¹</td>
<td>Co-operated with nurse visit</td>
<td>69</td>
<td>68</td>
<td>67</td>
<td>68</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Not interviewed</td>
<td>18</td>
<td>18</td>
<td>19</td>
<td>19</td>
<td>26</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>Refused/no contact at nurse visit</td>
<td>13</td>
<td>14</td>
<td>14</td>
<td>13</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Infant length³</td>
<td>Measured</td>
<td>43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No nurse visitᵇ</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refused/not obtainedᶜ</td>
<td>24</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saliva sample⁴</td>
<td>Measured</td>
<td>30</td>
<td>52</td>
<td>63</td>
<td>61</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No nurse visitᵇ</td>
<td>32</td>
<td>33</td>
<td>32</td>
<td>36</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refused/not obtained</td>
<td>38</td>
<td>15</td>
<td>5</td>
<td>3</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Blood pressure⁵</td>
<td>Measured</td>
<td>59</td>
<td>65</td>
<td>62</td>
<td>63</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No nurse visitᵇ</td>
<td>33</td>
<td>32</td>
<td>36</td>
<td>34</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refused/not obtained</td>
<td>8</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waist/hip⁶</td>
<td>Measured</td>
<td>61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No nurse visitᵇ</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Refused/not obtained</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

*a* Includes non-responders to interview as well as those where measurements not obtained.

*b* Includes non-responders to interview.

*c* Includes 5 boys aged under 6 weeks who were not eligible for length measurement.
### Table 9

**General population sample: Girls in co-operating households, response to the stages of the survey, by age**

_Eligible girls aged 0-15 in co-operating households_ 2008

<table>
<thead>
<tr>
<th>Individual response</th>
<th>Age group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-1</td>
<td>2-4</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewed</td>
<td>95</td>
<td>99</td>
</tr>
<tr>
<td>Not contacted/refused</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Height</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>78</td>
<td>84</td>
</tr>
<tr>
<td>Refused</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Measurement not attempted</td>
<td>13</td>
<td>5</td>
</tr>
<tr>
<td>Not contacted/not obtained&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>60</td>
<td>81</td>
</tr>
<tr>
<td>Refused</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Measurement not attempted</td>
<td>26</td>
<td>11</td>
</tr>
<tr>
<td>Not contacted/not obtained&lt;sup&gt;a&lt;/sup&gt;</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Nurse visit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Co-operated with nurse visit</td>
<td>63</td>
<td>69</td>
</tr>
<tr>
<td>Not interviewed</td>
<td>22</td>
<td>16</td>
</tr>
<tr>
<td>Refused/no contact at nurse visit</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>Infant length</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>No nurse visit&lt;sup&gt;b&lt;/sup&gt;</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>Refused/not obtained&lt;sup&gt;c&lt;/sup&gt;</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Saliva sample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>45</td>
<td>57</td>
</tr>
<tr>
<td>No nurse visit&lt;sup&gt;b&lt;/sup&gt;</td>
<td>26</td>
<td>28</td>
</tr>
<tr>
<td>Refused/not obtained&lt;sup&gt;c&lt;/sup&gt;</td>
<td>29</td>
<td>15</td>
</tr>
<tr>
<td>Blood pressure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>64</td>
<td>62</td>
</tr>
<tr>
<td>No nurse visit&lt;sup&gt;b&lt;/sup&gt;</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>Refused/not obtained&lt;sup&gt;c&lt;/sup&gt;</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Waist/hip</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>No nurse visit&lt;sup&gt;b&lt;/sup&gt;</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>Refused/not obtained&lt;sup&gt;c&lt;/sup&gt;</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

**Bases**

1. All eligible girls in co-operating households
2. All eligible girls aged 2-15 in co-operating households
3. All eligible girls aged 0-1 in co-operating households
4. All eligible girls aged 4-15 in co-operating households
5. All eligible girls aged 5-15 in co-operating households
6. All eligible girls aged 11-15 in co-operating households

<sup>a</sup> Includes non-responders to interview as well as those where measurements not obtained.

<sup>b</sup> Includes non-responders to interview.

<sup>c</sup> Includes 4 girls aged under 6 weeks who were not eligible for length measurement.
**Table 10**

**Combined general population and boost samples:**
**Boys in co-operating households, response to the stages of the survey, by age**

*Eligible boys aged 0-15 in co-operating households 2008*

<table>
<thead>
<tr>
<th>Individual response</th>
<th>Age group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-1</td>
<td>2-4</td>
</tr>
<tr>
<td>Boys</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewed†</td>
<td>92</td>
<td>99</td>
</tr>
<tr>
<td>Not contacted/refused</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Height‡</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>81</td>
<td>87</td>
</tr>
<tr>
<td>Refused</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Measurement not attempted</td>
<td>10</td>
<td>6</td>
</tr>
<tr>
<td>Not contacted/not obtaineda</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Weight†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>57</td>
<td>82</td>
</tr>
<tr>
<td>Refused</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Measurement not attempted</td>
<td>26</td>
<td>9</td>
</tr>
<tr>
<td>Not contacted/not obtaineda</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Bases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 All eligible boys in co-operating households</td>
<td>238</td>
<td>754</td>
</tr>
<tr>
<td>2 All eligible boys aged 2-15 in co-operating households</td>
<td>754</td>
<td>506</td>
</tr>
</tbody>
</table>

*a Includes non-responders to interview as well as those where measurements not obtained.

**Table 11**

**Combined general population and boost samples:**
**Girls in co-operating households, response to the stages of the survey, by age**

*Eligible girls aged 0-15 in co-operating households 2008*

<table>
<thead>
<tr>
<th>Individual response</th>
<th>Age group</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-1</td>
<td>2-4</td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interviewed†</td>
<td>95</td>
<td>99</td>
</tr>
<tr>
<td>Not contacted/refused</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Height‡</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>81</td>
<td>89</td>
</tr>
<tr>
<td>Refused</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Measurement not attempted</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Not contacted/not obtaineda</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Weight†</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measured</td>
<td>60</td>
<td>83</td>
</tr>
<tr>
<td>Refused</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Measurement not attempted</td>
<td>26</td>
<td>10</td>
</tr>
<tr>
<td>Not contacted/not obtaineda</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Bases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 All eligible girls in co-operating households</td>
<td>234</td>
<td>752</td>
</tr>
<tr>
<td>2 All eligible girls aged 2-15 in co-operating households</td>
<td>752</td>
<td>473</td>
</tr>
</tbody>
</table>

*a Includes non-responders to interview as well as those where measurements not obtained.*
### Table 12
**General population sample: Age distribution of responding adult sample compared with mid-2007 population estimates for England, by sex**

<table>
<thead>
<tr>
<th>Age group</th>
<th>Health survey responding adult sample</th>
<th>At interview</th>
<th>At nurse visit</th>
<th>Mid-2007 population estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><strong>Men</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-24</td>
<td>11</td>
<td>10</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>25-34</td>
<td>14</td>
<td>13</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>35-44</td>
<td>18</td>
<td>18</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>45-54</td>
<td>16</td>
<td>17</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>55-64</td>
<td>18</td>
<td>19</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>65-74</td>
<td>13</td>
<td>13</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>75 and over</td>
<td>10</td>
<td>10</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td><strong>All men</strong></td>
<td>45</td>
<td>45</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>116-24</td>
<td>11</td>
<td>10</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>25-34</td>
<td>15</td>
<td>15</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>35-44</td>
<td>18</td>
<td>18</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>45-54</td>
<td>16</td>
<td>17</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>55-64</td>
<td>16</td>
<td>18</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>65-74</td>
<td>12</td>
<td>12</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>75 and over</td>
<td>11</td>
<td>11</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><strong>All women</strong></td>
<td>55</td>
<td>55</td>
<td>51</td>
<td></td>
</tr>
</tbody>
</table>

**Bases:**

<table>
<thead>
<tr>
<th>Men</th>
<th>6760</th>
<th>4789</th>
<th>20,071</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>8342</td>
<td>5951</td>
<td>20,964</td>
</tr>
</tbody>
</table>

*a* Mid population estimates for England excluding those in institutions (Source: ONS). Base shown in thousands.

*b* Note that the percentages for age groups within sex are based on all respondents of that sex (they may not sum to 100% because of rounding). The ‘All men’ and ‘All women’ percentages are based on all respondents.

### Table 13
**General population sample: Age distribution of responding child sample compared with mid-2007 population estimates for England, by sex**

<table>
<thead>
<tr>
<th>Age group</th>
<th>Health survey responding child sample</th>
<th>At interview</th>
<th>At nurse visit</th>
<th>Mid-2007 population estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td><strong>Boys</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>4-5</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>6-7</td>
<td>13</td>
<td>13</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>8-9</td>
<td>13</td>
<td>13</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>10-11</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>12-13</td>
<td>12</td>
<td>12</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>14-15</td>
<td>12</td>
<td>12</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td><strong>All boys</strong></td>
<td>50</td>
<td>50</td>
<td>51</td>
<td></td>
</tr>
<tr>
<td><strong>Girls</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>14</td>
<td>13</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>4-5</td>
<td>11</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>6-7</td>
<td>12</td>
<td>13</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>8-9</td>
<td>13</td>
<td>12</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>10-11</td>
<td>13</td>
<td>14</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>12-13</td>
<td>12</td>
<td>11</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>14-15</td>
<td>13</td>
<td>12</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td><strong>All girls</strong></td>
<td>50</td>
<td>50</td>
<td>49</td>
<td></td>
</tr>
</tbody>
</table>

**Bases:**

<table>
<thead>
<tr>
<th>Boys</th>
<th>1725</th>
<th>1244</th>
<th>4,944</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girls</td>
<td>1748</td>
<td>1220</td>
<td>4,711</td>
</tr>
</tbody>
</table>

*a* Mid population estimates for England (Source: ONS). Base shown in thousands.

*b* Note that the percentages for age groups within sex are based on all respondents of that sex (they may not sum to 100% because of rounding). The ‘All boys’ and ‘All girls’ percentages are based on all children.
Table 14

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>% (p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Def</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meets recommendations</td>
<td>39.2</td>
<td>6737</td>
<td>7305</td>
<td>0.68</td>
<td>37.9-40.5</td>
<td>1.19</td>
<td></td>
</tr>
<tr>
<td>Some activity</td>
<td>31.3</td>
<td>6737</td>
<td>7305</td>
<td>0.62</td>
<td>30.1-32.5</td>
<td>1.14</td>
<td></td>
</tr>
<tr>
<td>Low activity</td>
<td>29.5</td>
<td>6737</td>
<td>7305</td>
<td>0.62</td>
<td>28.3-30.7</td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td>Meets recommendations</td>
<td>28.7</td>
<td>8317</td>
<td>7660</td>
<td>0.57</td>
<td>27.6-29.8</td>
<td>1.10</td>
<td></td>
</tr>
<tr>
<td>Some activity</td>
<td>33.6</td>
<td>8317</td>
<td>7660</td>
<td>0.56</td>
<td>32.5-34.7</td>
<td>1.03</td>
<td></td>
</tr>
<tr>
<td>Low activity</td>
<td>37.7</td>
<td>8317</td>
<td>7660</td>
<td>0.57</td>
<td>36.6-38.8</td>
<td>1.04</td>
<td></td>
</tr>
</tbody>
</table>

Table 15

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>% (p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Def</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Meets recommendations</td>
<td>6.2</td>
<td>623</td>
<td>610</td>
<td>1.23</td>
<td>3.8-8.6</td>
<td>1.26</td>
<td></td>
</tr>
<tr>
<td>Some activity</td>
<td>43.4</td>
<td>623</td>
<td>610</td>
<td>2.5</td>
<td>38.4-48.3</td>
<td>1.24</td>
<td></td>
</tr>
<tr>
<td>Low activity</td>
<td>50.4</td>
<td>623</td>
<td>610</td>
<td>2.47</td>
<td>45.6-55.3</td>
<td>1.22</td>
<td></td>
</tr>
<tr>
<td>Meets recommendations</td>
<td>4.1</td>
<td>682</td>
<td>586</td>
<td>1.00</td>
<td>2.1-6.1</td>
<td>1.23</td>
<td></td>
</tr>
<tr>
<td>Some activity</td>
<td>37.7</td>
<td>682</td>
<td>586</td>
<td>2.06</td>
<td>33.6-41.8</td>
<td>1.03</td>
<td></td>
</tr>
<tr>
<td>Low activity</td>
<td>58.2</td>
<td>682</td>
<td>586</td>
<td>2.09</td>
<td>54.1-62.3</td>
<td>1.03</td>
<td></td>
</tr>
</tbody>
</table>

Table 16

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean/ % (p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Def</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean VO$_2$ max (ml O$_2$/min/kg)</td>
<td>36.3</td>
<td>806</td>
<td>964</td>
<td>0.24</td>
<td>35.9-36.8</td>
<td>1.40</td>
<td></td>
</tr>
<tr>
<td>Sustained walking 3mph up a 5% incline</td>
<td>% Light exertion</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>% Moderate exertion</td>
<td>67.7</td>
<td>806</td>
<td>964</td>
<td>1.87</td>
<td>64.0-71.4</td>
<td>1.48</td>
<td></td>
</tr>
<tr>
<td>% Severe exertion</td>
<td>32.1</td>
<td>806</td>
<td>964</td>
<td>1.86</td>
<td>28.5-35.8</td>
<td>1.47</td>
<td></td>
</tr>
<tr>
<td>% Maximal exertion</td>
<td>0.1</td>
<td>806</td>
<td>964</td>
<td>0.1</td>
<td>0.0-0.4</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Mean VO$_2$ max (ml O$_2$/min/kg)</td>
<td>32.0</td>
<td>887</td>
<td>851</td>
<td>0.22</td>
<td>31.6-32.4</td>
<td>1.37</td>
<td></td>
</tr>
<tr>
<td>Sustained walking 3mph up a 5% incline</td>
<td>% Light exertion</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>% Moderate exertion</td>
<td>39.4</td>
<td>887</td>
<td>851</td>
<td>1.82</td>
<td>35.8-43.0</td>
<td>1.29</td>
<td></td>
</tr>
<tr>
<td>% Severe exertion</td>
<td>60.2</td>
<td>887</td>
<td>851</td>
<td>1.83</td>
<td>56.6-63.8</td>
<td>1.30</td>
<td></td>
</tr>
<tr>
<td>% Maximal exertion</td>
<td>0.4</td>
<td>887</td>
<td>851</td>
<td>0.2</td>
<td>0.1-0.8</td>
<td>1.03</td>
<td></td>
</tr>
</tbody>
</table>
### Table 17

**True standard errors and 95% confidence intervals for adult Body Mass Index (BMI), underweight, overweight and obesity prevalence**

*Aged 16 and over with both valid height and weight measurements*

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>Mean/ %</th>
<th>Sample size</th>
<th>Sample standard</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men 16+</strong></td>
<td><strong>BMI</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>27.2</td>
<td>5853</td>
<td>6385</td>
<td>0.07</td>
<td>27.0-27.3</td>
<td>1.19</td>
</tr>
<tr>
<td></td>
<td><strong>BMI status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Underweight</td>
<td>1.6</td>
<td>5853</td>
<td>6385</td>
<td>0.2</td>
<td>1.2-2</td>
<td>1.29</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>32.5</td>
<td>5853</td>
<td>6385</td>
<td>0.67</td>
<td>31.2-33.8</td>
<td>1.14</td>
</tr>
<tr>
<td></td>
<td>Overweight</td>
<td>41.8</td>
<td>5853</td>
<td>6385</td>
<td>0.65</td>
<td>40.5-43.0</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td>Obese, excluding morbidly obese</td>
<td>23.0</td>
<td>5853</td>
<td>6385</td>
<td>0.57</td>
<td>21.9-24.1</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>Morbidly obese</td>
<td>1.1</td>
<td>5853</td>
<td>6385</td>
<td>0.14</td>
<td>0.9-1.4</td>
<td>1.04</td>
</tr>
<tr>
<td></td>
<td>Overweight, including obese</td>
<td>65.9</td>
<td>5853</td>
<td>6385</td>
<td>0.68</td>
<td>64.6-67.2</td>
<td>1.15</td>
</tr>
<tr>
<td></td>
<td>Obese</td>
<td>24.1</td>
<td>5853</td>
<td>6385</td>
<td>0.58</td>
<td>23.0-25.3</td>
<td>1.09</td>
</tr>
<tr>
<td><strong>Women 16+</strong></td>
<td><strong>BMI</strong></td>
<td>26.9</td>
<td>6983</td>
<td>6450</td>
<td>0.07</td>
<td>26.7-27.2</td>
<td>1.02</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>BMI status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Underweight</td>
<td>2.0</td>
<td>6983</td>
<td>6450</td>
<td>0.18</td>
<td>1.6-2.3</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>41.1</td>
<td>6983</td>
<td>6450</td>
<td>0.6</td>
<td>40-42.3</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>Overweight</td>
<td>32.0</td>
<td>6983</td>
<td>6450</td>
<td>0.58</td>
<td>30.9-33.1</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>Obese, excluding morbidly obese</td>
<td>22.1</td>
<td>6983</td>
<td>6450</td>
<td>0.51</td>
<td>21.1-23.1</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>Morbidly obese</td>
<td>2.8</td>
<td>6983</td>
<td>6450</td>
<td>0.21</td>
<td>2.4-3.2</td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td>Overweight, including obese</td>
<td>56.9</td>
<td>6983</td>
<td>6450</td>
<td>0.6</td>
<td>55.7-58.1</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>Obese</td>
<td>24.9</td>
<td>6983</td>
<td>6450</td>
<td>0.55</td>
<td>23.8-26.2</td>
<td>1.03</td>
</tr>
</tbody>
</table>

### Table 18

**True standard errors and 95% confidence intervals for hypertension categories**

*Aged 16 and over with three valid BP measurements*

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>%(%p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men 16+</strong></td>
<td><strong>Hypertension levels</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normontensive untreated</td>
<td>68.3</td>
<td>4041</td>
<td>4350</td>
<td>0.79</td>
<td>66.7-69.8</td>
<td>1.34</td>
</tr>
<tr>
<td></td>
<td>Hypertensive controlled</td>
<td>8.3</td>
<td>4041</td>
<td>4350</td>
<td>0.43</td>
<td>7.5-9.1</td>
<td>1.22</td>
</tr>
<tr>
<td></td>
<td>Hypertensive uncontrolled</td>
<td>6.3</td>
<td>4041</td>
<td>4350</td>
<td>0.38</td>
<td>5.6-7.1</td>
<td>1.22</td>
</tr>
<tr>
<td></td>
<td>Hypertensive untreated</td>
<td>17.1</td>
<td>4041</td>
<td>4350</td>
<td>0.65</td>
<td>15.8-18.4</td>
<td>1.36</td>
</tr>
<tr>
<td></td>
<td>All with hypertension</td>
<td>31.7</td>
<td>4041</td>
<td>4350</td>
<td>0.79</td>
<td>30.2-33.3</td>
<td>1.34</td>
</tr>
<tr>
<td><strong>Women 16+</strong></td>
<td><strong>Hypertension levels</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normontensive untreated</td>
<td>71.4</td>
<td>4936</td>
<td>4507</td>
<td>0.67</td>
<td>70.1-72.7</td>
<td>1.18</td>
</tr>
<tr>
<td></td>
<td>Hypertensive controlled</td>
<td>9.2</td>
<td>4936</td>
<td>4507</td>
<td>0.4</td>
<td>8.4-10.0</td>
<td>1.11</td>
</tr>
<tr>
<td></td>
<td>Hypertensive uncontrolled</td>
<td>7.0</td>
<td>4936</td>
<td>4507</td>
<td>0.37</td>
<td>6.3-7.8</td>
<td>1.14</td>
</tr>
<tr>
<td></td>
<td>Hypertensive untreated</td>
<td>12.3</td>
<td>4936</td>
<td>4507</td>
<td>0.48</td>
<td>11.4-13.3</td>
<td>1.17</td>
</tr>
<tr>
<td></td>
<td>All with hypertension</td>
<td>28.6</td>
<td>4936</td>
<td>4507</td>
<td>0.67</td>
<td>27.3-29.9</td>
<td>1.18</td>
</tr>
</tbody>
</table>
### Table 19
True standard errors and 95% confidence intervals for adult blood analyts

**Aged 16 and over**

<table>
<thead>
<tr>
<th>Base</th>
<th>Mean/ (%(p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men 16+</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total cholesterol levels</td>
<td>Mean (mmol/l)</td>
<td>5.2</td>
<td>3349</td>
<td>3555</td>
<td>0.02</td>
<td>5.2-5.3</td>
</tr>
<tr>
<td>% with 5.0mmol/l or more</td>
<td>57.7</td>
<td>3349</td>
<td>3555</td>
<td>0.09</td>
<td>55.8-59.6</td>
<td>1.68</td>
</tr>
<tr>
<td>HDL-cholesterol (mmol/l)</td>
<td>Mean (mmol/l)</td>
<td>1.3</td>
<td>3349</td>
<td>3555</td>
<td>0.01</td>
<td>1.3-1.3</td>
</tr>
<tr>
<td>% with less than 1.0mmol/l</td>
<td>7.2</td>
<td>3349</td>
<td>3555</td>
<td>0.51</td>
<td>6.2-8.2</td>
<td>1.65</td>
</tr>
<tr>
<td>Glycated haemoglobin</td>
<td>Mean</td>
<td>5.6</td>
<td>3318</td>
<td>3514</td>
<td>0.01</td>
<td>5.6-5.7</td>
</tr>
<tr>
<td>7% or more&lt;sup&gt;a&lt;/sup&gt;</td>
<td>3.9</td>
<td>3318</td>
<td>3514</td>
<td>0.32</td>
<td>3.3-4.5</td>
<td>1.39</td>
</tr>
<tr>
<td><strong>Women 16+</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total cholesterol levels</td>
<td>Mean (mmol/l)</td>
<td>5.4</td>
<td>3925</td>
<td>3725</td>
<td>0.02</td>
<td>5.3-5.4</td>
</tr>
<tr>
<td>% with 5.0mmol/l or more</td>
<td>61.3</td>
<td>3925</td>
<td>3725</td>
<td>0.87</td>
<td>59.6-63.0</td>
<td>1.54</td>
</tr>
<tr>
<td>HDL-cholesterol (mmol/l)</td>
<td>Mean (mmol/l)</td>
<td>1.6</td>
<td>3924</td>
<td>3724</td>
<td>0.01</td>
<td>1.6-1.6</td>
</tr>
<tr>
<td>% with less than 1.0mmol/l</td>
<td>1.7</td>
<td>3924</td>
<td>3724</td>
<td>0.29</td>
<td>1.1-2.2</td>
<td>1.93</td>
</tr>
<tr>
<td>Glycated haemoglobin</td>
<td>Mean</td>
<td>5.6</td>
<td>3893</td>
<td>3694</td>
<td>0.01</td>
<td>5.6-5.6</td>
</tr>
<tr>
<td>7% or more&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2.6</td>
<td>3893</td>
<td>3694</td>
<td>0.27</td>
<td>2.1-3.2</td>
<td>1.45</td>
</tr>
</tbody>
</table>

<sup>a</sup> Indicating uncontrolled diabetes or possible undiagnosed diabetes.

### Table 20
True standard errors and 95% confidence intervals for adult fruit and vegetable consumption

**Aged 16 and over**

<table>
<thead>
<tr>
<th>Base</th>
<th>Portions per day</th>
<th>Mean/ (%(p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men 16+</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>3.5</td>
<td>6756</td>
<td>7325</td>
<td>0.03</td>
<td>3.5-3.6</td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>6.7</td>
<td>6756</td>
<td>7325</td>
<td>0.35</td>
<td>6-7.4</td>
<td>1.20</td>
<td></td>
</tr>
<tr>
<td>Less than 1 portion</td>
<td>2.7</td>
<td>6756</td>
<td>7325</td>
<td>0.22</td>
<td>2.3-3.2</td>
<td>1.14</td>
<td></td>
</tr>
<tr>
<td>1 portion or more but less than 2</td>
<td>16.1</td>
<td>6756</td>
<td>7325</td>
<td>0.5</td>
<td>15.1-17</td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td>2 portions or more but less than 3</td>
<td>18.1</td>
<td>6756</td>
<td>7325</td>
<td>0.52</td>
<td>17.1-19.1</td>
<td>1.16</td>
<td></td>
</tr>
<tr>
<td>3 portions or more but less than 4</td>
<td>16.6</td>
<td>6756</td>
<td>7325</td>
<td>0.48</td>
<td>15.7-17.5</td>
<td>1.10</td>
<td></td>
</tr>
<tr>
<td>4 portions or more but less than 5</td>
<td>14.6</td>
<td>6756</td>
<td>7325</td>
<td>0.45</td>
<td>13.8-15.5</td>
<td>1.08</td>
<td></td>
</tr>
<tr>
<td>5 portions or more</td>
<td>25.1</td>
<td>6756</td>
<td>7325</td>
<td>0.59</td>
<td>24.0-26.3</td>
<td>1.17</td>
<td></td>
</tr>
<tr>
<td><strong>Women 16+</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>3.8</td>
<td>8342</td>
<td>7682</td>
<td>0.03</td>
<td>3.7-3.8</td>
<td>1.10</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>5.5</td>
<td>8342</td>
<td>7682</td>
<td>0.26</td>
<td>5.0-6.1</td>
<td>1.01</td>
<td></td>
</tr>
<tr>
<td>Less than 1 portion</td>
<td>2.8</td>
<td>8342</td>
<td>7682</td>
<td>0.19</td>
<td>2.5-3.2</td>
<td>1.03</td>
<td></td>
</tr>
<tr>
<td>1 portion or more but less than 2</td>
<td>13.8</td>
<td>8342</td>
<td>7682</td>
<td>0.4</td>
<td>13.1-14.6</td>
<td>1.02</td>
<td></td>
</tr>
<tr>
<td>2 portions or more but less than 3</td>
<td>16.4</td>
<td>8342</td>
<td>7682</td>
<td>0.43</td>
<td>15.6-17.3</td>
<td>1.01</td>
<td></td>
</tr>
<tr>
<td>3 portions or more but less than 4</td>
<td>17.5</td>
<td>8342</td>
<td>7682</td>
<td>0.43</td>
<td>16.6-18.3</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>4 portions or more but less than 5</td>
<td>14.8</td>
<td>8342</td>
<td>7682</td>
<td>0.41</td>
<td>14.0-15.6</td>
<td>1.03</td>
<td></td>
</tr>
<tr>
<td>5 portions or more</td>
<td>29.0</td>
<td>8342</td>
<td>7682</td>
<td>0.54</td>
<td>28.0-30.1</td>
<td>1.05</td>
<td></td>
</tr>
</tbody>
</table>
### Table 21

**True standard errors and 95% confidence intervals for adult cigarette smoking status**

**Aged 16 and over 2008**

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>% (p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men 16+</strong></td>
<td>Current cigarette smoker</td>
<td>23.7</td>
<td>6706</td>
<td>7256</td>
<td>0.62</td>
<td>22.5-24.9</td>
<td>1.25</td>
</tr>
<tr>
<td></td>
<td>Used to smoke cigarettes regularly</td>
<td>27.3</td>
<td>6706</td>
<td>7256</td>
<td>0.59</td>
<td>26.1-28.4</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td>Never regularly smoked cigarettes</td>
<td>49.0</td>
<td>6706</td>
<td>7256</td>
<td>0.71</td>
<td>47.6-50.4</td>
<td>1.22</td>
</tr>
<tr>
<td><strong>Women 16+</strong></td>
<td>Current cigarette smoker</td>
<td>19.9</td>
<td>8292</td>
<td>7626</td>
<td>0.48</td>
<td>18.9-20.8</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td>Used to smoke cigarettes regularly</td>
<td>22.1</td>
<td>8292</td>
<td>7626</td>
<td>0.49</td>
<td>21.1-23.1</td>
<td>1.04</td>
</tr>
<tr>
<td></td>
<td>Never regularly smoked cigarettes</td>
<td>58.0</td>
<td>8292</td>
<td>7626</td>
<td>0.61</td>
<td>56.8-59.2</td>
<td>1.08</td>
</tr>
</tbody>
</table>

### Table 22

**True standard errors and 95% confidence intervals for adult saliva cotinine levels**

**Aged 16 and over 2008**

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>Mean/ % (p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men 16+</strong></td>
<td>Mean saliva cotinine</td>
<td>69.2</td>
<td>4362</td>
<td>4604</td>
<td>2.46</td>
<td>64.4-74.0</td>
<td>1.47</td>
</tr>
<tr>
<td></td>
<td>% with cotinine 15 ng/ml or more</td>
<td>26.2</td>
<td>4362</td>
<td>4604</td>
<td>0.8</td>
<td>24.6-27.8</td>
<td>1.55</td>
</tr>
<tr>
<td><strong>Women 16+</strong></td>
<td>Mean saliva cotinine</td>
<td>51.7</td>
<td>5239</td>
<td>4840</td>
<td>1.95</td>
<td>47.8-55.5</td>
<td>1.39</td>
</tr>
<tr>
<td></td>
<td>% with cotinine 15 ng/ml or more</td>
<td>20.6</td>
<td>5239</td>
<td>4840</td>
<td>0.64</td>
<td>19.3-21.8</td>
<td>1.38</td>
</tr>
</tbody>
</table>

### Table 23

**True standard errors and 95% confidence intervals for adult maximum alcohol consumption on any day in the last week**

**Aged 16 and over 2008**

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>% (p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Men 16+</strong></td>
<td>Did not drink in last week</td>
<td>28.7</td>
<td>6673</td>
<td>7213</td>
<td>0.69</td>
<td>27.3-30.1</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>Up to and including 4 units</td>
<td>30.1</td>
<td>6673</td>
<td>7213</td>
<td>0.6</td>
<td>29.0-31.3</td>
<td>1.12</td>
</tr>
<tr>
<td></td>
<td>More than 4, up to and including 8 units</td>
<td>16.4</td>
<td>6673</td>
<td>7213</td>
<td>0.48</td>
<td>15.5-17.4</td>
<td>1.11</td>
</tr>
<tr>
<td></td>
<td>More than 8 units</td>
<td>24.7</td>
<td>6673</td>
<td>7213</td>
<td>0.67</td>
<td>23.4-26.0</td>
<td>1.32</td>
</tr>
<tr>
<td></td>
<td>More than 4</td>
<td>41.2</td>
<td>6673</td>
<td>7213</td>
<td>0.76</td>
<td>39.7-42.6</td>
<td>1.31</td>
</tr>
<tr>
<td><strong>Women 16+</strong></td>
<td>Did not drink in last week</td>
<td>42.4</td>
<td>8266</td>
<td>7600</td>
<td>0.65</td>
<td>41.1-43.7</td>
<td>1.16</td>
</tr>
<tr>
<td></td>
<td>Up to and including 3 units</td>
<td>26.0</td>
<td>8266</td>
<td>7600</td>
<td>0.53</td>
<td>25.0-27.1</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td>More than 3, up to and including 6 units</td>
<td>16.2</td>
<td>8266</td>
<td>7600</td>
<td>0.44</td>
<td>15.3-17.1</td>
<td>1.05</td>
</tr>
<tr>
<td></td>
<td>More than 6 units</td>
<td>15.4</td>
<td>8266</td>
<td>7600</td>
<td>0.45</td>
<td>14.5-16.3</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>More than 3</td>
<td>31.6</td>
<td>8266</td>
<td>7600</td>
<td>0.58</td>
<td>30.4-32.7</td>
<td>1.09</td>
</tr>
</tbody>
</table>
### Table 24

**True standard errors and 95% confidence intervals for children’s self-reported summary activity levels**

**Aged 16 and over** 2008

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>% (p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boys 2-15</strong></td>
<td>Meets recommendations</td>
<td>32.4</td>
<td>3493</td>
<td>3332</td>
<td>1</td>
<td>30.5-34.4</td>
<td>1.23</td>
</tr>
<tr>
<td></td>
<td>Some activity</td>
<td>43.9</td>
<td>3493</td>
<td>3332</td>
<td>0.97</td>
<td>42.0-45.8</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td>Low activity</td>
<td>23.7</td>
<td>3493</td>
<td>3332</td>
<td>0.95</td>
<td>21.8-25.5</td>
<td>1.28</td>
</tr>
<tr>
<td><strong>Girls 2-15</strong></td>
<td>Meets recommendations</td>
<td>24.1</td>
<td>3545</td>
<td>3168</td>
<td>0.94</td>
<td>22.2-25.9</td>
<td>1.23</td>
</tr>
<tr>
<td></td>
<td>Some activity</td>
<td>46.7</td>
<td>3545</td>
<td>3168</td>
<td>0.97</td>
<td>44.8-48.6</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td>Low activity</td>
<td>29.3</td>
<td>3545</td>
<td>3168</td>
<td>0.93</td>
<td>27.4-31.1</td>
<td>1.15</td>
</tr>
</tbody>
</table>

### Table 25

**True standard errors and 95% confidence intervals for children’s objective summary activity levels**

**Children aged 4-15 with 7 valid days of accelerometer wear** 2008

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>% (p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boys 4-15</strong></td>
<td>Meets recommendations</td>
<td>32.6</td>
<td>132</td>
<td>142</td>
<td>4.68</td>
<td>23.4-41.8</td>
<td>1.19</td>
</tr>
<tr>
<td></td>
<td>Some activity</td>
<td>20.1</td>
<td>132</td>
<td>142</td>
<td>3.76</td>
<td>12.7-27.5</td>
<td>1.12</td>
</tr>
<tr>
<td></td>
<td>Low activity</td>
<td>47.3</td>
<td>132</td>
<td>142</td>
<td>5.01</td>
<td>37.4-57.2</td>
<td>1.20</td>
</tr>
<tr>
<td><strong>Girls 4-15</strong></td>
<td>Meets recommendations</td>
<td>20.6</td>
<td>151</td>
<td>141</td>
<td>4.05</td>
<td>12.6-28.6</td>
<td>1.19</td>
</tr>
<tr>
<td></td>
<td>Some activity</td>
<td>18.2</td>
<td>151</td>
<td>141</td>
<td>3.92</td>
<td>10.5-25.9</td>
<td>1.21</td>
</tr>
<tr>
<td></td>
<td>Low activity</td>
<td>61.2</td>
<td>151</td>
<td>141</td>
<td>4.67</td>
<td>52.0-70.4</td>
<td>1.14</td>
</tr>
</tbody>
</table>

### Table 26

**True standard errors and 95% confidence intervals for children’s BMI and BMI status**

**Aged 2-15** 2008

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>Mean/%</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boys 2-15</strong></td>
<td>Body Mass Index</td>
<td>Mean BMI (kg/m²)</td>
<td>18.4</td>
<td>3030</td>
<td>2880</td>
<td>0.08</td>
<td>18.3-18.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean BMI (kg/m²)</td>
<td>18.7</td>
<td>3068</td>
<td>2740</td>
<td>0.08</td>
<td>18.6-18.9</td>
</tr>
<tr>
<td><strong>Girls 2-15</strong></td>
<td>BMI status (UK National percentiles classification)</td>
<td>Neither overweight nor obese</td>
<td>70.8</td>
<td>3068</td>
<td>2740</td>
<td>0.88</td>
<td>69.1-72.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Overweight</td>
<td>14.0</td>
<td>3068</td>
<td>2740</td>
<td>0.64</td>
<td>12.7-15.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Obese</td>
<td>15.2</td>
<td>3068</td>
<td>2740</td>
<td>0.69</td>
<td>13.8-16.5</td>
</tr>
<tr>
<td><strong>Boys 2-15</strong></td>
<td>Neither overweight nor obese</td>
<td>68.6</td>
<td>3030</td>
<td>2880</td>
<td>0.92</td>
<td>66.8-70.4</td>
<td>1.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Overweight</td>
<td>14.6</td>
<td>3030</td>
<td>2880</td>
<td>0.68</td>
<td>13.2-15.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Obese</td>
<td>16.8</td>
<td>3030</td>
<td>2880</td>
<td>0.74</td>
<td>15.4-18.3</td>
</tr>
</tbody>
</table>
### Table 27

**True standard errors and 95% confidence intervals for children's fruit and vegetable consumption**

Aged 5-15 2008

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>Mean/ % (p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boys 5-15</strong></td>
<td>Mean portions</td>
<td>3.1</td>
<td>2765</td>
<td>2640</td>
<td>0.05</td>
<td>3.0-3.2</td>
<td>1.09</td>
</tr>
<tr>
<td></td>
<td>Portions per day</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>6.9</td>
<td>2765</td>
<td>2640</td>
<td>0.05</td>
<td>5.8-7.9</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td>Less than 1 portion</td>
<td>3.9</td>
<td>2765</td>
<td>2640</td>
<td>0.43</td>
<td>3.1-4.7</td>
<td>1.13</td>
</tr>
<tr>
<td></td>
<td>1 portion or more but less than 2</td>
<td>17.4</td>
<td>2765</td>
<td>2640</td>
<td>0.82</td>
<td>15.8-19.0</td>
<td>1.12</td>
</tr>
<tr>
<td></td>
<td>2 portions or more but less than 3</td>
<td>21.7</td>
<td>2765</td>
<td>2640</td>
<td>0.85</td>
<td>20.1-23.4</td>
<td>1.06</td>
</tr>
<tr>
<td></td>
<td>3 portions or more but less than 4</td>
<td>18.3</td>
<td>2765</td>
<td>2640</td>
<td>0.81</td>
<td>16.7-19.9</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>4 portions or more but less than 5</td>
<td>13.1</td>
<td>2765</td>
<td>2640</td>
<td>0.67</td>
<td>11.8-14.4</td>
<td>1.01</td>
</tr>
<tr>
<td></td>
<td>5 portions or more</td>
<td>18.7</td>
<td>2765</td>
<td>2640</td>
<td>0.8</td>
<td>17.1-20.2</td>
<td>1.05</td>
</tr>
<tr>
<td><strong>Girls 5-15</strong></td>
<td>Mean portions</td>
<td>3.3</td>
<td>2820</td>
<td>2514</td>
<td>0.05</td>
<td>3.2-3.4</td>
<td>1.08</td>
</tr>
<tr>
<td></td>
<td>Portions per day</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>4.4</td>
<td>2820</td>
<td>2514</td>
<td>0.4</td>
<td>3.6-5.2</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>Less than 1 portion</td>
<td>2.5</td>
<td>2820</td>
<td>2514</td>
<td>0.3</td>
<td>1.9-3.1</td>
<td>0.97</td>
</tr>
<tr>
<td></td>
<td>1 portion or more but less than 2</td>
<td>17.2</td>
<td>2820</td>
<td>2514</td>
<td>0.81</td>
<td>15.6-18.8</td>
<td>1.07</td>
</tr>
<tr>
<td></td>
<td>2 portions or more but less than 3</td>
<td>22.0</td>
<td>2820</td>
<td>2514</td>
<td>0.84</td>
<td>20.4-23.7</td>
<td>1.02</td>
</tr>
<tr>
<td></td>
<td>3 portions or more but less than 4</td>
<td>19.0</td>
<td>2820</td>
<td>2514</td>
<td>0.77</td>
<td>17.5-20.6</td>
<td>0.98</td>
</tr>
<tr>
<td></td>
<td>4 portions or more but less than 5</td>
<td>14.6</td>
<td>2820</td>
<td>2514</td>
<td>0.7</td>
<td>13.2-15.9</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>5 portions or more</td>
<td>20.3</td>
<td>2820</td>
<td>2514</td>
<td>0.88</td>
<td>18.6-22.0</td>
<td>1.10</td>
</tr>
</tbody>
</table>

### Table 28

**True standard errors and 95% confidence intervals for children's self-reported cigarette smoking status**

Aged 8-15 2008

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>% (p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boys 8-15</strong></td>
<td>Have ever smoked</td>
<td>11.4</td>
<td>1876</td>
<td>1800</td>
<td>0.81</td>
<td>9.9-13.0</td>
<td>1.07</td>
</tr>
<tr>
<td><strong>Girls 8-15</strong></td>
<td>Have ever smoked</td>
<td>13.0</td>
<td>1940</td>
<td>1716</td>
<td>0.84</td>
<td>11.4-14.7</td>
<td>1.04</td>
</tr>
</tbody>
</table>

### Table 29

**True standard errors and 95% confidence intervals for children's saliva cotinine levels**

Aged 4-15 with a valid cotinine assay 2008

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>%</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>Deft</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boys 4-15</strong></td>
<td>Cotinine (ng/ml)</td>
<td>% with cotinine 15 ng/ml or more</td>
<td>2.1</td>
<td>772</td>
<td>858</td>
<td>0.53</td>
<td>1.0-3.1</td>
</tr>
<tr>
<td></td>
<td>% with no detectable cotinine</td>
<td>40.1</td>
<td>772</td>
<td>858</td>
<td>2.08</td>
<td>36.0-44.2</td>
<td>2.64</td>
</tr>
<tr>
<td><strong>Girls 4-15</strong></td>
<td>% with cotinine 15 ng/ml or more</td>
<td>1.7</td>
<td>746</td>
<td>814</td>
<td>0.46</td>
<td>0.8-2.6</td>
<td>2.14</td>
</tr>
<tr>
<td></td>
<td>% with no detectable cotinine</td>
<td>40.9</td>
<td>746</td>
<td>814</td>
<td>2.01</td>
<td>36.9-44.8</td>
<td>2.47</td>
</tr>
</tbody>
</table>
### Table 30

**True standard errors and 95% confidence intervals for children’s self-reported experience of alcohol**

<table>
<thead>
<tr>
<th>Base</th>
<th>Characteristic</th>
<th>% (p)</th>
<th>Sample size</th>
<th>Weighted sample size</th>
<th>True standard error</th>
<th>95% confidence interval</th>
<th>2008 Dfet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boys 8-15</strong></td>
<td>% ever drunk proper alcoholic drink</td>
<td>29.5</td>
<td>1882</td>
<td>1805</td>
<td>1.08</td>
<td>27.3-31.6</td>
<td>1.01</td>
</tr>
<tr>
<td><strong>Girls 8-15</strong></td>
<td>% ever drunk proper alcoholic drink</td>
<td>31.7</td>
<td>1945</td>
<td>1722</td>
<td>1.21</td>
<td>29.3-34.1</td>
<td>1.08</td>
</tr>
</tbody>
</table>

### Table 31

**Reference intervals for blood analytes**

<table>
<thead>
<tr>
<th>Analyte</th>
<th>Reference interval</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total cholesterol</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>3.5-5.0 mmol/L</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>3.5-5.0 mmol/L</td>
<td></td>
</tr>
<tr>
<td><strong>HDL-cholesterol</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>1.0-1.5 mmol/L</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>1.2-1.8 mmol/L</td>
<td></td>
</tr>
<tr>
<td><strong>Total glycated haemoglobin (HbA1c)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>Non diabetic, &lt;6.1</td>
<td>%</td>
</tr>
<tr>
<td>Females</td>
<td>Non diabetic, &lt;6.1</td>
<td>%</td>
</tr>
</tbody>
</table>

*a* Biochemistry laboratory, Royal Victoria Infirmary, Newcastle.
## Table 32

### Internal quality control results for total cholesterol

<table>
<thead>
<tr>
<th>Date</th>
<th>Level</th>
<th>Target/ Achieved</th>
<th>Acceptable Range</th>
<th>S.D. (mmol/L) Achieved</th>
<th>C.V. (%) Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2008</td>
<td>Low</td>
<td>2.60/2.66</td>
<td>2.5-2.7</td>
<td>0.05</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.35</td>
<td>4.1-4.6</td>
<td>0.09</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.69</td>
<td>6.3-7.1</td>
<td>0.13</td>
<td>2.0</td>
</tr>
<tr>
<td>February</td>
<td>Low</td>
<td>2.60/2.63</td>
<td>2.5-2.7</td>
<td>0.07</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.30</td>
<td>4.1-4.6</td>
<td>0.13</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.64</td>
<td>6.3-7.1</td>
<td>0.19</td>
<td>2.8</td>
</tr>
<tr>
<td>March</td>
<td>Low</td>
<td>2.60/2.65</td>
<td>2.5-2.7</td>
<td>0.07</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.34</td>
<td>4.1-4.6</td>
<td>0.12</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.69</td>
<td>6.3-7.1</td>
<td>0.17</td>
<td>2.6</td>
</tr>
<tr>
<td>April</td>
<td>Low</td>
<td>2.60/2.61</td>
<td>2.5-2.7</td>
<td>0.08</td>
<td>2.9</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.29</td>
<td>4.1-4.6</td>
<td>0.09</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.62</td>
<td>6.3-7.1</td>
<td>0.16</td>
<td>2.4</td>
</tr>
<tr>
<td>May</td>
<td>Low</td>
<td>2.60/2.61</td>
<td>2.5-2.7</td>
<td>0.09</td>
<td>3.4</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.28</td>
<td>4.1-4.6</td>
<td>0.10</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.57</td>
<td>6.3-7.1</td>
<td>0.15</td>
<td>2.2</td>
</tr>
<tr>
<td>June</td>
<td>Low</td>
<td>2.60/2.62</td>
<td>2.5-2.7</td>
<td>0.06</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.29</td>
<td>4.1-4.6</td>
<td>0.10</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.60</td>
<td>6.3-7.1</td>
<td>0.18</td>
<td>2.7</td>
</tr>
<tr>
<td>July</td>
<td>Low</td>
<td>2.60/2.61</td>
<td>2.5-2.7</td>
<td>0.07</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.29</td>
<td>4.1-4.6</td>
<td>0.11</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.58</td>
<td>6.3-7.1</td>
<td>0.17</td>
<td>2.6</td>
</tr>
<tr>
<td>August</td>
<td>Low</td>
<td>2.60/2.61</td>
<td>2.5-2.7</td>
<td>0.06</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.29</td>
<td>4.1-4.6</td>
<td>0.10</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.58</td>
<td>6.3-7.1</td>
<td>0.16</td>
<td>2.5</td>
</tr>
<tr>
<td>September</td>
<td>Low</td>
<td>2.60/2.62</td>
<td>2.5-2.7</td>
<td>0.06</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.29</td>
<td>4.1-4.6</td>
<td>0.10</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.59</td>
<td>6.3-7.1</td>
<td>0.16</td>
<td>2.4</td>
</tr>
<tr>
<td>October</td>
<td>Low</td>
<td>2.60/2.62</td>
<td>2.5-2.7</td>
<td>0.08</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.30</td>
<td>4.1-4.6</td>
<td>0.13</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.63</td>
<td>6.3-7.1</td>
<td>0.21</td>
<td>3.2</td>
</tr>
<tr>
<td>November</td>
<td>Low</td>
<td>2.60/2.61</td>
<td>2.5-2.7</td>
<td>0.05</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.28</td>
<td>4.1-4.6</td>
<td>0.08</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.60</td>
<td>6.3-7.1</td>
<td>0.14</td>
<td>2.1</td>
</tr>
<tr>
<td>December</td>
<td>Low</td>
<td>2.60/2.61</td>
<td>2.5-2.7</td>
<td>0.06</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.30/4.28</td>
<td>4.1-4.6</td>
<td>0.11</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.65</td>
<td>6.4-7.0</td>
<td>0.17</td>
<td>2.6</td>
</tr>
<tr>
<td>January 2009</td>
<td>Low</td>
<td>2.60/2.62</td>
<td>2.5-2.7</td>
<td>0.06</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.70/4.65</td>
<td>4.4-4.9</td>
<td>0.11</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.66</td>
<td>6.4-7.0</td>
<td>0.15</td>
<td>2.3</td>
</tr>
<tr>
<td>February</td>
<td>Low</td>
<td>2.60/2.62</td>
<td>2.5-2.7</td>
<td>0.07</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.70/4.65</td>
<td>4.4-4.9</td>
<td>0.13</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.66</td>
<td>6.4-7.0</td>
<td>0.19</td>
<td>2.8</td>
</tr>
<tr>
<td>March</td>
<td>Low</td>
<td>2.60/2.65</td>
<td>2.5-2.7</td>
<td>0.07</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.70/4.69</td>
<td>4.4-4.9</td>
<td>0.13</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.70</td>
<td>6.4-7.0</td>
<td>0.18</td>
<td>2.7</td>
</tr>
<tr>
<td>April</td>
<td>Low</td>
<td>2.60/2.64</td>
<td>2.5-2.7</td>
<td>0.07</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>4.70/4.67</td>
<td>4.4-4.9</td>
<td>0.13</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>6.70/6.68</td>
<td>6.4-7.0</td>
<td>0.19</td>
<td>2.9</td>
</tr>
</tbody>
</table>
### Table 33

**Internal quality control results for HDL-cholesterol**

<table>
<thead>
<tr>
<th>Date</th>
<th>Level</th>
<th>Level/Target Achieved</th>
<th>Acceptable Range</th>
<th>S.D. Achieved</th>
<th>C.V. (%) Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.03</td>
<td>3.3</td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.04</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>2.1-2.4</td>
<td>0.06</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.03</td>
<td>4.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.05</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.1-2.4</td>
<td>0.09</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.03</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.04</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.1-2.4</td>
<td>0.08</td>
<td>3.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.03</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.04</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.1-2.4</td>
<td>0.09</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.03</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.04</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.1-2.4</td>
<td>0.07</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>June</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.02</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.04</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.1-2.4</td>
<td>0.07</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>July</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.03</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.04</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.1-2.4</td>
<td>0.09</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>August</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.03</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.05</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.1-2.4</td>
<td>0.07</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>September</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.03</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.04</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.1-2.4</td>
<td>0.05</td>
<td>2.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.03</td>
<td>3.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.05</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.1-2.4</td>
<td>0.08</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.02</td>
<td>2.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.04</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>2.1-2.4</td>
<td>0.06</td>
<td>2.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.02</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.3-1.5</td>
<td>0.04</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>1.9-2.3</td>
<td>0.05</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>January</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.03</td>
<td>3.8</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td></td>
<td>Normal</td>
<td>1.4-1.7</td>
<td>0.06</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
<td>1.9-2.3</td>
<td>0.09</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.04</td>
<td>4.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.4-1.7</td>
<td>0.06</td>
<td>4.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>1.9-2.3</td>
<td>0.08</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>March</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.03</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.4-1.7</td>
<td>0.05</td>
<td>3.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>1.9-2.3</td>
<td>0.06</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>Low</td>
<td>0.7-0.9</td>
<td>0.02</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Normal</td>
<td>1.4-1.7</td>
<td>0.04</td>
<td>3.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>1.9-2.3</td>
<td>0.06</td>
<td>3.0</td>
<td></td>
</tr>
</tbody>
</table>
### Table 34

**Internal quality control results for glycated haemoglobin (HbA1c)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Level (%) Target/ Achieved</th>
<th>S.D. (%) Achieved</th>
<th>C.V. (%) Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2008</td>
<td>5.40/5.39 5.2-5.6</td>
<td>0.10</td>
<td>1.9</td>
</tr>
<tr>
<td>February 2008</td>
<td>5.40/5.49 5.2-5.6</td>
<td>0.12</td>
<td>2.2</td>
</tr>
<tr>
<td>March 2008</td>
<td>5.40/5.41 5.2-5.6</td>
<td>0.07</td>
<td>1.3</td>
</tr>
<tr>
<td>April 2008</td>
<td>5.40/5.56 5.2-5.6</td>
<td>0.06</td>
<td>1.1</td>
</tr>
<tr>
<td>May 2008</td>
<td>5.40/5.57 5.2-5.6</td>
<td>0.07</td>
<td>1.3</td>
</tr>
<tr>
<td>June 2008</td>
<td>5.40/5.55 5.3-5.7</td>
<td>0.06</td>
<td>1.1</td>
</tr>
<tr>
<td>July 2008</td>
<td>5.40/5.55 5.3-5.7</td>
<td>0.07</td>
<td>1.3</td>
</tr>
<tr>
<td>August 2008</td>
<td>5.40/5.48 5.3-5.7</td>
<td>0.06</td>
<td>1.1</td>
</tr>
<tr>
<td>September 2008</td>
<td>5.40/5.47 5.3-5.7</td>
<td>0.08</td>
<td>1.5</td>
</tr>
<tr>
<td>October 2008</td>
<td>5.40/5.52 5.3-5.7</td>
<td>0.06</td>
<td>1.1</td>
</tr>
<tr>
<td>November 2008</td>
<td>5.40/5.47 5.3-5.7</td>
<td>0.05</td>
<td>0.9</td>
</tr>
<tr>
<td>December 2008</td>
<td>5.40/5.46 5.3-5.7</td>
<td>0.06</td>
<td>1.1</td>
</tr>
<tr>
<td>January 2009</td>
<td>5.40/5.47 5.3-5.7</td>
<td>0.05</td>
<td>0.9</td>
</tr>
<tr>
<td>February 2009</td>
<td>5.40/5.58 5.3-5.7</td>
<td>0.06</td>
<td>1.1</td>
</tr>
<tr>
<td>March 2009</td>
<td>5.40/5.60 5.3-5.7</td>
<td>0.05</td>
<td>0.9</td>
</tr>
<tr>
<td>April 2009</td>
<td>5.40/5.63 5.3-5.7</td>
<td>0.06</td>
<td>1.1</td>
</tr>
</tbody>
</table>

### Table 35

**Internal quality control results for saliva cotinine – Gas Chromatography (old method)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Level (ng/mL) Target/ Achieved</th>
<th>S.D. (ng/mL) Achieved</th>
<th>C.V. (%) Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2008b</td>
<td>1.00/1.00 1.0</td>
<td>0.10</td>
<td>10.00</td>
</tr>
<tr>
<td></td>
<td>5.00/4.75 5.0</td>
<td>0.24</td>
<td>5.11</td>
</tr>
<tr>
<td></td>
<td>20.00/18.93 20.0</td>
<td>0.40</td>
<td>2.13</td>
</tr>
<tr>
<td></td>
<td>100.00/94.87 100.0</td>
<td>3.20</td>
<td>3.37</td>
</tr>
<tr>
<td></td>
<td>400.00/399.53 400.0</td>
<td>6.49</td>
<td>1.63</td>
</tr>
<tr>
<td></td>
<td>600.00/601.57 600.0</td>
<td>11.02</td>
<td>1.83</td>
</tr>
<tr>
<td>Augustb</td>
<td>1.00/1.05 1.0</td>
<td>0.07</td>
<td>6.73</td>
</tr>
<tr>
<td></td>
<td>5.00/5.05 5.0</td>
<td>0.21</td>
<td>4.20</td>
</tr>
<tr>
<td></td>
<td>20.00/20.45 20.0</td>
<td>1.77</td>
<td>8.64</td>
</tr>
<tr>
<td></td>
<td>100.00/104.30 100.0</td>
<td>2.97</td>
<td>2.85</td>
</tr>
<tr>
<td></td>
<td>400.00/419.65 400.0</td>
<td>13.51</td>
<td>3.22</td>
</tr>
<tr>
<td></td>
<td>600.00/610.40 600.0</td>
<td>22.91</td>
<td>3.75</td>
</tr>
<tr>
<td>September</td>
<td>1.00/1.01 1.0</td>
<td>0.13</td>
<td>12.74</td>
</tr>
<tr>
<td></td>
<td>5.00/4.87 5.0</td>
<td>0.38</td>
<td>7.85</td>
</tr>
<tr>
<td></td>
<td>20.00/18.83 20.0</td>
<td>0.73</td>
<td>3.88</td>
</tr>
<tr>
<td></td>
<td>100.00/96.07 100.0</td>
<td>4.60</td>
<td>4.79</td>
</tr>
<tr>
<td></td>
<td>400.00/402.75 400.0</td>
<td>8.72</td>
<td>2.17</td>
</tr>
<tr>
<td></td>
<td>600.00/581.83 600.0</td>
<td>12.60</td>
<td>2.17</td>
</tr>
<tr>
<td>October</td>
<td>1.00/1.00 1.0</td>
<td>0.07</td>
<td>7.07</td>
</tr>
<tr>
<td></td>
<td>5.00/5.08 5.0</td>
<td>0.21</td>
<td>4.20</td>
</tr>
<tr>
<td></td>
<td>20.00/20.03 20.0</td>
<td>0.78</td>
<td>3.88</td>
</tr>
<tr>
<td></td>
<td>100.00/99.97 100.0</td>
<td>1.44</td>
<td>1.44</td>
</tr>
<tr>
<td></td>
<td>400.00/424.63 400.0</td>
<td>4.67</td>
<td>1.10</td>
</tr>
<tr>
<td></td>
<td>600.00/609.57 600.0</td>
<td>24.17</td>
<td>3.96</td>
</tr>
<tr>
<td>November</td>
<td>1.00/1.03 1.0</td>
<td>0.05</td>
<td>4.88</td>
</tr>
<tr>
<td></td>
<td>5.00/5.10 5.0</td>
<td>0.32</td>
<td>6.20</td>
</tr>
<tr>
<td></td>
<td>20.00/20.50 20.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>100.00/104.05 100.0</td>
<td>1.34</td>
<td>1.29</td>
</tr>
<tr>
<td></td>
<td>400.00/409.15 400.0</td>
<td>27.37</td>
<td>6.69</td>
</tr>
<tr>
<td></td>
<td>600.00/620.40 600.0</td>
<td>35.07</td>
<td>5.65</td>
</tr>
<tr>
<td>December</td>
<td>1.00/1.00 1.0</td>
<td>0.08</td>
<td>7.56</td>
</tr>
<tr>
<td></td>
<td>5.00/4.89 5.0</td>
<td>0.30</td>
<td>6.08</td>
</tr>
<tr>
<td></td>
<td>20.00/18.43 20.0</td>
<td>0.06</td>
<td>0.31</td>
</tr>
<tr>
<td></td>
<td>100.00/95.68 100.0</td>
<td>4.45</td>
<td>4.65</td>
</tr>
<tr>
<td></td>
<td>400.00/387.65 400.0</td>
<td>5.84</td>
<td>1.51</td>
</tr>
<tr>
<td></td>
<td>600.00/615.07 600.0</td>
<td>44.98</td>
<td>7.31</td>
</tr>
<tr>
<td>January 2009</td>
<td>1.00/1.05 1.0</td>
<td>0.06</td>
<td>5.50</td>
</tr>
<tr>
<td></td>
<td>5.00/5.17 5.0</td>
<td>0.29</td>
<td>5.70</td>
</tr>
<tr>
<td></td>
<td>20.00/19.83 20.0</td>
<td>0.35</td>
<td>1.77</td>
</tr>
<tr>
<td></td>
<td>100.00/98.57 100.0</td>
<td>2.90</td>
<td>2.94</td>
</tr>
<tr>
<td></td>
<td>400.00/389.43 400.0</td>
<td>5.75</td>
<td>1.48</td>
</tr>
<tr>
<td></td>
<td>600.00/595.57 600.0</td>
<td>15.32</td>
<td>2.57</td>
</tr>
<tr>
<td>February</td>
<td>1.00/1.10 1.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5.00/5.40 5.0</td>
<td>0.14</td>
<td>2.62</td>
</tr>
<tr>
<td></td>
<td>20.00/20.60 20.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>100.00/103.30 100.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>400.00/422.80 400.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>600.00/613.20 600.0</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Continued...
Table 35 continued

<table>
<thead>
<tr>
<th>Date</th>
<th>Level (ng/mL) Target/ Achieved</th>
<th>S.D. (ng/mL) Achieved</th>
<th>C.V. (%) Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td>1.00/1.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>5.00/5.20</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>20.00/20.20</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>100.00/103.20</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>400.00/429.10</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>600.00/615.20</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>April</td>
<td>1.00/0.90</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>5.00/4.60</td>
<td>0.14</td>
<td>3.07</td>
</tr>
<tr>
<td></td>
<td>20.00/19.40</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>100.00/98.10</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>400.00/413.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>600.00/611.10</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

In 2008, ABS Laboratories continued to use Gas Chromatography (GC-NPD, the ‘old method’) and also introduced new technology and methods to improve sample throughput, using high performance liquid chromatography coupled to tandem mass spectrometry (LC-MS/MS). After cross-validation of the two methods, during 2008 samples from non-smokers were reassayed only using LC-MS/MS, while samples from smokers (who have cotinine levels one to three orders of magnitude higher than non-smokers) were reassayed using either the old or new method, depending on the availability of equipment and the number of samples to be analysed.

Table 36

Internal quality control results for saliva cotinine – LC-MS/MS (new method), low calibration range

<table>
<thead>
<tr>
<th>Date</th>
<th>Level (ng/mL) Target/ Achieved</th>
<th>S.D. (ng/mL) Achieved</th>
<th>C.V. (%) Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 2008</td>
<td>0.36/0.39</td>
<td>0.01</td>
<td>3.59</td>
</tr>
<tr>
<td></td>
<td>8.00/8.71</td>
<td>0.18</td>
<td>2.11</td>
</tr>
<tr>
<td></td>
<td>80.00/86.27</td>
<td>0.24</td>
<td>0.28</td>
</tr>
<tr>
<td>August</td>
<td>0.30/0.29</td>
<td>0.03</td>
<td>10.38</td>
</tr>
<tr>
<td></td>
<td>8.00/7.85</td>
<td>0.62</td>
<td>7.95</td>
</tr>
<tr>
<td></td>
<td>80.00/75.89</td>
<td>6.05</td>
<td>7.98</td>
</tr>
<tr>
<td>September</td>
<td>0.30/0.31</td>
<td>0.03</td>
<td>8.53</td>
</tr>
<tr>
<td></td>
<td>8.00/7.66</td>
<td>0.50</td>
<td>6.46</td>
</tr>
<tr>
<td></td>
<td>80.00/77.59</td>
<td>3.06</td>
<td>3.95</td>
</tr>
<tr>
<td>October</td>
<td>0.30/0.30</td>
<td>0.03</td>
<td>8.61</td>
</tr>
<tr>
<td></td>
<td>8.00/7.89</td>
<td>0.56</td>
<td>7.13</td>
</tr>
<tr>
<td></td>
<td>80.00/80.61</td>
<td>4.76</td>
<td>5.91</td>
</tr>
<tr>
<td>November</td>
<td>0.30/0.29</td>
<td>0.03</td>
<td>11.30</td>
</tr>
<tr>
<td></td>
<td>8.00/8.00</td>
<td>0.34</td>
<td>4.21</td>
</tr>
<tr>
<td></td>
<td>80.00/76.51</td>
<td>4.33</td>
<td>5.66</td>
</tr>
<tr>
<td>December</td>
<td>0.30/0.30</td>
<td>0.02</td>
<td>8.08</td>
</tr>
<tr>
<td></td>
<td>8.00/7.54</td>
<td>0.38</td>
<td>5.09</td>
</tr>
<tr>
<td></td>
<td>80.00/75.96</td>
<td>4.35</td>
<td>5.73</td>
</tr>
<tr>
<td>January</td>
<td>0.30/0.30</td>
<td>0.03</td>
<td>8.67</td>
</tr>
<tr>
<td></td>
<td>8.00/7.63</td>
<td>0.19</td>
<td>2.50</td>
</tr>
<tr>
<td></td>
<td>80.00/75.41</td>
<td>3.13</td>
<td>4.15</td>
</tr>
<tr>
<td>February</td>
<td>0.30/0.30</td>
<td>0.03</td>
<td>8.33</td>
</tr>
<tr>
<td></td>
<td>8.00/7.62</td>
<td>0.40</td>
<td>5.22</td>
</tr>
<tr>
<td></td>
<td>80.00/75.05</td>
<td>4.28</td>
<td>5.71</td>
</tr>
<tr>
<td>March</td>
<td>0.30/0.29</td>
<td>0.03</td>
<td>9.97</td>
</tr>
<tr>
<td></td>
<td>8.00/8.10</td>
<td>0.41</td>
<td>5.10</td>
</tr>
<tr>
<td></td>
<td>80.00/81.47</td>
<td>2.63</td>
<td>3.23</td>
</tr>
<tr>
<td>April</td>
<td>0.30/0.30</td>
<td>0.03</td>
<td>9.06</td>
</tr>
<tr>
<td></td>
<td>8.00/8.43</td>
<td>0.31</td>
<td>3.63</td>
</tr>
<tr>
<td></td>
<td>80.00/76.06</td>
<td>6.51</td>
<td>8.55</td>
</tr>
</tbody>
</table>

The 2008 analysis began in spring and resumed in summer 2008 due to these changes and the relocation of ABS Laboratories.

Note:

a In 2008, ABS Laboratories continued to use Gas Chromatography (GC-NPD, the ‘old method’) and also introduced new technology and methods to improve sample throughput, using high performance liquid chromatography coupled to tandem mass spectrometry (LC-MS/MS). After cross-validation of the two methods, during 2008 samples from non-smokers were reassayed only using LC-MS/MS, while samples from smokers (who have cotinine levels one to three orders of magnitude higher than non-smokers) were reassayed using either the old or new method, depending on the availability of equipment and the number of samples to be analysed.

b The 2008 analysis began in spring and resumed in summer 2008 due to these changes and the relocation of ABS Laboratories.

c The 2008 analysis began in spring and resumed in summer 2008 due to these changes and the relocation of ABS Laboratories.
### Table 37
Internal quality control results for saliva cotinine – LC-MS/MS (new method),\(^a\) high calibration range\(^b\)

<table>
<thead>
<tr>
<th>Date</th>
<th>Target/ Achieved (ng/mL)</th>
<th>S.D. Achieved (ng/mL)</th>
<th>C.V. (%) Achieved</th>
<th>Level</th>
<th>S.D.</th>
<th>C.V. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>3.00/3.21</td>
<td>0.06</td>
<td>1.77</td>
<td>250.00/262.97</td>
<td>16.98</td>
<td>6.46</td>
</tr>
<tr>
<td></td>
<td>800.00/790.97</td>
<td>33.28</td>
<td>4.21</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>November</td>
<td>3.00/3.37</td>
<td>0.07</td>
<td>1.96</td>
<td>30.00/31.17</td>
<td>1.61</td>
<td>5.18</td>
</tr>
<tr>
<td></td>
<td>250.00/251.21</td>
<td>10.38</td>
<td>4.13</td>
<td>800.00/735.07</td>
<td>19.84</td>
<td>2.70</td>
</tr>
<tr>
<td>December</td>
<td>30.00/30.81</td>
<td>1.22</td>
<td>3.95</td>
<td>250.00/254.04</td>
<td>2.12</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td>750.00/754.45</td>
<td>6.37</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>January 2009</td>
<td>30.00/31.00</td>
<td>0.82</td>
<td>2.64</td>
<td>250.00/249.70</td>
<td>2.41</td>
<td>0.96</td>
</tr>
<tr>
<td></td>
<td>750.00/702.84</td>
<td>36.40</td>
<td>5.18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>February</td>
<td>3.00/2.82</td>
<td>0.16</td>
<td>5.79</td>
<td>30.00/31.75</td>
<td>1.42</td>
<td>4.46</td>
</tr>
<tr>
<td></td>
<td>250.00/232.63</td>
<td>6.30</td>
<td>2.71</td>
<td>750.00/733.47</td>
<td>36.30</td>
<td>4.95</td>
</tr>
<tr>
<td>March</td>
<td>30.00/30.45</td>
<td>1.29</td>
<td>4.24</td>
<td>250.00/240.82</td>
<td>6.19</td>
<td>2.57</td>
</tr>
<tr>
<td></td>
<td>750.00/735.99</td>
<td>15.79</td>
<td>2.15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>30.00/30.94</td>
<td>0.25</td>
<td>0.80</td>
<td>250.00/253.06</td>
<td>5.47</td>
<td>2.16</td>
</tr>
<tr>
<td></td>
<td>750.00/743.71</td>
<td>22.81</td>
<td>3.07</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) In 2008, ABS Laboratories continued to use Gas Chromatography (GC-NPD, the 'old method') and also introduced new technology and methods to improve sample throughput, using high performance liquid chromatography coupled to tandem mass spectrometry (LC-MS/MS). After cross-validation of the two methods, during 2008 samples from non-smokers were assayed only using LC-MS/MS, while samples from smokers were assayed using either the old or new method depending on the availability of equipment and the number of samples to be analysed.

\(^b\) At the beginning of the year, samples were analysed with the LC-MS/MS assay using the range 0.1 to 100 ng/mL, with samples above this range (i.e. for some smokers) being re-assayed using the original GC-NPD method. From October 2008, samples from smokers were analysed using either the GC-NPD method or a new high calibration range assay on the LC-MS/MS equipment and this table shows quality control results for this high range. Initially the range measured was from 1 to 1000ng/mL (with quality control samples at 30ng/mL) as the low calibration range was used for samples in the lower range.

### Table 38
External quality assessment results for total cholesterol

<table>
<thead>
<tr>
<th>Date</th>
<th>Target value (mmol/L)(^a)</th>
<th>Assayed value (mmol/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2008</td>
<td>6.96</td>
<td>6.900</td>
</tr>
<tr>
<td></td>
<td>5.504</td>
<td>5.600</td>
</tr>
<tr>
<td></td>
<td>3.316</td>
<td>3.400</td>
</tr>
<tr>
<td></td>
<td>4.284</td>
<td>4.400</td>
</tr>
<tr>
<td></td>
<td>4.855</td>
<td>5.100</td>
</tr>
<tr>
<td>February</td>
<td>3.318</td>
<td>3.300</td>
</tr>
<tr>
<td></td>
<td>5.793</td>
<td>5.900</td>
</tr>
<tr>
<td></td>
<td>4.994</td>
<td>5.000</td>
</tr>
<tr>
<td></td>
<td>4.673</td>
<td>4.600</td>
</tr>
<tr>
<td></td>
<td>4.181</td>
<td>4.100</td>
</tr>
<tr>
<td>March</td>
<td>4.848</td>
<td>5.000</td>
</tr>
<tr>
<td></td>
<td>3.228</td>
<td>3.300</td>
</tr>
<tr>
<td></td>
<td>4.455</td>
<td>4.600</td>
</tr>
<tr>
<td></td>
<td>5.495</td>
<td>5.600</td>
</tr>
<tr>
<td></td>
<td>4.900</td>
<td>5.000</td>
</tr>
<tr>
<td>April</td>
<td>5.014</td>
<td>5.200</td>
</tr>
<tr>
<td></td>
<td>5.799</td>
<td>6.200</td>
</tr>
<tr>
<td></td>
<td>3.315</td>
<td>3.500</td>
</tr>
<tr>
<td></td>
<td>4.884</td>
<td>5.200</td>
</tr>
<tr>
<td>May</td>
<td>4.563</td>
<td>4.500</td>
</tr>
<tr>
<td></td>
<td>3.646</td>
<td>3.700</td>
</tr>
<tr>
<td></td>
<td>5.421</td>
<td>5.600</td>
</tr>
<tr>
<td></td>
<td>5.852</td>
<td>6.000</td>
</tr>
<tr>
<td>June</td>
<td>7.505</td>
<td>7.500</td>
</tr>
<tr>
<td></td>
<td>5.885</td>
<td>5.800</td>
</tr>
<tr>
<td></td>
<td>4.249</td>
<td>4.200</td>
</tr>
<tr>
<td></td>
<td>3.749</td>
<td>3.700</td>
</tr>
<tr>
<td>July</td>
<td>5.036</td>
<td>5.000</td>
</tr>
<tr>
<td></td>
<td>3.666</td>
<td>3.700</td>
</tr>
<tr>
<td></td>
<td>6.215</td>
<td>6.200</td>
</tr>
<tr>
<td></td>
<td>5.290</td>
<td>5.400</td>
</tr>
<tr>
<td>August</td>
<td>5.036</td>
<td>5.100</td>
</tr>
<tr>
<td></td>
<td>5.909</td>
<td>6.000</td>
</tr>
<tr>
<td></td>
<td>4.632</td>
<td>4.800</td>
</tr>
<tr>
<td></td>
<td>3.673</td>
<td>3.700</td>
</tr>
<tr>
<td>September</td>
<td>3.674</td>
<td>3.700</td>
</tr>
<tr>
<td></td>
<td>5.050</td>
<td>5.200</td>
</tr>
<tr>
<td></td>
<td>5.932</td>
<td>6.000</td>
</tr>
<tr>
<td></td>
<td>4.412</td>
<td>4.400</td>
</tr>
<tr>
<td>October</td>
<td>5.495</td>
<td>5.700</td>
</tr>
<tr>
<td></td>
<td>7.176</td>
<td>7.500</td>
</tr>
<tr>
<td></td>
<td>4.018</td>
<td>4.100</td>
</tr>
<tr>
<td></td>
<td>5.402</td>
<td>5.800</td>
</tr>
<tr>
<td>November</td>
<td>5.047</td>
<td>5.100</td>
</tr>
<tr>
<td></td>
<td>5.299</td>
<td>5.600</td>
</tr>
<tr>
<td></td>
<td>4.256</td>
<td>4.400</td>
</tr>
<tr>
<td></td>
<td>4.475</td>
<td>4.500</td>
</tr>
</tbody>
</table>

\(^a\) Overall mean.
### Table 39

**External quality assessment results for HDL-cholesterol**

<table>
<thead>
<tr>
<th>Date</th>
<th>Target value (mmol/L)</th>
<th>Assayed value (mmol/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>January 2008</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>1.425</td>
<td>1.300</td>
</tr>
<tr>
<td></td>
<td>1.271</td>
<td>1.300</td>
</tr>
<tr>
<td></td>
<td>1.228</td>
<td>1.300</td>
</tr>
<tr>
<td></td>
<td>0.942</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>2.072</td>
<td>2.100</td>
</tr>
<tr>
<td><strong>February</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>1.229</td>
<td>1.200</td>
</tr>
<tr>
<td></td>
<td>1.433</td>
<td>1.400</td>
</tr>
<tr>
<td></td>
<td>1.316</td>
<td>1.300</td>
</tr>
<tr>
<td></td>
<td>1.004</td>
<td>1.100</td>
</tr>
<tr>
<td></td>
<td>1.570</td>
<td>1.600</td>
</tr>
<tr>
<td><strong>March</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>2.067</td>
<td>2.000</td>
</tr>
<tr>
<td></td>
<td>1.088</td>
<td>1.100</td>
</tr>
<tr>
<td></td>
<td>1.606</td>
<td>1.600</td>
</tr>
<tr>
<td></td>
<td>1.270</td>
<td>1.200</td>
</tr>
<tr>
<td></td>
<td>1.275</td>
<td>1.300</td>
</tr>
<tr>
<td><strong>April</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>0.935</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>1.432</td>
<td>1.500</td>
</tr>
<tr>
<td></td>
<td>1.233</td>
<td>1.200</td>
</tr>
<tr>
<td></td>
<td>1.270</td>
<td>1.300</td>
</tr>
<tr>
<td><strong>May</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>1.724</td>
<td>1.700</td>
</tr>
<tr>
<td></td>
<td>1.121</td>
<td>1.100</td>
</tr>
<tr>
<td></td>
<td>0.896</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>1.430</td>
<td>1.400</td>
</tr>
<tr>
<td><strong>June</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>0.955</td>
<td>1.000</td>
</tr>
<tr>
<td></td>
<td>1.449</td>
<td>1.500</td>
</tr>
<tr>
<td></td>
<td>1.079</td>
<td>1.100</td>
</tr>
<tr>
<td></td>
<td>0.710</td>
<td>0.800</td>
</tr>
<tr>
<td><strong>July</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>1.426</td>
<td>1.400</td>
</tr>
<tr>
<td></td>
<td>1.140</td>
<td>1.100</td>
</tr>
<tr>
<td></td>
<td>1.676</td>
<td>1.600</td>
</tr>
<tr>
<td></td>
<td>1.099</td>
<td>1.100</td>
</tr>
<tr>
<td><strong>August</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>1.422</td>
<td>1.400</td>
</tr>
<tr>
<td></td>
<td>1.155</td>
<td>1.200</td>
</tr>
<tr>
<td></td>
<td>1.720</td>
<td>1.700</td>
</tr>
<tr>
<td></td>
<td>1.136</td>
<td>1.200</td>
</tr>
<tr>
<td><strong>September</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>1.126</td>
<td>1.100</td>
</tr>
<tr>
<td></td>
<td>1.409</td>
<td>1.400</td>
</tr>
<tr>
<td></td>
<td>1.145</td>
<td>1.200</td>
</tr>
<tr>
<td></td>
<td>1.425</td>
<td>1.400</td>
</tr>
<tr>
<td><strong>October</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>1.165</td>
<td>1.300</td>
</tr>
<tr>
<td></td>
<td>1.297</td>
<td>1.400</td>
</tr>
<tr>
<td></td>
<td>1.724</td>
<td>1.600</td>
</tr>
<tr>
<td></td>
<td>1.052</td>
<td>1.100</td>
</tr>
<tr>
<td><strong>November</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>1.397</td>
<td>1.400</td>
</tr>
<tr>
<td></td>
<td>1.050</td>
<td>1.100</td>
</tr>
<tr>
<td></td>
<td>1.061</td>
<td>1.100</td>
</tr>
<tr>
<td></td>
<td>1.599</td>
<td>1.600</td>
</tr>
</tbody>
</table>

*a Overall mean.

Continued...
Table 40

External quality assessment results for glycated haemoglobin (HbA1c)

<table>
<thead>
<tr>
<th>Date</th>
<th>Target value (%GHb)(^a)</th>
<th>Assayed value (%GHb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 2008</td>
<td>6.55</td>
<td>6.50</td>
</tr>
<tr>
<td></td>
<td>7.43</td>
<td>7.70</td>
</tr>
<tr>
<td>March</td>
<td>6.40</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>6.69</td>
<td>6.50</td>
</tr>
<tr>
<td></td>
<td>8.05</td>
<td>7.80</td>
</tr>
<tr>
<td></td>
<td>9.69</td>
<td>9.50</td>
</tr>
<tr>
<td>April</td>
<td>5.99</td>
<td>5.90</td>
</tr>
<tr>
<td></td>
<td>7.34</td>
<td>7.00</td>
</tr>
<tr>
<td></td>
<td>8.91</td>
<td>8.60</td>
</tr>
<tr>
<td></td>
<td>10.16</td>
<td>9.80</td>
</tr>
<tr>
<td>May</td>
<td>7.28</td>
<td>7.50</td>
</tr>
<tr>
<td></td>
<td>5.18</td>
<td>5.40</td>
</tr>
<tr>
<td>June</td>
<td>7.34</td>
<td>7.40</td>
</tr>
<tr>
<td></td>
<td>5.23</td>
<td>5.30</td>
</tr>
<tr>
<td></td>
<td>6.68</td>
<td>6.70</td>
</tr>
<tr>
<td></td>
<td>10.18</td>
<td>10.30</td>
</tr>
<tr>
<td>July</td>
<td>4.94</td>
<td>5.00</td>
</tr>
<tr>
<td></td>
<td>6.76</td>
<td>6.80</td>
</tr>
<tr>
<td>August</td>
<td>9.68</td>
<td>9.80</td>
</tr>
<tr>
<td></td>
<td>8.91</td>
<td>9.00</td>
</tr>
<tr>
<td></td>
<td>6.68</td>
<td>6.70</td>
</tr>
<tr>
<td></td>
<td>5.98</td>
<td>6.00</td>
</tr>
<tr>
<td>September</td>
<td>7.74</td>
<td>7.80</td>
</tr>
<tr>
<td></td>
<td>6.39</td>
<td>6.30</td>
</tr>
<tr>
<td>October</td>
<td>8.05</td>
<td>8.10</td>
</tr>
<tr>
<td></td>
<td>6.42</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>5.22</td>
<td>b</td>
</tr>
<tr>
<td></td>
<td>7.31</td>
<td>7.30</td>
</tr>
<tr>
<td>November</td>
<td>7.35</td>
<td>7.40</td>
</tr>
<tr>
<td></td>
<td>7.59</td>
<td>7.50</td>
</tr>
<tr>
<td>December</td>
<td>8.97</td>
<td>8.60</td>
</tr>
<tr>
<td></td>
<td>10.25</td>
<td>9.80</td>
</tr>
<tr>
<td></td>
<td>6.02</td>
<td>5.90</td>
</tr>
<tr>
<td></td>
<td>8.04</td>
<td>7.70</td>
</tr>
<tr>
<td>January 2009</td>
<td>7.78</td>
<td>7.90</td>
</tr>
<tr>
<td></td>
<td>7.28</td>
<td>7.30</td>
</tr>
<tr>
<td>February</td>
<td>5.26</td>
<td>5.30</td>
</tr>
<tr>
<td></td>
<td>9.71</td>
<td>9.90</td>
</tr>
<tr>
<td></td>
<td>6.69</td>
<td>6.80</td>
</tr>
<tr>
<td></td>
<td>8.26</td>
<td>8.40</td>
</tr>
<tr>
<td>March</td>
<td>6.91</td>
<td>6.90</td>
</tr>
<tr>
<td></td>
<td>7.00</td>
<td>7.00</td>
</tr>
<tr>
<td>April</td>
<td>5.93</td>
<td>5.90</td>
</tr>
<tr>
<td></td>
<td>7.60</td>
<td>7.60</td>
</tr>
<tr>
<td></td>
<td>9.72</td>
<td>9.60</td>
</tr>
</tbody>
</table>

\(^a\) Overall mean.

\(^b\) Unusual chromatography. These samples contained variant haemoglobins which may or may not interfere with the quantification of the HbA1c.
Appendix A

Fieldwork documents

Stage 1 leaflet: Interviewer
Actigraph leaflet
Stage 2 leaflet: Nurse
Household questionnaire
Individual questionnaire
Selected show cards (excluding those where answer categories are given in the questionnaire documentation)
Fresh fruit size coding list
Butter and margarine coding list
Self completion booklets
8-12 year olds
13-15 year olds
Young adults
Adults
Parents of 4-15 year olds
Adults: Eating habits

Consents:
Hospital Episode Statistics
NHS Central Register and Cancer Register
Nurse questionnaire
Consent form
Nurse showcard (not shown in questionnaire documentation)


The Health Survey for England 2008

This survey is being carried out for the Information Centre for Health and Social Care, by the National Centre for Social Research, an independent research institute, and the Department of Epidemiology and Public Health at UCL (University College London).

This leaflet tells you more about the survey and why it is being carried out.

What is it about?
The Information Centre for health and social care would like information about the health of adults and children in England. This is so that new and better ways can be developed to help people maintain good health and provide the necessary services for people who need treatment at times of ill health.

The Health Survey for England is an annual survey designed to provide information about the health of people in England. Each year a fresh set of people is interviewed.

The 2008 survey has questions about your general health, and about factors that can affect your health, including behaviours such as eating habits, physical activity, smoking and drinking. The survey also collects, if you agree, some physical measurements such as height, weight, and blood pressure. (We will give you more information about this later on.) You can agree to have some measurements or samples and not others. Some personal details such as age, sex and employment are needed to interpret this information.

Do I get anything from the survey?

For adults (aged 16 and over) the nurse will ask for your consent to collect a blood sample. The nurse will have to get your written permission before saliva or blood samples can be taken. You are of course free to choose not to give a sample, even if you are willing to help the nurse with everything else.

The analysis of all the measurements and samples will tell us a lot about the health of the population. During the visit, the nurse will be able to explain the importance of these measurements and answer any questions.

Why have we come to your household?

To visit every household in England would take too long and cost too much money. Instead we select a sample of addresses and ask the people at each address to take part in the 2008 Health Survey.

Is the survey confidential?

Yes. We take great care to protect the confidentiality of the information we are given. The survey results will not be presented in a form which can reveal your identity. This will only be known to the National Centre / UCL research team.

If you agree, however, your name, address and date of birth, but no other information, will be passed to the National Health Service Central Register, Cancer Registry and Hospital Episode Statistics register. This would help us if we wanted to follow you up in future.

Is the survey compulsory?

No. In all our surveys we rely on voluntary co-operation. The success of the survey depends on the goodwill and co-operation of those asked to take part. The more people who do take part, the more useful the results will be. You are free to withdraw from the survey at any time. However, we will not be able to remove individual information after the survey results have been published.

What will happen after the interview?

After the interview, if you agree, the interviewer will arrange for a qualified nurse to visit at a time convenient for you, so that some measurements can be taken. There are different measurements for different age groups.

The nurse will carry out a length measurement for infants under 2 years. The nurse will measure blood pressure (for all those aged 5 and over) and waist and hip circumferences (for all those aged 11 and over). For everyone aged 4 and over, the nurse will ask for consent to collect a sample of saliva (spit).

Other benefits from the survey will be indirect and in due course will come from any improvements in health and in health services which result from any future report about you.

If I have any other questions?

We hope this leaflet answers the questions you may have, and that it shows the importance of the survey. If you have any other questions about the survey, please do not hesitate to ring one of the contacts listed overleaf, or look at our website.

Your co-operation is very much appreciated.

Thank you very much for your help with this survey.

Thank you for your co-operation

For further information, please contact:

Lesley Mullender
Kings House
101-135 Kings Road
Brentwood, Essex
CM14 4LX
Tel: 0800 526 397

Dr. Jennifer Mindell
Department of Epidemiology and Public Health
Royal Free and University College London
Medical School
1-19 Torrington Place
London
WC1E 6BT
Tel: 020 7679 5646

www.healthsurveyforengland.org
Is participation compulsory?

No. In all our surveys we rely on voluntary co-operation. The success of the survey depends on the goodwill and co-operation of those asked to take part. The more people who do take part, the more useful the results will be. You are free to withdraw from the study at any time.

Is the study confidential?

Yes. We take very great care to protect the confidentiality of the information we are given. The study results will not be in a form that can reveal your identity. This will only be known to the National Centre / UCL research team.

Do I get anything for wearing the actigraph?

You will be sent a high street voucher as a token of appreciation for your time and to thank you for taking part.

If I have any other questions?

We hope this leaflet answers the questions you may have, and that it shows the importance of the survey. If you have any other questions about the survey, please do not hesitate to ring either Lesley Mullender or Sue Roche on freephone 0800 026 397.

Frequently Asked Questions

Q. Will the Actigraph harm me in any way?
A. No, the Actigraph cannot harm you. The rechargeable battery is securely housed in the device shell. The monitor does not emit radiation, electrical current, vibration, or heat and it can be worn under your clothing without causing discomfort.

What is the ‘Actigraph’ monitor?

The Actigraph is a small machine that records information about physical activity patterns. The monitor records body movements during normal daily activities such as walking and jogging. The monitor records no other information and is not harmful in any way.

What am I supposed to do with the monitor?

You are asked to wear the monitor during the time you are awake, for 7 days. Please put the monitor on when you get up in the morning and take it off before you go to bed.

• Please remove the monitor before you shower, have a bath or go swimming, as if it gets wet it may be damaged (if you forget to take the monitor off before swimming or having a bath, you will not be harmed).

• Please keep the monitor away from children under 4 years and pets to avoid accidents.

How am I supposed to wear the monitor?

The monitor is worn on the waist using the elastic belt provided. Attach the belt snugly around your waist so that the monitor rests on the right side of your body, above your right hip. Ideally you should wear the monitor under your clothes. It is best to keep the monitor fastened on the belt to reduce the risk of losing it. Please put the monitor on during your waking hours and take it off before you go to bed each day.

What do I do after I have worn the monitor for 7 days?

The interviewer will arrange an appointment for the nurse to collect the monitor. Until then, please take off the monitor and keep it in a safe place.

(Frequently Asked Questions)

Q. The light on the monitor is flashing, does this mean that something is wrong?
A. No, this just indicates how much battery life is left.

Q. I play a team sport, is it OK to keep the monitor on? What if we are not allowed to wear jewellery?
A. Please keep the monitor on unless you are playing vigorous contact sports like rugby, martial arts and so on. We can provide you with a spare copy of this information sheet to show to your coach or anyone else who asks about the monitor, e.g. whether it counts as jewellery (No – it is a piece of scientific equipment).

Q. What do I need to do if I go through a metal detector (e.g. at an airport)?
A. Please take the belt off and put it in the tray to be screened. Please keep the information sheet to show to the security personnel.

Q. If I swim/cycle/how, what do I need to do?
A. Please record these activities (as well as sleeping times) in your activity log booklet because the monitor does not collect this information. Please take the monitor off before swimming, as it may be damaged if it gets wet.

Q. What if I lose or damage the monitor?
A. The monitor is an expensive piece of equipment. We would appreciate your help in keeping it safe at all times.

Q. What if I am sick or I cannot do much physical activity for any reason during the week I am wearing the monitor?
A. Please wear the monitor as normal. We are interested in your physical activity patterns no matter how active or inactive you are.

Q. What if I works shifts?
A. Please wear the monitor all the time you are awake, whether this is during the day or night. Please record the time you put the monitor on and took it off in your log booklet.
The Measurements

• **Blood pressure (Age 5 years and over)**
  High blood pressure can be a health problem. However, blood pressure is difficult to measure accurately. A person’s blood pressure is influenced by age and can vary from day to day with emotion, meals, tobacco, alcohol, medication, temperature and pain. Although the nurse will tell you your blood pressure along with an indication of its meaning, a diagnosis cannot be made on measurements taken on a single occasion. Blood pressure is measured using an inflatable cuff that goes around the upper arm.

• **Waist-to-hip ratio (Age 11 years and over)**
  Lately there has been much discussion about the relationship between weight and health. We have already recorded your weight and height but another factor is the distribution of weight over the body. The ratio of your waist to hip measurements is most useful for assessing this.

• **Saliva sample (Age 4 years and over)**
  We would like to take a sample of saliva (spit). This simply involves dribbling saliva down a straw into a tube, or sucking on a piece of cotton wool. The sample will be analysed for cotinine. Cotinine is related to the intake of cigarette smoke and is of particular interest to see whether non-smokers may have raised levels as a result of ‘passive’ smoking. The saliva will only be tested for cotinine. It will not be tested for other substances, like drugs or alcohol.

• **Stepping exercise (Age 16 to 74 years)**
  Some adults aged 16 to 74 will be asked to do a stepping exercise. The stepping exercise is useful because the results can be related to physical fitness. You will not be asked to do anything you do not feel safe and comfortable with. The nurse will ask your permission for doing the exercise.

• **Blood sample (Age 16 years and over)**
  We would be very grateful if you would agree to provide us with a sample of blood. The analysis of the blood samples will tell us a lot about the health of the population. You are, of course, free to choose not to give a blood sample and the nurse will ask for your written permission before a blood sample is taken.
If you agree to your results being sent to your GP, then he/she may use them in medical reports about you. This may occur if you apply for a new life assurance policy, or for a new job. Insurance companies may ask those who apply for new policies if they have had any medical reports from the GP. Because of the Access to Medical Reports Act 1988 an insurance company cannot ask your GP for a medical report on you without your permission. Having given your permission, you then have the right to see the report before your GP sends it to the insurance company and you can ask for the report to be amended if you consider it to be incorrect or misleading.

The purpose of a medical report is to help the insurance company to judge whether to charge normal premiums, whether to charge higher premiums or whether, in exceptional circumstances, to turn down life insurance on account of the person's health. If you think you may apply for health insurance in the future, you can choose not to know the results of any tests and not to let your GP know these results.

If I have any other questions?

We hope this leaflet answers the questions you may have, and that it shows the importance of the survey. If you have any other questions about the nurse measurements, results or samples please do not hesitate to ring one of the contacts listed below. Your cooperation is very much appreciated.

Lesley Mullender
National Centre for Social Research
Kings House 101-131 Kings Road
Brentwood, Essex CM14 4LX
Tel: 0800 526 397

Dr Jennifer Mindell
Department of Epidemiology and Public Health
Royal Free and University College London Medical School
UCL
1-19 Torrington Place
London WC1E 6BT
Tel: 020 7679 5646
The Health Survey for England 2008 - Household Questionnaire

Program Documentation

Household Questionnaire

Point
SAMPLE POINT NUMBER.
Range: 1..997

Address
ADDRESS NUMBER.
Range: 1..97

Hhold
HOUSEHOLD NUMBER.
Range: 1..9

First
INTERVIEWER FOR INFORMATION……You are in the Questionnaire for Point no: (Point number)
Address no: (Address number)
Household no: (Household number)

QIntro

DateOK
Today’s date according to the laptop is (date). Is this the correct start date of this interview?
1 Yes
2 No

WhoHere
INTERVIEWER: COLLECT THE NAMES OF THE PEOPLE IN THIS HOUSEHOLD.
1 Continue

IF First person in household OR More=Yes THEN
Name
What is the name of person number (1-12)?
ENTER PERSON’S FORENAME

More
Is there anyone else in this household?
1 Yes
2 No

ENDIF

(Name and More repeated for up to 12 household members)

HHSize
Derived household size.
Range: 1..12

SizeConf
So, can I check, altogether there are (\(x\)) number from HHSize) people in your household?
1 Yes
2 No, more than (\(x\))
3 No, less than (\(x\))

HOUSEHOLD COMPOSITION GRID FOR ALL HOUSEHOLD MEMBERS (MAXIMUM 12)

Person
Person number in Household Grid
Range: 1..12

Name
First name from WhoHere

Sex
INTERVIEWER: CODE (name of respondent’s) SEX.
1 Male
2 Female

DoB
What is (name of respondent’s) date of birth?
Enter Date in numbers, E.g. 02/01/1972.

AgeOf
Can I check, what was (name of respondent’s) age last birthday?
Range: 0..120

IF AgeOf = NONRESPONSE THEN
AgeEst
INTERVIEWER CODE: ASK IF NECESSARY (are you / is he/she) AGED UNDER 2 YEARS, AT LEAST 2 UP TO 15 YEARS, OR 16 YEARS OR OLDER?
IF NOT KNOWN, TRY TO GET BEST ESTIMATE
1 Under 2 years
2 2 to 15 years
3 16 to 64 years
4 65 and over

ENDIF
The Health Survey for England 2008 - Household Questionnaire

IF (AgeOf >=16) OR (AgeEst = 16 years or older) THEN

MarStat
Are you (is he/she)...

1...single, that is never married,
2...married and living with (husband/wife),
3...civil partner in a legally recognised Civil Partnership
4...married and separated from (husband/wife),
5...divorced,
6...or, widowed?
7...formerly in a legally recognised civil partnership and separated from civil partner
8...formerly in a legally recognised civil partnership and civil partnership is now legally dissolved
9...a surviving civil partner (his/her partner has since died)

ENDIF

IF (more than one person aged 16+ in household) AND (MarStat = single OR married and separated OR divorced OR widowed) THEN

Couple
May I just check, are you (is he/she) living with anyone in this household as a couple?

1...Yes
2...No
3...SPONTANEOUS ONLY - same sex couple but not in a formal registered civil partnership

ENDIF

IF AgeOf = 16 - 17 THEN

LegPar
Can I check, do either of (name of respondent's) parents, or someone who has legal parental responsibility for him/her, live in this household?

1...Yes
2...No

ENDIF

IF (AgeOf = 0 - 15) AND (AgeEst = response) OR (LegPar = Yes) OR (AgeEst = Under 2 years or 2 to 15 years) THEN

Par1
Which of the people in this household are (name of respondent's) parents or have legal parental responsibility for him/her on a permanent basis?

CODE FIRST PERSON AT THIS QUESTION. IF Not a household member/dead, CODE 97.

Range: 1...97

Par2
Which other person in this household is (name of respondent's) parent or have legal parental responsibility for him/her on a permanent basis?

CODE SECOND PERSON AT THIS QUESTION. IF no-one else in the household, CODE 97.

Range: 1...97

Nat1Par
SHOW CARD B
From this card please tell me what is the relationship of (name of respondent) to (name of parent/legal guardian) [Par1] just tell me the number beside the answer that applies to (name of respondent) and (name of parent/legal guardian).

IF (Par2 IN 1..12) THEN

Nat2Par
SHOW CARD B
From this card please tell me the relationship of (name of respondent) to (name of respondent). Just tell me the number beside the answer that applies to (name of respondent).

Person to Nat2Par repeated for up to 12 members of the HH

ENDIF

ENDIF

ENDIF
The Health Survey for England 2008 - Household Questionnaire

RELATIONSHIP BETWEEN HOUSEHOLD MEMBERS COLLECTED FOR ALL

IF Person > 1 THEN
SHOW CARD A
What is (name of respondent’s) relationship to (name)? Just tell me the number on this card.
ARRAY [1..12]
1 husband/wife
2 partner/cohabitee
3 natural son/daughter
4 adopted son/daughter
5 foster child
6 stepson/daughter/child of partner
7 son/daughter-in-law
8 natural parent
9 adoptive parent
10 foster parent
11 step-parent/parent’s partner
12 parent-in-law
13 natural brother/sister
14 half-brother/sister
15 step-brother/sister
16 adopted brother/sister
17 foster brother/sister
18 brother/sister-in-law
19 grandchild
20 grandparent
21 other relative
22 other non-relative

ASK ALL
HHldr
In whose name is the accommodation owned or rented? Anyone else?
CODE ALL THAT APPLY.
(Codeframe of all household members)
1-12 Person numbers of household members
97 Not a household member

HHResp
INTERVIEWER CODE: WHO WAS THE PERSON RESPONSIBLE FOR ANSWERING THE GRIDS IN THIS QUESTIONNAIRE?
(Codeframe of adult household members)
1-12 Person numbers of household members

IF More than one person coded at HHldr THEN
HiHNum
You have told me that (name) and (name) jointly own or rent the accommodation. Which of you /who has the highest income (from earnings, benefits, pensions and any other sources)?
ENTER PERSON’S NUMBER – IF TWO PEOPLE HAVE THE SAME INCOME, ENTER 13
(Codeframe of joint householders)
1-12 Person numbers of household members
13 Two people have the same income

IF HiHNum=13 THEN
JntEldA
ENTER PERSON NUMBER OF THE ELDEST JOINT HOUSEHOLDER FROM THOSE WITH THE HIGHEST INCOME.
ASK OR RECORD.
(Codeframe of joint householders)
1-12 Person numbers of household members

ENDIF
ELSEIF HiHNum=Don’t know or Refused
JntEldB
ENTER PERSON NUMBER OF THE ELDEST JOINT HOUSEHOLDER.
ASK OR RECORD.
(Codeframe of joint householders)
1-12 Person numbers of household members

ENDIF

ENDIF

HRP
INTERVIEWER: THE HOUSEHOLD REFERENCE PERSON IS:
Displays name of Household Reference Person
PRESS <1> AND <Enter> TO CONTINUE.

DVHRPNum
Person number of Household Reference Person

Eligible
INTERVIEWER: FOR YOUR INFORMATION THE PERSONS IN THIS HOUSEHOLD ELIGIBLE FOR INDIVIDUAL INTERVIEW ARE:
(List of eligible respondents)
For Actigraph points

ACTElig
THE PEOPLE IN THIS HOUSEHOLD ELIGIBLE FOR THE ACTIGRAPH COMPONENT ARE:
(List of eligible respondents)

ASK ALL
Tenure
SHOW CARD C
Now, I’d like to get some general information about your household. In which of these ways does your household occupy this accommodation? Please give an answer from this card.
1 Own it outright
2 Buying it with the help of a mortgage or loan
3 Pay part rent and part mortgage (shared ownership)
4 Rent it
5 Live here rent free (including rent free in relative’s/friend’s property; excluding squatting)
6 Squatting

IF Tenure=Pay part rent/part mortgage OR Rent it OR Live here rent free THEN
JobAccom
Does the accommodation go with the job of anyone in the household?
1 Yes
2 No

Landlord
Who is your landlord?
READ OUT AND CODE FIRST THAT APPLIES:
1 the local authority/council/New Town Development
2 a housing association or co-operative or charitable trust,
3 employer (organisation) of a household member,
4 another organisation,
5 relative/friend (before you lived here) of a household member,
6 employer (individual) of a household member,
7 another individual private landlord?

Furn1
Is the accommodation provided...
READ OUT...
1 furnished,
2 partly furnished (e.g. curtains and carpets only),
3 or, unfurnished?

ENDIF
ASK ALL
Bedrooms
How many bedrooms does your household have, including bed sitting rooms and spare bedrooms?
EXCLUDE BEDROOMS CONVERTED TO OTHER USES (e.g. bathroom). INCLUDE BEDROOMS TEMPORARILY USED FOR OTHER THINGS (e.g. study, playroom).
Range: 0..20

ENDIF
ASK ALL

The Health Survey for England 2008 - Household Questionnaire
PasSm
Does anyone smoke inside this (house/flat) on most days?
INTERVIEWER: INCLUDE NON-HOUSEHOLD MEMBERS WHO SMOKE IN THE HOUSE OR FLAT. EXCLUDE HOUSEHOLD MEMBERS WHO ONLY SMOKE OUTSIDE THE HOUSE OR FLAT.
1 Yes
2 No

IF PasSm = Yes THEN
NumSm
How many people smoke inside this (house/flat) on most days?
Range: 1..20

ENDIF
ASK ALL
Car
Is there a car or van normally available for use by you or any members of your household?
INCLUDE: ANY PROVIDED BY EMPLOYERS IF NORMALLY AVAILABLE FOR PRIVATE USE BY RESPONDENT OR MEMBERS OF HOUSEHOLD.
1 Yes
2 No

IF Car = Yes THEN
NumCars
How many are available?
1 One
2 Two
3 Three or more

ENDIF

SrcInc
Please look at SHOW CARD D. There has been a lot of talk about health and income. We would like to get some idea of your household’s income. This card shows various possible sources of income. Can you please tell me which kinds of income you (and your husband/wife/partner) receive?
PROBE: FOR ALL SOURCES. CODE ALL THAT APPLY
1 Earnings from employment or self-employment
2 State retirement pension
3 Pension from former employer
4 Personal Pensions
5 Child Benefit
6 Job-Seekers Allowance
7 Pension Credit
8 Income Support
9 Working Tax Credit
10 Child Tax Credit
11 Housing Benefit
12 Other state benefits
13 Interest from savings and investments (e.g. stocks & shares)
14 Other kinds of regular allowance from outside your household (e.g. maintenance, student’s grants, rent)
15 No source of income

NJntInc
The Health Survey for England 2008 - Household Questionnaire

SHOW CARD E

This card shows incomes in weekly, monthly and annual amounts. Which of the groups on this card represents (you/you and your husband/partner's combined) income from all these sources, before any deductions for income tax, National Insurance, etc? Just tell me the number beside the row that applies to you (your joint income).

ENTER BAND NUMBER. DON'T KNOW = 96, REFUSED = 97.

Range: 1, 3, 1, 31, 96, 97

IF 2 Adults in household who are not spouse/partner, or 3 or more adults in household

THEN

OthInc

Can I check, does anyone else in the household have an income from any source?

1 Yes
2 No

IF OthInc = Yes THEN

HHInc

Thinking of the income of your household as a whole, which of the groups on this card represents the total income of the whole household before deductions for income tax, National Insurance, etc?

ENTER BAND NUMBER. DON'T KNOW = 96, REFUSED = 97.

Range: 1, 3, 1, 31, 96, 97

ENDIF

ENDIF

EMPLOYMENT DETAILS OF HOUSEHOLD REFERENCE PERSON COLLECTED

NHActiv

SHOW CARD F

Which of these descriptions applies to what you (Household Reference Person) were doing last week, that is in the seven days ending (date last Sunday)?

CODE FIRST TO APPLY.

1 Going to school or college full-time (including on vacation)
2 In paid employment or self-employed (or temporarily away)
3 On a Government scheme for employment training
4 Doing unpaid work for a business that you own, or that a relative owns
5 Waiting to take up paid work already obtained
6 Looking for paid work or a Government training scheme
7 Intending to look for work but prevented by temporary sickness or injury (CHECK MAX 28 DAYS)
8 Permanently unable to work because of long-term sickness or disability (USE ONLY FOR MEN AGED 16-64 OR WOMEN AGED 16-59)
9 Retired from paid work
10 Looking after home or family
11 Doing something else (SPECIFY)

IF NHActiv = Doing something else THEN

NHActivO

9

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF
The Health Survey for England 2008 - Household Questionnaire

IF (HEverJob = Yes) OR (NHActiv = In paid employment or self-employed .. Waiting to take up a job already obtained) OR (HstWork = Yes) THEN

HJobTit
I'd like to ask you some details about the job you were doing last week/your most recent job/the main job you had/the job you are waiting to take up. What is/was/will be the name or title of the job?

Text: Maximum 60 characters

HFtPtime
Were/Are/Will you/name (Household Reference Person) be working full-time or part-time?

(FULL-TIME = MORE THAN 30 HOURS, PART-TIME = 30 HOURS OR LESS)

1 Full-time
2 Part-time

HWtWork
What kind of work do/did/will you/name (Household Reference Person) do most of the time?

Text: Maximum 50 characters

HMatUsed
IF RELEVANT: What materials or machinery do/did/will you/name (Household Reference Person) use? IF NONE USED, WRITE IN 'NONE'.

Text: Maximum 50 characters

HSkilNee
What skills or qualifications are/were needed for the job?

Text: Maximum 120 characters

HEmploye
Were/Are/Will you/name (Household Reference Person) be an employee or, self-employed?

IF IN DOUBT, CHECK HOW THIS EMPLOYMENT IS TREATED FOR TAX & NI PURPOSES.

IF HEmploye = self employed THEN

HDirctr
Can I just check, in this job are/were/will you/name (Household Reference Person) be a Director of a limited company?

1 Yes
2 No

ENDIF

IF (HEmploye = Employee) OR (HDirctr = Yes) THEN

HEmpStat
Are/Were/Will you/name (Household Reference Person) be a... READ OUT ...

1 manager
2 foreman or supervisor
3 or other employee?

ENDIF

HOthPaid
Apart from the job you/name are waiting to take up, have you/name (Household Reference Person) ever been in paid employment or self-employed?

1 Yes
2 No

ENDIF

IF NHActiv=Waiting to take up paid employment already obtained THEN

HOthPaid
Apart from the job you/name are waiting to take up, have you/name (Household Reference Person) ever been in paid employment or self-employed?

1 Yes
2 No

ENDIF

IF NHActiv=(Waiting to take up paid work OR Looking for work) OR (H4WkLook =Yes) THEN

HHowLong
How long have you been looking for paid work/a place in a government scheme?

1 Not yet started
2 Less than 1 month
3 1 month but less than 3 months
4 3 months but less than 6 months
5 6 months but less than 12 months
6 12 months or more.

ENDIF

IF HEverJob = Yes THEN

HPayLast
Which year did you/name (Household Reference Person) you/his/her leave last paid job? WRITE IN.

Numeric: 1920..2999 Decimals: 0

IF HPayLast <= 8 years ago THEN

HPayMon
Which month in that year did you/he/she leave?

1 January
2 February
3 March
4 April
5 May
6 June
7 July
8 August
9 September
10 October
11 November
12 December
13 Can't remember

ENDIF

ENDIF

11

12
The Health Survey for England 2008 - Household Questionnaire

**HNEmploye**
Including yourself (Household Reference Person), about how many people are/were/will be employed at the place where you usually work(s)/usually worked/will work(s)?

1. 1 or 2
2. 3-24
3. 25-499
4. 500+

ELSEIF (HEmploye = SelfEmp) AND (HDirec = No) THEN

**HNEmple**
Do/Did/Will you (Household Reference Person) have any employees?

1. 1 or 2
2. 3-24
3. 25-499
4. 500+

ENDIF

IF HEmploye = Employee THEN

**HNInd**
What does/did your/his/her employer make or do at the place where you usually work(s)/usually worked/will work(s)?

Text: Maximum 100 characters

ELSEIF HEmploye = Self Employed THEN

**HSlfWtMa**
What do/did you (Household Reference Person) make or do in your business?

Text: Maximum 100 characters

ENDIF

ENDIF

ASK ALL

**HRPOcc**
INTERVIEWER: DID (Household Reference Person) ANSWER THE OCCUPATION QUESTIONS HIM/HERSELF?

1. Yes
2. No
**General Health**

**ASK ALL**

**OwnDoB**

What is your date of birth?

ENTER DATE IN NUMBERS, E.G. 02/01/1972.

IF (Name) DOES NOT KNOW HIS/HER DATE OF BIRTH, PLEASE GET AN ESTIMATE.

IF OwnDoB = Response THEN

**OwnAge**

Can I just check, your age is (computed age)?

1. Yes
2. No

ENDIF

IF OwnDoB = Not known/Refused THEN

**OwnAgeE**

Can you tell me your age last birthday? IF NECESSARY: What do you estimate your age to be?

Range: 1..120

IF (OwnAgeE = Not known/Refused) AND (Estimated age from household grid >=16) THEN

**AgeAEst**

INTERVIEWER: ESTIMATE NEAREST AGE

1. 18 (ie between 16-19)
2. 25 (ie between 20-29)
3. 35 (ie between 30-39)
4. 45 (ie between 40-49)
5. 55 (ie between 50-59)
6. 65 (ie between 60-69)
7. 75 (ie between 70-79)
8. 85 (ie 80+)

ELSE IF (OwnAgeE = Not known/Refused) AND (Estimated age from household grid < 16) THEN

**AgeCEst**

INTERVIEWER: ESTIMATE NEAREST AGE:

1. 1 year
2. 3 years
3. 5 years
4. 7 years
5. 9 years
6. 11 years
7. 13 years
8. 15 years

ENDIF

ENDIF

**ASK ALL**

**GenHelf**

How is your health in general? Would you say it was ...READ OUT...

1. ...very good
2. good
3. fair
4. bad
5. very bad
The Health Survey for England 2008 - Individual Questionnaire

**Fruit and vegetable consumption**

**IF Age of respondent >= 5 THEN**

**VFInt**

I'd like to ask you a few questions about some of the things you ate and drank yesterday. By yesterday I mean 24 hours from midnight to midnight. First I'd like to ask you some questions about the amount of fruit and vegetables you have eaten yesterday.

**IF VFInt = Yes THEN**

**VegSal**

Did you eat any salad yesterday? Don't count potato, pasta or rice salad or salad in a sandwich.

**INTERVIEWER: SALADS MADE MAINLY FROM BEANS CAN EITHER BE INCLUDED HERE OR AT THE NEXT QUESTION.**

You can record half bowls of salad, such as 1.5, 0.5.

**IF VegSal = Yes THEN**

**VegSalQ**

How many cereal bowlfuls of salad did you eat yesterday?

**IF ASKED: ‘Think about an average-sized cereal bowl’**

Range: 0.5 - 50.0

**ENDIF**

**VegPul**

Did you eat any pulses yesterday? By pulses I mean lentils and all kinds of peas and beans, including chickpeas and baked beans. Don’t count pulses in foods like Chilli con carne.

**IF VegPul = Yes THEN**

**VegPulQ**

SHOW CARD G

How many tablespoons of pulses did you eat yesterday?

**IF ASKED: ‘Think about a heaped or full tablespoon’**

Range: 0.5 - 50.0

**ENDIF**

**VegVeg**

Not counting potatoes, did you eat any vegetables yesterday? Include fresh, raw, tinned and frozen vegetables.

**IF VegVeg = Yes THEN**

**VegVegQ**

SHOW CARD G

How many tablespoons of vegetables did you eat yesterday?

**IF ASKED: ‘Think about a heaped or full tablespoon’**

Range: 0.5 - 50.0

**ENDIF**

---

The Health Survey for England 2008 - Individual Questionnaire

**LongIll**

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

**IF LongIll = Yes THEN**

**FOR i = 1 TO 6 DO**

**IF (i = 1) OR (More[i-1] = Yes) THEN**

Records up to six long-standing illnesses

**IllsTxt[i]**

What is the matter with you?

**INTERVIEWER: RECORD FULLY. PROBE FOR DETAIL.**

**IF MORE THAN ONE MENTIONED, ENTER ONE HERE ONLY.**

Open Answer: up to 60 characters

Variable names for text are IllsText1-IllsText6

**IF (i < 6) THEN**

**More[i]**

(Can I check) do you have any other long-standing illness, disability or infirmity?

1 Yes

2 No

**ENDIF**

**ENDIF**

**ENDDO**

**IF LongIll = Yes THEN**

**LimitAct**

Does this illness or disability do any of these illnesses or disabilities limit your activities in any way?

1 Yes

2 No

**ENDIF**

**ASK ALL**

**LastFort**

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

1 Yes

2 No

**IF LastFort = Yes THEN**

**DaysCut**

How many days was this in all during these 2 weeks, including Saturdays and Sundays?

Range: 1..14

**ENDIF**
The Health Survey for England 2008 - Individual Questionnaire  
Fruit and vegetable consumption

VegDish
Apart from anything you have already told me about, did you eat any other dishes made mainly from vegetables or pulses yesterday, such as vegetable lasagne or vegetable curry?
Don't count vegetable soups or dishes made mainly from potatoes.
1 Yes
2 No

IF VegDish = Yes THEN
VegDishQ
SHOW CARD G
How many table spoons of vegetables or pulses did you eat in these kinds of dishes yesterday?
IF ASKED: 'Think about a heaped or full tablespoon'.
Range 0.5 - 50.0
ENDIF

VegUsual
Compared with the amount of vegetables, salads and pulses you usually eat, would you say that yesterday you ate...
...READ OUT...
1 less than usual,
2 more than usual,
3 or about the same as usual?

FrtDrnk
Not counting cordials, fruit drinks and squashes, did you drink any fruit juice yesterday?
1 Yes
2 No

IF FrtDrnk = Yes THEN
FrtDrnkQ
SHOW CARD G
How many small glasses of fruit juice did you drink yesterday?
IF ASKED: 'A small glass is about a quarter of a pint'.
Range 0.5 - 50.0
ENDIF

Frt
Did you eat any fresh fruit yesterday? Don't count fruit salads, fruit pies, etc.
1 Yes
2 No

IF Frt = Yes THEN
FOR idx:= 1 TO 15 DO
IF (idx = 1) OR (FrtMor[idx-1] = Yes) THEN
FrtC[idx]
What kind of fresh fruit did you eat yesterday?
INTERVIEWER USE THE FRESH FRUIT SIZE LIST IN THE CODING BOOKLET TO CODE THE SIZE OF THE FRUIT. IF MORE THAN ONE KIND OF FRUIT MENTIONED, CODE ONE HERE ONLY
1 Very large fruit
2 Large fruit
3 Medium-sized fruit
4 Small fruit
5 Very small fruit
6 Not on coding list

The Health Survey for England 2008 - Individual Questionnaire  
Fruit and vegetable consumption

IF FrtC[idx] IN [VLge..VSml] THEN
IF FrtC[idx] = VLge THEN
much:= 'many average slices'
ELSEIF FrtC[idx] IN [Lge..Sml] THEN
much:= 'much'
ELSEIF FrtC[idx] = VSml THEN
much:= 'many average handfuls'
ENDIF
FrtQ[idx]
How much of this fruit did you eat yesterday?
Range 0.5 - 50.0
ENDIF
FrtDry
Did you eat any dried fruit yesterday? Don't count dried fruit in cereal, cakes, etc.
1 Yes
2 No

IF FrtDry = Yes THEN
FrtDryQ
SHOW CARD G
How many tablespoons of dried fruit did you eat yesterday?
IF ASKED: 'Think about a heaped or full tablespoon'.
Range 0.5 - 50.0
ENDIF
FrtFroz
Did you eat any frozen or tinned fruit yesterday?
1 Yes
2 No

IF FrtFroz = Yes THEN
FrtFrozQ
SHOW CARD G
How many tablespoons of frozen fruit did you eat yesterday?
IF ASKED: 'Think about a heaped or full tablespoon'.
Range 0.5 - 50.0
ENDIF
Frt to FrtMor repeated for up to 15 different types of fruit

FrtDrnk
Not counting cordials, fruit drinks and squashes, did you drink any fruit juice yesterday?
1 Yes
2 No

IF FrtDrnk = Yes THEN
FrtDrnkQ
SHOW CARD G
How many small glasses of fruit juice did you drink yesterday?
IF ASKED: 'A small glass is about a quarter of a pint'.
Range 0.5 - 50.0
ENDIF

Frt
Did you eat any fresh fruit yesterday? Don't count fruit salads, fruit pies, etc.
1 Yes
2 No

IF Frt = Yes THEN
FOR idx:= 1 TO 15 DO
IF (idx = 1) OR (FrtMor[idx-1] = Yes) THEN
FrtC[idx]
What kind of fresh fruit did you eat yesterday?
INTERVIEWER USE THE FRESH FRUIT SIZE LIST IN THE CODING BOOKLET TO CODE THE SIZE OF THE FRUIT. IF MORE THAN ONE KIND OF FRUIT MENTIONED, CODE ONE HERE ONLY
1 Very large fruit
2 Large fruit
3 Medium-sized fruit
4 Small fruit
5 Very small fruit
6 Not on coding list

5

6
Eating Habits

ASK ALL AGED 2-45

EatIntr

Now I would like to ask you about different types of food that you eat.

BreadA

What kind of bread do you usually eat? Is it...

1. White (incl chollah)
2. Brown - granary, wheatmeal, (incl wheatgerm, softgrain, rye, german)
3. Wholemeal (incl highbran)
4. White bread with wholemeal (such as Hovis ‘Best of Both’ and Kingsmill ‘Wholemeal and White’)
95. Or some other kind of bread
97. Does not eat any type of bread

INT: If brown, check if wholemeal or some other sort of bread. If pitta/naan/soda etc. check if white or wholemeal.

Spontaneous: 96 Does not have a usual type

BreadQua

How many rolls or pieces of bread do you (you/name of child) eat each day, on average? Is it...

1. Less than 1 a day
2. 1 or 2 a day
3. 3 or 4 a day
4. 5 or more a day?

Nspread

What type of margarine, butter or other spread do you usually use, for example on bread, sandwiches, toast, potatoes or vegetables?

CODE ONE ONLY. REFER TO THE CODING LIST FOR BUTTER/MARGARINE IN YOUR SHOWCARDS.

1. Butter or margarine
2. Low fat spread or reduced fat spread, or half-fat butter
3. Spread not on coding list
SPONTANEOUS:
4. Does not have usual type
5. Does not use fat spread

INT: If NSpread = Other then

OthSprd

INTERVIEWER- SPECIFY NAME OF SPREAD.

Text: Maximum 40 characters

ENDF
Where you eat fried foods, what kind of fat or oil are the foods usually cooked in?

**FatQ**

When you eat fried foods, what kind of fat or oil are the foods usually cooked in?

**SHOW CARD H**

*CODE ONE ONLY. Is it … READ OUT…*

1. butter, ghee, lard, suet or other solid cooking fat,
2. hard or soft margarine, half fat butter,
3. vegetable oil e.g. sunflower, olive, rape, seed, mustard, peanut?
4. Does not use fat or oil in cooking

**CMilk**

What kind of milk do you usually use for drinks, in tea or coffee and on cereals?

Is it … **READ OUT…**

1. whole milk,
2. semi-skimmed (incl dried semi-skimmed),
3. skimmed (incl dried skimmed, Boots dried powder, Co-op powder),
4. soya/rice/oat or other non-dairy milk substitute
5. or, some other kind of milk?

**SPONTANEOUS:**

96. Does not have usual type
97. Does not drink milk

**CMilkQua**

About how much milk do you use each day, on average for drinks, in tea and coffee, on cereals etc.

Is it … **READ OUT…**

1. less than a quarter of a pint,
2. about a quarter of a pint,
3. about half a pint,
4. Or, one pint or more?

**HotSug**

Do you usually have sugar in hot drinks like tea and coffee?

**INTERVIEWER:** If the respondent only uses artificial sweetener, code No.

1. Yes, always,
2. Yes, sometimes,
3. No,
4. Does not drink hot drinks.

**CerQua**

About how many times a week do you have a bowl of breakfast cereal or porridge?

**SHOW CARD H**

1. 6 or more times a week,
2. 3-5 times a week,
3. 1-2 times a week,
4. Less than once a week,
5. Rarely or never.
Eating Habits

SofDrnk
SHOW CARD H.
How often on average do you have fizzy drinks, or soft drinks like squash, excluding diet or sugar-free drinks?

1 6 or more times a week
2 3-5 times a week
3 1-2 times a week
4 Less than once a week
5 Rarely or never

ENDIF

CFriedFd
SHOW CARD H.
How often on average do you eat a serving of any fried food, including fried fish, chips, cooked breakfast, samosas?

1 6 or more times a week
2 3-5 times a week
3 1-2 times a week
4 Less than once a week
5 Rarely or never

CFish
SHOW CARD H.
Apart from fried fish, how often on average do you eat a serving of fish?

1 6 or more times a week
2 3-5 times a week
3 1-2 times a week
4 Less than once a week
5 Rarely or never

CSnacks
SHOW CARD H.
How often on average do you eat snacks such as crisps, nuts or biscuits, including savoury biscuits such as cream crackers?

1 6 or more times a week
2 3-5 times a week
3 1-2 times a week
4 Less than once a week
5 Rarely or never

NCakes
SHOW CARD H.
How often on average do you eat a serving of cakes, pies, puddings, including rice pudding or semolina, or pastries?

1 6 or more times a week
2 3-5 times a week
3 1-2 times a week
4 Less than once a week
5 Rarely or never

Sweets
SHOW CARD H.
How often on average do you eat sweets or chocolate?

1 6 or more times a week
2 3-5 times a week
3 1-2 times a week
4 Less than once a week
5 Rarely or never
Adult Physical Activity Questions

ASK ALL AGED 16+

Intro
Now I’d like to ask you some questions about things that you have done that involve physical activity. This may be things that you have done at work, college or in your leisure time.

INTERVIEWER: PRESS 1 AND <ENTER> TO CONTINUE

Work
First of all, in the last 4 weeks, that is since (date of interview – 4 weeks), did you do any paid or unpaid work either as an employee or as self-employed?

Please include any voluntary work or part-time work you may have done.

1 Yes
2 No

IF Work = Yes THEN

WkDays
On how many days did you work in the last 4 weeks?

INTERVIEWER: PLEASE INCLUDE ANY PAID OR UNPAID OVERTIME. INCLUDE ALL JOBS IF MORE THAN ONE. INCLUDE ALL DAYS RESPONDENT WORKED EVEN IF THEY WERE NOT FULL WORKING DAYS.

Range: 0..28

WkAct2
SHOWCARD 1
Looking at showcard 1, which of these did you do whilst working? Please include any work you did on weekends.

CODE ALL THAT APPLY

1 Sitting down or standing up
2 Walking at work (e.g. door to door sales, hospital nurse work)
3 Climbing stairs or ladders
4 Lifting, carrying or moving heavy loads

IF WkAct2 = Sit THEN

WkAct3H
On an average work day in the last four weeks, how much time did you usually spend sitting down or standing up?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED. RECORD HOURS SPENT BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION.

Range: 0..12

WkAct3M
(On an average work day, how much time did you usually spend sitting down or standing up?)

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

IF WkAct2 = walk

WkAct4H
On an average work day in the last four weeks, how much time did you usually spend walking at work (e.g. door to door sales, hospital nurse work)?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED. RECORD HOURS SPENT BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION.

: 0..12

WkAct4M
(On an average work day in the last four weeks, how much time did you usually spend walking at work e.g. door to door sales, hospital nurse work)?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED.

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

IF WkAct2 = climb

WkAct5H
On an average work day in the last four weeks, how much time did you usually spend climbing stairs or ladders?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED.

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

IF WkAct2 = lift

WkAct6H
On an average work day in the last four weeks, how much time did you usually spend lifting, carrying or moving heavy loads?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED.

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

IF WorkAct2 = walk

WkAct8H
On an average work day in the last four weeks, how much time did you usually spend walking at work (e.g. door to door sales, hospital nurse work)?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED.

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

WkAct8M
(On an average work day, how much time did you usually spend walking at work e.g. door to door sales, hospital nurse work)?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED.

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

WkAct9H
On an average work day in the last four weeks, how much time did you usually spend climbing stairs or ladders?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED.

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

WkAct9M
(On an average work day, how much time did you usually climb stairs or ladders?)

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

WkAct10H
On an average work day in the last four weeks, how much time did you usually climb stairs or ladders?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED.

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

WkAct10M
(On an average work day, how much time did you usually climb stairs or ladders?)

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

WkAct11H
On an average work day in the last four weeks, how much time did you usually lift, carry or move heavy loads?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED.

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

WkAct11M
(On an average work day, how much time did you usually lift, carry or move heavy loads?)

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

IF WorkAct2 = climb

WkAct12H
On an average work day in the last four weeks, how much time did you usually spend climbing stairs or ladders?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED.

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

WkAct12M
(On an average work day, how much time did you usually climb stairs or ladders?)

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

WkAct13H
On an average work day in the last four weeks, how much time did you usually lift, carry or move heavy loads?

INTERVIEWER: IF RESPONDENT WAS ON HOLIDAY OR UNABLE TO WORK ON ANY DAYS IN THE LAST FOUR WEEKS, ASK THEM TO REPORT THE AVERAGE NUMBER OF HOURS ON THOSE DAYS THEY WORKED.

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF

WkAct13M
(On an average work day, how much time did you usually lift, carry or move heavy loads?)

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

: 0..59

END IF
Adult Physical Activity

WrkAct6M
On an average work day, how much time did you lifting, carrying or moving heavy loads?
ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES
Range: 1..28
END IF

Active
Thinking about your job in general would you say that you are...
READ OUT...
1...very physically active,
2...fairly physically active,
3...not very physically active,
4...not at all physically active in your job?
END IF

ASK ALL AGE 16+

Housewrk
I'd like you to think about all the physical activities you have done in the last few weeks (when you were not doing your job). Have you done any housework in the past four weeks, that is from (date of interview) up to yesterday?
1 Yes
2 No

IF Housewrk = Yes THEN
HWWrkList
SHOW CARD J
Have you done any housework listed on this card?
1 Yes
2 No

HeavyHWrk
SHOW CARD K
Some kinds of housework are heavier than others. This card gives some examples of heavy housework. It does not include everything, these are just examples. Was any of the housework you did in the last four weeks this kind of heavy housework?
1 Yes
2 No

IF HeavyHWrk = Yes THEN
HeavyDay
During the past four weeks on how many days have you done this kind of heavy housework?
Range: 1..28
END IF

IF HeavyDay IN [1..28] THEN
HrsHHW
On the days you did heavy housework, how long did you usually spend?
RECORD HOURS SPENT BELOW. ENTER 0 IF LESS THAN 1 HOUR RECORD MINUTES AT NEXT QUESTION
Range: 0..12
END IF

End

ManDays
During the past four weeks on how many days have you done any gardening, DIY or building work from this card, or any similar heavy manual work?
1 Yes
2 No

IF ManWork = Yes THEN
ManWork
Have you done any gardening, DIY or building work from this other card, or any similar heavy manual work?
1 Yes
2 No

IF Garden = Yes THEN
GardList
SHOW CARD L
Have you done any gardening, DIY or building work listed on this card?
1 Yes
2 No

Garden
Have you done any gardening, DIY or building work in the past four weeks, that is since (date of interview - 4 weeks)?
1 Yes
2 No

WrkAct6M
On an average work day, how much time did you lifting, carrying or moving heavy loads?
ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES
Range: 0..12
END IF

END IF

ASK ALL AGE 16+

Housewrk
I'd like you to think about all the physical activities you have done in the last few weeks (when you were not doing your job). Have you done any housework in the past four weeks, that is from (date of interview) up to yesterday?
1 Yes
2 No

IF Housewrk = Yes THEN
HWWrkList
SHOW CARD J
Have you done any housework listed on this card?
1 Yes
2 No

HeavyHWrk
SHOW CARD K
Some kinds of housework are heavier than others. This card gives some examples of heavy housework. It does not include everything, these are just examples. Was any of the housework you did in the last four weeks this kind of heavy housework?
1 Yes
2 No

IF HeavyHWrk = Yes THEN
HeavyDay
During the past four weeks on how many days have you done this kind of heavy housework?
Range: 1..28
END IF

IF HeavyDay IN [1..28] THEN
HrsHHW
On the days you did heavy housework, how long did you usually spend?
RECORD HOURS SPENT BELOW. ENTER 0 IF LESS THAN 1 HOUR RECORD MINUTES AT NEXT QUESTION
Range: 0..12
END IF

End

ManDays
During the past four weeks on how many days have you done any gardening, DIY or building work from this card, or any similar heavy manual work?
1 Yes
2 No

IF ManWork = Yes THEN
ManWork
Have you done any gardening, DIY or building work from this other card, or any similar heavy manual work?
1 Yes
2 No

IF Garden = Yes THEN
GardList
SHOW CARD L
Have you done any gardening, DIY or building work listed on this card?
1 Yes
2 No

Garden
Have you done any gardening, DIY or building work in the past four weeks, that is since (date of interview - 4 weeks)?
1 Yes
2 No
**ASK ALL AGE 16+**

**WlkSit**
I'd like you to think about all the walking you have done in the past four weeks either locally or away from here. Please include any country walks, walking to and from work or college and any other walks that you have done.

In the past four weeks, that is since (date of interview – 4 weeks), have you done a continuous walk that lasted at least 5 minutes?  
1. Yes  
2. No  
3. Can't walk at all

**IF WlkSit = Yes THEN**

**Wlk10M**
In the past four weeks, have you done a continuous walk that lasted at least 10 minutes? (That is since (date of interview – 4 weeks)).

1. Yes  
2. No

**IF Wlk10M = Yes THEN**

**DayWlk**
During the past four weeks, on how many days did you do a walk of at least 10 minutes? (That is since (date of interview – 4 weeks)).  
Range: 1..28

**Day1Wlk**
On (any of those days) did you do more than one walk lasting at least 10 minutes?  
1. Yes, more than one walk of 10+ mins (on at least one day)  
2. No, only one walk of 10+ mins a day

**IF (DayWlk in [2..28]) AND (Day1Wlk = Yes) THEN**

**Day2Wlk**
On how many days in the last four weeks did you do more than one walk that lasted at least 10 minutes?  
Range: 1..28

**END IF**

**IF Wlk10M = Yes THEN**

**HrsWlk**
How long did you usually spend walking each time you did a walk for 10 minutes or more?  
**IF VERY DIFFERENT LENGTHS, PROBE FOR MOST REGULAR. ENTER HOURS SPENT BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION.**  
Range: 0..12

**MinWlk**
**RECORD MINUTES SPENT WALKING.**
Range: 0..59

**END IF**

**END IF**

**END IF**
The Health Survey for England 2008 - Individual Questionnaire

Adult Physical Activity

IF (OActQ = Yes) THEN

INTerviewer: Record brief details of the (first/second/third/fourth/fifth/sixth) other sport exercise activity.
Type 'other' if the sport is not listed. Type 'xxx' (for not listed/don't know) if unable to code. On exiting coding frame press <Enter> to move to next question.

Note: records up to 6 activities.

END IF

END IF

END DO

Note: ActVar is a combination of WhtAct and OactQ. ActVar = 1 to 10 comes from WhtAct = 1 to 10. ActVar = 11-16 comes from OactQ = 11-16.

FOR ActVar = 1 TO 16 DO

DayExc
Can you tell me on how many separate days you did (name of activity) for at least 10 minutes a time during the past four weeks, that is since (date of interview – 4 weeks)?
IF ONLY DONE FOR LESS THAN 10 MINUTES ENTER 0.
Range: 0..28

IF DayExc in [1..28] THEN

ExcHrs
How much time did you usually spend doing (name of activity) on each day? Only count times you did it for at least 10 minutes.
RECORD HOURS SPENT BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION.
Range: 0..12

ExcMin
RECORD MINUTES HERE.
Range: 0..59

ExcSwt
During the past four weeks, was the effort of (name of activity) usually enough to make you out of breath or sweaty?
1 Yes
2 No

END IF

Note: repeated for each activity named in WhtAct.

IF WhtAct = 1, 3 OR 4 THEN

Intro
Now I'd like to ask you some further questions about some of the things you have done in the last four weeks. This may include some of the things you have just told me about, but we are interested to know what different types of activities people regularly take part in.

END IF

IF WhtAct = 1 THEN

Swim
You said that you did some swimming. What was it that you did mainly; swimming as a family or social activity OR swimming laps or lengths?
CODE ONE ONLY. IF RESPONDENT SAYS BOTH, PROBE FOR THE ACTIVITY THAT THEY DID MOST OFTEN.
1 Swimming as a social or family activity
2 Swimming laps or lengths

END IF

IF WhtAct = 3 THEN

Workout
You mentioned workout at a gym / exercise bike / weight training. What did you do specifically?
CODE ALL THAT APPLY.
1 Strength work out at a gym using machines or free weights
2 Exercise bike
3 Spinning classes
4 Stepping machines, rowing machines or cross trainer
5 Treadmill running

FOR Workout = 1 to 5, i = 1 to 5 DO

Day2Exc(i)
Can you tell me on how many separate days you did (name of activity) for at least 10 minutes a time during the past four weeks, that is since (date of interview – 4 weeks)?
IF ONLY DONE FOR LESS THAN 10 MINUTES ENTER 0.
Range: 0..28

IF Day2Exc(i) in [1..28] THEN

Exc2Hrs(i)
How much time did you usually spend doing (name of activity) on each day? Only count times you did it for at least 10 minutes.
RECORD HOURS SPENT BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION.
Range: 0..12

Exc2Min(i)
RECORD MINUTES HERE.
Range: 0..59

END IF

Note: repeated for each activity named in WhtAct.
The Health Survey for England 2008 - Individual Questionnaire

**Adult Physical Activity**

**Exc2Swt(i)**
During the past four weeks, was the effort of (name of activity) usually enough to make you out of breath or sweaty?

1. Yes
2. No

END IF
END DO
END IF

**IF WhtAct = 4 THEN**

Keep Fit
SHOW CARD P
You said that you did some Aerobics/Keep fit/Gymnastics/ Dance for fitness. What was that specifically?

CODE ALL THAT APPLY
1. Aerobics/keep fit classes
2. Fitness dancing
3. Aqua Aerobics
4. Gymnastics
5. circuit training

FOR KeepFit = 1 to 5, i = 1 to 5 DO

**Day3Exc(i)**
Can you tell me on how many separate days you did (name of activity) for at least 10 minutes a time during the past four weeks, that is since (date of interview - 4 weeks)? IF ONLY DONE FOR LESS THAN 10 MINUTES ENTER 0.

Range: 0..28

IF Day3Exc(i) in [1..28] THEN

**Exc3Hrs(i)**
How much time did you usually spend doing (name of activity) on each day? Only count times you did it for at least 10 minutes.

RECORD HOURS SPENT BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION.

Range: 0..12

**Exc3Min(i)**
RECORD MINUTES HERE.

Range: 0..59

**Exc3Swt(i)**
During the past four weeks, was the effort of (name of activity) usually enough to make you out of breath or sweaty?

1. Yes
2. No

Introd
Now I'd like to ask you some questions about time that you might have spent sitting down. For these questions, I'd like you to think about what you have done in the last four weeks, that is since (date of interview - 4 weeks) (when you were not doing your (paid) job).

INTERVIEWER: PRESS 1 AND ENTER TO CONTINUE
Children's Physical Activity Questions

ASK ALL AGED 2-15

FOR CHILDREN AGED 2-12 PARENT WILL ANSWER ON BEHALF OF CHILD. CHILDREN AGED 13-15 TO ANSWER FOR THEMSELVES.

Note: Please omit references to school and playgroup throughout the children's questionnaire for all children for whom they are irrelevant (from answers to Sch7D).

ChIntro
Now I'd like to ask you some questions about things that (you have / name of child has) done that involve physical activity. This may be things that (you have / he has / she has) done at school, nursery, playgroup or things that (you have / he has / she has) done in the evenings and at weekends.

INTERVIEWER: PRESS 1 AND ENTER TO CONTINUE.

Range: 1..1

Sch7D
Can I just check, in the last seven days, that is from (date of interview - 7) to yesterday, did (you / name of child) go to school, nursery or playgroup?

1. Yes, school
2. Yes, nursery
3. Yes, playgroup
4. No

Note: If Sch7D = No, route straight to Sports and Activities section (WDIntro).

IF sch7d=1,2 or 3 THEN

SchDays
In the last seven days (that is from (date of interview - 7) to yesterday), on how many days did (you / name of child) go to school, nursery or playgroup?

INTERVIEWER: ENTER NUMBER OF DAYS

INTERVIEWER: DO NOT INCLUDE WORK EXPERIENCE OR EXTRA-CURRICULAR ACTIVITIES AS GOING TO SCHOOL.

Range: 1..6

END IF

ASK IF SchDays > 0

JWlkCyc
Still thinking about the last seven days, (that is from (date of interview - 7) to yesterday), did (you / name of child) walk or cycle all or part of the way to or from (school / nursery / playgroup)?

INTERVIEWER: INCLUDE WALKING TO OR FROM THE BUS STOP OR THE TRAIN STATION, OR WALKING PART OF THE WAY AFTER DRIVING (“PARK AND STRIDE”) BUT ONLY WHEN THEY WERE ON THEIR WAY TO OR COMING BACK FROM SCHOOL.

IF A CHILD USES A SCOOTER ON THEIR JOURNEY TO OR FROM SCHOOL, THIS SHOULD BE RECORDED AS WALKING.

1. Yes - Walking
2. Yes - Cycling
3. Yes - Both
4. No

END IF
IF SchlBr = 3 THEN

**Walk Pace**
Which of the following best describes *(your / name of child’s)* usual walking pace ...READ OUT...

1. a slow pace,
2. a steady average pace,
3. a fairly brisk pace,
4. or, a fast pace?

END IF

ASK ALL AGED 2-15

WDIntro
SHOW CARDS R AND S
I would now like to ask you some questions about whether *(you have / name of child has)* done any of the physical activities listed on these two showcards in the last 7 days.

INTERVIEWER: SHOW RESPONDENT CARDS R AND S.
I will first ask you about the informal activities on Showcard R and then about the more formal activities on Showcard S.

INTERVIEWER: PRESS 1 AND ENTER TO CONTINUE

Range: 1..1

**NSWA**
SHOW CARD R
Firstly, please think about informal activities. Since last *(day of week seven days ago), you / has name of child)* done any activities listed on this card on weekdays *(outside school hours)*?

INTERVIEWER: By outside school hours we mean anything not done in lessons and school breaks. The respondent should include activities done in after school clubs.

1. Yes
2. No

Note: If NSWA = No, route to WendWA2.

IF NSWA = Yes THEN

NSWA2
SHOW CARD R
Which ones?

CODE ALL THAT APPLY
1. Cycling (but not to or from school)
2. Walking (but not to or from school / nursery / playgroup)
3. Hoovering, cleaning car, gardening, etc
4. Hopscotch
5. Bouncing on trampoline
6. Playing around, e.g. kicking a ball around, catch, hide and seek
7. Skating / Skateboarding / using a scooter
8. Dancing, including dance lessons
9. Skipping rope

25

26
FOR ALL NSWA2[1..9] DO 
NSPAD 
On which weekdays since last (day 7 days ago) did (you / name of child) do (name of activity)?
CODE ALL THAT APPLY:
1 Monday
2 Tuesday
3 Wednesday
4 Thursday
5 Friday

FOR ALL NSPAD IN 1..5 DO 
NSPATH(i)
How long did (you / name of child) spend in total doing (name of activity) on (day)?
RECORD HOURS BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION
Range: 0..12

NSPATM(i)
How long did (you / name of child) spend in total doing (name of activity) on (day)?
ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES
Range: 0..59

END DO
END DO
END IF

Note: NSPATH(i) and NSPATM(i) repeated for each day coded at NSPAD.
NSPAD to NSPATM repeated for each activity coded at NSWA2.

WendWA2
SHOW CARD R
I would now like to ask you about any activities (you / name of child) did (last weekend). (last weekend) did (you / name of child) do any activities listed on this card?
1 Yes
2 No

IF WendWA2 = Yes THEN 
WEPAW2
SHOW CARD R
Which ones?
INTERVIEWER: CODE ALL THAT APPLY.
1 Football / Rugby / Hockey / Lacrosse
2 Netball / Basketball / Handball
3 Cricket/ Rounders
4 Running, jogging, athletics
5 Swimming laps
6 Swimming (splashing about)
7 Dancing, including dance lessons
8 Gymnastics
9 Workout with gym machines / Weight training
10 Aerobics
11 Tennis / Badminton / Squash

Note: WEPAH(i) and WEPAM(i) repeated for each day coded at WEPAD. WEPAD to WEPAM repeated for each activity coded at WEPWA2.

The Health Survey for England 2008 - Individual Questionnaire Children's Physical Activity

FOR ALL WEPAW2 IN [1..9] DO 
WEPAD 
On which days did (you / name of child) do (name of activity)?
INTERVIEWER: CODE ALL THAT APPLY
1 Saturday
2 Sunday

FOR ALL WEPAD IN [1..2], i = 1..2 DO 
WEPAH(i)
How long did (you / name of child) spend in total doing (name of activity) on (day)?
RECORD HOURS BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION
Range: 0..20

WEPAM(i)
How long did (you / name of child) spend in total doing (name of activity) on (day)?
ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES
Range: 0..59

END DO
END DO
END IF

The Health Survey for England 2008 - Individual Questionnaire Children's Physical Activity

FOR ALL NSWA2[1..9] DO 
NSPAD 
On which weekdays since last (day 7 days ago) did (you / name of child) do (name of activity)?
CODE ALL THAT APPLY:
1 Monday
2 Tuesday
3 Wednesday
4 Thursday
5 Friday

FOR ALL NSPAD IN 1..5 DO 
NSPATH(i)
How long did (you / name of child) spend in total doing (name of activity) on (day)?
RECORD HOURS BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION
Range: 0..12

NSPATM(i)
How long did (you / name of child) spend in total doing (name of activity) on (day)?
ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES
Range: 0..59

END DO
END DO
END IF

Note: NSPATH(i) and NSPATM(i) repeated for each day coded at NSPAD.
NSPAD to NSPATM repeated for each activity coded at NSWA2.

WendWA2
SHOW CARD R
I would now like to ask you about any activities (you / name of child) did (last weekend). (last weekend) did (you / name of child) do any activities listed on this card?
1 Yes
2 No

IF WendWA2 = Yes THEN 
WEPAW2
SHOW CARD R
Which ones?
INTERVIEWER: CODE ALL THAT APPLY.
1 Cycling (but not to or from school)
2 Walking (but not to or from school / nursery / playgroup)
3 Hoovering, cleaning car, gardening, etc
4 Hip-hop
5 Bouncing on trampoline
6 Playing around, e.g. kicking a ball around, catch, hide and seek
7 Skating / Skateboarding / using a scooter
8 Dancing, including dance lessons
9 Skipping rope

The Health Survey for England 2008 - Individual Questionnaire Children's Physical Activity

FOR ALL WEPAD IN [1..2], i = 1..2 DO 
WEPAH(i)
How long did (you / name of child) spend in total doing (name of activity) on (day)?
RECORD HOURS BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION
Range: 0..20

WEPAM(i)
How long did (you / name of child) spend in total doing (name of activity) on (day)?
ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES
Range: 0..59

END DO
END DO
END IF

Note: WEPAH(i) and WEPAM(i) repeated for each day coded at WEPAD. WEPAD to WEPAM repeated for each activity coded at WEPWA2.

Copyright © 2009, The Health and Social Care Information Centre. All rights reserved
FOR ALL NSpWB in [1..10], DO
NSWB
On which weekdays in the last week did (you / name of child) do (name of activity)?
CODE ALL THAT APPLY:
1. Monday
2. Tuesday
3. Wednesday
4. Thursday
5. Friday

FOR ALL NSWBD in [1..5] DO
NSWBH(i)
How long did (you / name of child) spend in total doing (name of activity) on (day)?
RECORD HOURS BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION
Range: 0..20
NSWBM(i)
How long did (you / name of child) spend in total doing (name of activity) on (day)?
ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES
Range: 0..59

END DO
END DO
END IF

Note: NSWBH(i) and NSWBM(i) repeated for each day coded at NSWBD.
NSWBH to NSWBM(i) repeated for each activity coded at NSpWB.

WendWB2
SHOW CARD S
I would now like to ask you about any activities (you / name of child) did (last weekend). (Last weekend) did (you / name of child) do any activities listed on this card?
1. Yes
2. No

IF WendWB2 = 1 THEN
WendWB
SHOW CARD S
Which ones?
CODE ALL THAT APPLY.
1. Football / Rugby / Hockey / Lacrosse
2. Netball / Basketball / Handball
3. Cricket / Rounders
4. Running / Jogging / Athletics
5. Swimming laps
6. Swimming (splashing about)
7. Gymnastics
8. Workout with gym machines / Weight training
9. Aerobics
10. Tennis / Badminton / Squash

FOR ALL WendWB IN [1..10] DO
WendWB
On which days in the last week did (you / name of child) do (name of activity)?
CODE ALL THAT APPLY
1. Saturday
2. Sunday

FOR ALL WendWB in [1..2] DO
WendWBDH(i)
How long did (you / name of child) spend in total doing (name of activity) on (day)?
RECORD HOURS SPENT BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION
Range: 0..20
WendWBM(i)
How long did (you / name of child) spend in total doing / playing (name of activity) on (day)?
ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES
Range: 0..59

END DO
END DO
END IF

Note: WendWBDH(i) and WendWBM(i) repeated for each day coded at WendWB.
WendWB to WendWBM(i) repeated for each activity coded at WendWB.

ASK ALL AGED 2-15
NSOth2
SHOW CARDS R AND S
In the last seven days, that is from (date of interview – 7) to yesterday, (have you / has name of child) done any other similar activities not listed on these two cards on weekdays?
INTERVIEWER: If 'Yes', RECORD BRIEF DETAILS OF ALL OTHER ACTIVITIES IN THE NEXT QUESTION
1. Yes
2. No

IF NSOth2 = yes THEN
NSpEx2
INTERVIEWER: Record brief details of the (first / second / third / fourth / fifth) other sport or exercise activity.
Type in the few letters of the sport to enter coding frame.
Type ‘other’ if the sport is not listed.
Type ‘xxx’ (for not listed / don’t know) if unable to code.
On exiting coding frame press 'Enter' to move to next question.

Text: Maximum 50 characters

Note: repeat NSOth2 and NSpEx2 for up to 5 activities.
The Health Survey for England 2008 - Individual Questionnaire
Children's Physical Activity

NSothD2
On which weekdays during the last seven days did (you / name of child) do (activity)?
CODE ALL THAT APPLY:
1 Monday
2 Tuesday
3 Wednesday
4 Thursday
5 Friday

FOR ALL NSothD2 in [1..5] DO
NSothT2H(i)
How long did (you / name of child) spend doing (activity) on (day)?
RECORD HOURS BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION
Range: 0..20

NSothT2M
How long did (you / name of child) spend doing (name of sport/activity) on (day)?
ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES
Range: 0..59

END DO

Inten
When (you / name of child) did (activity) was it hard enough to make (you / name of child) out of breath or sweaty?
1 Yes
2 No

END IF

Note: NOSpEx2 to Inten repeated for each activity coded at NOSpEx2.

ASK ALL AGED 2-15

WEOth2
Did (you / name of child) do any other similar activities not listed on these two cards (last weekend)?
INTERVIEWER: IF ‘Yes’, RECORD BRIEF DETAILS OF ALL OTHER SPORTS AND ACTIVITIES IN THE NEXT QUESTION.
1 Yes
2 No

IF WEOth2 = yes THEN

WEOspEx2
INTERVIEWER: Record brief details of the (first / second / third / fourth / fifth) other physical activity.
Text: Maximum 50 characters

Note: WEOth2 and WEOspEx2 are repeated for up to five activities.
The Health Survey for England 2008 - Individual Questionnaire

**Smoking** (Aged 18+)

**IF Age of Respondent = 18 to 24 THEN**

BookChk

INTERVIEWER CHECK: (name of respondent) IS AGED (age of respondent). RESPONDENT TO BE:

1. Asked Smoking/Drinking questions
2. Given SELF-COMPLETION BOOKLET FOR YOUNG ADULTS

ENDIF

Press <1> and <Enter> to continue.

Insert self-completion intro for young adults here?

**IF (Age of Respondent is 25 years or over) OR (BookChk = Asked) THEN**

SmokEver

May I just check, have you ever smoked a cigarette, a cigar or a pipe?

1. Yes
2. No

**IF SmokEver = Yes THEN**

SmokeNow

Do you smoke cigarettes at all nowadays?

1. Yes
2. No

**ENDIF**

**IF SmokeNow = Yes THEN**

DlySmoke

About how many cigarettes a day do you usually smoke on weekdays?

INTERVIEWER: IF LESS THAN ONE A DAY, ENTER 0. IF RANGE GIVEN AND CAN'T ESTIMATE, ENTER MID POINT. IF RESPONDENT SMOKES ROLL UPS AND CANNOT GIVE NUMBER OF CIGARETTES, CODE 97.

Range: 0..97

**IF DlySmoke = 97 THEN**

Estim

INTERVIEWER: ASK RESPONDENT FOR AN ESTIMATED (DAILY) CONSUMPTION OF TOBACCO (ON WEEKDAYS). WILL IT BE GIVEN IN GRAMS OR IN OUNCEs?

1. Grams
2. Ounces

**IF Estim = grams THEN**

Grams

PLEASE RECORD ESTIMATED (DAILY) CONSUMPTION OF TOBACCO (ON WEEKDAYS) IN GRAMS.

Range: 1.67

---

**Children’s Physical Activity**

**SedWkH**

Still thinking about weekdays, from last (day) to yesterday, how much time did (you / name of child) usually spend each day sitting down doing other any other activity?

INTERVIEWER: EXAMPLES OF ACTIVITIES INCLUDE READING, DOING HOMEWORK, DRAWING, USING A COMPUTER OR PLAYING VIDEO GAMBS

RECORD HOURS BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION.

Range: 0..20

**SedWkM**

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

Range: 0..59

**TVWEH**

Last weekend how much time did (you / name of child) usually spend each day sitting watching TV including DVDs or videos?

RECORD HOURS BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION.

Range: 0..20

**TVWEM**

**Last weekend how much time did (you / name of child) usually spend each day sitting watching TV including DVDs or videos?**

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

Range: 0..59

**SedWEH**

Still thinking of last weekend, how much time did (you / name of child) usually spend each day sitting down doing other any other activity?

INTERVIEWER: EXAMPLES OF ACTIVITIES INCLUDE READING, DOING HOMEWORK, DRAWING, USING A COMPUTER OR PLAYING VIDEO GAMBS

RECORD HOURS BELOW. ENTER 0 IF LESS THAN 1 HOUR. RECORD MINUTES AT NEXT QUESTION.

Range: 0..20

**SedWEM**

ENTER NUMBER OF MINUTES. IF AN EXACT HOUR, ENTER 0 FOR MINUTES

Range: 0..59

**Normal**

Last week, that is from (date of interview – 7) to yesterday (were you / was name of child) ...READ OUT...

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

**Involve**

INTERVIEWER: How involved was (name of child) in answering the physical activity questions?

1. Child was not present
2. Child was present but did not participate
3. Child was present and helped proxy answer a few questions
4. Child was present and helped proxy answer some questions
5. Child was present and helped proxy answer most questions
ELSEIF Estim = ounces THEN
  Ounces
  PLEASE RECORD ESTIMATED (DAILY) CONSUMPTION OF TOBACCO (ON WEEKDAYS) IN OUNCES.
  FOR FRACTIONS OF OUNCES RECORD:
  1/4 (a quarter) oz as .25
  1/3 (a third) oz as .33
  1/2 (half) oz as .5
  2/3 (two thirds) oz as .66
  3/4 (three quarters) oz as .75
  Range: 0.01-.2.40
ENDIF

RolWkd
Computed: estimated tobacco consumption in ounces.
Range: 1..97
ENDIF

For analysis purposes ounces or grams of tobacco are converted to number of cigarettes
and stored in the variable CigWEnd.

WkndSmok
And about how many cigarettes a day do you usually smoke at weekends?
INTERVIEWER: IF RANGE GIVEN AND CAN'T ESTIMATE, ENTER MID POINT. IF
RESPONDENT SMOKES ROLL UPS AND CANNOT GIVE NUMBER OF CIGARETTES,
CODE 97.
Range: 0..97
IF WkndSmok = 97 THEN
  Estim
  INTERVIEWER: ASK RESPONDENT FOR AN ESTIMATED (DAILY)
  CONSUMPTION OF TOBACCO (AT WEEKENDS); WILL IT BE GIVEN IN GRAMS
  OR IN OUNCES?
  1 Grams
  2 Ounces
  ELSEIF Estim = grams THEN
    Grams
    PLEASE RECORD ESTIMATED (DAILY) CONSUMPTION OF TOBACCO (AT
    WEEKENDS) IN GRAMS.
    Range: 1..67
    ELSEIF Estim = ounces THEN
      Ounces
      PLEASE RECORD ESTIMATED (DAILY) CONSUMPTION OF TOBACCO (AT
      WEEKENDS) IN OUNCES.
      FOR FRACTIONS OF OUNCES RECORD:
      1/4 (a quarter) oz as .25
      1/3 (a third) oz as .33
      1/2 (half) oz as .5
      2/3 (two thirds) oz as .66
      3/4 (three quarters) oz as .75
      Range: 0.01-.2.40
  ENDIF
ENDIF
**The Health Survey for England 2008 - Individual Questionnaire**

**Smoking**

**GiveUp**

Would you like to give up smoking altogether?

1. Yes
2. No

**ENDIF**

**SmokPpl**

SHOWCARD X

In the last 7 days, did you smoke near to any of the following types of people?

1. Babies aged 2 and under
2. Children aged 2-10
3. Children aged 11-15
4. Older adults over the age of 65
5. Pregnant women
6. Adults aged 16-64 with asthma or breathing problems
7. None of these

**ENDIF**

**SmokOut**

SHOW CARD W

In which of these places, if any, did you smoke during the last 7 days ending yesterday?

1. In the street or out and about
2. Outside at work
3. Outside other people’s home
4. Outside pubs or bars
5. Outside restaurants, cafes or canteens
6. Outside shops
7. Outside other places

**ENDIF**

**SmokWher**

SHOW CARD T

Why did you decide to give up smoking?

CODE ALL THAT APPLY

1. Advice from a GP or health professional
2. Advert for a nicotine replacement product
3. Government TV, radio or press advert
4. Hearing about a new stop smoking treatment
5. Financial reasons (can’t afford it)
6. Because of the smoking ban in all enclosed public places, including pubs and restaurants
7. Family or friends wanted me to stop
8. Worried about the effect on my children
9. Worried about the effect on other family members
10. My own motivation
11. A concern about future health problems
12. Pregnancy
13. Something else

**QUIT**

**SmokWher = 2 THEN**

**SmokOut**

SHOW CARD W

In which of these places, if any, did you smoke during the last 7 days ending yesterday?

1. In the street or out and about
2. Outside at work
3. Outside other people’s home
4. Outside pubs or bars
5. Outside restaurants, cafes or canteens
6. Outside shops
7. Outside other places

**ENDIF**

**IF**

**SmokNow = Yes THEN**

**FirstCig**

How soon after waking do you usually smoke your first cigarette of the day? PROMPT AS NECESSARY.

1. Less than 5 minutes
2. 5-14 minutes
3. 15-29 minutes
4. 30 minutes but less than 1 hour
5. 1 hour but less than 2 hours
6. 2 hours or more

**ENDIF**

**ELSE IF**

**SmokNow = No**

**SmNoDay**

How easy or difficult would you find it to go without smoking for a whole day? Would you find it .... READ OUT ...

1. ... very easy,
2. ... fairly easy,
3. ... fairly difficult,
4. ... or, very difficult?

**ENDIF**

**SmokPpl**

SHOWCARD X

In the last 7 days, did you smoke near to any of the following types of people?

1. Babies aged 2 and under
2. Children aged 2-10
3. Children aged 11-15
4. Older adults over the age of 65
5. Pregnant women
6. Adults aged 16-64 with asthma or breathing problems
7. None of these

**ENDIF**

**SmokWher**

SHOW CARD T

Why did you decide to give up smoking? CODE ALL THAT APPLY

1. Advice from a GP or health professional
2. Advert for a nicotine replacement product
3. Government TV, radio or press advert
4. Hearing about a new stop smoking treatment
5. Financial reasons (can’t afford it)
6. Because of the smoking ban in all enclosed public places, including pubs and restaurants
7. I knew someone else who was stopping
8. Seeing a health warning on cigarette packet
9. Family or friends wanted me to stop
10. Being contacted by my local NHS Stop Smoking Services
11. Health problems I had at the time
12. A concern about future health problems
13. Pregnancy
14. Worried about the effect on my children
15. Worried about the effect on other family member
16. My own motivation
17. Something else
18. Cannot remember

**QUIT**
The Health Survey for England 2008 - Individual Questionnaire

**Smoking**

IF SmokeCig = Yes THEN

**SmokeReg**

Did you smoke cigarettes regularly, that is at least one cigarette a day, or did you smoke them only occasionally?
1. smoked cigarettes regularly, at least 1 per day
2. smoked them only occasionally
3. Spontaneous: Never really smoked cigarettes, just tried them once or twice

IF SmokeReg = Smoked cigarettes regularly THEN

**NumSmok**

About how many cigarettes did you smoke in a day?
INTERVIEWER: IF RANGE GIVEN AND CAN'T ESTIMATE, ENTER MID POINT. IF RESPONDENT SMOKES ROLL UPS AND CANNOT GIVE NUMBER OF CIGARETTES, CODE 97.

ENDIF

IF NumSmok = 97 THEN

**Estim**

INTERVIEWER: ASK RESPONDENT FOR AN ESTIMATED (DAILY) CONSUMPTION OF TOBACCO (ON WEEKDAYS/AT WEEKENDS). WILL IT BE GIVEN IN GRAMS OR IN OUNCES?

1. Grams
2. Ounces

IF Estim = grams THEN

**RolNum**

Computed: estimated tobacco consumption in ounces.

ENDIF

ELSEIF Estim = ounces THEN

**RolNum**

Computed: estimated tobacco consumption in ounces.

ENDIF

For analysis purposes ounces or grams of tobacco are converted into number of cigarettes and stored in the variable NumSmoke.

IF (SmokeNow=Yes) OR (SmokeReg=Smoked cigarettes regularly) THEN

**StartSmk**

ENDIF
The Health Survey for England 2008 - Individual Questionnaire

Smoking

IF IsPreg = Yes THEN
  SmokePrg
  Have you smoked at all since you’ve known you’ve been pregnant?
  IF YES, PROBE: All the time or just some of the time?
  1 Yes, all the time
  2 Yes, some of the time
  3 No, not at all

IF SmokePrg = [Yes, some of the time OR No, not at all] THEN
  StopPreg
  Did you stop smoking specifically because of your pregnancy, or for some other reason?
  1 Because of pregnancy
  2 For some other reason
ENDIF
ENDIF

ELSEIF (IsPreg = No) OR (IsPreg = NONRESPONSE) OR (SmokeNow = Yes) THEN
  PregRec
  Can I check, have you been pregnant in the last twelve months?
  1 Currently pregnant
  2 Was pregnant in last twelve months but not now
  3 Not pregnant in last twelve months

IF PregRec = Was pregnant in last twelve months but not now THEN
  PregSmok
  Did you smoke at all during pregnancy? (I.E. DURING TIME WHEN KNEW SHE WAS PREGNANT) IF YES, PROBE: All the time or just some of the time?
  1 Yes, all the time
  2 Yes, some of the time
  3 No, not at all
ENDIF
ENDIF

IF (PregSmok =Yes, some of the time OR No, not at all) THEN
  PregStop
  Did you stop smoking specifically because of your pregnancy, or for some other reason?
  1 Because of pregnancy
  2 For some other reason
ENDIF

IF (SmokeNow= Yes) OR (SmokeReg= smoked occasionally..regularly) THEN
  SmokeTry
  Have you ever tried to give up smoking because of a particular health condition you have had at the time?
  1 Yes
  2 No
ENDIF

DrSmoke
Did/Has a medical person, for example a doctor or nurse ever advised you to stop smoking altogether because of your health?
  1 Yes
  2 No

IF DrSmoke = Yes THEN
  DrSmoke1
  How long ago was that?
  INTERVIEWER: PROMPT AS NECESSARY.
  1 Within the last twelve months
  2 Over twelve months ago
ENDIF
ENDIF

CigarNow
Do you smoke cigars at all nowadays?
  1 Yes
  2 No

IF CigarNow = Yes THEN
  CigarReg
  Do you smoke cigars regularly, that is at least one cigar a month, or do you smoke them only occasionally?
  1 Smoke at least one cigar a month
  2 Smoke them only occasionally
ENDIF

IF Sex = Male THEN
  PipeNowA
  Do you smoke a pipe at all nowadays?
  1 Yes
  2 No
ENDIF

IF (PregNow = Yes, some of the time OR No, not at all) THEN
  PregStop
  Did you stop smoking specifically because of your pregnancy, or for some other reason?
  1 Because of pregnancy
  2 For some other reason
ENDIF

INTERVIEWER: PROMPT AS NECESSARY.

Copyright © 2009, The Health and Social Care Information Centre. All rights reserved
Drinking (Aged 18+)

**Drink**

I am now going to ask you a few questions about what you drink - that is if you drink. Do you ever drink alcohol nowadays including drinks you brew or make at home?

1. Yes
2. No

**DrinkAny**

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

1. Very occasionally
2. Never

**AlwaysTT**

Have you always been a non-drinker or did you stop drinking for some reason?

1. Always a non-drinker
2. Used to drink but stopped

**WhyTT**

Did you stop drinking because of a particular health condition that you had at the time?

INTERVIEWER: IF RESPONDENT SAYS PREGNANCY, CODE YES

1. Yes
2. No

**DrinkOft**

Thinking now about all kinds of drinks, how often have you had an alcoholic drink of any kind during the last 12 months?

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

**DrinkL7**

Did you have an alcoholic drink in the seven days ending yesterday?

1. Yes
2. No
The Health Survey for England 2008 - Individual Questionnaire

Drinking

If DrinkL7 = Yes THEN

DrnkDay

On how many days out of the last seven did you have an alcoholic drink?
Range: 1..7

If DrnkDay = 2 to 7 days THEN

DrnkSame

Did you drink more on one of the days/same days as others, or did you drink about the same on both of these days?
1 Drank more on one/some day(s) than other(s)
2 Same each day

ENDIF

WhichDay

Which day last week did you last have an alcoholic drink/have the most to drink?
1 Sunday
2 Monday
3 Tuesday
4 Wednesday
5 Thursday
6 Friday
7 Saturday

DrnkType

SHOW CARD CC
Thinking about last (answer to WhichDay), what types of drink did you have that day?
CODE ALL THAT APPLY
1 Normal strength beer/lager/cider/shandy
2 Strong beer/lager/cider
3 Spirits or liqueurs
4 Sherry or marini
5 Wine
6 Alcopops/pre-mixed alcoholic drinks
7 Other alcoholic drinks
8 Low alcohol drinks only

If DrnkType = Normal strength beer/lager/cider/shandy THEN

NBrL7

Still thinking about last (answer to WhichDay), how much normal strength beer, lager, stout, cider or shandy did you drink that day? INTERVIEWER: CODE MEASURES THAT YOU ARE GOING TO USE.
1 Half pints
2 Small cans
3 Large cans
4 Bottles

If NBrL7 = Half pints THEN

NBrL7Q(1)

ASK OR CODE: How many half pints of normal strength beer, lager, stout, cider or shandy did you drink that day?
Range: 1.97

ENDIF

IF NBrL7 = Small cans THEN

NBrL7Q(2)

ASK OR CODE: How many small cans of normal strength beer, lager, cider or shandy did you drink that day?
Range: 1.97

ENDIF

IF NBrL7 = Large cans THEN

NBrL7Q(3)

ASK OR CODE: How many large cans of normal strength beer, lager, cider or shandy did you drink that day?
Range: 1.97

ENDIF

IF NBrL7 = Bottles THEN

NBrL7Q(4)

ASK OR CODE: What make of normal strength beer, lager, stout, cider or shandy did you drink from bottles on that day? INTERVIEWER: IF RESPONDENT DRANK DIFFERENT MAKES CODE WHICH THEY DRANK MOST.
Text: Maximum 21 characters

ENDIF

ENDIF

IF DrnkType = Strong beer/lager/cider THEN

SBrL7

Still thinking about last (answer to WhichDay), how much strong beer, lager, stout or cider did you drink that day? INTERVIEWER: CODE MEASURES THAT YOU ARE GOING TO USE.
1 Half pints
2 Small cans
3 Large cans
4 Bottles

IF SBrL7 = Half pints THEN

SBrL7Q(1)

ASK OR CODE: How many half pints of strong beer, lager, stout or cider did you drink on that day?
Range: 1.97

ENDIF

IF SBrL7 = Small cans THEN

SBrL7Q(2)

ASK OR CODE: How many small cans of strong beer, lager, stout or cider did you drink on that day?
Range: 1.97

ENDIF

ENDIF
The Health Survey for England 2008 - Individual Questionnaire

Drinking

IF WineL7=1 (Bottles or part of bottle)

W17Bt

INTERVIEWER: code the number of 125ml glasses drunk from the bottle by the respondent. E.g. If they drank half a bottle, code 3 glasses.

CODE THE NUMBER OF GLASSES.

1 BOTTLE = 6 GLASSES

1/2 BOTTLE = 3 GLASSES

1/3 BOTTLE = 2 GLASSES

1 LITRE = 8 GLASSES

1/2 LITRE = 4 GLASSES

1/3 LITRE = 2.5 GLASSES

1/4 LITRE = 2 GLASSES

Range: 1..97 (ALLOW FRACTIONS)

ENDIF

F9 for WL7Bt

If respondent has answered in bottles or litres convert to glasses using the information provided on the screen. For example if a respondents said they shared a bottle with one other person and they shared it equally code 3 glasses.

IF WineL7=2 (Glasses)

W17Gl

CODE THE NUMBER OF GLASSES drunk as glasses.

Range: 1..97 (ALLOW FRACTIONS)

W17Glz

Were you drinking from a large, standard or small glass?

INTERVIEWER: If respondent drank from two or three different size glasses, please code all that apply.

1 Large glass (250ml)

2 Standard glass (175 ml)

3 Small glass (125 ml)

IF WL7Glz=1 THEN 250mlGlz

How many large (250ml) glasses did you drink?

Range: 1..97

IF WL7Glz=2 THEN 175mlGlz

How many standard (175ml) glasses did you drink?

Range: 1..97

IF WL7Glz=3 THEN 125mlGlz

How many small (125ml) glasses did you drink?

Range: 1..97

ENDIF
Drinking

IF DrnkType = 'Alcopops/pre-mixed alcoholic drink' THEN
  PopsL7
  Still thinking about last (answer to WhichDay), how much (name of 'other' alcoholic drink) did you drink on that day? INTERVIEWER: CODE MEASURES THAT YOU ARE GOING TO USE
  1 Small cans
  2 Bottles

IF PopsL7 = 'Small cans' THEN
  PopsL7Q(1)
  ASK OR CODE: How many small cans of (name of 'other' alcoholic drink) did you drink on that day?
  Range: 1..97

ENDIF

IF PopsL7 = 'Bottles' THEN
  PopsL7Q(2)
  ASK OR CODE: How many bottles of (name of 'other' alcoholic drink) did you drink on that day?
  Range: 1..97

ENDIF

IF DrnkType = 'Other' THEN
  OthL7TA
  Still thinking about last (answer to WhichDay), what other type of alcoholic drink did you drink on that day? CODE FIRST MENTIONED ONLY:
  Text: Maximum 30 characters

  OthL7QA
  How much (name of 'other' alcoholic drink) did you drink on that day? WRITE IN HOW MUCH. REMEMBER TO SPECIFY HALF PINTS/ SINGLES/ GLASSES/ BOTTLES.
  Text: Maximum 30 characters

  OthL7B
  Did you drink any other type of alcoholic drink on that day?
  1 Yes
  2 No

IF OthL7B = 'Yes' THEN
  OthL7TB
  Still thinking about last (answer to WhichDay), what other type of alcoholic drink did you drink on that day? CODE FIRST MENTIONED ONLY.
  Text: Maximum 30 characters

DrAmount

Compared to five years ago, would you say that on the whole you drink more, about the same or less nowadays?
  1 More nowadays
  2 About the same
  3 Less nowadays

ENDIF
The Health Survey for England 2008 - Individual Questionnaire

Classification

IF RESPONDENT AGED 16+ AND NOT HOUSEHOLD REFERENCE PERSON or IF RESPONDENT IS HOUSEHOLD REFERENCE PERSON BUT DID NOT ANSWER OCCUPATION QUESTIONS IN HOUSEHOLD QUESTIONNAIRE

IF (Age of Respondent is >=16) AND NOT (PerNum=PHRPNo AND PHRPOcc=Yes))

Nat

SHOW CARD DD

Which of these descriptions applies to what you were doing last week, that is in the seven days ending (date last Sunday)?

CODE FIRST TO APPLY

1 Going to school or college full-time (including on vacation)
2 In paid employment or self-employment (or away temporarily)
3 On a Government scheme for employment training
4 Doing unpaid work for a business that you own, or that a relative owns
5 Waiting to take up paid work already obtained
6 Looking for paid work or a Government training scheme
7 Intending to look for work but prevented by temporary sickness or injury (CHECK 28 DAYS OR LESS)
8 Permanently unable to work because of long-term sickness or disability (USE ONLY FOR MEN AGED 16-64 OR WOMEN AGED 16-59)
9 Retired from paid work
10 Looking after the home or family
11 Doing something else (SPECIFY)

IF Nat=Doing something else THEN NatIn

INTERVIEWER: PLEASE SPECIFY

Text: Maximum 60 characters

ENDIF

IF (Nat=School) THEN StWk

Did you do any paid work in the seven days ending (date last Sunday), either as an employee or self-employed?

1 Yes
2 No

ENDIF

IF (Nat=intending to look for work, Retired from paid work, Looking after the home or family or Doing something else OR StWk=No) AND ((Age = 16 to 64 years AND Sex=Male) OR (Age = 16 to 59 years AND Sex=Female))

H4WkLook

Thinking now of the four weeks ending (date last Sunday). Were you looking for any paid work or Government training scheme at any time in those four weeks?

1 Yes
2 No

ENDIF

IF Nat=Looking for paid work/training scheme OR 4WkLook =Yes THEN

2WkStrt

If a job or a place on a Government training scheme had been available in the (7 days/four weeks) ending (date last Sunday), would you have been able to start within two weeks?

1 Yes
2 No

ENDIF
**Employe**
Are you...READ OUT...
1 an employee,
2 or, self-employed
IF IN DOUBT, CHECK HOW THIS EMPLOYMENT IS TREATED FOR TAX & NI PURPOSES.

**Direcr**
Can I just check, in this job are you...READ OUT...
1 Yes
2 No

**EmpStat**
Are you...READ OUT...
1 manager,
2 foreman or supervisor,
3 or other employee?
### IF Age of Respondent is 16+ THEN

**EducEnd**

At what age did you finish your continuous full-time education at school or college?

1. Not yet finished
2. Never went to school
3. 14 or under
4. 15
5. 16
6. 17
7. 18
8. 19 or over

**Qual**

SHOW CARD EE

Do you have any of the qualifications listed on this card? Please look down the whole list before telling me.

1. Yes
2. No

### IF Qual = Yes THEN

**QualA**

Which of the qualifications on this card do you have? Just tell me the number written beside each one. RECORD ALL THAT APPLY. PROBE: Any others?

1. Degree/Degree level qualification (including higher degree)
2. Teaching qualification
3. Nursing qualifications SRN, SCM, SEN, RGN, RM, RHV, Midwife
4. HNC/HND, BTEC Higher, BTEC Higher/SCOTECH Higher
5. ONC/OND/BTEC not higher
6. City and Guilds Full Technological Certificate
7. City and Guilds Advanced/Final Level
8. City and Guilds Craft/Ordinary Level
9. A-levels/Higher School Certificate
10. AS level
11. SLC/SCE/SUPExHigher Grade or Certificate of Sixth Year Studies
12. O-level passes taken after 1975
13. O-level passes taken after 1975 GRADS A-C
15. GCSE GRADES A-C
16. GCSE GRADES D-G
17. CSE GRADE 1/SCE BANDS A-C/Standard Grade LEVEL 1-3
18. CSE GRADES 2-5/SCE Ordinary BANDS D-E
19. CSE Ungraded
20. SLC Lower
21. SUPE Lower or Ordinary
22. School Certificate or Metric
23. NVQ Level 5
24. NVQ Level 4
25. NVQ Level 3/Advanced level GNVQ
26. NVQ Level 2/Intermediate level GNVQ
27. NVQ Level 1/Foundation level GNVQ
28. Recognised Trade Apprenticeship completed
29. Clerical or Commercial Qualification (e.g. typing/book-keeping/commerce)

**XOrigin**

Please describe
Self-completion placement (Aged 8+)

If Age of Respondent is 13 years or over and BookChk= Given THEN
SCIntro
PREPARE [Yellow/Blue/Brown] SELF-COMPLETION BOOKLET (FOR CHILDREN AGED 13-15/FOR YOUNG ADULTS/FOR ADULTS) BY ENTERING SERIAL NUMBERS. CHECK YOU HAVE THE CORRECT PERSON NUMBER.

ELSEIF Age of respondent is 8 to 12 years THEN
SCintCh
Here is a little booklet which I would like to ask [name of child] to complete for [him/her]. It asks children if they have ever tried cigarettes or alcohol, and about cycling. May I explain it to [him/her]?
IF ASKED, SHOW ORANGE BOOKLET TO PARENT(S). IF AGREES, PREPARE ORANGE BOOKLET. SEE CHILD. EXPLAIN HOW TO COMPLETE. REMEMBER TO USE A BLACK PEN.
ENDIF

If Age of Respondent is 18-24 and BookChk= Given END IF

If Age of Respondent is 13 years or over THEN
SCComp2
I would now like you to answer some more questions in this booklet on your own. The questions cover general health.
INTERVIEWER: Explain how to complete booklet and show example in booklet

Wait until respondent(s) have finished and then check each booklet completed.
If not, ask if questions missed in error.
If in error ask respondent to complete.

ENDIF

If Age of respondent is 8 years or over THEN
SCComp3
INTERVIEWER CHECK: WAS THE [ORANGE/YELLOW/BLUE/BROWN] BOOKLET (FOR CHILDREN AGED 8-12/FOR CHILDREN AGED 13-15/FOR YOUNG ADULTS/FOR ADULTS) COMPLETED?
1 Fully completed
2 Partially completed
3 Not completed

IF SCComp3 =Fully completed OR Partially completed THEN
SCAcc
Was it completed without assistance?
1 Completed independently
2 Assistance from other children
3 Assistance from other household member (Assistance from adults) (not interviewer)
4 Assistance from interviewer
5 Interviewer administered

ENDIF

If Age of respondent is 4 TO 15 years THEN
SDQChk
INTERVIEWER: PLEASE CHECK: Was the [ liaison] booklet for parents completed?
1 Fully completed
2 Partially completed
3 Not completed

If SCComp= Other THEN
SCComp60
INTERVIEWER: RECORD WHY BOOKLET NOT COMPLETED / PARTIALLY COMPLETED. CODE ALL THAT APPLY:
0 Child away from home during fieldwork period
1 Eyesight problems
2 Language problems
3 Reading/writing/comprehension problems
4 Respondent bored/fed up/tired
5 Questions too sensitive/invasion of privacy
6 Too long/too busy/taken long enough already
7 Refused to complete booklet (no other reason given)
97 Other (SPECIFY)

END IF
I would now like to measure height and weight. There is interest in how people’s weight, given their height, is associated with their health. MAKE OUT LIGHT TURQUOISE MRC FOR EACH PERSON.

IF Age >= 2 THEN
RespHts MEASURE HEIGHT AND CODE. INCLUDE ‘DISGUISED’ REFUSALS SUCH AS ‘IT WILL TAKE TOO LONG’, ‘I HAVE TO GO OUT’ ETC. AT CODE 2: Height refused.
1 Height measured
2 Height refused
3 Height attempted, not obtained
4 Height not attempted

IF RespHts = Height measured THEN
Height ENTER HEIGHT.
Range: 60.0..244.0
ENDIF
RelHite INTERVIEWER CODE ONE ONLY
1 No problems experienced reliable height measurement obtained
2 Reliable
3 Unreliable

IF RelHite = Unreliable THEN
HiNRel WHAT CAUSED THE HEIGHT MEASUREMENT TO BE UNRELIABLE?
1 Hairstyle or wig
2 Turban or other religious headgear
3 Respondent stooped
4 Child respondent refused stretching
5 Respondent would not stand still
6 Respondent wore shoes
95 Other, please specify

IF HiNRel = Other THEN
OHiNRel PLEASE SPECIFY WHAT CAUSED UNRELIABLE HEIGHT MEASUREMENT.
Text: Maximum 60 characters
ENDIF
ENDIF

MBookHt INTERVIEWER: CHECK HEIGHT RECORDED ON MEASUREMENT RECORD CARD.
HEIGHT: (x) cm OR (x) feet (x) inches.
PLEASE RECORD ESTIMATED HEIGHT. ENTER INCHES.

Range: 0..11
You can enter half inches, if given, with a .5 decimal.

ENDIF
ENDIF

EstHt
Computed: Final measured or estimated height (cm).
Range: 0..0...999.9

IF (Sex = Female) AND (Age of Respondent is 16 to 49) THEN
PregNowB
May I check, are you pregnant now?
1 Yes
2 No
ENDIF

IF PregNowB<>Yes THEN
RespWts
INTERVIEWER: MEASURE WEIGHT AND CODE.
(IF RESPONDENT WEIGHS MORE THAN 130KG (20 ½ STONES) DO NOT WEIGH. CODE AS 'WEIGHT NOT ATTEMPTED') INCLUDE 'DISGUISED' REFUSALS SUCH AS 'IT WILL TAKE TOO LONG', 'I HAVE TO GO OUT' ETC.
AT CODE 2: Weight refused.
0 If Age 2-5 years: Weight obtained (child held by adult)/ If Age over 5 years: DO NOT USE THIS CODE
1 Weight obtained (subject on own)
2 Weight refused
3 Weight attempted, not obtained
4 Weight not attempted

IF RespWtsMeas = Weight obtained (subject on own) OR Weight obtained (child held by adult) THEN
XWeight
RECORD WEIGHT.
Range: 10.0..140.0

ELSEIF RespWtsMeas = Weight obtained (subject on own) THEN
XWeight
RECORD WEIGHT.
Range: 10.0..140.0

ELSEIF RespWts = Weight obtained (child held by adult) THEN
WtAdult
ENTER WEIGHT OF ADULT ON HIS/HER OWN.
Range: 15.0..130.0

WtChAd
ENTER WEIGHT OF ADULT HOLDING CHILD.
Range: 15.0..130.0

ENDIF

Weight
Computed: Measured weight, either Weight or WtChAd – WtAdult
Range: 0.0..140.0
The Health Survey for England 2008 - Individual Questionnaire

Measurements

**FloorC**

SCALES PLACED ON?
1 Uneven floor
2 Carpet
3 None of these

**RelWaitB**

INTERVIEWER CODE ONE ONLY.
1 No problems experienced, reliable weight measurement obtained
2 Problems experienced - measurement likely to be:
3 Unreliable

**MBBookWt**

INTERVIEWER: CHECK WEIGHT RECORDED ON MEASUREMENT RECORD CARD. WEIGHT: (x) kg OR (x) stones (x) pounds. IF WEIGHT LOOKS WRONG, GO BACK TO XWeight AND REWEIGH.

ENDIF

IF RespWts = Weight refused, Weight attempted, not obtained OR Weight not attempted THEN
IF RespWts = Weight refused THEN

ResNWt

GIVE REASONS FOR REFUSAL.
1 Cannot see point/Weight already known/Doctor has measurement
2 Too busy/Taken long enough already/No time
3 Respondent too ill/ frail/tired
4 Considered intrusive information
5 Respondent too anxious/nervous/shy/embarrassed
6 Child refused to be held by parent
7 Parent refused to hold child
8 Refused (no other reason given)
9 Other

ELSEIF RespWts = Weight attempted, not obtained OR Weight not attempted THEN

NoWtBC

CODE REASON FOR NOT OBTAINING WEIGHT. CODE ALL THAT APPLY.
1 Child: away from home during fieldwork period (specify in a Note)
2 Respondent is unsteady on feet
3 Respondent cannot stand upright
4 Respondent is chairbound
5 Confined to bed
6 Respondent unable to remove shoes
7 Respondent weighs more than 130 kg
8 Ill or in pain
9 Scales not working
10 Parent unable to hold child
11 Child asleep
95 Other - specify

**EstWt**

Computed: Final measured or estimated weight (kg).

Range: 0.0…999.9

ENDIF

IF (RespHts = Yes) OR (RespWts = Yes) THEN

StadNo

INTERVIEWER- PLEASE RECORD SERIAL NUMBER OF STADIOMETER USED FOR THIS INTERVIEW.

Range: 0…997

ScNo

INTERVIEWER- PLEASE RECORD SERIAL NUMBER OF SCALES USED FOR THIS INTERVIEW.

Range: 0…997

ENDIF

IF RESPONDENT IS <16

Birth

Can you tell me, what was [name of child’s] weight at birth?

INTERVIEWER: IS WEIGHT GIVEN IN KILOGRAMS OR IN POUNDS AND OUNCES?

1 Kilograms
2 Pounds and ounces

ENDIF
The Health Survey for England 2008 - Individual Questionnaire

---

**Measurements**

IF Birth = Kilograms THEN

Birthkg

PLEASE RECORD (name of child's) BIRTHWEIGHT IN KILOGRAMS.

Range: 1.00..6.75

ELSEIF Birth = Pounds and ounces THEN

Birthl

PLEASE RECORD (name of child's) BIRTHWEIGHT. ENTER POUNDS.

Range: 2.15

BirthO

PLEASE RECORD (name of child's) BIRTHWEIGHT. ENTER OUNCES.

Range: 0.15

ENDIF

BirthWt

Computed: Given birthweight (kg)

Range: 0.00...8.70

IF BirthWt = [between 0.1kg and 2.5kg] THEN

Premature

Was (name of child) born prematurely?

1 Yes

2 No

IF Premature = Yes THEN

PrWeeks

How many weeks early was (name of child) born?

ENTER NUMBER OF WEEKS, ROUNDED TO NEAREST WEEK. IF LESS THAN FOUR DAYS, ENTER 0.

Range: 0..20

ENDIF

ENDIF

---

**Nurse Appointment**

IF Age of respondent < 16 AND No legal parent in household THEN

NurseA

In order for the nurse to take any of your measurements we have to have the permission of your parents or the person who has legal parental responsibility. As there is no-one in your household who I can ask, I won’t be making an appointment for you.

1 Continue

ELSE (All other respondents)

Nurse

There are two parts to this survey. You have just helped us with the first part. We hope you will also help us with the second part, which is a visit by a qualified nurse to collect some medical information and carry out some measurements. I would like to make an appointment for the nurse to come round and explain some more about what is required.

INTERVIEWER: check whether the respondent agrees to the nurse visit. Always mention the nurse by name (if known).

IF ASKED FOR DETAILS, EXPLAIN: the nurse will ask some more questions, for example, whether they are taking any medications, and take some measurements, for example, blood pressure and take a saliva and blood sample.

1 Agreed nurse could contact

2 Refused nurse contact

ENDIF

IF Nurse = Agreed nurse could contact THEN

NApptLtr

Shortly, I will arrange a convenient time for the nurse to come and talk to you.

ENDIF

IF Nurse = Refused nurse contact THEN

NurseRef

RECORD REASON WHY RESPONDENT REFUSED NURSE CONTACT. CODE BELOW AND RECORD AT G1 ON A.R.F.

0 Own doctor already has information

1 Given enough time already to this survey (expecting too much

2 Too busy, cannot spare the time (if Code 1 does not apply)

3 Had enough of medical tests / medical profession at present time

4 Worried about what nurse may find out / might tempt fate

5 Scared of medical profession / particular medical procedures (e.g. blood sample)

6 Not interested / Can’t be bothered / No particular reason

95 Other reason (specify)

IF NurseRef=Other reason THEN

NrsRefO

PLEASE SPECIFY OTHER REASON FOR REFUSAL. CODE BELOW AND RECORD AT G1 ON A.R.F.

Text: Maximum 60 characters

ENDIF
We would like you to wear the actigraph for 7 days. As a thank you, you will receive a £20 voucher. Please read this leaflet, it explains more about what is involved.

INTERVIEWER: Give the respondent the (adult/child) actigraph leaflet and allow them time to read it and ask you any questions. If necessary, reassure them that invitation to take part is randomly selected by the computer and not based on respondent characteristics.

Press <1> and <Enter> to continue.

AGCons1
Are you willing (for name of child) to take part in the study?
1 Agreed to take part and consent given
2 No, not willing to take part

AGCons2
Are you willing to take part in the study?
1 Agreed to take part and consent given
2 No, not willing to take part

Place
I will now help fit the actigraph on (you / name of child) so that (you / he / she) can see how it feels.

Press <1> and <Enter> to continue.

INTERVIEWER: Fit the actigraph and suggest to the respondent that they wear it for the remainder of the day to get used to it. Demonstrate and explain to the respondent:
- The monitor is worn on the waist using the elastic belt provided.
- Attach the belt snugly around respondent’s waist so that the monitor rests on the right side of body, above the right hip.
- (he/she) should ideally wear the monitor under (his/her) clothes. (you do not / he/she does not) need to wear it against the skin.
- Keep the monitor fastened on the belt to reduce the risk of losing it.
- Put the monitor on when (you wake up / name of child wakes up) and take it off before (you go / he/she goes) to bed on each day.
- Please remove the monitor before (you shower, bath or go swimming / he/she showers, bathes or goes swimming), as if it is wet it may be damaged. (If you forget / he/she forgets) to take the monitor off before bathing or swimming, (you / he/she) will not be harmed.

INTERVIEWER: Press <1> and <Enter> to continue.
ActFit
INTERVIEWER: HOW WAS THE FIT OF THE ACTIGRAPH AGAINST THE BODY?
1. Snug fit, flat against the body
2. Snug fit, not flat because of body shape
3. Not snug fit (respondent refused to wear it tight around the waist)
4. Other

ActNo
INTERVIEWER: Record the serial number of the actigraph, e.g. for ACT123 enter 123A.
Numeric: 1-999 Decimals: 0

Log
INTERVIEWER: Give the respondent the activity log "Colour.
- Write the serial number on the front of the log.
- Place the coloured sticker on the actigraph and on the front cover of the activity log.
- Write in the days of the week (on page 3).
- If the respondent cannot begin wearing the actigraph the next day, then write the actual start date on the log.
- Explain to the respondent how to fill it in.

Respondent serial number is: ................
Press <1> and <Enter> to continue

Actplcd
INTERVIEWER: Did you place the actigraph and activity log with (name of respondent)?
1. Yes
2. No

IF Actplcd=2 THEN
WhyActNo
INTERVIEWER: Please record why the actigraph and activity booklet were not placed.

Phone
INTERVIEWER: Collect the respondent’s telephone number and record it on the ARF.

READ OUT: Either myself or my colleague will give you a call midway through the week to check how things are going.

ACTnrs
INTERVIEWER: Please start wearing the actigraph when you get up tomorrow morning and wear it every day until you go to bed on (date). The nurse will collect the actigraph and the activity booklet when he/she comes to visit (you/name of respondent). Please keep the actigraph and activity booklet in a safe place until the nurse comes to collect it.
The Health Survey for England 2008 - Individual Questionnaire

Consents

ASK ALL AGED 16+

NHSCan

We would like your consent for us to send your name, address and date of birth to three National Health Service registers. These are the NHS Central Register, the NHS Cancer Registry and the Hospital Episodes Statistics Register. Please read these forms, it explains more about what is involved.

INTERVIEWER: GIVE THE RESPONDENT THE COLOUR (GREEN/YELLOW) CONSENT FORM (NHS AND CANCER REGISTRY) AND ALLOW THEM TIME TO READ THE INFORMATION.

1 Consents given
2 Consent not given

IF NHSCAN = Consent given THEN

NHSSig

EXPLAIN THE NEED FOR WRITTEN CONSENT: Before I can pass your details on, I have to obtain written consent from you.

ENTER THE RESPONDENT’S SERIAL NUMBER ON THE TOP OF THE CONSENT FORMS.

ASK RESPONDENT TO SIGN AND DATE BOTH FORMS.

GIVE THE SECOND COPY OF THE FORM TO THE RESPONDENT.

CODE WHETHER SIGNED CONSENTS OBTAINED.

CODE ALL THAT APPLY.

1 Hospital Episodes Statistics Register consent obtained
2 NHS Central Register and Cancer Registry consent obtained
3 All consents signed
4 No signed consents

ENDIF

Thank

Thank you for your help. Before we end the interview I need to collect a little more information for our records.

1 Continue

TPhone

Some interviews in a survey are checked to make sure that people like yourself are satisfied with the way the interview was carried out. Just in case yours is one of the interviews that is checked, it would be helpful if we could have your telephone number.

INTERVIEWER: IF GIVEN, ENTER TELEPHONE NUMBER ON FRONT OF ARF.

1 Number given
2 Number refused
3 No telephone
4 Number unknown

ReInter

If at some future date we wanted to talk to you further about your health, may we contact you to see if you are willing to help us again?

1 Yes
2 No
**CARD E**

**GROSS INCOME FROM ALL SOURCES**

(before any deductions for tax, national insurance, etc.)

<table>
<thead>
<tr>
<th>WEEKLY</th>
<th>or</th>
<th>MONTHLY</th>
<th>or</th>
<th>ANNUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than £10</td>
<td>57</td>
<td>Less than £40</td>
<td>57</td>
<td>Less than £520</td>
</tr>
<tr>
<td>£10 less than £30</td>
<td>66</td>
<td>£40 less than £130</td>
<td>66</td>
<td>£520 less than £1,600</td>
</tr>
<tr>
<td>£30 less than £50</td>
<td>55</td>
<td>£130 less than £220</td>
<td>55</td>
<td>£1,600 less than £2,600</td>
</tr>
<tr>
<td>£50 less than £70</td>
<td>74</td>
<td>£220 less than £300</td>
<td>74</td>
<td>£2,600 less than £3,600</td>
</tr>
<tr>
<td>£70 less than £100</td>
<td>62</td>
<td>£300 less than £430</td>
<td>62</td>
<td>£3,600 less than £5,200</td>
</tr>
<tr>
<td>£100 less than £150</td>
<td>73</td>
<td>£430 less than £650</td>
<td>73</td>
<td>£5,200 less than £7,800</td>
</tr>
<tr>
<td>£150 less than £200</td>
<td>65</td>
<td>£650 less than £870</td>
<td>65</td>
<td>£7,800 less than £10,400</td>
</tr>
<tr>
<td>£200 less than £250</td>
<td>51</td>
<td>£870 less than £1,100</td>
<td>51</td>
<td>£10,400 less than £13,000</td>
</tr>
<tr>
<td>£250 less than £300</td>
<td>78</td>
<td>£1,100 less than £1,300</td>
<td>78</td>
<td>£13,000 less than £15,600</td>
</tr>
<tr>
<td>£300 less than £350</td>
<td>54</td>
<td>£1,300 less than £1,500</td>
<td>54</td>
<td>£15,600 less than £18,200</td>
</tr>
<tr>
<td>£350 less than £400</td>
<td>76</td>
<td>£1,500 less than £1,700</td>
<td>76</td>
<td>£18,200 less than £20,800</td>
</tr>
<tr>
<td>£400 less than £450</td>
<td>81</td>
<td>£1,700 less than £2,000</td>
<td>81</td>
<td>£20,800 less than £23,400</td>
</tr>
<tr>
<td>£450 less than £500</td>
<td>53</td>
<td>£2,000 less than £2,200</td>
<td>53</td>
<td>£23,400 less than £26,000</td>
</tr>
<tr>
<td>£500 less than £550</td>
<td>72</td>
<td>£2,200 less than £2,400</td>
<td>72</td>
<td>£26,000 less than £28,600</td>
</tr>
<tr>
<td>£550 less than £600</td>
<td>58</td>
<td>£2,400 less than £2,600</td>
<td>58</td>
<td>£28,600 less than £31,200</td>
</tr>
<tr>
<td>£600 less than £650</td>
<td>70</td>
<td>£2,600 less than £2,800</td>
<td>70</td>
<td>£31,200 less than £33,800</td>
</tr>
<tr>
<td>£650 less than £700</td>
<td>68</td>
<td>£2,800 less than £3,000</td>
<td>68</td>
<td>£33,800 less than £36,400</td>
</tr>
<tr>
<td>£700 less than £800</td>
<td>75</td>
<td>£3,000 less than £3,500</td>
<td>75</td>
<td>£36,400 less than £41,600</td>
</tr>
<tr>
<td>£800 less than £900</td>
<td>64</td>
<td>£3,500 less than £3,900</td>
<td>64</td>
<td>£41,600 less than £46,800</td>
</tr>
<tr>
<td>£900 less than £1,000</td>
<td>71</td>
<td>£3,900 less than £4,300</td>
<td>71</td>
<td>£46,800 less than £52,000</td>
</tr>
<tr>
<td>£1,000 less than £1,150</td>
<td>69</td>
<td>£4,300 less than £5,000</td>
<td>69</td>
<td>£52,000 less than £60,000</td>
</tr>
<tr>
<td>£1,150 less than £1,350</td>
<td>80</td>
<td>£5,000 less than £5,800</td>
<td>80</td>
<td>£60,000 less than £70,000</td>
</tr>
<tr>
<td>£1,350 less than £1,550</td>
<td>79</td>
<td>£5,800 less than £6,700</td>
<td>79</td>
<td>£70,000 less than £80,000</td>
</tr>
<tr>
<td>£1,550 less than £1,750</td>
<td>60</td>
<td>£6,700 less than £7,500</td>
<td>60</td>
<td>£80,000 less than £90,000</td>
</tr>
<tr>
<td>£1,750 less than £1,900</td>
<td>52</td>
<td>£7,500 less than £8,300</td>
<td>52</td>
<td>£90,000 less than £100,000</td>
</tr>
<tr>
<td>£1,900 less than £2,100</td>
<td>67</td>
<td>£8,300 less than £9,200</td>
<td>67</td>
<td>£100,000 less than £110,000</td>
</tr>
<tr>
<td>£2,100 less than £2,300</td>
<td>59</td>
<td>£9,200 less than £10,000</td>
<td>59</td>
<td>£110,000 less than £120,000</td>
</tr>
<tr>
<td>£2,300 less than £2,500</td>
<td>77</td>
<td>£10,000 less than £10,800</td>
<td>77</td>
<td>£120,000 less than £130,000</td>
</tr>
<tr>
<td>£2,500 less than £2,700</td>
<td>61</td>
<td>£10,800 less than £11,700</td>
<td>61</td>
<td>£130,000 less than £140,000</td>
</tr>
<tr>
<td>£2,700 less than £2,900</td>
<td>56</td>
<td>£11,700 less than £12,500</td>
<td>56</td>
<td>£140,000 less than £150,000</td>
</tr>
<tr>
<td>£2,900 or more</td>
<td>63</td>
<td>£12,500 or more</td>
<td>63</td>
<td>£150,000 or more</td>
</tr>
</tbody>
</table>
CARD J

1. Hoovering
2. Dusting
3. Ironing
4. General tidying
5. Washing floors and paintwork

CARD G

Teaspoon
Dessertspoon
Tablespoon
CARD K

1. Moving heavy furniture
2. Spring cleaning
3. Walking with heavy shopping (for more than 5 minutes)
4. Cleaning windows
5. Scrubbing a floor with a scrubbing brush

CARD L

1. Hoeing, weeding, pruning
2. Mowing with a power mower
3. Planting flowers/seeds
4. Decorating
5. Minor household repairs
6. Car washing/polishing
7. Car repairs/maintenance
<table>
<thead>
<tr>
<th>Name of Fruit</th>
<th>Size of Fruit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple (all types)</td>
<td>Medium</td>
</tr>
<tr>
<td>Apricot</td>
<td>Small</td>
</tr>
<tr>
<td>Avocado</td>
<td>Large</td>
</tr>
<tr>
<td>Banana</td>
<td>Medium</td>
</tr>
<tr>
<td>Banana, apple</td>
<td>Small</td>
</tr>
<tr>
<td>Banana, nino</td>
<td>Small</td>
</tr>
<tr>
<td>Berry (other)</td>
<td>Very small</td>
</tr>
<tr>
<td>Bilberry</td>
<td>Very small</td>
</tr>
<tr>
<td>Blackcurrant</td>
<td>Very small</td>
</tr>
<tr>
<td>Blackberry</td>
<td>Very small</td>
</tr>
<tr>
<td>Blueberry</td>
<td>Very small</td>
</tr>
<tr>
<td>Cactus pear</td>
<td>Medium</td>
</tr>
<tr>
<td>Cape gooseberry</td>
<td>Very small</td>
</tr>
<tr>
<td>Carambola / Star fruit</td>
<td>Medium</td>
</tr>
<tr>
<td>Cherry</td>
<td>Very small</td>
</tr>
<tr>
<td>Cherry tomatoes</td>
<td>Very small</td>
</tr>
<tr>
<td>Chinese gooseberry</td>
<td>Small</td>
</tr>
<tr>
<td>Chinese lantern</td>
<td>Very small</td>
</tr>
<tr>
<td>Chirimoya / Cherimoya</td>
<td>Medium</td>
</tr>
<tr>
<td>Clementine</td>
<td>Medium</td>
</tr>
<tr>
<td>Custard Apple</td>
<td>Medium</td>
</tr>
<tr>
<td>Damson</td>
<td>Very small</td>
</tr>
<tr>
<td>Date (fresh)</td>
<td>Small</td>
</tr>
<tr>
<td>Dragon fruit</td>
<td>Large</td>
</tr>
<tr>
<td>Elderberry</td>
<td>Very small</td>
</tr>
<tr>
<td>Figs (fresh)</td>
<td>Small</td>
</tr>
<tr>
<td>Gooseberry</td>
<td>Very small</td>
</tr>
<tr>
<td>Granadillo / Passion</td>
<td>Small</td>
</tr>
<tr>
<td>Grapes (all types)</td>
<td>Very small</td>
</tr>
<tr>
<td>Grapefruit</td>
<td>Large</td>
</tr>
<tr>
<td>Greenage</td>
<td>Small</td>
</tr>
<tr>
<td>Grenadillo</td>
<td>Very small</td>
</tr>
<tr>
<td>Guava</td>
<td>Medium</td>
</tr>
<tr>
<td>Horned melon / Kwano</td>
<td>Large</td>
</tr>
<tr>
<td>Kiwi</td>
<td>Small</td>
</tr>
<tr>
<td>Kubo</td>
<td>Very small</td>
</tr>
<tr>
<td>Kumquat</td>
<td>Very small</td>
</tr>
<tr>
<td>Lemon</td>
<td>Medium</td>
</tr>
<tr>
<td>Lime</td>
<td>Medium</td>
</tr>
<tr>
<td>Loquat</td>
<td>Very small</td>
</tr>
<tr>
<td>Lychee</td>
<td>Very small</td>
</tr>
<tr>
<td>Mandarin orange</td>
<td>Medium</td>
</tr>
<tr>
<td>Mango</td>
<td>Large</td>
</tr>
<tr>
<td>Medlar</td>
<td>Medium</td>
</tr>
<tr>
<td>Melon (all types)</td>
<td>Very large</td>
</tr>
<tr>
<td>Mirella</td>
<td>Large</td>
</tr>
<tr>
<td>Nectarine</td>
<td>Medium</td>
</tr>
<tr>
<td>Olive</td>
<td>Very small</td>
</tr>
<tr>
<td>Orange</td>
<td>Medium</td>
</tr>
<tr>
<td>Passion fruit</td>
<td>Small</td>
</tr>
<tr>
<td>Papaya / Paw Paw</td>
<td>Large</td>
</tr>
<tr>
<td>Peach</td>
<td>Medium</td>
</tr>
<tr>
<td>Pear</td>
<td>Medium</td>
</tr>
<tr>
<td>Persimmon</td>
<td>Medium</td>
</tr>
<tr>
<td>Pitaya</td>
<td>Medium</td>
</tr>
<tr>
<td>Pineapple</td>
<td>Very large</td>
</tr>
<tr>
<td>Physalis</td>
<td>Very small</td>
</tr>
<tr>
<td>Plantain</td>
<td>Medium</td>
</tr>
<tr>
<td>Plum</td>
<td>Small</td>
</tr>
<tr>
<td>Pomegranate</td>
<td>Medium</td>
</tr>
<tr>
<td>Pomelo/Pummelo</td>
<td>Large</td>
</tr>
<tr>
<td>Prickly pear</td>
<td>Medium</td>
</tr>
<tr>
<td>Rambutans</td>
<td>Very small</td>
</tr>
<tr>
<td>Raspberry</td>
<td>Very small</td>
</tr>
<tr>
<td>Redcurrants</td>
<td>Very small</td>
</tr>
<tr>
<td>Satsuma</td>
<td>Medium</td>
</tr>
<tr>
<td>Shaddock</td>
<td>Large</td>
</tr>
<tr>
<td>Sharon fruit</td>
<td>Medium</td>
</tr>
<tr>
<td>Starfruit</td>
<td>Medium</td>
</tr>
<tr>
<td>Strawberry</td>
<td>Very small</td>
</tr>
<tr>
<td>Stonefruit</td>
<td>Very small</td>
</tr>
<tr>
<td>Tamarillo / Tree</td>
<td>Small</td>
</tr>
<tr>
<td>Tangerine</td>
<td>Medium</td>
</tr>
<tr>
<td>Tomato</td>
<td>Small</td>
</tr>
<tr>
<td>Tomato, cherry</td>
<td>Very small</td>
</tr>
<tr>
<td>Tomato, beef</td>
<td>Large</td>
</tr>
<tr>
<td>Tree tomato/Tamarillo</td>
<td>Small</td>
</tr>
<tr>
<td>Ugli fruit</td>
<td>Large</td>
</tr>
<tr>
<td>Butter &amp; Margarine</td>
<td>Code</td>
</tr>
<tr>
<td>---------------------</td>
<td>------</td>
</tr>
<tr>
<td>Valley Organic British Butter</td>
<td>1</td>
</tr>
<tr>
<td>Organic Unsalted Butter</td>
<td>2</td>
</tr>
<tr>
<td>Anchor Lighter</td>
<td>1</td>
</tr>
<tr>
<td>Anchor Lighter Speadable</td>
<td>1</td>
</tr>
<tr>
<td>Argento Spread</td>
<td>2</td>
</tr>
<tr>
<td>Benecol Olive Spread</td>
<td>2</td>
</tr>
<tr>
<td>Benecol Light Spread</td>
<td>2</td>
</tr>
<tr>
<td>President Lighter</td>
<td>3</td>
</tr>
<tr>
<td>President Lighter Speadable</td>
<td>3</td>
</tr>
<tr>
<td>Sunflower low fat spread</td>
<td>4</td>
</tr>
<tr>
<td>Weight Watchers</td>
<td>2</td>
</tr>
</tbody>
</table>

**Note:** All brands of butter and hard block margarine code as 1.
How to answer these questions

• Please read each question carefully

• Most of the questions can be answered by putting a tick in the box next to the answer that applies to you like this

  Yes

  No

• Sometimes you have to write a number in the box, for example

  I was 10 years old

• Next to some of the boxes are arrows and instructions. They show or tell you which question to answer next. If there are no special instructions, just answer the next question.
Cigarette Smoking

1. Have you ever tried smoking a cigarette, even if it was only a puff or two?

   Tick one box

   No  → Go to question 2

   Yes  → How old were you when you tried smoking a cigarette, even if it was only a puff or two?

   I was  [ ] years old

   Write in

2. Now read all the following sentences very carefully and tick the box next to the one which best describes you.

   Tick one box

   I have never smoked  → Go to question 3

   I have only smoked once or twice

   I used to smoke sometimes, but I never smoke a cigarette now

   I sometimes smoke, but I don't smoke every week

   I smoke between one and six cigarettes a week

   I smoke more than six cigarettes a week

3. Did you smoke any cigarettes last week?

   Tick one box

   No  → Go to question 4

   Yes  → How many cigarettes did you smoke last week?

   I smoked  [ ] cigarettes

   Write in

4. Do you find that you are often near people who are smoking in any of these places?

   Please tick all the places where you are often near people who are smoking

   Tick all boxes which apply

   At home

   On buses or trains

   In other people's homes  → Go to question 5

   In other places  → Go to question 6 on page 4

   No, none of these

5. Does this bother you?

   Tick one box

   Yes  → Go to the next question

   No  →
Drinking

6. Have you ever had a proper alcoholic drink – a whole drink, not just a sip? Please don’t count drinks labelled low alcohol.

Tick one box

Yes Go to question 8
No Go to question 7

7. Have you ever drunk alcopops (such as Bacardi Breezer, Smirnoff Ice, WKD etc)?

Tick one box

Yes Go to question 8
No Go to question 11 on page 6

8. How old were you the first time you had a proper alcoholic drink or alcopop?

I was write in years old

9. How often do you usually have an alcoholic drink or alcopop?

Tick one box

Almost every day
About twice a week
About once a week
About once a fortnight
About once a month
Only a few times a year
I never drink alcohol now

Go to question 10

10. When did you last have an alcoholic drink or alcoholic soft drink?

Tick one box

Today
Yesterday
Some other time during the last week
1 week, but less than 2 weeks ago
2 weeks, but less than 4 weeks ago
1 month, but less than 6 months ago
6 months ago or more

Go to question 11
Your weight

Everyone please answer

11. Given your age and height, would you say that you are...

Tick one box

About the right weight

Too heavy

or too light?

Not sure

12. At the present time are you trying to lose weight, trying to gain weight, or are you not trying to change your weight?

Tick one box

Trying to lose weight

Trying to gain weight

Not trying to change weight

Cycling

Everyone please answer

13. Do you have a bicycle?

Tick one box

Yes

No

Go to question 14

14. Do you wear a bicycle helmet when you ride a bike?

Tick one box

I always wear a helmet when I ride a bike

I sometimes wear a helmet when I ride a bike

I never wear a helmet when I ride a bike

I never ride a bike

Go to question 15

15. What do you think about bicycle helmets?

Please tick all the boxes that you agree with

Wearing a helmet makes me feel safer when I ride a bike

I sometimes forget to put my helmet on

Bicycle helmets cost too much money

Helmets look good

It is difficult to get helmets to fit

Helmets can protect you if you have an accident

Wearing a helmet makes me feel like a proper cyclist

Thank you for answering these questions.

Please give the booklet back to the interviewer.
How to answer these questions

• Please read each question carefully.

• Most of the questions can be answered by putting a tick in the box next to the answer that applies to you like this.

  Yes

  No

• Sometimes you have to write a number in the box, for example.

  I was 10 years old

  write in

• Next to some of the boxes are arrows and instructions.

  They show or tell you which question to answer next.

  If there are no special instructions, just answer the next question.

  Go to question 4

  I was 10 years old

  write in
EVERYONE PLEASE ANSWER

Q6 Do you find that you are often near people who are smoking in any of these places?

Please tick all the places where you are often near people who are smoking

Tick all boxes which apply

- At home
- On buses or trains
- In other people's homes
- In other places
- No, none of these

Go to question 8 on page 4

Q7 Does this bother you?

Tick one box

- Yes
- Go to next question
- No

Spare

Q1 Have you ever tried smoking a cigarette, even if it was only a puff or two?

Tick one box

- Yes
- Go to next question
- No

Q2 Now read all the following sentences very carefully and tick the box next to the one which best describes you.

Tick one box

- I have never smoked
- Go to question 6
- I have only smoked once or twice
- I used to smoke sometimes, but I never smoke a cigarette now
- I sometimes smoke, but I don't smoke every week
- I smoke between one and six cigarettes a week
- I smoke more than six cigarettes a week

Go to question 3

Q3 How old were you when you tried smoking a cigarette, even if it was only a puff or two?

I was □□□ years old

write in

Go to next question

Q4 Did you smoke any cigarettes last week?

Tick one box

- Yes
- Go to next question
- No

Go to question 6

Q5 How many cigarettes did you smoke last week?

I smoked □□□ cigarettes

write in

Go to next question

Spare
Drinking

Q8 Have you ever had a proper alcoholic drink – a whole drink, not just a sip? Please don’t count drinks labelled low alcohol.

Tick one box

Yes → Go to question 10
No → Go to next question

Q9 Have you ever drunk alcopops (such as Bacardi Breezer, Smirnoff Ice, WKD, Hooch etc)?

Tick one box

Yes → Go to question 19 on page 8
No → Go to next question

Q10 How old were you the first time you had a proper alcoholic drink or an alcopop?

I was ______ years old → Go to next question

Q11 How often do you usually have an alcoholic drink or alcopop?

Tick one box

Almost every day
About twice a week
About once a week
About once a fortnight
About once a month
Only a few times a year
I never drink alcohol now

→ Go to next question

Q12 When did you last have an alcoholic drink or alcopop?

Tick one box

Today
Yesterday
Some other time during the last week
1 week, but less than 2 weeks ago
2 weeks, but less than 4 weeks ago
1 month, but less than 6 months ago
6 months ago or more

→ Go to next question

Q13 Which, if any, of the drinks shown below, have you drunk in the last 7 days? Please (✔) either yes or no for each kind of drink.

For each kind of drink, write in the box how much you drank in the last 7 days.

Beer, lager cider or shandy
(exclude bottles or cans of shandy)

Have you drunk this in the last 7 days?

Tick one box

No → Go to question 14
Yes

How much did you drink in the last 7 days?
Write in:

Pints (if half a pint, write in ½)

Large cans or bottles

Small cans or bottles
Q14  Spirits or liqueurs, such as gin, vodka, whisky, rum, brandy or cocktails
Have you drunk this in the last 7 days?
Tick one box
No  Go to question 15
Yes
How much did you drink in the last 7 days?
Write in:
Glasses (count doubles as two glasses)

Q15  Sherry or martini (including port, vermouth, cinzano, dubonnet)
Have you drunk this in the last 7 days?
Tick one box
No  Go to question 16
Yes
How much did you drink in the last 7 days?
Write in:
Glasses (count doubles as two glasses)

Q16  Wine (including babycham and champagne)
Have you drunk this in the last 7 days?
Tick one box
No  Go to question 17
Yes
How much did you drink in the last 7 days?
Write in:
Glasses

Q17  Alcopop (such as Bacardi Breezer, Smirnoff Ice, WKD, Hooch, etc.)
Have you drunk this in the last 7 days?
Tick one box
No  Go to question 18
Yes
How much did you drink in the last 7 days?
Write in:
Large cans or bottles
Small cans or bottles

Q18  Other kinds of alcoholic drink?
Have you drunk this in the last 7 days?
Tick one box
No  Go to question 19
Yes
Complete details below
Write in name of drink
How much did you drink in the last 7 days?
Write in:
Glasses (count doubles as two glasses)
General health over the last few weeks

Please read this carefully:
We should like to know how your health has been in general over the past few weeks. Please answer ALL the questions by ticking the box below the answer which you think most applies to you.

HAVE YOU RECENTLY:

Q21 been able to concentrate on whatever you’re doing?

Q22 lost much sleep over worry?

Q23 felt you were playing a useful part in things?

Q24 felt capable of making decisions about things?

Q25 felt constantly under strain?

Q26 felt you couldn’t overcome your difficulties?

Your weight

Everyone please answer

Q19 Given your age and height, would you say that you are...

Q20 At the present time are you trying to lose weight, trying to gain weight, or are you not trying to change your weight?
HAVE YOU RECENTLY:

Q27 been able to enjoy your normal day-to-day activities?
- More so than usual
- Same as usual
- Less so than usual
- Much less than usual

Q28 been able to face up to your problems?
- More so than usual
- Same as usual
- Less able than usual
- Much less able

Q29 been feeling unhappy and depressed?
- Not at all
- No more than usual
- Rather more than usual
- Much more than usual

Q30 been losing confidence in yourself?
- Not at all
- No more than usual
- Rather more than usual
- Much more than usual

Q31 been thinking of yourself as a worthless person?
- More so than usual
- About same as usual
- Less so than usual
- Much less than usual

Q32 been feeling reasonably happy, all things considered?
- More so than usual
- About same as usual
- Less so than usual
- Much less than usual

Thank you for answering these questions.
Please give the booklet back to the interviewer.
Health Survey for England 2008

Booklet for Young Adults

In Confidence

How to fill in this questionnaire

A. Most of the questions on the following pages can be answered by simply ticking the box below or alongside the answer that applies to you.

Example:

Do you feel that you lead a ...

 Tick one box

Very healthy life
Fairly healthy life
Not very healthy life
An unhealthy life

B. Sometimes you are asked to write in a number or the answer in your own words. Please enter numbers as figures rather than words.

Example:

Write in no. 6

C. On most pages you should answer ALL the questions but sometimes you will find an instruction next to the box you have ticked telling you to go to another question.

By following the instructions carefully you will miss out questions which do not apply to you.

Example:

Tick one box

Yes

No

Go to Q4

Go to Q5
Q5  Why did you decide to give up smoking?

Tick ALL that apply

- Advice from a GP/health professional
- Advert for a nicotine replacement product
- Government TV, radio or press advert
- Hearing about a new stop smoking treatment
- Financial reasons (couldn’t afford it)
- I knew someone else who was stopping
- Seeing a health warning on a cigarette packet
- Family or friends wanted me to stop
- Being contacted by my local NHS Stop Smoking Services
- Health problems I had at the time
- Worried about future health problems
- Pregnancy
- Worried about the effect on my children
- Worried about the effect on other family members
- My own motivation
- Something else
- Cannot remember

Q6  Did you smoke cigarettes regularly or occasionally?

Tick ONE box

- Regularly, that is at least one cigarette a day
- Occasionally
- I never really smoked cigarettes, just tried them once or twice

Q7  About how many cigarettes a day do you usually smoke on weekdays?

Write in number smoked a day

Q8  And about how many cigarettes a day do you usually smoke at weekends?

Write in number smoked a day

Q9  Do you mainly smoke ...

Tick ONE box

- filter-tipped cigarettes,
- plain or untipped cigarettes,
- or hand-rolled cigarettes?

Q10 Would you like to give up smoking altogether?

Tick ONE box

- Yes
- No

Q11 What are your main reasons for wanting to give up?

Tick ALL that apply

- Because of a health problem I have at present
- Better for my health in general
- Less risk of getting smoking related illnesses
- Family/friends wanted me to stop
- Financial reasons (couldn’t afford it)
- Worried about the effect on my children
- Because of the forthcoming ban on smoking in all public places
- Other
EVERYONE PLEASE ANSWER

Q12 Did your father ever smoke regularly when you were a child?

Tick ONE box

Yes □
No □
Don’t know □

Q13 Did your mother ever smoke regularly when you were a child?

Tick ONE box

Yes □
No □
Don’t know □

Q14 In most weeks, how many hours a week are you exposed to other people’s tobacco smoke?

Number of hours a week □

Write in

Q15 Does this bother you?

b) □

Tick ONE box

Yes □
No □

Q15 a) Do you find that you are often near people who are smoking in any of these places?

Please tick all the places where you are often near people who are smoking.

Tick ALL boxes which apply

At home □
At work □
On buses or trains □
In other people’s homes □
In pubs □
In other places □
No, none of these □

Go to Q16
**Q16** Do you ever drink alcohol nowadays, including drinks you brew or make at home?
- Yes  [ ]  Go to Q19
- No  [ ]

**Q17** Just to check, does that mean you never have an alcoholic drink nowadays, or do you have an alcoholic drink very occasionally, perhaps for medicinal purposes or on special occasions like Christmas and New Year?
- Very occasionally  [ ]  Go to Q19
- Never  [ ]

**Q18** Have you always been a non-drinker or did you stop drinking for some reason?
- Always a non-drinker  [ ]  Go to Q24 on page 9
- Used to drink but stopped  [ ]

**Q19** How old were you the first time you ever had a proper alcoholic drink?
Write in how old you were then  [ ]

**Q20** Thinking now about all kinds of drinks, how often have you had an alcoholic drink of any kind during the last 12 months?
- Almost every day  [ ]
- Five or six days a week  [ ]
- Three or four days a week  [ ]
- Once or twice a week  [ ]
- Once or twice a month  [ ]
- Once every couple of months  [ ]
- Once or twice a year  [ ]
- Not all in the last 12 months  [ ]

**Q21** Did you have an alcoholic drink in the seven days ending yesterday?
- Yes  [ ]  Go to Q24
- No  [ ]

**Q22** On how many days out of the last seven did you have an alcoholic drink?
- One  [ ]
- Two  [ ]
- Three  [ ]
- Four  [ ]
- Five  [ ]
- Six  [ ]
- Seven  [ ]
Now we would like to know how your health is today. Please answer ALL the questions. By ticking one box for each question below, please indicate which statements best describe your own health state today.

**Q24 Mobility**
- I have no problems in walking about
- I have some problems in walking about
- I am confined to bed

**Q25 Self-Care**
- I have no problems with self-care
- I have some problems washing or dressing myself
- I am unable to wash or dress myself

**Q26 Usual activities**
- I have no problems with performing my usual activities (eg. work, study, housework, family or leisure activities)
- I have some problems with performing my usual activities
- I am unable to perform my usual activities

**Q27 Pain/Discomfort**
- I have no pain or discomfort
- I have moderate pain or discomfort
- I have extreme pain or discomfort

**Q28 Anxiety/Depression**
- I am not anxious or depressed
- I am moderately anxious or depressed
- I am extremely anxious or depressed

---

**Q23** Please think about the day in the last week on which you drank the most. (If you drank the same amount on more than one day, please answer about the most recent of those days.)

From this list, please tick all the types of alcoholic drink which you drank on that day. For the ones you drank, write in how much you drank on that day. EXCLUDE NON-ALCOHOLIC OR LOW-ALCOHOL DRINKS, EXCEPT SHANDY.

<table>
<thead>
<tr>
<th>TICK ALL DRINKS DRUNK ON THAT DAY</th>
<th>WRITE IN HOW MUCH DRUNK ON THAT DAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glasses (count doubles as 2 singles)</td>
<td>Pints</td>
</tr>
<tr>
<td>Normal strength beer, lager, stout, cider or shandy (less than 6% alcohol)</td>
<td></td>
</tr>
<tr>
<td>Strong beer, lager, stout or cider (6% alcohol or more, such as Tennants Super, Special Brew, Diamond White)</td>
<td></td>
</tr>
<tr>
<td>Spirits or liqueurs, such as gin, whisky, rum, brandy, vodka, or cocktails</td>
<td></td>
</tr>
<tr>
<td>Sherry or martini (including port, vermouth, cinzano, dubonnet)</td>
<td></td>
</tr>
<tr>
<td>Wine (including babycham and champagne)</td>
<td></td>
</tr>
<tr>
<td>Alcoholic soft drink ('alcopop') or a premixed alcoholic drink such as Bacardi Breezer, WKD or Smirnoff Ice</td>
<td></td>
</tr>
</tbody>
</table>

Other kinds of alcoholic drink

WRITE IN NAME OF DRINK

1. 
2. 

---

**Copyright © 2009, The Health and Social Care Information Centre. All rights reserved**
### General Health Over the Last Few Weeks

Please read this carefully:

We should like to know how your health has been in general over the past few weeks. Please answer **ALL** the questions by ticking the box below the answer which you think most applies to you.

#### Have you recently:

<table>
<thead>
<tr>
<th>Question</th>
<th>Ticks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q29: Been able to concentrate on whatever you’re doing?</td>
<td>Not at all</td>
</tr>
<tr>
<td>Q30: Lost much sleep over worry?</td>
<td>Not at all</td>
</tr>
<tr>
<td>Q31: Felt you were playing a useful part in things?</td>
<td>Not at all</td>
</tr>
<tr>
<td>Q32: Felt capable of making decisions about things?</td>
<td>Not at all</td>
</tr>
<tr>
<td>Q33: Felt constantly under strain?</td>
<td>Not at all</td>
</tr>
<tr>
<td>Q34: Felt you couldn’t overcome your difficulties?</td>
<td>Not at all</td>
</tr>
</tbody>
</table>

#### Have you recently:

<table>
<thead>
<tr>
<th>Question</th>
<th>Ticks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q35: Been able to enjoy your normal day-to-day activities?</td>
<td>More so than usual</td>
</tr>
<tr>
<td>Q36: Been able to face up to your problems?</td>
<td>More so than usual</td>
</tr>
<tr>
<td>Q37: Been feeling unhappy and depressed?</td>
<td>More so than usual</td>
</tr>
<tr>
<td>Q38: Been losing confidence in yourself?</td>
<td>More so than usual</td>
</tr>
<tr>
<td>Q39: Been thinking of yourself as a worthless person?</td>
<td>More so than usual</td>
</tr>
<tr>
<td>Q40: Been feeling reasonably happy, all things considered?</td>
<td>More so than usual</td>
</tr>
</tbody>
</table>

Thank you for answering these questions.

Please give the booklet back to the interviewer.
Now we would like to know how your health is today. Please answer ALL the questions. By ticking one box for each question below, please indicate which statements best describe your own health state today.

Q1 Mobility
Tick one box
- I have no problems in walking about
- I have some problems in walking about
- I am confined to bed

Q2 Self-Care
Tick one box
- I have no problems with self-care
- I have some problems washing or dressing myself
- I am unable to wash or dress myself

Q3 Usual activities
Tick one box
- I have no problems with performing my usual activities (e.g. work, study, housework, family or leisure activities)
- I have some problems with performing my usual activities
- I am unable to perform my usual activities

Q4 Pain/Discomfort
Tick one box
- I have no pain or discomfort
- I have moderate pain or discomfort
- I have extreme pain or discomfort

Q5 Anxiety/Depression
Tick one box
- I am not anxious or depressed
- I am moderately anxious or depressed
- I am extremely anxious or depressed
GENERAL HEALTH OVER THE LAST FEW WEEKS

Please read this carefully:
We should like to know how your health has been in general over the past few weeks. Please answer ALL the questions by ticking the box below the answer which you think most applies to you.

HAVE YOU RECENTLY:

Q6 been able to concentrate on whatever you’re doing?

Q7 lost much sleep over worry?

Q8 felt you were playing a useful part in things?

Q9 felt capable of making decisions about things?

Q10 felt constantly under strain?

Q11 felt you couldn’t overcome your difficulties?

Q12 been able to enjoy your normal day-to-day activities?

Q13 been able to face up to your problems?

Q14 been feeling unhappy and depressed?

Q15 been losing confidence in yourself?

Q16 been thinking of yourself as a worthless person?

Q17 been feeling reasonably happy, all things considered?

Thank you for answering these questions.
Please give the booklet back to the interviewer.
**Strengths and Difficulties Questionnaire**

We’d like you to tell us something about your child’s behaviour over the last 6 months.

For each item, please tick the box for Not true, Somewhat true, or Certainly true to show how true the item is of your child.

(TICK ONE BOX ON EACH LINE)

<table>
<thead>
<tr>
<th></th>
<th>Not True</th>
<th>Somewhat True</th>
<th>Certainly True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Considerate of other people’s feelings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Restless, overactive, cannot stay still for long</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Often complains of headaches, stomach aches or sickness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Shares readily with other children (treats, toys, pencils etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Often has temper tantrums or hot tempers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Rather solitary, tends to play alone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Generally obedient, usually does what adults request</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Many worries, often seems worried</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Helpful if someone is hurt, upset or feeling ill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Generally liked by other children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Easily distracted, concentration wanders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Nervous or clingy in new situations, easily loses confidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Kind to younger children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Often volunteers to help others (parents, teachers, other children)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Has at least one good friend</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Often fights with other children or bullies them</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Often unhappy, downhearted or tearful</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>Often volunteers to help others (parents, teachers, other children)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Often lies or cheats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td>Picked on or bullied by other children</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Health Survey for England 2008**

**Booklet for parents of 4-15 year olds**

In Confidence

How to fill in this questionnaire

The questions in this booklet are answered by putting a tick in the box below the answer that applies to you.

Example:

<table>
<thead>
<tr>
<th>Very healthy life</th>
<th>Fairly healthy life</th>
<th>Not very healthy life</th>
<th>An unhealthy life</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Do you feel that you lead a ...
(TICK ONE BOX ON EACH LINE)

<table>
<thead>
<tr>
<th></th>
<th>Not True</th>
<th>Somewhat true</th>
<th>Certainly true</th>
</tr>
</thead>
<tbody>
<tr>
<td>21.</td>
<td>Thinks things out before acting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>Steals from home, school or elsewhere</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>Gets on better with adults than with other children</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24.</td>
<td>Many fears, easily scared</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>Sees tasks through to the end, good attention span</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

26. Have you ever consulted any of the following people or organisations about any behavioural or developmental problem your child may have had?

CIRCLE ALL THAT APPLY

- General Practitioner (GP) 01
- Health Visitor 02
- Nurse at GP surgery or health centre 03
- Community, School or District nurse 04
- Consultant/Specialist or other doctor at hospital outpatients 05
- Social Worker 06
- Psychologist 07
- Teacher 08
- Other person or organisation (please write in who) 09
- None of these 10

Thank you for answering these questions.
Please give the booklet back to the interviewer.
Eating Habits

Please read this carefully

We would now like to ask you about some foods which you may eat. Please answer ALL the questions by ticking the box which you think most applies to you.

1. What kind of milk do you usually use for drinks, in tea or coffee and on cereals? Is it ...
   - Whole milk
   - Semi-skimmed milk, including dried semi-skimmed
   - Skimmed milk, including dried skimmed
   - Do not have a usual type
   - Do not drink milk
   Details of non-dairy milk substitutes:

2. About how much milk do you yourself use each day, on average (for drinks, in tea and coffee, on cereals etc.). Is it ...
   - Less than a quarter of a pint
   - About a quarter of a pint
   - About half a pint
   - One pint or more

3. How often, on average, do you eat a serving of any type of cheese, except cottage cheese?
   - 6 or more times a week
   - 3 to 5 times a week
   - 1 to 2 times a week
   - Less than once a week
   - Rarely or never

4. How often, on average, do you eat a serving of chicken or turkey?
   - 6 or more times a week
   - 3 to 5 times a week
   - 1 to 2 times a week
   - Less than once a week
   - Rarely or never

INCLUDE: processed chicken or turkey, chicken roll, chicken nuggets, turkey burgers
5. How often, on average, do you eat a serving of beef, pork or lamb?

INCLUDE: burgers, sausages, bacon, cold meats, ham, canned beef, luncheon meat, spam, meat pies, meat curries, casseroles.

6. How often, on average, do you eat a serving of any fried food?

INCLUDE: Fried fish or chicken, chips (including oven chips), cooked breakfast, accompaniments.

7. Apart from fried fish, how often, on average, do you eat a serving of fish?

INCLUDE: Prawns, tinned fish such as tuna.

8. How often, on average, do you eat sweet or savoury snacks such as chocolates, crisps, nuts or biscuits?

INCLUDE: savoury biscuits such as cream crackers.

9. How often, on average, do you eat a serving of cakes, pies, puddings or pastries?

10. About how many rounded teaspoons of butter, margarine or other spread do you usually use in a day, for example on bread, sandwiches, toast, potatoes or vegetables?

a. Butter or margarine (eg. Anchor, Lurpak, Stork, I can’t believe it’s not butter, Clover)

WRITE IN
No. of teaspoons per day

b. Low fat or reduced spreads, half fat butter (eg. Flora, Gold, Bertolli, Pure dairy free spread with Soya, Sunflower spreads, etc.)

c. If you do not use any of these on a normal day, please tick (✓) here

11. What sort of fat or oil do you usually use for cooking or frying food?

Tick ONE box

- Butter, ghee, lard, suet, solid cooking fat
- Hard or soft margarine, half fat butter
- Vegetable oil, e.g. Sunflower, olive, rape seed, mustard, peanut, corn
- Do not use oil or fat in cooking

Thank you for answering these questions.

Please give the booklet back to the nurse.
Thank you for the information that you have provided about your health.

With your permission, we would like to find out more about your health and treatment from NHS records.

The Hospital Episode Statistics register collects information on in-patient care delivered by NHS hospitals in England since 1989, such as the length of stay, reason for visit, nature of illness, type of operation, maternity care and waiting time.

We would like to ask for your consent for us to link information about your health and treatment from this database.

This information will be confidential and used for research purposes only.

Names and addresses will never be included in these results and no individual can be identified from the research.

You can cancel this permission at any time in the future by writing to us at the following address:

- National Centre for Social Research, 35 Northampton Square, London EC1V 0AX,
- Dr. Jennifer Mindell, Department of Epidemiology and Public Health, UCL, 1-19 Torrington Place, London WC1E 6BT.

Your consents

I, (name) _____________________________

I authorise the Department of Health to disclose to the National Centre for Social Research a link to information about my health and treatment held on the Hospital Episode Statistics database.

I understand that the information obtained will be limited to the purposes of this study and will cover dates of admission to and discharge from hospital, diagnoses received and treatments given.

The link to this information can only be used by researchers who have gained ethical approval for analysing this database.

This consent will remain valid until revoked by me in writing.

Signed _____________________________ Date ___________________________
HEALTH SURVEY FOR ENGLAND 2008

NHS Central Register and Cancer Register
(Adults 16+)

- The NHS Central Register lists all the people in the country and their National Health Service (NHS) number.
- We would like to ask for your consent for us to send your name, address and date of birth to the National Health Service Central Register. A marker will be put against your name to show that you took part in the Health Survey.
- If a person who took part in the Health Survey gets cancer, or dies, the type of cancer or cause of death will be linked with their answers to the survey. By linking this information the research is more useful as we can look at how people’s lifestyle can have an impact on their future health.
- This information will be confidential and used for research purposes only.
- By signing this form you are only giving permission for the linking of this information to routine administrative data and nothing else. We will not be able to obtain any other details from your medical records.
- You can cancel this permission at any time in the future by writing to us at the following address:
  - National Centre for Social Research, 35 Northampton Square, London EC1V 0AX, or
  - Dr. Jennifer Mindell, Department of Epidemiology and Public Health, UCL, 1-19 Torrington Place, London WC1E 6BT.

Your consent

I, (name) _____________________________ consent to the National Centre for Social Research/UCL Joint Health Surveys Unit passing my name, address and date of birth to the National Health Service Central Register.
I understand that information held by the NHS Central Register may be used to follow up my health status.

Signed _____________________________ Date _____________________________

I understand that these details will be used for research purposes only.
**Household grid**

Person & Qc are usually transmitted directly from the interview data to the nurse CAPI program. There is also a facility for nurses to key this information directly from the Nurse Record Form, for example if the nurse visit follows too quickly from the interview to allow the automatic transmission to take place.

**Person**

- Person number of person who was interviewed
  - Range 01..12

- Name
  - Name of person who was interviewed

- Sex
  - Sex of person who was interviewed
    - 1: Male
    - 2: Female

- Age
  - Age of person who was interviewed
  - Range 0..120

- Qc
  - Interview outcome of person who was interviewed
    - 1: Agreed Nurse Visit
    - 2: Refused Nurse Visit
    - 3: No outcome yet

**IF** Age <= 15 **THEN**

- P1
  - Person number of child's Parent 1.
  - Range: 1..12

- NatPs1
  - Parent type of Parent 1.
    - 1: Parent
    - 2: Legal parental responsibility

**P2**

- Person number of child's Parent 2
  - (code 97=no Parent 2 in household)
  - Range: 0..97

**IF** P2 IN [1..12] **THEN**

- NatPs2
  - Parent type of Parent 2.
    - 1: Parent
    - 2: Legal parental responsibility

ENDIF

**ENDIF**

**AdrField**

Please enter the first ten characters of the first line of the address taken from N.R.F. address label.

Make sure to type it exactly as it is printed:

- Text: Maximum 10 characters
Introduction

IF OC = 1 THEN

INFO

You are in the Nurse Schedule for:
Person Number:
Name:
Age:
Sex:
Actigraph to collect
Actigraph serial number
Actigraph start date
Can you interview this person?
1 Yes, I will do the interview now
2 No, I will not be able to do this interview

ELSEIF OC = 2 OR 3 THEN

REFINFO

NURSE: (Name of respondent) IS RECORDED AS HAVING REFUSED A NURSE VISIT.

HAS (he/she) CHANGED (his/her) MIND?
NURSE: THERE IS NO INFORMATION YET FROM THE INTERVIEWER WHETHER (Name of respondent) HAS AGREED TO A NURSE VISIT. IF YOU ARE SURE THAT (he/she) HAS COMPLETED AN INTERVIEW AND HAS AGREED TO SEE YOU, CODE 1 FOR "Yes" HERE. ELSE CODE 2 FOR "No"
1 Yes, (now/this person) agrees nurse visit
2 No, (still refuses/this person will not have a) nurse visit

ENDIF

ALL WITH A NURSE VISIT (INFO = Yes OR REFINFO = Yes, agrees nurse visit)

NURSE ENTER THE DATE OF THIS INTERVIEW.

NDoB

Can I just check your date of birth?
ENTER RESPONDENT'S DATE OF BIRTH, ENTER DAY OF MONTH IN NUMBERS, NAME OF MONTH IN WORDS (FIRST THREE LETTERS), YEAR IN NUMBERS, EG 2Jan72

ConfAge

Derived: Age of respondent based on Nurse entered date of birth and date at time of household interview.
Range: 0..120

DispAge

CHECK WITH RESPONDENT: So your age is (computed age)?
1 Yes
2 No

IF Age of Respondent is 0 to 15 years THEN

CParInt

NURSE A child can be interviewed only with the permission of, and in the presence of, their parent or person who has (permanent) legal parental responsibility ("parent"). No measurements should be carried out without the agreement of both parent and the child.
Actigraph Collection Block

If Sample type = Core Actigraph AND IActColl = Nurse collection AND (Age is 16+ OR 4-15) THEN

NIntro
INTERVIEWER: Now follows the actigraph collection.
Press <1> and <Enter> to continue.

NSTime
Time at start of the collection block.

NSDate
Date checked and collected actigraph.

NAGIntro
Thank you for taking part in this stage of the study. During this visit, I would like to collect the actigraph and ask you about (your/his/her) experiences of wearing it.
Press <1> and <enter> to continue.

NAGIntro
Thank you for taking part in this stage of the study. During this visit, I would like to collect the actigraph and ask you about (your/his/her) experiences of wearing it.
Press <1> and <enter> to continue.

NWear
Firstly, can I check, did (you/he/she) wear it for all seven days?
1 Actigraph worn for 7 days
2 Actigraph worn for 5 or 6 days
3 Actigraph worn for 3 or 4 days
4 Actigraph worn for 2 days or less
IF NWear = 2, 3, 4
NNoWear
Why were (you/he/she) unable to wear the actigraph for all 7 days?
1 Actigraph lost/stolen
2 Actigraph broken
3 Respondent ill
4 Respondent forgot
5 Other
IF NNoWear = Other
Noth
NURSE: Record why respondent did not wear the actigraph for all 7 days.
ENDIF
ENDIF

NUseLog
NURSE: Collect the ‘Activity Booklet’.
The Health Survey for England 2008 - Nurse Schedule

Actigraph collection

1. Log collected and completed in full
2. Log collected and partially completed
3. Log collected, not completed
4. Log not collected - lost

IF NUseLog = (codes 1 - 3)
   NAGSDate
   NURSE: Record from the activity log (front page) the START date of wearing the actigraph.
   NAGEDate
   NURSE: Record from the activity log (front page) the END date of wearing the actigraph.
   NAGNum
   INTERVIEWER: Record from the activity log how many days the actigraph was worn. : 0..7
ENDIF

NCollect
NURSE: Did you collect the actigraph?
   1. Yes
   2. No

IF NCollect = No THEN
   NYnoACT
   NURSE: Why did you not collect the actigraph?
   1. Actigraph lost/stolen
   2. Other

IF NYNOACT = Other
   NNOoth
   NURSE: Record why you didn’t collect the actigraph.
ENDIF

IF NCollect = Yes THEN
   NAGDesp
   NURSE: Prepare the despatch note for the respondent.
   Wrap the despatch note around the actigraph and send back to Brentwood (one actigraph per jiffy bag).
   Serial number:
   Date of birth:
   Actigraph serial number: (ActNo)
   IF Wear = 1 - 3 OR NoWear = code 2 OR (NoWear = code 1 AND Wear = codes 1-3) THEN
      NVoucher
      As a token of our appreciation for taking part in this stage of the study, a £20 high street voucher will be sent to you shortly.
      NURSE: Complete and leave behind the actigraph promissory note for the incentive voucher. Remember to write in the serial number on the promissory note.
      Press <1> and <enter> to continue.
ENDIF

Thank you for taking part in this stage of the study.
NURSE: for your information this respondent is not eligible for a voucher.

ENDIF

NColEnd1
NURSE: The actigraph collection for (respondents name) has now been completed.

IF schedule type = actigraph only THEN
   NColEnd2
   To complete the admin block press <Ctrl and Enter>.
ENDIF
The Health Survey for England 2008 - Nurse Schedule  Immunisations and Infant Length

**Immunisations and Infant Length**

**IF CHILD AGED UNDER 2 YEARS BUT OVER 6 WEEKS:**

1. **Lgth.Mod**
   Nurse: Now follows the Infant Length Module. Please press <1> and <Enter> to continue. Continue

2. **Lgth.Int**
   (As I mentioned earlier,) I would like to measure (child's name)'s length. If asked: This gives us information about your child's growth.
   1. Length measurement agreed
   2. Length measurement refused
   3. Unable to measure length for other reason

3. **If LgthInt=Agree THEN**
   Nurse: Measure infant's length and record in centimetres. If measurement not obtained, enter '999.9'.
   Range: 40.0 - 999.9

4. **If Length <> 999.9 THEN**
   Nurse: Is this measurement reliable?
   1. Yes
   2. No

5. **ELSE (IF Length = 999.9)**
   Nurse: Give reason for not obtaining a length measurement.
   1. Measurement refused
   2. Attempted, not obtained
   3. Measurement not attempted

6. **ENDIF**

7. **ENDIF**

8. **If (YNoLgh IN [Refuse, NoTry]) OR (LgthInt IN [Refuse, Unable]) THEN**
   Nurse: Give reason for refusal/not obtaining the measurement/not attempting the measurement
   1. Child asleep
   2. Child too frightened or upset
   3. Child too shy
   4. Child would not lie still
   95. Other reason(s)
## Prescribed medicines, drug coding and folic acid

**ALL WITH A NURSE VISIT**

### MedCNJD

Are you taking or using any medicines, pills, syrups, ointments, puffers or injections prescribed for you by a doctor? **NURSE**: If statins have been prescribed by a doctor, please code them here. If they are bought without a prescription, code at the statins question.

1. Yes
2. No

**IF MedCNJD = Yes THEN**

### MedIntro

Could I take down the names of the medicines, including pills, syrups, ointments, puffers or injections, prescribed for you by a doctor? **NURSE**: Including the contraceptive pill.

1. Continue

**Collect details of up to 22 prescribed medicines**

FOR $i := 1$ TO 22 DO

**IF ($i = 1$) OR (MedBIC[$i-1$] = Yes) THEN**

### MedBI

**NURSE**: ENTER NAME OF DRUG NO. (1, 2, 3.. etc.). ASK IF YOU CAN SEE THE CONTAINERS FOR ALL PRESCRIBED MEDICINES CURRENTLY BEING TAKEN. IF ASPIRIN, RECORD DOSAGE AS WELL AS NAME.

Text: Maximum 30 characters

**MedBIA**

Have you taken/used (name of medicine) in the last 7 days?

1. Yes
2. No

**IF MedBIA = Yes THEN**

**MedBIC**

**NURSE CHECK**: Any more drugs to enter?

1. Yes
2. No

**ENDDO**

**IF age>=16 AND MedCNJD = No OR MedBic = 2 THEN**

### Statins

Are you taking statins (drugs to lower cholesterol) bought over the counter from a pharmacist, without the prescription of a doctor? **NURSE**: Here are some examples of common statins, which may be bought over the counter:

- Atorvastatin (Lipitor)
- Fluvastatin (Lescol, Lescol XL)
- Pravastatin (Lipostat)
- Rosuvastatin (Crestor) and Simvastatin (Zocor)

1. Yes
2. No

---

### Immunisations and Infant Length

**ImOth**

SHOW CARD A, AGAIN. Has (child’s name) had any immunisations not listed on this card? (These may also be written in the Red Book).

**INCLUDE IMMUNISATIONS RECEIVED ABROAD, BUT EXCLUDE IMMUNISATIONS JUST FOR TRAVEL OR HOLIDAYS.**

1. Yes
2. No

**IF ImOth = Yes THEN**

### ImOthWh

**Which ones?**

**NURSE**: TYPE IN NAME OF ANY OTHER IMMUNISATIONS. WHERE POSSIBLE COPY DIRECTLY FROM RED BOOK.

Text (maximum 100 characters)

**ENDIF**

**IF (ImAny = Yes) OR (ImOth = Yes) THEN**

### ImRedB

**NURSE CODE**: Did parent consult health record (red book) for information or immunisations?

**IF YES: Was the information in the health record?**

1. Consulted and information available
2. Consulted but information not available
3. Did not consult health record

**ENDIF**

**ENDIF**

---
The Health Survey for England 2008 - Nurse Schedule

Prescribed medicines

IF Statins = Yes THEN
  StatinA
  Have you taken/used any statins in the last 7 days?
  1 Yes
  2 No
ENDIF

IF Age=16-74 THEN
  Beta
  Are you currently taking Beta-Blockers or Digoxins, such as Lanoxin, to treat a heart flutter?
NURSE: Use your look up card for a list of common beta blockers. Beta blockers can be taken for a variety of reasons including high blood pressure, migraines, anxiety and hypothyroidism.
  1 Yes
  2 No
ENDIF

IF MedicCNJ = Yes THEN
  DrugCod1
  NURSE: To do the drug coding now; press <Ctrl + Enter>, select DrugCode[schedule no] with the highlight bar and press <Enter>.
  Else, enter '1' to continue.
  1 Continue
ENDIF

Drug coding block

Drintro
  NURSE: PLEASE COMPLETE DRUG CODING FOR
  Person (person no.) (person name).
  PRESS 1 AND <Enter> TO CONTINUE.
  1 Continue

Repeat for up to 22 drugs coded

FOR j:= 1 TO (Number of drugs recorded) DO
  DrC1
  NURSE: ENTER CODE FOR (name of drug) ENTER 999999 IF UNABLE TO CODE
  Text: Maximum 6 characters
  IF (Age of Respondent is over 15 years) AND (Drug code begins 02) THEN
    YTake1
    Do you take (name of drug) because of a heart problem, high blood pressure or for some other reason?
    1 Heart problem
    2 High blood pressure
    3 Other reason
ENDIF

IF YTake1 = Other THEN
  TakeOth1
  NURSE: GIVE FULL DETAILS OF REASON(S) FOR TAKING (name of drug):
  Text: Maximum 255 characters
ENDIF

The Health Survey for England 2008 - Nurse Schedule

Prescribed medicines

IF YTake1 = Other THEN
  TakeOth1
  NURSE: GIVE FULL DETAILS OF REASON(S) FOR TAKING (name of drug):
  Text: Maximum 255 characters
ENDIF

IF Age=16-74 THEN
  Beta
  Are you currently taking Beta-Blockers or Digoxins, such as Lanoxin, to treat a heart flutter?
NURSE: Use your look up card for a list of common beta blockers. Beta blockers can be taken for a variety of reasons including high blood pressure, migraines, anxiety and hypothyroidism.
  1 Yes
  2 No
ENDIF

IF Sex=Female and Age=18-49 THEN
  Folic
  At present, are you taking any folic acid supplements such as Solgar folic acid, Pregnacare tablets, Sanatogen Pronatal, or Healthy Start, to supplement your diet or improve your health?
  1 Yes
  2 No
ENDIF

IF PreNTJ = Yes AND Folic = Yes
  FolPreg
  Did you start taking folic acid supplements before becoming pregnant?
  1 Yes
  2 No
ENDIF

IF PreNTJ = No AND Folic = Yes
  FolPregHR
  People can take folic acid for various health reasons. Are you taking folic acid supplements because you hope to become pregnant?
  1 Yes
  2 No
ENDIF

IF FolPreg = Yes
  FolPreg12
  Have you been taking folic acid supplements for the first 12 weeks of your pregnancy?
  1 Yes
  2 No
ENDIF

Copyright © 2009, The Health and Social Care Information Centre. All rights reserved
The Health Survey for England 2008 - Nurse Schedule

Nicotine replacements

**Nicotine replacement therapy**

ASK IF RESPONDENT AGED 16 AND OVER

**Smoke**
Can I ask, do you smoke cigarettes, cigars or a pipe at all these days?
CODE ALL THAT APPLY.
IF RESPONDENT USED TO SMOKE BUT DOES NOT ANY MORE, CODE 'NO'.
1 Yes, cigarettes
2 Yes, cigars
3 Yes, pipe
4 No

IF (Smoke = Yes, cigarettes) OR (Smoke = Yes, cigars) OR (Smoke = Yes, pipe) THEN

**LastSmok**
How long is it since you last smoked a cigarette, (and/or a) cigar, (and/or a) pipe?
1 Within the last 30 minutes
2 Within the last 31-60 minutes
3 Over an hour ago, but within the last 2 hours
4 Over two hours ago, but within the last 24 hours
5 More than 24 hours ago

ENDIF

**UseNic**
We are also interested in whether people use any of the nicotine replacement products that are now available, such as nicotine chewing gum, patches or inhalers. Have you used any of these types of products in the last seven days?
NURSE: PLEASE NOTE THIS DOES NOT INCLUDE THE NEW MEDICATION PRESCRIBED TO AID SMOKING CESSATION.
1 Yes
2 No

IF UseNic=Yes THEN

**UseGum**
First, in the last seven days have you used a nicotine chewing gum?
1 Yes
2 No

IF UseGum=Yes THEN

**GumMG**
What strength is the nicotine chewing gum you are using - is it 2mg or 4mg?
CODE ONE ONLY. IF BOTH - WHICH MOST RECENTLY? IF CAN'T SAY - ASK TO SEE PACKET
1 2mg
2 4mg
3 Can't say (and no packet available)

ENDIF

**UsePat**
In the last seven days have you used nicotine patches that you stick on your skin?
1 Yes
2 No

IF UsePat=Yes THEN

**NicPats**
Can you tell me which brand and strength of nicotine patches you use?
CODE ONE ONLY. DO NOT PROMPT.
IF MORE THAN ONE TYPE - WHICH MOST RECENTLY? IF NOT SURE - ASK TO SEE PACKET
1 Nicorette: 5mg
2 Nicorette: 10mg
3 Nicorette: 15mg
4 Nicotinell TTS: 10 (7mg)
5 Nicotinell TTS: 20 (14mg)
6 Nicotinell TTS: 30 (21mg)
7 Niquitin: 7mg
8 Niquitin: 14mg
9 Niquitin: 21mg
95 Other (SPECIFY AT NEXT QUESTION)
96 Can't say (and no packet available)

IF NicPats=Other THEN

**OthNic**
STATE NAME AND STRENGTH OF NICOTINE PATCHES
Text: Maximum 140 characters

ENDIF

**UseNas**
In the last seven days, have you used nicotine nasal spray or a nicotine inhaler?
1 Yes
2 No

ENDIF
IF Age of Respondent is 13 years or over THEN
ConSubX
May I just check, have you eaten, smoked, drunk alcohol or done any vigorous exercise in the past 30 minutes?
CODE ALL THAT APPLY.
1 Eaten
2 Smoked
3 Drunk alcohol
4 Done vigorous exercise
5 (None of these)
ELSEIF (Age of Respondent is 5 to 12 years AND BPConst = Yes, agrees) THEN
ConSubX2
May I just check, has [name of child] eaten, or done any vigorous exercise, in the past 30 minutes?
CODE ALL THAT APPLY.
1 Eaten
2 Done vigorous exercise
3 Neither
ENDIF
OMRONNo
RECORD BLOOD PRESSURE EQUIPMENT SERIAL NUMBER:
Range: 001..999
CufSize
SELECT CUFF AND ATTACH TO THE RESPONDENT’S RIGHT ARM.
ASK RESPONDENT TO SIT STILL FOR FIVE MINUTES.
RECORD CUFF SIZE CHOSEN.
1 Child (15 - 22 cm)
2 Adult (22 - 32 cm)
3 Large adult (32 - 42 cm)
AirTemp
RECORD THE AMBIENT AIR TEMPERATURE IN CENTIGRADES TO ONE DECIMAL PLACE.
Range: 00.0..40.0
BPReady
NURSE: ONCE RESPONDENT HAS SAT STILL FOR 5 MINUTES YOU ARE READY TO TAKE THE MEASUREMENTS.
ENSURE THE READY TO MEASURE SYMBOL IS LIT BEFORE PRESSING THE START BUTTON TO THE START MEASUREMENTS.
1 Continue
Map to Dias repeated for up to 3 blood pressure measurements.
FOR I:= 1 TO 3 DO
Map[i]
TAKE THREE MEASUREMENTS FROM RIGHT ARM. ENTER (FIRST/SECOND/THIRD) MAP READING (mmHg).
The Health Survey for England 2008 - Nurse Schedule

Blood pressure

IF READING NOT OBTAINED, ENTER 999.
IF YOU ARE NOT GOING TO GET ANY BP READINGS AT ALL ENTER "996".
Range: 001..999

Pulse[i]
ENTER (FIRST/SECOND/THIRD) PULSE READING (bpm).
IF READING NOT OBTAINED, ENTER 999.
Range: 001..999

Sys[i]
ENTER (FIRST/SECOND/THIRD) SYSTOLIC READING (mmHg).
IF READING NOT OBTAINED, ENTER 999.
Range: 001..999

Dia[i]
ENTER (FIRST/SECOND/THIRD) DIASTOLIC READING (mmHg).
IF READING NOT OBTAINED, ENTER 999.
Range: 001..999

IF NO FULL MEASUREMENT OBTAINED THEN:

YNoBP
ENTER REASON FOR NOT RECORDING ANY FULL BP READINGS
1 Blood pressure measurement attempted but not obtained
2 Blood pressure measurement not attempted
3 Blood pressure measurement refused

ENDIF

IF BLOOD PRESSURE MEASUREMENT REFUSED OR NOT ATTEMPTED, OR FEWER THAN THREE FULL READINGS OBTAINED THEN:

NAttBP
RECORD WHY (ONLY TWO READINGS OBTAINED/ONLY ONE READING OBTAINED/READING NOT OBTAINED/READING NOT ATTEMPTED/READING REFUSED/UNABLE TO TAKE READING). CODE ALL THAT APPLY.
0 Problems with PC
1 Respondent upset/anxious/nervous
2 Error reading
3 (IF AGED UNDER 16: Too shy)
4 (IF AGED UNDER 16: Child would not sit still long enough)
5 Problems with cuff fitting/painful
6 Problems with equipment (not error reading)
95 Other reason(s) (SPECIFY AT NEXT QUESTION)

ENDIF

IF ONE, TWO OR THREE FULL BLOOD PRESSURE READINGS OBTAINED THEN:

DifBPC
RECORD ANY PROBLEMS TAKING READINGS. CODE ALL THAT APPLY.

1 No problems taking blood pressure
2 Reading taken on left arm because right arm not suitable
3 Respondent was upset/anxious/nervous
4 Problems with cuff fitting/painful
5 Problems with equipment (not error reading)
6 Error reading
95 Other problems (SPECIFY AT NEXT QUESTION)

ENDIF

The Health Survey for England 2008 - Nurse Schedule

Blood pressure

1 Yes
2 No

IF GPreBP = Yes THEN

GPsEnd
May we send your blood pressure readings to your GP?
1 Yes
2 No

IF GPsEnd = No THEN

GPreRefC
SPECIFY REASON(S) FOR REFUSAL TO ALLOW BP READINGS TO BE SENT TO GP.
1 Hardly/Never sees GP
2 GP knows respondent’s BP level
3 Does not want to bother GP
95 Other (SPECIFY AT NEXT QUESTION)

IF GPreRefC = Other THEN

OthGPreRefC
NURSE GIVE FULL DETAILS OF REASON(S) FOR REFUSAL.
Text: Maximum 140 characters

ENDIF

ENDIF

IF (GPreBP <> Yes) OR (GPsEnd = No) THEN

Code022
CIRCLE CONSENT CODE 02 ON FRONT OF CONSENT BOOKLET.
1 Continue
The Health Survey for England 2008 - Nurse Schedule

Blood pressure

ELSEIF GPsEnd = Yes THEN
ConsFrm1
ASK THE RESPONDENT TO READ AND COMPLETE THE ‘BLOOD PRESSURE TO GP’ SECTION OF THE CONSENT BOOKLET.
CHECK GP NAME, ADDRESS AND PHONE NO. ARE RECORDED ON CONSENT
FORM.
CHECK NAME BY WHICH GP KNOWS RESPONDENT.
CIRCLE CONSENT CODE01 ON FRONT OF CONSENT BOOKLET.
1 Continue
ENDIF

BPOffer
OFFER BLOOD PRESSURE RESULTS TO RESPONDENT.

Pulse
Systolic
Diastolic

i) (First Pulse reading) (First Systolic reading) (First Diastolic reading)

ii) (Second Pulse reading) (Second Systolic reading) (Second Diastolic reading)

iii) (Third Pulse reading) (Third Systolic reading) (Third Diastolic reading)

ENTER ON THEIR MEASUREMENT RECORD CARD (COMPLETE NEW RECORD
CARD IF REQUIRED).

ADVICE TO RESPONDENTS ON BLOOD PRESSURE READING

IF Systolic reading >179 OR Diastolic reading >114 THEN
TICK THE CONSIDERABLY RAISED BOX AND READ OUT TO RESPONDENT: Your blood pressure is high today. Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure. You are strongly advised to visit your GP within 5 days to have a further blood pressure reading to see whether this is a once-off finding or not.
NURSE: IF RESPONDENT IS ELDERLY, ADVISE HIM/HER TO CONTACT GP WITHIN NEXT 7-10 DAYS.

IF Systolic reading 160-179 OR Diastolic reading 100-114 (Men aged 16-49 OR Women aged 16+) OR IF Systolic reading 170-179 OR Diastolic reading 105-114 (Men aged 50+) THEN
TICK THE MODERATELY RAISED BOX AND READ OUT TO RESPONDENT: Your blood pressure is a bit high today. Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure. You are advised to visit your GP within 2 weeks to have a further blood pressure reading to see whether this is a once-off finding or not.

IF Systolic reading 140-159 OR Diastolic reading 85-99 (Men aged 16-49 OR Women aged 16+) OR IF Systolic reading 160-169 OR Diastolic reading 96-104 (Men aged 50+) THEN
TICK THE MILDLY RAISED BOX AND READ OUT TO RESPONDENT: Your blood pressure is a bit high today. Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure. You are advised to visit your GP within 2 months to have a further blood pressure reading to see whether this is a once-off finding or not.

ENDIF
ENDIF
ENDIF
ENDIF
The Health Survey for England 2008 - Nurse Schedule

Step test exclusion module

IF (AGE=16-74) AND (PREGNT=No) AND (Average systolic BP<=160mmHg AND average diastolic BP<=100mmHg) AND (Beta=No).

ExIntro
The next part of my visit is a fitness exercise called the step test. Before I administer the step test I need to ask you a few questions to make sure it is safe for you to do the test. Press 1 and enter.

IF AGE>=65 THEN

ExFalls
Have you fallen down in the past 12 months (excluding sports-related falls)?
NURSE: Include falls where injury has resulted in seeking medical treatment.

1 Yes
2 No

IF ExFalls=No OR (Sex=Female AND Age is 16 to 64) OR (Sex=Male AND Age is 16 to 64) THEN

ExDizzy
Do you have any problems with your balance?
Nurse: If asked, conditions that affect balance such as vertigo or Meniere’s Disease should be included here.

1 Yes
2 No

IF ExFalls=Yes or ExDizzy= Yes THEN

NoElig1
NURSE: this person is not eligible to take the step test. Explain that it would be safest if you didn't administer this test. Circle code 06 on the front of the consent booklet. Press 1 and enter to continue.

ENDIF

ENDIF

IF ExDizzy=No THEN

ExHeart
SHOWCARD B
Can you tell me if you have EVER had any of the things listed on this card?
Please look down the whole list
NURSE: PRESS F9 for a list of ‘lay’ terms for some of the items on this card
Heart Attack
Heart Valve Disease
Atrial Fibrillation (Heart Flutter)
Abnormal Heart Rhythm
Heart Transplant
Congenital Heart Disease
Transient Ischaemic attack (mini stroke)
Stroke
Angina
Intermittent Claudication

F9 guide for nurses:

Abnormal Heart Rhythm
Prolapses (heart arrhythmia)
Pulitations
Tachycardia
Bradycardia (heart block)
Slow Heart
Heart Fibrillation
Flutter

Intermittent Claudication

is muscle pain on exercise which is relieved by rest.

IF ExHeart=Yes THEN

WhExHeart
Which ones?
PROBE: What others? CODE ALL THAT APPLY
1 Heart Attack
2 Heart Valve Disease
3 Atrial Fibrillation (Heart Flutter)
4 Abnormal Heart Rhythm
5 Heart Transplant
6 Congenital Heart Disease
7 Transient Ischaemic attack (mini stroke)
8 Stroke
9 Angina
10 Intermittent Claudication

ENDIF

IF WhExHeart = 1,4,10 THEN

NoElig2
NURSE: this person is not eligible to take the step test. Explain that it would be safest if you didn’t administer this test. Circle code 06 on the front of the consent booklet. Press 1 and enter to continue.

ENDIF

IF WhExHeart = 7 THEN

ExDia
Have you had an attack in the last year, that is since <date one year ago>

1 Yes
2 No

IF ExDia = Yes THEN

NoElig3
NURSE: this person is not eligible to take the step test. Explain that it would be safest if you didn’t administer this test. Circle code 06 on the front of the consent booklet. Press 1 and enter to continue.

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF

ENDIF
The Health Survey for England 2008 - Nurse Schedule

Step test exclusion

IF ExTia=No THEN
ExAsprin
Do you currently take aspirin for your TIA?
  1 Yes
  2 No
ENDIF

IF ExAsprin = No THEN
NoElig4
NURSE: this person is not eligible to take the step test. Explain that it would be safest if you didn’t administer this test. Circle code 06 on the front of the consent booklet. Press 1 and enter to continue.
ENDIF

IF ExHeart=No OR ExAsprin=Yes THEN
ExSurg
Can I check, have you ever had heart surgery?
NURSE: PROBE to include things like cardiac catheterisation, coronary angioplasty or a pacemaker fitted?
  1 Yes
  2 No
ENDIF

IF ExSurg = Yes THEN
NoElig5
NURSE: this person is not eligible to take the step test. Explain that it would be safest if you didn’t administer this test. Circle code 06 on the front of the consent booklet. Press 1 and enter to continue.
ENDIF

IF ExSurg=No THEN
ExMeds
NURSE CHECk: Has this person already told you that they are currently taking Beta Blockers or Digoxins, such as Lanoxin, to treat a heart flutter?
NURSE: Beta blockers can be taken for a variety of reasons including high blood pressure, migraines, anxiety and hypothyroidism.
  1 Yes
  2 No
ENDIF

IF ExMeds= Yes THEN
NoElig6
NURSE: this person is not eligible to take the step test. Explain that it would be safest if you didn’t administer this test. Circle code 06 on the front of the consent booklet. Press 1 and enter to continue.
ENDIF

IF ExMed=No THEN
ExCOPD
Has a doctor told you that you have long term damage to your lungs?
This can include conditions like Chronic Bronchitis, Emphysema or any other Chronic Obstructive Pulmonary Disease?
  1 Yes
  2 No
ENDIF

IF ExCOPD=No THEN
ExMusc
Do you have any problems with joints, muscles or bones that might prevent you from stepping up and down repeatedly?
Nurse: include rheumatism, arthritis, tear or injuries to ligaments, knee problems etc
  1 Yes
  2 No
ENDIF

IF ExCOPD = Yes OR ExMusc=Yes THEN
NoElig7
NURSE: this person is not eligible to take the step test. Explain that it would be safest if you didn’t administer this test. Circle code 06 on the front of the consent booklet.
Press 1 and enter to continue.
ENDIF

ENDIF

IF ExMusc=No THEN
ExAbs
In the past three months, that is since <date three month ago>, have you had abdominal surgery?
  1 Yes
  2 No
ENDIF

IF ExAbs = Yes THEN
NoElig8
NURSE: this person is not eligible to take the step test. Explain that it would be safest if you didn’t administer this test. Circle code 06 on the front of the consent booklet.
Press 1 and enter to continue.
ENDIF

IF ExAbs=No THEN
ExAsthma
Do you have asthma?
  1 Yes
  2 No
ENDIF

IF ExAsthma=Yes THEN
ExAstMed

The Health Survey for England 2008 - Nurse Schedule

Step test exclusion

Nurse: people with asthma are eligible for the step test, if they are willing to take part. During or before the test, they should use the medication they would normally take when doing or about to do physically active things. Please advise the respondent about this.

Continue

ENDIF

ASK IF HAVE NOT BEEN SCREENED OUT TO THIS POINT

ExChesP

I am now going to ask you some questions mainly about symptoms of the chest. Have you ever had any pain or discomfort in your chest?

1. Yes
2. No

IF ExChesP = Yes THEN

ExUphill

Do you get it when you walk uphill or hurry?

1. Yes
2. No
3. Sometimes / occasionally
4. Never walks uphill or hurries
5. (Cannot walk)

IF ExUphill = Sometimes / occasionally THEN

ExOccas1

Does this happen on most occasions?

1. Yes
2. No

IF (ExUphill = Yes) OR (ExOccas1 = Yes) THEN

ExUphill

What do you do if you get it while you are walking? Do you stop, slow down or carry on?

NURSE: IF RESPONDENT UNSURE, PROBE: What do you do on most occasions?

1. Stop
2. Slow down
3. Carry on

IF ExWalkdo = Stop or Slow down THEN

ExStopWlk

If you stand still does the pain go away or not?

NURSE: IF RESPONDENT UNSURE, PROBE: What happens to the pain on most occasions?

1. Pain goes away
2. Pain doesn’t go away

ENDIF

IF ExStopWlk = Pain goes away THEN

Howsoon

How soon does the pain go away? Does it go in... READ OUT...

1. 10 minutes or less
2. or more than 10 minutes

IF Howsoon = 10 minutes or less THEN

PanSitC

Can you show me where you get this pain or discomfort?

NURSE: USE CARD C TO HELP CODE POSITION OF PAIN OR DISCOMFORT.

CODE ALL THAT APPLY.

PROBE: Where else?

1. Sternum (upper or middle)
2. Sternum lower
3. Left anterior chest
4. Left arm
5. Right anterior chest
6. Right arm
7. (Somewhere else)

Automatically derived Rose Angina Score

ExPossangi

ExPossangi is calculated using the following rules:

IF (PanSitC = 1 - 4 AND ExUphill = Yes) THEN ExPossangi = 1.

ExPossangi (D)

Angina

No angina

IF ExPossangi = Angina THEN

NoElig9

NURSE: This person is not eligible to take the step test. Explain that it would be safest if you didn’t administer this test. Circle code 06 on the front of the consent booklet.

Press 1 and enter to continue.

ENDIF

ASK IF HAVE NOT BEEN SCREENED OUT AT THIS POINT

ExChesP

I am now going to ask you some questions mainly about symptoms of the chest. Have you ever had any pain or discomfort in your chest?

1. Yes
2. No

IF ExChesP = Yes THEN

ExUphill

Do you get it when you walk uphill or hurry?

1. Yes
2. No
3. Sometimes / occasionally
4. Never walks uphill or hurries
5. (Cannot walk)

IF ExUphill = Sometimes / occasionally THEN

ExOccas1

Does this happen on most occasions?

1. Yes
2. No

IF (ExUphill = Yes) OR (ExOccas1 = Yes) THEN

ExUphill

What do you do if you get it while you are walking? Do you stop, slow down or carry on?

NURSE: IF RESPONDENT UNSURE, PROBE: What do you do on most occasions?

1. Stop
2. Slow down
3. Carry on

IF ExWalkdo = Stop or Slow down THEN

ExStopWlk

If you stand still does the pain go away or not?

NURSE: IF RESPONDENT UNSURE, PROBE: What happens to the pain on most occasions?

1. Pain goes away
2. Pain doesn’t go away

ENDIF

IF ExStopWlk = Pain goes away THEN

Howsoon

How soon does the pain go away? Does it go in... READ OUT...

1. 10 minutes or less
2. or more than 10 minutes

IF Howsoon = 10 minutes or less THEN

PanSitC

Can you show me where you get this pain or discomfort?

NURSE: USE CARD C TO HELP CODE POSITION OF PAIN OR DISCOMFORT.

CODE ALL THAT APPLY.

PROBE: Where else?

1. Sternum (upper or middle)
2. Sternum lower
3. Left anterior chest
4. Left arm
5. Right anterior chest
6. Right arm
7. (Somewhere else)

Automatically derived Rose Angina Score

ExPossangi

ExPossangi is calculated using the following rules:

IF (PanSitC = 1 - 4 AND ExUphill = Yes) THEN ExPossangi = 1.

ExPossangi (D)

Angina

No angina

IF ExPossangi = Angina THEN

NoElig9

NURSE: This person is not eligible to take the step test. Explain that it would be safest if you didn’t administer this test. Circle code 06 on the front of the consent booklet.

Press 1 and enter to continue.

ENDIF

ASK IF HAVE NOT BEEN SCREENED OUT AT THIS POINT

EverPain

Have you ever had a severe pain across the front of your chest lasting for half an hour or more?

1. Yes
2. No

Respondents with possible infarction are not eligible. PossMI is calculated using the following rules:

IF Everpain = Yes THEN EXCLUDED
NURSE: EXPLAIN THE PURPOSE OF THE TEST.
'I would now like to carry out the step test, this involves you stepping up and down onto the step repeatedly. I will first demonstrate the movement to you.

If you cannot do this movement, or if you feel it would be unsafe to try to do it, please tell me. I do not want you to try to do any movement that you feel might be unsafe'.

Do you have any questions before we begin?

NURSE: Demonstrate the movement to the respondent using the 15cm/20cm step.

PRESS <1> AND <ENTER> TO ACTIVATE THE SOUND FILE TO BEGIN THE DEMONSTRATION.

NURSE: To stop the demonstration press <1> and <enter>.

Allow the respondent a minute to practice the movement. You can go back to the sound file by pressing the 'up' key.

When you have finished the demonstration exercise press <1> and <enter> to continue.

NURSE: After you have described the test and demonstrated the movement, discuss with respondent whether they could attempt the test.

ASK: Do you feel that this would be safe?

1 Yes
2 No

IF StepIntro = No THEN

NURSE: this person is not eligible to take the step test. Explain that it would be safest if you didn't administer this test. Circle code 06 on the front of the consent booklet.

Press 1 and enter to continue.

ENDIF
ENDIF

ASK IF NOT BEEN SCREENED OUT AT THIS POINT

Does the respondent agree to do the step test?

1 Yes, step test agreed
2 No, step test refused

IF StepIntro = Yes THEN

NURSE: Does the respondent agree to do the step test?

Ask the respondent to read and complete the 'Step test' section of the consent booklet.

1 Yes, step test agreed
2 No, step test refused
Start
NURSE You will need to start your stop watch after the count down marker.
Record heart rate, on your PINK record card, AT EVERY 30 SECOND INTERVALS during the test.
Check respondent is about to use the <15cm/20cm> step.
'Please start the test AFTER the count down.'
Press <1> and <Enter> to activate the sound file to begin the test.

HRRecord
NURSE THE AGE RELATED STOPPING HEART RATE FOR THIS RESPONDENT IS (stepping heart rate textfill 1).
You should stop the test if the respondent's heart rate goes above the maximum shown on the screen at any point during the test.
After the test stop you stop watch, immediately record the recovery heart rate at EVERY 15 SECOND INTERVALS for 2 MINUTES.
Press <1> and <Enter> to record recovery heart rate.

Recover
NURSE At each 'beep' record the recovery heart rate on your PINK record card.
Once finished, press <1> and <Enter> to continue.

HR1
NURSE Please enter the first heart rate measurement.
Enter 999 if no heart rate readings was obtained AT ALL.
Enter 999 if this reading was not obtained.
[40.220, 997, 999]

HR2
NURSE Please enter the first heart rate measurement.
Enter 999 if this reading was not obtained.
[40.220, 999]

[Repeat for HR3 through to HR16]

IF HR1=997 OR after HR16=response

HRRecov
NURSE Please enter the first recovery heart rate measurement.
Enter 999 if no heart rate readings were obtained AT ALL.
Enter 999 if this reading was not obtained.
[40.220, 997, 999]

---

1 Formulae for stepping heart rate calculation:
Age related heart rate is based on 208-(age*0.7)
Respondents aged 16-59 should stop above 85% of 208-(age*0.7)
Respondents aged 60-74 should stop above 80% of 208-(age*0.7)
NURSE: Please enter the first recovery heart rate measurement. Enter 999 if this reading was not obtained.

A0..220, 999

[Repeat for HRRecov3 through to HRRecov8]

IF HRRecov1=997 OR after HRRecov8

SafeChk

NURSE: Remind the respondent that although they should not experience any after effects once they have cooled down after the exercise, the respondent should inform their GP if they feel any discomfort during or immediately following the test.

1. Continue

Complet

Nurse: Did the respondent complete the test (all 8 minutes?)

1. Yes
2. No

IF Complet=Yes

Problem

Nurse: Did the respondent have any problems in doing the step test?

1. Yes
2. No

IF Problem=Yes

WhyProb

Nurse: What problem(s) did the respondent have in doing the test?

1. Respondent felt unsafe doing test
2. Respondent fatigue
3. Respondent pain/discomfort
4. Respondent slipped/fell off step etc
5. Other problem

ENDIF

Cadence

NURSE: Did the respondent keep pace with the rhythm produced by the laptop accurately?

1. Yes
2. No

IF Cadence=No THEN

Reliable

NURSE: Do you think the results are likely to be reliable?

1. Results likely to be reliable
2. Results not reliable/accurate

ENDIF

ENDIF

The Health Survey for England 2008 - Nurse Schedule

Introduction to step test

NURSE: How long did the respondent step for?

Enter time in MINUTES here

:0..7

CmplngM

IF Complet=No

CmplngS

NURSE: How long did the respondent step for?

Enter time in SECONDS here

:0..59

WHYSTOP

NURSE: Why was the test stopped early?

1. Respondent heart rate exceeded a safe level specified for that age
2. Respondent slipped/stumbled/fell off step/lost balance etc
3. Respondent felt unsafe doing test
4. Respondents performance deteriorated during the test
5. Respondent showed signs of confusion during the test
6. Respondent showed signs of respiratory distress such as gasping for breath
7. Respondent fatigue
8. Respondent pain/discomfort
9. Respondent wanted to stop the test
10. Nurse felt it unsafe for the respondent to continue
11. Other problem

IF WhyStop = Other problem THEN

WhyOth

NURSE: Please describe the other problem

ENDIF
The Health Survey for England 2008 - Nurse Schedule

Saliva sample

If Respondent aged 4 and over THEN

SalInt1
NURSE NOW FOLLOWS THE SALIVA SAMPLE.
1 Continue

SalIntr1
NURSE: Ask respondent for a saliva sample.
READ OUT: I would like to take a sample of saliva (spit). This simply involves (keeping a cotton swab in your mouth for a few minutes aged 16+) / using a straw to dribble saliva into a tube aged 4-15). The sample will be analysed for cotinine which is related to the intake of tobacco smoke and is of particular interest to see if non-smokers may have raised levels as a result of "passive" smoking.
1 Respondent agrees to give saliva sample
2 Respondent refuses to give saliva sample
3 Unable to obtain saliva sample for reason other than refusal

IF SalIntr1=Agree AND Age=16+ THEN

SalWrit
NURSE: Ask the respondent to read and complete the Saliva sample/ section of the consent booklet.
Circle code 03 on front of the Consent Booklet.
Press <1> and <Enter> to continue
ENDIF

IF SalIntr1=Agree AND Age=4-15 THEN

SalWritC
NURSE: Ask the parent to read and complete the Saliva sample/ section of the consent booklet.
Show respondent the saliva sample information on the child information and consent sheet.
Circle code 03 on front of the Consent Booklet.
Press <1> and <Enter> to continue.
ENDIF

IF SalIntr1=Refuse

SalCode
NURSE: Circle code 04 on front of the Consent Booklet
Press <1> and <Enter> to continue.
ENDIF

IF SalIntr1=Agree

SalInst
NURSE: Ask respondent to keep the (cotton swab in the mouth for a few minutes / dribble through straw into the tube).
Write the serial number and date of birth on the green label using a blue biro.
Serial number:
Date of birth:
Press <1> and <Enter> to continue.
ENDIF

SalObt1
NURSE CHECK:
1 Saliva sample obtained
2 Saliva sample refused
3 Saliva sample not attempted
4 Attempted but not obtained

IF SalObt1=obtained

SalHow
NURSE: Code the method used to obtain the saliva sample.
1 Dribbled into tube
2 Cotton swab

ENDIF

IF (SalObt1= Not attempted or Attempted, not obtained) OR (SalIntr1=Unable)

SalNObt
NURSE: Record why saliva sample not obtained.
CODE ALL THAT APPLY.
1 Respondent not able to produce any saliva
95 Other (specify at next question)

IF SalNObt = Other THEN

OthNObt
NURSE: Give full details of reason(s) why saliva sample not obtained.
Text: Maximum 140 characters
ENDIF

ENDIF
The Health Survey for England 2008 - Nurse Schedule

Waist and hip circumference

ASK ALL Respondents aged 11+ AND PregnNT=No THEN

WHIntro

I would now like to measure your waist and hips. The waist relative to hip measurement is very useful for assessing the distribution of weight over the body.

WHNABM

1. Respondent agrees to have waist/hip ratio measured
2. Respondent refuses to have waist/hip ratio measured
3. Unable to measure waist/hip ratio for reason other than refusal

IF WHIntro=Agree THEN

Repeat for up to three waist-hip measurements. Third measurement taken only if difference between first two measurements is greater than 3cm.

FOR Loop:= 1 TO 3 DO

IF (Loop IN [1..2]) OR ((Loop = 3) AND (Measure[1].Waist <> 999.9) AND (Measure[2].Waist <> 999.9) AND (ABS(Measure[1].Waist - Measure[2].Waist) > 3)) THEN

Waist

WHNABM

1. Respondent is chairbound
2. Respondent is confined to bed
3. Respondent is too stooped
4. Respondent did not understand the procedure
5. Respondent is embarrassed / sensitive about their size
6. No time / busy / already spent enough time on this survey
7. Other (SPECIFY AT NEXT QUESTION)

ENDIF

ENDIF

IF AT LEAST ONE WAIST MEASUREMENT OBTAINED (IF (Waist1 <> 999.9 AND Waist1 <> EMPTY) OR (Waist2 <> 999.9 AND Waist2 <> EMPTY)) THEN

WJRel

RECORD ANY PROBLEMS WITH WAIST MEASUREMENT:

1. No problems experienced, RELIABLE waist measurement
2. Problems experienced - waist measurement likely to be RELIABLE
3. Problems experienced - waist measurement likely to be SLIGHTLY UNRELIABLE
4. Problems experienced - waist measurement likely to be UNRELIABLE

IF WJRel = Problems experienced THEN

ProbWJ

RECORD WHETHER PROBLEMS EXPERIENCED ARE LIKELY TO INCREASE OR DECREASE THE WAIST MEASUREMENT.

1. Increases measurement
2. Decreases measurement

ENDIF

ENDIF

IF AT LEAST ONE HIP MEASUREMENT OBTAINED (IF (Hip1 <> 999.9 AND Hip1 <> EMPTY) OR (Hip2 <> 999.9 AND Hip2 <> EMPTY)) THEN

HJRel

RECORD ANY PROBLEMS WITH HIP MEASUREMENT:

1. No problems experienced, RELIABLE hip measurement
2. Problems experienced - hip measurement likely to be RELIABLE
3. Problems experienced - hip measurement likely to be SLIGHTLY UNRELIABLE
4. Problems experienced - hip measurement likely to be UNRELIABLE

HNoWH

ENTER REASON FOR NOT GETTING BOTH MEASUREMENTS

1. Both measurements refused
2. Attempted but not obtained
3. Measurement not attempted
NURSE: NOW FOLLOWS THE BLOOD SAMPLE MODULE.
PRESS <1> AND <ENTER> TO CONTINUE.

1. Continue

ClotB
EXPLAIN PURPOSE AND PROCEDURE FOR TAKING BLOOD.
May I just check, do you have a clotting or bleeding disorder or are you currently on anti-coagulant drugs such as Warfarin?
(NURSE: ASPIRIN THERAPY IS NOT A CONTRAINDICATION FOR BLOOD SAMPLE.)

1. Yes
2. No

IF ClotB = No THEN
Fit
May I just check, have you ever had a fit (including epileptic fit, convulsion, convulsion associated with high fever)?

1. Yes
2. No

ENDIF

IF Fit = No THEN
BSWill
Would you be willing to have a blood sample taken?

1. Yes
2. No

ENDIF

IF BSWill = No THEN
RefBS
RECORD WHY BLOOD SAMPLE REFUSED. CODE ALL THAT APPLY.

1. Previous difficulties with venepuncture
2. Dislike/fear of needles
3. Respondent recently had blood test/health check
4. Refused because of current illness
5. Worried about HIV or AIDS
95 Other

IF RefBS = Other THEN
OthRefBS
GIVE FULL DETAILS OF OTHER REASON(S) FOR REFUSING BLOOD SAMPLE.
Text Maximum 135 characters

ENDIF

ELSEIF BSWill = Yes THEN
BSCons
EXPLAIN NEED FOR WRITTEN CONSENT: Before I can take any blood, I have to obtain written consent from you.
PRESS <1> AND <ENTER> TO CONTINUE

1. Continue
The Health Survey for England 2008 - Nurse Schedule

Blood sample

1 Continue
ENDIF
ENDIF

IF BSWill = Yes THEN
BSCons
NURSE: Ask the respondent to read and complete point number one in the 'Blood sample' section of the consent booklet.
Circle consent code 07 on the front of the Consent Booklet.
Press <1> and <Enter> to continue.

GPSam
NURSE CHECK:
1 Respondent registered with GP
2 Respondent not registered with GP

IF GPSRegB = Yes OR GPSam = GP THEN
SendSam
May we send the results of your blood sample analysis to your GP?
1 Yes
2 No

IF SendSam = Yes THEN
BSSign
NURSE: Ask the respondent to read and complete point number two in the 'Blood sample' section of the consent booklet.
Check name by which GP knows respondent.
Check GP name, address and phone no. are recorded on front of the Consent Booklet.
Circle consent code 09 on front of the Consent Booklet.
Press <1> and <Enter> to continue.
ELSEIF SendSam = No THEN
SenSaC
Why do you not want your blood sample results sent to your GP?
1 Hardly/never sees GP
2 GP recently took blood sample
3 Does not want to bother GP
95 Other

IF SenSaC = Other THEN
OthSam
GIVE FULL DETAILS OF REASON(S) FOR NOT WANTING RESULTS SENT TO GP.
Text: Maximum 140 characters
ENDIF
ENDIF

IF (GPSam = No GP OR SendSam = No) THEN
Code08
CIRCLE CONSENT CODE 10 ON FRONT OF CONSENT BOOKLET.
PRESS <1> AND <ENTER> TO CONTINUE.
ENDIF
The Health Survey for England 2008 - Nurse Schedule

Blood sample

SampTak
Computed: Blood sample outcome.
1 Blood sample obtained
2 No blood sample obtained

IF SampTak = Yes THEN
SampArm
RECORD WHICH ARM BLOOD TAKEN FROM.
1 Right
2 Left
3 Both

SamDifC
RECORD ANY PROBLEMS IN TAKING BLOOD SAMPLE CODE ALL THAT APPLY.
1 No problem
2 Incomplete sample
3 Collapsing/poor veins
4 Second attempt necessary
5 Some blood obtained, but respondent felt faint/fainted
6 Unable to use tourniquet
95 Other (SPECIFY AT NEXT QUESTION)

IF SamDifC = Other THEN
OthBDif
GIVE FULL DETAILS OF OTHER PROBLEM(S) IN TAKING BLOOD SAMPLE.
Text: Maximum 140 characters
ENDIF

SnDrSam
Would you like to be sent the results of your blood sample analysis?
1 Yes
2 No

IF SnDrSam = Yes THEN
Code11
CIRCLE CONSENT CODE 13 ON FRONT OF CONSENT BOOKLET.
PRESS <1> AND <ENTER> TO CONTINUE.
ELSEIF SnDrSam = No THEN
Code12
CIRCLE CONSENT CODE 14 ON FRONT OF CONSENT BOOKLET.
PRESS <1> AND <ENTER> TO CONTINUE.
ENDIF
ELSEIF SampTak = No THEN
NoBSC
CODE REASON(S) NO BLOOD OBTAINED. CODE ALL THAT APPLY.
1 No suitable or no palpable vein/collapsed veins
2 Respondent was too anxious/nervous
3 Respondent felt faint/fainted
4 Other

ENDIF
NSIntro
PREPARE GREEN SELF-COMPLETION BOOKLET BY ENTERING SERIAL NUMBERS.
CHECK YOU HAVE CORRECT PERSON NUMBER.

NSComp2
I would now like you to answer some questions by completing this booklet on your own.
The questions cover eating habits. EXPLAIN HOW TO COMPLETE BOOKLET. REMEMBER TO USE A BLACK PEN.

NSCheck
NURSE: Wait until the respondent has finished and then check that the booklet has been completed. If not, ask if any questions were missed in error. If in error, ask the respondent to complete.

NSComp3
NURSE CHECK: WAS THE GREEN BOOKLET COMPLETED?
1 Fully completed
2 Partially completed
3 Not completed

SENDIF
IF NSComp3 = Fully completed OR Partially completed THEN
NSC3Acc
Was it completed without assistance?
1 Completed independently
2 Assistance from other household member
3 Assistance from nurse
4 Nurse administered

SENDIF
IF NSComp3 = Other THEN
NSComp6
NURSE: RECORD WHY BOOKLET NOT COMPLETED/PARTIALLY COMPLETED.
CODE ALL THAT APPLY:
1 Eyesight problems
2 Language problems
3 Reading/writing/comprehension problems
4 Respondent bored/fed up/tired
5 Questions too sensitive/invasion of privacy
6 Too long/too busy/taken long enough already
7 Refused to complete booklet (no other reason given)
95 Other (SPECIFY)

SENDIF
IF NSComp6 = Other THEN
NSComp6O
PLEASE SPECIFY OTHER REASON
Text: Maximum 60 characters

SENDIF

Blood sample

NSIntro
PREPARE GREEN SELF-COMPLETION BOOKLET BY ENTERING SERIAL NUMBERS.
CHECK YOU HAVE CORRECT PERSON NUMBER.

NSComp2
I would now like you to answer some questions by completing this booklet on your own.
The questions cover eating habits. EXPLAIN HOW TO COMPLETE BOOKLET. REMEMBER TO USE A BLACK PEN.

NSCheck
NURSE: Wait until the respondent has finished and then check that the booklet has been completed. If not, ask if any questions were missed in error. If in error, ask the respondent to complete.

NSComp3
NURSE CHECK: WAS THE GREEN BOOKLET COMPLETED?
1 Fully completed
2 Partially completed
3 Not completed

SENDIF
IF NSComp3 = Fully completed OR Partially completed THEN
NSC3Acc
Was it completed without assistance?
1 Completed independently
2 Assistance from other household member
3 Assistance from nurse
4 Nurse administered

SENDIF
IF NSComp3 = Partially completed OR Not completed THEN
NSComp6
NURSE: RECORD WHY BOOKLET NOT COMPLETED/PARTIALLY COMPLETED.
CODE ALL THAT APPLY
1 Sensory deficit
2 Haematoma
3 Swelling
95 Other

SENDIF
IF NSComp6 = Other THEN
NSComp6O
PLEASE SPECIFY OTHER REASON
Text: Maximum 140 characters

SENDIF
IF NSComp3 = Fully completed OR Partially completed THEN
  NSComp5A
NURSE: CODE WHO WAS PRESENT IN ROOM WHILE SELF-COMPLETION WAS COMPLETED. INCLUDE YOURSELF AND OTHERS IN THE ROOM.
CODE ALL THAT APPLY.
1  Spouse / partner
2  Parent(s) (incl step-/ foster-)
3  Brother(s)/ Sister(s)
4  Own/ Related child(ren) (incl step-/ foster-/partner's)
5  Other relative(s)
6  Unrelated adult(s)
7  Unrelated child(ren)
8  Nurse
9  No-one else present
ENDIF

AllCheck
CHECK BEFORE LEAVING RESPONDENT:
THAT ALL (CHILDREN AGED 2-15/RESPONDENTS) HAVE A CONSENT BOOKLET.
THAT YOU HAVE RE-CHECKED THE PUNCTURE SITE AFTER TAKING BLOOD FOR THAT INDIVIDUAL (IF APPLICABLE)
THAT FULL GP DETAILS ARE ENTERED ON FRONT OF CONSENT BOOKLET.
THE NAME BY WHICH GP KNOWS RESPONDENT.
THAT ALL DETAILS ARE COMPLETED ON FRONT OF CONSENT BOOKLET.
ALL NECESSARY SECTIONS OF THE CONSENT BOOKLET HAVE BEEN INITIALED AND THAT THE RESPONDENT HAS PRINTED THEIR NAME, SIGNED AND DATED THE CONSENT BOOKLET.
THAT THERE ARE SEVEN APPROPRIATE CONSENT CODES RINGED ON FRONT OF THE CONSENT BOOKLET.
Continue

Thank
NURSE: END OF QUESTIONNAIRE REACHED. THANK RESPONDENTS FOR THEIR CO-OPERATION.
THEN ENTER '7' TO FINISH.
BP (C)

CHILD AGED 5-15

1. I am the parent/guardian of the child named on this booklet and I consent to the National Centre for Social Research/UCL Joint Health Surveys Unit informing his/her General Practitioner (GP) of his/her blood pressure results.

I am aware that the results of his/her blood pressure measurement may be used by his/her GP to help monitor his/her health and that his/her GP may wish to include the results in any future report about him/her.

S (C)

CHILD AGED 4-15

1. I am the parent/guardian of the child named on this booklet and I consent to a qualified nurse collecting a sample of his/her saliva on behalf of the National Centre for Social Research/UCL Joint Health Surveys Unit.

This saliva sample will only be tested for cotinine, a derivative of nicotine. It will not be tested for substance abuse.

2. The purpose and procedure have been explained to me by the nurse and I have had an opportunity to discuss this with him/her.

Respondents (Child) Name: ____________________________
Parent/Guardian Name: ____________________________

Parent/Guardian Signature: ____________________________

Date: ____________________________
BLOOD SAMPLE CONSENT FORM

(ADULT AGED 16+)

1. I consent to the nurse taking a sample of my blood on behalf of the National Centre for Social Research/UCL Joint Health Surveys Unit. This blood sample will not be used to test for HIV virus or viral load for genetic testing. The sample will be tested for total and HDL cholesterol, and glycated haemoglobin. I consent to the sample being taken.

2. I consent to the National Centre for Social Research/UCL Joint Health Surveys Unit informing my General Practitioner (GP) of the blood sample analysis results for total and HDL cholesterol, and glycated haemoglobin. I am aware that the results of my blood sample analysis may be used by my GP to help monitor my health and that my GP may wish to include the results in any future report about me.

3. I consent to any remaining blood being stored for future analysis. This blood sample may be used for future studies of the causes, diagnosis, treatment and outcome of disease, provided that the studies are approved by an NHS ethics committee. I understand that the samples will be stored with no identification except a coded study number. Only authorised members of the research team for this study will be able to find out who the codes refer to. Before being used in future research, some details of my medical history (but not any details which would identify me) may be attached to the sample, but the study number code will then be removed from the blood sample and the medical details. The stored blood will not be available for commercial purposes. When the sample is tested for research, it will no longer be possible to link the results of the testing to me, so I will not be told the results of the testing. I understand that it will not be possible to remove my results from reports, as the results cannot be linked to me. I understand that I can withdraw my consent to store my blood at any time, without giving any reason, by asking the investigators in writing for my blood to be removed from storage and destroyed.

Print name:
Signed (respondent):
Date:
Signed (nurse):
Date:
CARD C

Step test
PanSitC

Right
6 5 1 3 4

Left
6 5 2 3 4
Appendix B

Measurement protocols

Height, weight and infant length measurement
Recording ambient air temperature
Blood pressure measurement
Measurement of demispan
Measurement of waist and hip circumferences
Step test
Saliva sample collection
Non-fasting blood sample collection
Portable stadiometer – a collapsible device with a sliding head plate, a base plate and three connecting rods marked with a measuring scale.

Frankfort plane card.

The protocol – adults (aged 16 and over)

1. Ask the respondent to remove their shoes in order to obtain a measurement that is as accurate as possible.
2. Assemble the stadiometer and raise the head plate to allow sufficient room for the respondent. Double check that you have assembled the stadiometer correctly.
3. The respondent should stand with their feet flat on the centre of the base plate, feet together and heels against the rod. The respondent’s back should be as straight as possible, preferably against the rod but NOT leaning on it. They should have their arms hanging loosely by their sides. They should be facing forwards.
4. Move the respondent’s head so that the Frankford Plane is in a horizontal position (i.e. parallel to the floor). The Frankford Plane is an imaginary line passing through the external ear canal and across the top of the lower bone of the eye socket, immediately under the eye (see diagram). This position is important if an accurate reading is to be obtained. An additional check is to ensure that the measuring arm rests on the bottom of the eye socket. You can use the Frankford Plane Card to line up the bottom of the eye socket with the flap of skin on the ear. The Frankford Plane is horizontal when the card is parallel to the stadiometer arm.
5. Instruct the respondent to keep their eyes focused on a point straight ahead, to breathe in deeply and to stretch to their fullest height. If after stretching up the respondent’s head is no longer horizontal, repeat the procedure. It can be difficult to determine whether the stadiometer head plate is resting on the respondent’s head. If so, ask the respondent to tell you when they feel it touching their head.
6. Ask the respondent to step forwards. If the measurement has been done correctly the respondent will be able to step off the stadiometer without ducking their head. Make sure that the head plate does not move when the respondent does this.
7. Look at the bottom edge of the head plate cuff. There is a green arrowhead pointing to the measuring scale. Take the reading from this point and record the respondent’s height in centimetres and millimetres, that is in the form 123.4.

Measurement Protocols

1. Eligibility

You should be able to measure the height and weight of most of the respondents. However, in some cases it may not be possible or appropriate to do so. Do not force a respondent to be measured if it is clear that the measurement will be far from reliable but whenever you think a reasonable measurement can be taken, do so. Examples of people who should not be measured are:

- Chairbound respondents.
- If after discussion with a respondent it becomes clear that they are too unsteady on their feet for these measurements.
- If the respondent finds it painful to stand or stand straight, do not attempt to measure height.
- Pregnant women are not eligible for weight as this is clearly affected by their condition.
- Children under the age of 2 years do not have a height measurement taken. For small children, there is an option to weigh them held by an adult. In this case, you weigh the adult on either own scale, the child is then added and the computer will calculate the child’s weight.
- Old children, i.e. those over the age of 2 years, can be weighed on scales but it is easier to use height measurement equipment.

1. Site

It is strongly preferable to measure height and weight on a floor which is level and not carpeted. If all the household is carpeted, choose a floor with the thinnest and hardest carpet (usually the kitchen or bathroom).
Height. You may at this time record the respondent’s height onto their Measurement Record Card and at the question MbookHt you will be asked to check that you have done so. At that point the computer will display the recorded height in both centimetres and in feet and inches. At RelHtieB you will be asked to code whether the measurement you obtained was reliable or unreliable.

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

9. Push the head plate high enough to avoid any member of the household hitting their head against it when getting ready to be measured.
The protocol – children (aged 2-15)

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

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

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

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

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

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

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

5. Move the child's head so that the Frankfort Plane is in a horizontal position (see diagram).

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

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

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

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

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

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

Additional points – all respondents

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

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

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

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

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

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

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

8. Move the child's head so that the Frankfort Plane is in a horizontal position (see diagram).

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

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

The equipment
Soehnle, Seca or Tanita electronic bathroom scales, calibrated for the Health Survey.

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

The scales have an inbuilt memory which stores the weight for 10 minutes. If during this time you weigh another object that differs in weight by less than 500 grams (about 1lb), the stored weight will be displayed and not the weight that is being measured. This means that if you weigh someone else during this time, you could be given the wrong reading for the second person.

So if you get an identical reading for a second person, make sure that the memory has been cleared. Clear the memory from the last reading by weighing an object that is more than 500 grams lighter (i.e. a pile of books, your briefcase or even the stadiometer). You will then get the correct weight when you weigh the second respondent.

You will only need to clear the memory in this way if:

a) You have to have a second or subsequent attempt at measuring the same person

b) Two respondents appear to be of a very similar weight

c) Your reading for a respondent in a household is identical to the reading for another respondent in the household whom you have just weighed.

The protocol
1. Turn the display on by using the appropriate method for the scales. The readout should display 888.8 (1888 for the Seca 870) momentarily. If this is not displayed check the batteries, if this is not the cause you will need to report the problem to the National Centre at Brentwood. While the scales read 888.8 do not attempt to weigh anyone.

2. Ask the respondent to remove shoes, heavy outer garments such as jackets and cardigans, heavy jewellery, loose change and keys.

3. If necessary, turn the scales on again. Wait for a display of 0.0 before the respondent stands on the scales.

4. Ask the respondent to stand with their feet together in the centre and their heels against the back edge of the scales. Arms should be hanging loosely at their sides and head facing forward. Ensure that they keep looking ahead - it may be tempting for the respondent to look down at their weight reading. Ask them not to do this and assure them that you will tell them their weight afterwards if they want to know.

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

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

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

Additional Points

Pregnant women do not have their weight measured. For women respondents aged 16-49, the computer displays a question asking them whether they are pregnant and then enforces the appropriate routing. If you have a respondent aged under 16 who is obviously pregnant, code them as “Weight not attempted” at RespWts. The computer will display a question asking them for an estimate. Do not attempt to weigh them.

Weighing Children

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

Children wearing nappies should be wearing a dry disposable. If the nappy is wet, please ask the parent to change it for a dry one and explain that the wetness of the nappy will affect the weight measurement.
In most cases it will be possible to measure children’s weight following the protocol set out for adults. However, if accurate readings are to be obtained, it is very important that respondents stand still. Ask the child to stand perfectly still - “Be a statue.” For very young children who are unable to stand unaided or small children who find this difficult you will need to alter the protocol and first weigh an adult then weigh that adult holding the child as follows:

a) Code as “Weight obtained (child held by adult)” at RespWts

b) Weigh the adult as normal following the protocol as set out above. Enter this weight into the computer at WtAdult.

c) Weigh the adult and child together and enter this into the computer at WtChAd.

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

1.5 Infant length measurement

1.5.1 Eligibility
This measurement is for infants aged under 2 years but at least 6 weeks old. This is based on age at the original interview.

1.5.2 Equipment
Rollameter Baby Measure Mat
Frankfort Plane Card
Kitchen roll

1.5.3 Procedure
Infants (children under the age of 2) should be measured lying down (supinely). Two people are required for the task, yourself and the child’s parent.

1. Ask the parent to remove any bulky clothing or shoes that the infant is wearing. It is not necessary for them to remove the infant’s nappy.

2. Unroll the Rollameter and lay it flat on any suitable flat, firm surface (e.g. table, floor). It is essential that the Rollameter is fully unrolled and as flat as possible, therefore doing the measurement on a deep pile carpet or rug would not be appropriate. Lay one layer of kitchen roll on the mat (just in case there are any accidents!!)

3. Place the child on the foam bed with his/her head touching the headpiece on which the name Rollameter is printed.

   ![Infant Frankfort Plane Card]

4. Move the child’s head so that Frankfort Plane is in a position at right angles to the floor/table (see diagram). Ask the parent to hold the child in this position and make sure their head is in contact with the headpiece.

5. Straighten the child’s legs by holding the legs by the ankles with one hand and applying a gentle downward pressure.

6. With your free hand, move the footrest on which the measuring tape is mounted to touch the child’s heels by depressing the red button on the tape measure.

7. The measurement is read from the red cursor in the tape window. The measurement is recorded in centimetres and millimetres to the nearest millimetre. If the measurement lies between two millimetres then you should round to the nearest even millimetre. For example, if the measurement is halfway between 68.8 and 68.9 then round down to 68.8.
2 RECORDING AMBIENT ROOM TEMPERATURE

2.1 The thermometer
You have been provided with a digital thermometer and probe. This instrument is very sensitive to minor changes in temperature. It is therefore important that you record temperature at the appropriate time in your routine. It can also take a few minutes to settle down to a final reading if it is experiencing a large change in temperature (e.g. coming into a warm house from a cold outside).

Immediately after you have settled the respondent down to rest for five minutes prior to taking their blood pressure, set up the thermometer to take a reading. Just prior to recording the blood pressure note the temperature and record it when the computer prompts you to do so. Always switch it off after taking a reading, to avoid battery problems. The thermometer automatically switches off if you have left it on for more than 7 minutes.

Place the thermometer on a surface near the Omron. Do not let the probe touch anything - you can for example let it hang over the edge of a table. Do not put it on top of the Omron as it will be warm.

Please note that you must enter the temperature to one decimal place - do not round it to the nearest degree. For example, enter ‘21.2’, not just ‘21’. If you do not enter a decimal point, the computer will give you a warning. If the temperature is exactly, say, 21 degrees, then all you need to do is suppress the warning and it will automatically fill in the ‘.0’ for you. Otherwise, you must go back and amend your answer. As a further check, it will also ask you to confirm that a temperature ending in ‘.0’ is correct.

2.2 Instructions for using the thermometer
1. The probe plug fits into the socket at the top of the instrument.
2. Press the completely white circle to turn the instrument on. To turn off, press the white ring.
3. Before taking a reading, ensure that the reading has stabilised.
4. Be careful of the probe - it is quite fragile.
5. When "LO B AT" is shown on the display the battery needs replacing, take no further readings.
6. The battery in your thermometer is a long-life battery and should last at least one year. However, should it run low please purchase a new battery. Take the old one with you to ensure it is the same type. Claim in the usual way.
7. To remove old battery and insert a new one, unscrew the screw on the back of the thermometer.

3 BLOOD PRESSURE MEASUREMENT (Aged 5+)

3.1 Eligibility
High blood pressure is an important risk factor for cardiovascular disease. It is important that we look at the blood pressure of everyone in the survey using a standard method so we can see the distribution of blood pressure across the population. This is vital for monitoring change over time, and monitoring progress towards lower blood pressure targets set in the Health of the Nation.

The only people not eligible for blood pressure measurement are those who are pregnant or aged less than 5 years old. However, if a pregnant woman wishes to have her blood pressure measured, you may do so, but do not record the readings on the computer.

Timing - Blood pressure can be higher than normal immediately after eating, smoking, drinking alcohol or taking vigorous exercise. This is why respondents are asked to avoid doing these for 30 minutes before you arrive. As already suggested, if you can juggle respondents within a household around to avoid having to break this "half-hour" rule, do so. But sometimes this will not be possible and you will have to take their blood pressure within this time period. In which case enter all the codes that apply at ConSubX.

3.2 Protocol for blood pressure recording: Omron HEM-907
This section describes the protocol for measuring blood pressure using the Omron HEM 907. More detailed information may be obtained from the instructions booklet inside the box. If you have any further questions or problems then please contact Dr Jenny Mindell on 020 7679 1289.

Protocol
Equipment
Omron HEM 907 blood pressure monitor
Child/small adult cuff (17-22 cm)
Standard adult cuff (22-32 cm)
Large adult cuff (32-42 cm)
AC adapter
3.3 Preparing the respondent

The respondent should not have eaten, smoked, drunk alcohol or taken vigorous exercise in the 30 minutes preceding the blood pressure measurement as blood pressure can be higher than normal immediately after any of these activities.

Ask the respondent to remove outer garments (e.g. jumper, cardigan, jacket) and expose the right upper arm. The sleeve should be rolled or slid up to allow sufficient room to place the cuff. If the sleeve constricts the arm, restricting the circulation of blood, ask the respondent if they would mind taking their arm out of the sleeve for the measurement.

3.4 Selecting the correct cuff

Adults aged 16 and over: Do not measure the upper arm circumference. Instead, choose the correct cuff size based on the acceptable range which is marked on the inside of the cuff. You will note that there is some overlap between the cuffs. If the respondent falls within this overlap range then use the standard cuff where possible.
1. Switch the monitor on by pushing the ON/OFF button. Wait for the READY TO MEASURE symbol to light, indicating the machine is ready to start the measurement (approx 2 sec).

2. Check that the MODE Selector is set to AVG and the P-SET (pressure setting) Volume is set to AUTO.

3. Press the START button to start the measurement. The cuff will now start to inflate and take the first measurement. When the first measurement is complete the LCD displays show systolic pressure, diastolic pressure, and pulse rate. Record the readings on the interview schedule.

4. Blood pressure will then be recorded at one-minute intervals thereafter. After each interval record the reading from the LCD displays on the interview schedule.

5. After the three measurements are complete press the ON/OFF button to turn off the power and remove the cuff.

If there are any problems during the blood pressure measurements or the measurement is disturbed for any reason, press the STOP button and start the procedure again. If the respondent has to get up to do something, then ask them to sit and rest for five minutes again.

3.7 Error readings

They appear on the LCD display:

- **Er1, Er2**: Check that the tube connecting the cuff to the monitor is properly inserted and not bent. Repeat the measurement.
- **Er3**: Check that the tube connecting the cuff to the monitor is not bent. Repeat the measurement.
- **Er4**: This could be because of a motion artefact. Ask the respondent to sit as still as possible and take the measurement again. If you still get another Er4 error reading, it could be because the respondent has a very high blood pressure. Set the P-SET Volume to 260 and repeat the measurement.
- **Er5, Er6**: Check that the cuff is properly wrapped around the arm. Repeat the measurement.

If any of these error readings persist, record that it wasn’t possible to get a reading and explain to the respondent that this sometimes happens. Then contact Brentwood and inform them that there is a problem with the monitor.

---

**Children aged 5 to 15**: It is important to select the correct cuff size. The appropriate cuff is the largest cuff which fits between the axilla (underarm) and the antecubital fossa (front of elbow) without obscuring the brachial pulse and so that the index line is within the range marked on the inside of the cuff. You will be provided with a child’s cuff as well as the other adult cuffs. Many children will not need the children’s cuff and instead will require an adult cuff. You should choose the cuff that is appropriate to the circumference of the arm.

**Adults and Children**: The appropriate cuff should be connected via the grey air tube to right end side of the monitor.

### 3.5 Procedure

**Wrap the correct sized cuff round the upper right arm and check that the index line falls within the range lines. Use the left arm only if it is impossible to use the right. If the left arm is used, record this on the schedule. Locate the brachial pulse just medial to the biceps tendon and position the arrow on the cuff over the brachial artery. The lower edge should be about 1-2 cm above the cubital fossa (elbow crease).**

**Do not put the cuff on too tightly as bruising may occur on inflation. Ideally, it should be possible to insert two fingers between cuff and arm. However, the cuff should not be applied too loosely, as this will result in an inaccurate measurement.**

**The respondent should be sitting in a comfortable chair with a suitable support so that the right arm will be resting at a level to bring the antecubital fossa (elbow) to approximately heart level. They should be seated in a comfortable position with cuff applied, legs uncrossed and feet flat on the floor.**

**Explain that before the blood pressure measurement we need them to sit quietly for five minutes to rest. They should not smoke, eat or drink during this time. Explain that during the measurement the cuff will inflate three times and they will feel some pressure on their arm during the procedure.**

**It is important that children as well as adults rest for five minutes before the measurement is taken. However, making children sit still for five minutes can be unrealistic. They may move around a little, but they should not be running or taking vigorous exercise. As with adults, they should not eat or drink during this time.**

**After five minutes explain you are starting the measurement. Ask the respondent to relax and not to speak until the measurement is completed as this may affect their reading.**

### 3.6 How to operate the monitor

See Picture of Omron HEM-907 monitor above.
Check that the respondent does not move, ask the respondent to sit as still as possible and take the measurement again. If you still get an error reading the pulse may be irregular. Do NOT palpate the pulse. Record that it wasn’t possible to get a reading and explain to the respondent that this sometimes happens.

Technical fault. Contact Brentwood immediately and inform them that there is a problem with the monitor.

### 3.8 Feedback to respondents

Offer the respondent his/her blood pressure readings. If (s)he would like them, enter them on the Measurement Record Card (MRC). If an adult respondent has a raised blood pressure you must give him/her advice based on the result. This will be calculated by the computer and will appear on the screen for you to read out exactly as written. Write any advice given onto the MRC. The interviewer should have given them a MRC with the height and weight recorded on it. If the respondent has lost it, or claims never to have had one, make out a new one, ensuring the name is on the front of the card.

It is not the purpose of this survey to provide respondents with medical advice. Nevertheless, many respondents will ask you what their blood pressure readings mean. Make sure you are very familiar with the guidance below. We wish to be strictly followed. It is very important that no anxiety is caused but at the same time we have a duty to advise people to see their GPs if blood pressure is raised.

#### a) Child respondents (age 5 to 15)

We do not wish you to comment on the child’s blood pressure readings to the parents. If they seek comment, reiterate what you have already said about not being able to interpret a single blood pressure measurement without checking to see whether it is normal for the child’s age and height. Reassure them that if it is found to be abnormal, the Survey Doctor will get in touch and advise them as to what steps they should take. This rule applies for all readings you obtain.

#### b) Adult respondents (aged 16+)

In answering queries about an adult’s blood pressure it is very important to remember that it is not the purpose of the survey to provide respondents with medical advice, nor are you in a position to do so as you do not have the respondent’s full medical history. But you will need to say something. What you say in each situation has been agreed with the Department of Health, and you have been given a sheet with these comments to read out. It is very important that you make all the points relevant to the particular situation and that you do not provide a more detailed interpretation as this could be misleading. Read the instructions below very carefully and make sure you always follow these guidelines.

Your comments should be based on the last two of the first three readings you take from the Omron HEM-907. Base your advice on the higher of the last two readings. If the first reading is higher than the other two, explain that the first reading can be high because people are nervous of having their pressure taken. The computer will guide you as to which readings you should base your advice on. This will be based on the highest systolic and highest diastolic reading from the last two readings. This will usually, but not always, be from the same reading. For example, occasionally it may be the systolic from the second reading and the diastolic from the third reading.

Definitions of raised blood pressure differ slightly. The Department of Health has decided to adopt the ones given below for this survey. It is important that you adhere to these definitions, so that all respondents are treated in an identical manner. These are shown below.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Systolic</th>
<th>Diastolic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt;140</td>
<td>&lt;85</td>
</tr>
<tr>
<td>Mildly raised</td>
<td>140-159</td>
<td>85-99</td>
</tr>
<tr>
<td>Raised</td>
<td>160-179</td>
<td>100-114</td>
</tr>
<tr>
<td>Considerably raised</td>
<td>180 or more</td>
<td>115 or more</td>
</tr>
</tbody>
</table>

Points to make to a respondent about their blood pressure (given on screen):

- **Normal**: “Your blood pressure is normal.”
- **Mildly raised**: “Your blood pressure is a bit high today.”
- **Raised**: “Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure.”
- **Considerably raised**: “You are advised to visit your GP within 2 months to have a further blood pressure reading to see whether this is a once-off finding or not.”

---

**ADULTS ONLY**

**SURVEY DEFINITION OF BLOOD PRESSURE RATINGS**

For men and women aged 16+

---

**Copyright © 2009, The Health and Social Care Information Centre. All rights reserved**
We do not want you to use the first reading as it is prone to error for the reason stated above.

<table>
<thead>
<tr>
<th>BLOOD PRESSURE</th>
<th>ACTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal/mildly raised/raised BP</td>
<td>No further action necessary</td>
</tr>
<tr>
<td>Systolic less than 180 mmHg and</td>
<td></td>
</tr>
<tr>
<td>Diastolic less than 115 mmHg</td>
<td></td>
</tr>
<tr>
<td>Considerably raised BP</td>
<td></td>
</tr>
<tr>
<td>Systolic at or greater than 180</td>
<td></td>
</tr>
<tr>
<td>mmHg or Diastolic at or greater</td>
<td></td>
</tr>
<tr>
<td>than 115 mmHg</td>
<td></td>
</tr>
</tbody>
</table>

* A hypertensive crisis is an extremely rare complication of high blood pressure. Its signs and symptoms include diastolic bp > 135 mmHg, headache, confusion, sleepiness, stupor, visual loss, seizures, coma, cardiac failure, oliguria, nausea & vomiting.

** You must still contact the Survey Doctor even if respondents tell you that their GP knows about their raised BP.

All high or unusual readings will be looked at by the Survey Doctor when they reach the office. If the reading is high, then the Survey Doctor will contact the respondent directly.

---

**Note:** If the respondent is elderly and has considerably raised blood pressure, amend your advice so that you are advised to contact their GP within the next week or so about this reading. This is because in many cases the GP will be well aware of their high blood pressure and we do not want to worry the respondent unduly. It is however important that they do contact their GP about the reading within 7 to 10 days. In the meantime, we will have informed the GP of their result (providing the respondent has given their permission).

---

3.9 Action to be taken by the nurse after the visit

If you need to contact the Survey Doctor, do not do this from the respondent’s home - you will cause unnecessary distress.

a) Children

No further action is required after taking blood pressure readings on children. All high readings are viewed routinely by the Survey Doctor. However, in the rare event that you encounter a child with a very high blood pressure, i.e. systolic 160 or above or diastolic 100 or above please call the Survey Doctor.

b) Adults

The chart on the next page summarises what action you should take as a result of the knowledge you have gained from taking an adult’s blood pressure readings. For this purpose you should only take into account the last two of the three readings you take.

---

Raised:

"Your blood pressure is a bit high today."

"Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure."

"You are advised to visit your GP within 2 weeks to have a further blood pressure reading to see whether this is a once-off finding or not."

Considerably raised:

"Your blood pressure is high today."

"Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure."

"You are strongly advised to visit your GP within 5 days to have a further blood pressure reading to see whether this is a once-off finding or not."

---

"Your blood pressure is a bit high today."

"Blood pressure can vary from day to day and throughout the day so that one high reading does not necessarily mean that you suffer from high blood pressure."

"You are advised to visit your GP within 2 weeks to have a further blood pressure reading to see whether this is a once-off finding or not."

---

**Note:** If the respondent is elderly and has considerably raised blood pressure, amend your advice so that they are advised to contact their GP within the next week or so about this reading. This is because in many cases the GP will be well aware of their high blood pressure and we do not want to worry the respondent unduly. It is however important that they do contact their GP about the reading within 7 to 10 days. In the meantime, we will have informed the GP of their result (providing the respondent has given their permission).

---

3.9 Action to be taken by the nurse after the visit

If you need to contact the Survey Doctor, do not do this from the respondent’s home - you will cause unnecessary distress.

a) Children

No further action is required after taking blood pressure readings on children. All high readings are viewed routinely by the Survey Doctor. However, in the rare event that you encounter a child with a very high blood pressure, i.e. systolic 160 or above or diastolic 100 or above please call the Survey Doctor.

b) Adults

The chart on the next page summarises what action you should take as a result of the knowledge you have gained from taking an adult’s blood pressure readings. For this purpose you should only take into account the last two of the three readings you take.
4.4 Preparing the respondent

The measurement is made on the right arm unless this arm cannot be fully stretched in which case the left arm may be used.

Record which arm was used and whether the respondent was standing, or sitting.

Although the measurement requires minimal undressing, certain items that might distort the measurement will need to be removed. These include:

- Ties
- Jackets, jumpers and other thick garments
- Jewellery items such as chunky necklaces/bracelets
- Shoulder pads
- High heeled shoes
- Shirts should be unbuttoned at the neck.

If the respondent does not wish to remove any item that you think might affect the measurement, you should record that the measurement was not reliable (code 2) when prompted by the computer.

4.5 Procedure

1. Locate a wall where there is room for the respondent to stretch his/her arm. They should stand with their back to the wall but not support themselves on it. Ask the respondent to stand about 3 inches (7cm) away from it.

2. Ask the respondent to stand with weight evenly distributed on both feet, head facing forward.

3. Ask the respondent to raise their right arm until it is horizontal. The right wrist should be in neutral rotation and neutral flexion. Rest your left arm against the wall allowing the respondent's right wrist to rest on your left wrist.
12. Repeat the measurement from steps 4-11. Explain to the respondent that this is to improve accuracy. You must go back to step 4 and relocate and mark the sternal notch before you take your second reading. If your second measurement differs from the first by 3cm or more, the computer will give you an error message, and instruct you to either amend one of your previous responses, or to take a third measurement. Amend a previous response if you have made a mistake when entering the measurement, e.g. entered 65.2 instead of 75.2. Take a third measurement if there is another reason for the measurements being different. If in doubt, take a third measurement rather than overwriting one of the previous two. The computer will automatically work out which two to use.

13. Offer to write the measurements onto the respondent’s Measurement Record Card. If the respondent would like the measurement in inches, there is a conversion chart on the back of your drug coding booklet.

4.6 Using the tape
The tape is fairly fragile. It can be easily damaged and will dent or snap, if bent or pressed too firmly against the respondent’s skin. Also the ring connecting the hook to the tape is a relatively weak point. Avoid putting more strain on this ring than necessary to make the measurements.

When extending the tape, hold the tape case rather than the tape itself as this puts less strain on the hook and tape. When hooking the tape to the sternal notch, do not press into the sternal notch so much that the tape kinks.

4.7 Seated measurements
If the respondent is unable to stand in the correct position, or finds it difficult to stand steadily, ask them to sit for the measurement. Use an upright chair and position it close to a wall. Still try to support the arm if possible. You may need to sit or kneel to take the reading.

If the respondent is much taller than you, take the measurement with the respondent sitting.

If the respondent’s arm is much longer than yours, support the arm close to the elbow rather than wrist level. Your arm must not be between the elbow and shoulder, as this will not provide sufficient support.
If the respondent is wearing a belt, ask them if it would be possible to remove it or loosen it for the measurement.

Pockets should be emptied.
Some respondents may be wearing religious or other symbols which they cannot remove and which may affect the measurement. Do not embarrass or offend the respondent by asking them to remove such things.

If the respondent is not willing to remove bulky outer garments or tight garments and you are of the opinion that this will significantly affect the measurement, record this on the Schedule at questions WJRel and/or HJRel. Some respondents may be wearing articles of clothing which cannot be removed and will affect the measurement (e.g.: saris) – this should also be recorded.

If possible, ask the respondent to empty their bladder before taking the measurement. If the person is over 16 they will be eligible to provide a urine sample – this may be collected earlier in the interview if the person needs to empty their bladder.

5.5 Using the insertion tape
All measurements should be taken to the nearest millimetre. If the length lies half-way between two millimetres, then round to the nearest whole millimetre. For example, if the measurement is halfway between 68.3 and 68.4, round up to 68.4. And if the measurement is halfway between 68.8 and 68.9, round down to 68.8. Please note that you must enter the measurement to one decimal place - do not round it to the nearest centimetre. For example, enter ‘78.2’, not just ‘78’. If you do not enter a decimal point, the computer will give you a warning. If the measurement is exactly, say, 78cm, then all you need to do is suppress the warning and it will automatically fill in the ‘.0’ for you. Otherwise, you must go back and amend your answer. As a further check, the computer will also ask you to confirm that a measurement ending in ‘.0’ is correct.

Ensure the respondent is standing erect in a relaxed manner and breathing normally. Weight should be evenly balanced on both feet and the feet should be about 25-30cm (1 foot) apart. The arms should be hanging loosely at their sides.

If possible, kneel or sit on a chair to the side of the respondent.

Pass the tape around the body of the respondent and insert the plain end of the tape through the metal ring at the other end of the tape.

To check the tape is horizontal you have to position the tape on the right flank and peer round the participant's back from his/her left flank to check that it is level. This will be easier if you are kneeling or sitting on a chair to the side of the respondent.
5.8 General points
The tape should be tight enough so that it doesn’t slip but not tight enough to indent clothing. If clothing is baggy, it should be folded before the measure is taken.

If the respondent is large, ask him/her to pass the tape around rather than having to "hug" them. Remember though to check that the tape is correctly placed for the measurement being taken and that the tape is horizontal all the way around.

If your second waist or hip measurement differs by 3cm or more from the first, the computer will give you a warning. If you have made a mistake when entering the figures (e.g. typed 78.2 instead of 68.2), you should type over the mistake. If it was not a mistake, you should suppress the warning and take a third measurement.

If you have problems palpating the rib, ask the respondent to breathe in very deeply. Locate the rib and as the respondent breathes out, follow the rib as it moves down with your finger. If your respondent has a bow at the back of her skirt, this should be untied as it may add a substantial amount to the waist circumference.

Female respondents wearing jeans may present a problem if the waistband of the jeans is on the waist at the back but dips down at the front. It is essential that the waist measurement is taken midway between the lower rib margin and the iliac crest. Therefore in this circumstance the waist measurement would be taken on the waistband at the back and off the waistband at the front. Only if the waistband is over the waist all the way around can the measurement be taken on the waistband. If there are belt loops, the tape should be threaded through these so they don’t add to the measurement.

5.9 Recording problems
We only want to record problems that will affect the measurement by more than would be expected when measuring over light clothing. As a rough guide only record a problem if you feel it affected the measurements by more than 0.5cm. We particularly want to know if waist and hip are affected differently.

Hold the buckle flat against the body and flatten the end of the tape to read the measurement from the outer edge of the buckle. Do not pull the tape towards you, as this will lift away from the respondent’s body, affecting the measurement.

5.6 Measuring waist circumference
1. The waist is defined as the point midway between the iliac crest and the costal margin (lower rib). To locate the levels of the costal margin and the iliac crest use the fingers of the right hand held straight and pointing in front of the participant to slide upward over the iliac crest. Men’s waists tend to be above the top of their trousers whereas women’s waists are often under the waistband of their trousers or skirts.

2. Do not try to avoid the effects of waistbands by measuring the circumference at a different position or by lifting or lowering clothing items. For example, if the respondent has a waistband at the correct level of the waist (midway between the lower rib margin and the iliac crest) measure the waist circumference over the waistband.

3. Ensure the tape is horizontal. Ask the participant to breathe out gently and to look straight ahead (to prevent the respondent from contracting their muscles or holding their breath). Take the measurement at the end of a normal expiration. Measure to the nearest millimetre and record this on the schedule.

4. Repeat this measurement again.

5. If you are of the opinion that clothing, posture or any other factor is significantly affecting the waist measurement, record this on the schedule.

5.7 Measuring hip circumference
1. The hip circumference is defined as being the widest circumference over the buttocks and below the iliac crest. To obtain an accurate measurement you should measure the circumference at several positions and record the widest circumference.

2. Check the tape is horizontal and the respondent is not contracting the gluteal muscles. Pull the tape, allowing it to maintain its position but not to cause indentation. Record the measurement on the schedule to the nearest millimetre, e.g. 95.3. If the length lies halfway between two millimeters, then round to the nearest even millimetre.

3. If clothing is significantly affecting the measurement, record this on the schedule.

4. Repeat this measurement again.
6 Step test

6.1 Introduction
The step test is an objective measure of physical fitness developed by researchers at the Medical Research Council (MRC) Cambridge. The test provides a measure of functional aerobic work capacity (VO2max). The VO2max is used to assess cardiorespiratory fitness levels and predict aerobic work capacity. Aerobic work capacity has been shown to have the potential to respond to training and lifestyle changes. Therefore it is critical to measure this to determine the protective health benefits of physical fitness.

6.2 Exclusion criteria
CAPI will take you through the exclusion criteria. Respondents are excluded from the step test if they are:

- Pregnant (if you have been told)
- Younger than 16 at the start of the fieldwork period or older than 74 at the end of the fieldwork period
- Aged 65 to 74 and having had a fall (other than sport-related fall) in the previous 12 months
- Abdominal surgery in last 3 months
- Wearing a pacemaker/implantable cardiac defibrillator
- Musculoskeletal problem affecting lower back, hip, knees, ankles, feet etc (e.g. bad rheumatism, artificial leg, bad feet) that makes it difficult for the participant to step up and down repeatedly
- Dizzy spells – respondent’s judgement of having balance problems rather than formal diagnosis
- Intermittent claudication (pain on exercise, due to poor blood supply to legs)
- History of cardiac disease (any of the following: heart attack, heart surgery, cardiac catheterisation, coronary angioplasty, heart valve disease)
- Cardiac symptoms (responses indicating possible angina or heart attack from the rose angina questionnaire)
- Stroke
- TI (transient ischaemic attack), if less than 1 year since last attack or not on aspirin
- Chronic obstructive pulmonary disease including chronic bronchitis or emphysema
- An average blood pressure measurement of 160/100 or above
- Has concerns about doing the test and is not willing to take part or not willing to give signed consent.

People with asthma are NOT excluded.

If a person with asthma does not wish to do the test, then s/he will be excluded. If the person is willing to take part, you should advise them to take any medication they would normally take before doing physical exercise.

If after answering the CAPI exclusion criteria questions the respondent is ineligible, CAPI will prompt you to explain to them that it would be safest if they did not administer the test. Please note that under the F9 function is some ‘lay’ terms to describe abnormal heart rhythm and intermittent claudication. Please look at this as people with an abnormal heart rhythm should not take part in the step test.

6.3 Consent
Written consent is required for the step test. The office copy of the appropriate form must be initialled, signed and dated by the respondent and the nurse.

6.4 Equipment
You will need:
- A single step (1 x 15cm for those aged 55-74 and 1 x 20cm for those aged 16-54)
- A stopwatch
- A Polar fitness heart rate monitor
- A stopwatch
- A wristwatch
- A non slip rubber mat

6.4.1 How to use the heart rate monitor
The Polar fitness heart rate monitor works by transmitting a signal from the electrode around the respondent’s torso to the wristwatch that they are wearing, which in turn gives a heart rate reading. Once the strap has been fitted, the watch can be used.

1. The wristwatch will display the time of day setting to start.
2. Press the button on the front of the watch and EXE should appear. This initiates a countdown while the watch checks the strength of the heart rate reading.
3. Underneath the seconds countdown is a heart symbol. This symbol gives you an indication of the strength of the connection between the strap and the wristwatch.
   a. The heart is full, blue in colour and flashes. There is a good connection and the heart rate is being transmitted. After a few seconds the watch will show you the heart rate reading for the respondent and the blue heart symbol will continue to flash underneath the reading.
   b. The heart is just an outline. The connection is not sufficient enough to transmit a heart rate reading. The strap will need to be repositioned and the electrodes on the strap may need to be moistened until a full blue heart is displayed on the watch (see section 6.6, item 1).
4. To clear the wristwatch and stop the heart rate reading, press the button on the front of the wristwatch until STOP appears. This will set the wristwatch back to the time of day setting.

6.4.2 Care and maintenance of the heart rate monitor
- For the purposes of hygiene, the plastic electrode casing and wrist watch must be wiped with a mild antibacterial wipe after it is worn by a respondent. Wipe the front and back of the casing and the watch, allowing it to dry before it is packed away. It is particularly important to clean the equipment if there is more than one respondent doing the step test within a household. If this is the case, it must be wiped between respondents.
6.5.2 Clothing and footwear

Respondents should be asked to wear something light and cool. Shorts and T-shirt are ideal but any light clothing that allows easy movement is acceptable. A loose fitting top is advisable as it makes fitting the heart rate monitor easier.

Trainers are ideal but any comfortable walking shoe is acceptable. The step does have one or two sharp edges so it is not advisable to do the test barefoot or only wearing socks.

6.6 Procedure

1. Fit the strap Start by having the strap loose and wrap it around the respondent’s torso. Do it up at the side, position the electrodes over the front and tighten the strap. The strap should be sufficiently tight to keep the electrodes in place but not to impede breathing in any way. The strap should be positioned just below the sternum, for women this can be just below the bra line. Most respondents will be able to do this for themselves, however it will need to be checked for positioning and tightness.

2. Moist the electrode area to ensure good contact between the electrodes and the skin. This can be done with water or KY jelly.

3. Turn the wristwatch on and ensure that you are getting a heart rate on the watch. If you are experiencing difficulty getting a heart rate reading it is more than likely because of poor contact between the electrodes and the skin. The electrodes may need to be moistened more.

4. Check that you are using the appropriate step, CAPI will tell you which height step to use. If the step is not sitting on carpet, it must be placed on the non-slip rubber mat to prevent it from slipping while the test is being conducted.

5. Ask the respondent to get into position by standing with both feet together at the base of the step, hands by their side.

6. Discourage them from talking and waving their arms around as it increases their heart rate. Remind the participant that their whole foot must go on the step, not just their toes or half a foot. This is for safety and for a more accurate reading.

7. Explain that it will be just like their practice run with the computer counting them down 5, 4, 3, 2, 1 and then they begin when they hear the first ‘up’. Further explain that every 30 seconds a heart rate reading will need to be recorded so you will need to check the watch that they are wearing for this.

8. Record the respondents stepping heart rate given by CAPI on your hear rate record card.

9. Check that the respondent is ready to begin and then activate the sound file in CAPI. Start the stopwatch after the countdown.

It is very important that you demonstrate this correctly, as respondents are more likely to follow what you do rather than what you say.

6.4.3 How to use the stopwatch

The make and model of stopwatches in the field may vary so it is important to ensure you are familiar with the type you will be using. In general the following apply:

• To change from time mode to stopwatch mode (if necessary):
  - Press the middle button labelled “Mode”.

• To reset the stopwatch:
  - Press the button on the left hand side (if this restarts the stopwatch, press the right button once to stop it, then the left button twice, until zero appears).

• To start and stop the stopwatch:
  - Press the button on the right hand side labelled “Start/Stop”.

It is recommended that you practice using the stopwatch, to familiarise yourself with the model that you have, before carrying out an interview.

6.5 Preparing the respondent

Explain to the respondent the purpose of the test and what is involved.

6.5.1 Demonstrating and respondent practice

Demonstrate the step test fully using the demonstration screen in CAPI.

• Start the demonstration using the ‘up up down down’ sound file. To activate the sound file PRESS <1> and <ENTER>.

• The sound file will play for a maximum of 8 minutes but you can stop it at anytime by pressing <1> AND <ENTER>.

• If the respondent is happy to proceed allow them to practice, using the appropriate size step, for up to 1 minute. You can start the demonstration screen by pressing the page up key.

• If at this stage the respondent is not comfortable with doing the test then code them out. If they have not fully understood the demonstration, or if you feel that they would be at risk if they proceeded with the test, do not administer it.

• If necessary, clean the plastic electrode casing using a mild soap and water solution. Dry it carefully with a soft towel. Never use alcohol or any abrasive material such as steel wool or cleaning chemicals.

• Please make sure that the electrode casing is dried properly. If it is stored when it is wet, the transmitter may be activated and shorten the lifespan of the battery.

• You will be provided with extra elastic straps, which attach to the plastic casing. The straps will need to be cleaned regularly by soaking them in a mild soap and water solution and allowing them to air dry. Please do not put the elastic strap in the washing machine or tumble dryer as it may damage the strap.

• Check that the respondent is comfortable bending forward and allowing them to air dry. Please do not put the elastic strap in the washing machine or tumble dryer as it may damage the strap.

• Please make sure that the electrode casing is dried properly. If it is stored when it is wet, the transmitter may be activated and shorten the lifespan of the battery.

• You will be provided with extra elastic straps, which attach to the plastic casing. The straps will need to be cleaned regularly by soaking them in a mild soap and water solution and allowing them to air dry. Please do not put the elastic strap in the washing machine or tumble dryer as it may damage the strap.

• Please make sure that the plastic electrode casing is dried properly. If it is stored when it is wet, the transmitter may be activated and shorten the lifespan of the battery.

• You will be provided with extra elastic straps, which attach to the plastic casing. The straps will need to be cleaned regularly by soaking them in a mild soap and water solution and allowing them to air dry. Please do not put the elastic strap in the washing machine or tumble dryer as it may damage the strap.

• Please do not expose the heart rate monitor to extended periods of direct heat e.g. by leaving it in the car, as this may damage the unit. Store it in a cool, dry place.
10. Using the stopwatch, record the heart rate on the heart rate record card every 30 seconds. Provided that the respondent completes all 8 minutes of the step test, you will need to record a total of 16 heart rate readings.

11. Monitor the respondent while they are doing the step test to ensure that they are doing the movement correctly, their whole foot is going on the step and that the test is not causing them any physical discomfort or difficulties.

12. If it is necessary stop the respondent before they complete the 8 minutes (see section 6.7), stop the stopwatch, activate the sound file for resting heart rate and get the respondent to sit down. Record resting heart rate on the heart rate record card at 15 second intervals for 2 minutes. The computer will beep every 15 seconds for the two minute period so you will not need to use the stopwatch.

13. If they complete the 8 minutes, ask the respondent to sit down and activate the resting heart rate sound file on the computer. Record the recovery heart rate on the heart rate record card.

14. Allow the respondent to rest for 5 minutes, during which time, accurately transfer the information from the heart rate record card into CAPI. If one heart rate measurement was not obtained you will need to enter 999 on the heart rate record card and in CAPI. The record card must not be left with the respondent.

15. Explain to the respondent that they may feel a little ‘stiff and sore’ in the next couple of days as a result of stretching calf and gluteal muscles. Reassure the respondent that it is not cause for concern and that any discomfort will be resolved in 2-3 days. Further add that if they are concerned they should see their GP.

16. Remove the electrode strap and wrist watch and clean with an antibacterial wipe, allowing it to air dry before it is packed away.

6.7 Stopping rules
CAPI will calculate and inform you of the age related maximum stepping heart rate for the respondent. If at anytime during the 8 minute period, the respondent’s heart rate exceeds this limit STOP the test. Stop the test by saying:

“We’ll done, I think we now have all the information we need.”

OR

“Thanks, that’s all the information I need, we can stop now.”

Do not alarm the respondent but be supportive and encouraging. Do not tell them that the test was stopped because of their heart rate.

Other circumstances when the step test should be stopped are if the respondent:
- complains about safety
- shows a clear deterioration in performance, such as slowing down and not keeping pace with the rhythm
- shows signs of confusion during the test
- is fatigued
- shows signs of respiratory distress, such as gasping for breath
- slips, stumbles, falls off the step or loses balance
- wants to stop the test – this could be for any reason

If you feel it is unsafe to continue for any reason in addition to the ones above

If the test is stopped for any of these reasons then get the respondent to sit down, record resting heart rate and monitor them for a few minutes before continuing with the nurse schedule.

6.8 Obtaining optimal performance
The following rules should be applied to ensure that respondents obtain their optimal performance during the step test:
- At the outset, explain to the respondent that the test requires concentration and should ideally be conducted in a quiet room.
- Ask the respondent to rest for 5 minutes before the test. During this time you can be administering the exclusion questionnaire, demonstrating the movement etc. It will be best if the respondent is seated at this point to ensure their heart rate is not elevated before the test begins.
- Ensure that respondent safety is maintained at all times. Place the step near a wall so that if the respondent does lose balance they have some support.
- The respondent should use the demonstration time to practise the movement and keep in time to the rhythm.
- Discourage the respondent from talking during the test and also from waving their arms as this increases their heart rate.
- If the respondent finds keeping to the rhythm difficult, count for them such as up, two, three, four, down, two, three, four.
- Foot placement during the test is very important. The full foot should be placed on the step, not half the foot.
- You should give gentle encouragement to help reassure the respondent whilst doing the test but do not mention timings.

6.9 Respondent feedback
At the outset of the step test, respondents should be told that feedback cannot be provided about their individual performance. Explain that heart rate results alone do not provide meaningful information about fitness, instead the results need to be combined with other known information to estimate maximum oxygen uptake. Further explain that this is not something that can be provided at the time and that an individual’s heart rate during the test can be affected by what people have had to eat or drink before taking the test, as well as nerves and adrenaline.

Copyright © 2009, The Health and Social Care Information Centre. All rights reserved
7 SALIVA SAMPLE COLLECTION (AGE 4+)

We wish to obtain a measure of exposure to passive smoking. This can be detected by measuring the level of cotinine in saliva. Cotinine is a derivative of nicotine and shows recent exposure to tobacco smoke, either because the individual is a smoker or because they have been exposed to other people's tobacco smoke. Note that respondents' cotinine analysis results will not be sent to them or their GP. This means that respondents will only be offered a GP letter if they have had their blood pressure measured.

7.1 Eligibility

A saliva sample should be obtained from all core sample respondents aged 4 years and over. A sample will not be requested from pregnant girls; as mentioned earlier, you should not ask for this information if it has not been volunteered. Respondents who are HIV positive or have Hep B or Hep C should not give a saliva sample. You should not ask this information but if the respondent volunteers the information code as unable to give a sample and write a note.

7.2 Equipment

For all respondents:
- Plain 5 ml tube
- Short wide bore straw.
- Kitchen paper

Alternative equipment for adults:
- Plain 5 ml tube
- Dental roll
- Kitchen paper

The straw makes it easier for people to direct their saliva sample into the tube. Its use will also minimise the amount of other items that are included in saliva, such as crumbs, which might enter the tube.

If adult or child respondents prefer to dribble directly into the tube, then this method should be used. The dental roll is available for adults, should they prefer this.

Obtaining consents

There is a separate consent form for the saliva sample Saliva Sample Consent Form – S. This is to obtain consent to take the sample and should be signed by the respondent or the parent or person with legal parental responsibility in the case of children.

Before taking the sample, check that you have the written consent and that you have circled the correct code on the front of the booklet (office copy). If the respondent agrees to the saliva sample, you should circle code 11 on the front of the consent booklet. If the respondent refused the saliva sample or you were unable to obtain the sample you would code 12.

Once you have obtained the sample, write the respondent's date of birth and serial number on a urine/saliva tube label in blue biro and attach it to the saliva tube.

7.3 Procedure

The aim is to get as much saliva as possible into the tube.

The protocol

1. Remove the cap from the plain tube.

2. Give the straw to the respondent. Explain that you want him/her to gather up their saliva (spit) in their mouth and then let it dribble down the straw into the tube. The saliva does not need to go through the straw, the straw is just intended to direct the saliva into the tube. Make sure that you are not getting sputum i.e. that the respondent is not clearing their chest for the spit.

3. Allow the respondent about three minutes to do this. Collect as much as you can in this time. The saliva will be frothy, so it is easy to think you have collected more than you actually have, so do not give up too soon. You should have at least 0.5 cm depth in the tube (not including froth).

4. If respondents find it difficult to use the straw they may dribble directly into the tube. This is acceptable, but encourage them to use the straw where possible.

5. If the respondent's mouth is excessively dry and they can not produce saliva allow them to have a drink of plain water. Wait for a few minutes to ensure that no water is retained when they provide the saliva sample.

6. Record on the computer that you have taken the sample along with any problems you may have encountered.

NB. If an adult respondent has a problem with dribbling into the tube then you can follow the protocol for using the dental roll (see below).

Using the dental roll:

The procedure is very simple, but it is crucial to make sure that an adequate amount of saliva is collected.
8 NON FASTING BLOOD SAMPLE (16+)

The protocol for taking blood samples set out below is written in accordance with the Clinical Procedure Guidelines: Venepuncture. All nurses are to read this document before carrying out any venepuncture procedure.

8.1 Eligibility

All persons aged 16 and over, with the following exceptions, are eligible to give blood.

a. Pregnant women

b. Respondents who are HIV positive or who have hepatitis B or C (see section 8.7)

c. People with clotting or bleeding disorder

By clotting or bleeding disorders we mean conditions such as haemophilia and low platelets, i.e. thrombocytopenia. There are many different types of bleeding/clotting disorders but they are all quite rare. The reason these respondents are excluded from blood sampling is that:

a) The integrity of their veins is extremely precious

b) We do not wish to cause prolonged blood loss

For the purposes of blood sampling, those who have had, for example, a past history of thrombophlebitis, a deep venous thrombosis, a stroke caused by a clot, a myocardial infarction or an embolus are NOT considered to have clotting disorders.

d. People who have ever had a fit

Respondents who have ever had a fit (e.g. epileptic fit, convulsion) should not be asked to provide a blood sample. This applies even if the fit(s) occurred some years ago.

e. People who are currently on anticoagulant drugs, e.g. Warfarin therapy

Check if the respondent has a clotting or bleeding disorder or is on anticoagulant drugs, such as Warfarin, and record this in CAPI. These are very uncommon. If you find someone with these problems, do not attempt to take blood, even if the disorder is controlled.

Aspirin therapy is not a contraindication to blood sampling. If you are uncertain whether a condition constitutes a contraindication to blood sampling, the Survey Doctor will be happy to answer your queries.

f. Adults who are not willing or able to give their consent in writing or children whose parent/guardian is unwilling or unable to give consent in writing.

8.2 Purpose

A non-fasting blood sample will be collected from those aged 16 and over, who give consent for this and will be analysed for the following:

1. Instruct the respondent to take the dental roll from the tube, insert it in his/her mouth and leave it there until soaked. The aim is to get the dental roll saturated with saliva.

2. Moving the dental roll about the mouth, without chewing, helps to ensure thorough wetting. For most people, 3 minutes will be ample to ensure thorough wetting.

3. If the respondent complains of a dry mouth, and you think you will have difficulties in filling the roll, you can ask them to drink some water before starting the procedure. Wait for a few minutes to ensure that no water is retained when they provide the saliva sample.

4. When the respondent has finished, ask her/him to remove the dental roll from her/his mouth and place it in the plain tube.

5. Check that the roll is well soaked. The tube should feel noticeably heavier than an unused one. If the dental roll rattles around in the tube like a pea, it is not sufficiently wet, and you should ask the respondent to put it back in her/his mouth for a further period.

6. Record on the computer that you have taken the sample, and mention any problems you might have encountered.

7.4 Packaging the saliva sample

1. Make sure that the lid of the salivary tube is secure.

2. Label the tube (using the RED labels provided for samples). Enter the respondent’s serial number and date of birth on the label.

3. Insert the tube in the packaging. The choice of the appropriate size of packaging will depend on the total number of samples obtained by each respondent as explained in Section 8.9.

Continue to pack as instructed in Section 8.9 ‘Packaging the saliva and urine samples’.
BLOOD SAMPLE | WHAT IT MEASURES
--- | ---
Glycated Haemoglobin | Glycated haemoglobin is a measure of the respondent’s longer term glycaemic status. High levels are indicative of poor control of, or undiagnosed diabetes.

Total, LDL and HDL cholesterol | Total cholesterol and LDL cholesterol increase the risk of atherosclerosis (‘furring’ of the arteries). Raised levels are associated with higher risks of heart attacks, while HDL cholesterol has a protective role.

The blood will not be tested for any viruses, such as HIV (AIDS).

8.3 Consent
As blood sampling is an invasive procedure we need to ensure that fully informed written consent is obtained from each respondent. Information on what they are consenting to is mainly given in the Stage 2 leaflet, and the respondent confirms that they have been provided with this information on the consent form.

The leaflet ‘Giving a blood sample’ also provides useful information about the risks around giving a sample and after-care. This is information that you should be giving verbally in any case, and you therefore do not need to ensure that the respondent has read this leaflet in advance as long as you make sure you have covered all the points yourself.

On no account should you ever take blood before you have obtained written consent to do so from the respondent.

There are two further written consents we wish to obtain in respect to blood sampling - consent to send the results to the GP and consent to store a small amount of the blood - you should seek to contain all these consents before you take any blood.

The Blood Sample Consent Form is BS (A) is divided into three sections – consent to take the blood, consent to send the results to their GP, consent for blood storage. A signature is needed for each section.

Small quantities of blood are being stored in special freezers for further analysis in the future. Future analysis will definitely not involve tests for viruses (e.g. HIV (AIDS) test). Your survey specific instructions will specify whether or not there may be any genetic testing. Any future analysis will be unlinked which means that the researcher doing the analysis will not be able to link it back to the respondent. Respondents will therefore not receive the results of any tests done on their blood in the future.

The questions on the CAPI questionnaire will take you step by step through all the procedures for obtaining consents. Make sure you follow these carefully - recording consent codes as instructed and giving reasons for refusals, if applicable.

In summary:
- Ask the respondent if they would be willing to have a blood sample taken. Try to reassure respondents about the process, and be prepared to answer their concerns. You will need to explain the importance of written consent to the respondent.

8.4 Equipment
1 x plain red tube
1 x EDTA (purple) tube

8.5 Preparing the respondent
Protocol on preparing the respondent can be found in the CPG on page 8.

Further points to note include:
- Ask the respondent to remove any jackets, thick garments and/or roll their sleeves up.
- Instruct the respondent to remain as still as possible.

8.6 Taking the blood sample
Please refer to the clinical procedure guidelines.

8.7 Other important points
‘Giving a blood sample’ leaflet
We need to be sure that each respondent is left with information about giving a blood sample, including information about who to contact should they experience any side effects as a result of the blood sample.

To provide them with this information, leave the respondent with the leaflet ‘Giving a blood sample’. The leaflet includes information on any possible side effects they may experience such as pain and bruising, and how to care for the puncture site. It is also a useful leaflet to leave behind to reassure the friends and family of the respondent of the procedure used should they have any concerns after your visit.

Venepuncture check questions
Always complete the Venepuncture checklist on CAPI for every respondent from whom you attempt to take blood. This shows that you have followed the correct procedure, and noted, where applicable, any abnormalities, and the action you took. The checklist is usually towards the end of the CAPI.

Please remember to check the respondent just before you leave and note any changes in their physical appearance in CAPI.

Fainting respondents
If a respondent looks or feels faint during the venepuncture procedure, it should be discontinued. The respondent should be asked to lie down with feet elevated.
• Never return any used sharps bins by post or courier to the Operations Department or other member of the freelance nurse or interviewer panel.

Place the used needles and the vacutainer holders in the sharps box and put gloves etc in the self-seal disposal bag. The needle disposable box should be taken to your local hospital or GP practice for incineration. Telephone them beforehand, if you are not sure where to go. If you cannot find a place to dispose of the sharps bin, contact your nurse supervisor who will be able to give you information on appropriate places.

The sealed bag containing gloves etc. can be disposed of with household waste as long as it does not have any items in it that are contaminated by blood.

**Needle stick injuries**

The following information is based on guidelines from the Department of Health, immediately following exposure.

**First Aid**

• Encourage wound to bleed.

• Do not suck.

• Wash liberally with soap and water without scrubbing, do not use antiseptics and skin washes.

• Dry and apply waterproof dressing.

• Exposed mucous membrane and conjunctivae should be irrigated copiously with water.

Following the above procedure it is recommended that the nurse attend a nearby accident and emergency department to ensure immediate current needle stick injury assessment/treatment.

Please note that you should not take any further action in the respondent’s home; any further procedures which might be necessary (such as taking a sample of the respondent’s blood) would be carried out by somebody else.

**Report**

• Incident to be reported as soon as possible to Nurse Supervisor, who will report the incident to the Survey Doctor.

• Special Report form to be completed and sent to Operations Standards Co-ordinator at Brentwood.

As soon as the nurse supervisor hears, she will ensure that the nurse is offered appropriate advice and support.

**Respondents who are HIV or Hepatitis B positive**

If a respondent volunteers that they are HIV, Hepatitis B or Hepatitis C positive, do not take a blood sample. Record this as the reason in the CAPI. You should never, of course, seek this information.
8.8 Labelling & packaging the sample(s)

Label the tubes as you take the blood. It is vital that you do not confuse blood tubes within a household.

Use the set of serial number and date of birth labels to label the vacutainer tubes. Attach a serial number label to every tube that you send to the lab. Enter the serial number and date of birth very clearly on each label. Make sure you use blue biro—it will not run if it gets damp. Check the date of birth with the respondent again verbally.

It cannot be stressed enough the importance of correctly labelling each tube with the correct serial number for the person from whom the blood was obtained. Apart from the risk of matching up the blood analyses to the wrong person's data, we will be sending the GP the wrong results. Imagine the implications of an abnormal result being reported to the wrong respondent.

8.9 Packaging the blood and saliva samples

Pack the blood tubes for each informant separately from those of other members of the household. All tubes from one person should be packed together in one dispatch container. You have been provided with two different types of dispatch containers, a small one and a large one. Depending on the total number of samples each informant provides, you will need to use the appropriate packaging.

“Saliva-only” households: you would only have a saliva-only household if all the adults had refused nurse visits or samples. In this case, all saliva samples from the same household can go in the same dispatch container. In this case, all relevant dispatch notes should be put into the box.

If you have taken more than one sample type in a household, then each household member must have their samples dispatched separately. If you have a blood only household, then each household member must have their samples dispatched separately.

8.10 The packaging comprises

Small packaging

- Absorbent insert
- Plastic container
- Cardboard mailing box with foam

Using the small packaging

1. Insert the blood sample tubes in the pockets of the absorbent insert.
2. Roll the insert with the folded dispatch note*.
3. Place the rolled insert in the plastic container and close.
4. Push the plastic container into the foam and put in the cardboard box.

* If you find it difficult to insert the dispatch note in the plastic tube, fold it and put it in the cardboard box.

Please note:

- Use a separate package for each informant.
- Do not seal the mailing box with tape.
- Check there is a label firmly attached and addressed to the RVI lab in Newcastle.
- The packaging comprises

Using the large packaging

1. Insert the sample tubes in the bubble wrap pouch.
2. Remove the red tape and seal the bubble wrap pouch.
3. Roll the insert with the folded dispatch note* and close.
4. Put the large plastic container in the cardboard box.

*If you find it difficult to insert the dispatch note in the plastic tube, fold it and put it in the cardboard box.

Remember to check that the serial number and dates of birth correspond on the dispatch notes and blood tubes.

8.11 Posting the blood and saliva samples

The size of the packaging means you will not be able to post blood samples in a letter box. The samples will have to be taken to the post office for posting.

The samples should be posted within 24 hours of the sample been taken. Try to avoid taking samples if you think that you will be unable to post them within 24 hours.

Weekend posting

If you miss the Saturday post collection, the sample must be posted on the following Monday morning.

Storage of blood samples

If you are unable to post the samples immediately, they can be stored at room temperature. When you have posted the samples, fill in the date of posting on the office copy of the Dispatch Notes.

8.12 Completing the Dispatch Note

The consent booklet contains one lab Dispatch Note. This should be filled in with a black pen and sent to the laboratory with the blood and/or saliva samples.

- Enter the informant's serial number very carefully. This should both correspond to your entry on page 1 of the Consent Booklet and to the serial numbers you have recorded on the tubes.
- Complete items 2, 3 and 4. Check that the date of birth is correct and consistent with entry on nurse schedule and tube label. Don't forget to code which age group category the informant belongs to.
- Complete item 5 (date sample was taken).

On the DISPATCH NOTE:

- At item 6 ring a code to tell the laboratory whether or not permission has been obtained to store part of the blood. Your entry here should correspond to your entry at Item 9e on the front page of the booklet.
- At item 7 enter your Nurse Number.

Tear off the appropriate dispatch note and send with the samples to the laboratory.
On the last page of the consent booklet complete the Office DISPATCH note for the non-fasting blood samples and saliva samples. This tells us the date you sent the samples to the lab and indicates what we should expect back from the laboratory.

If you have only achieved an incomplete blood sample (e.g. have only filled one tube), please state this clearly on both copies of the dispatch note and give the reason.
This glossary explains terms used in the report, other than those fully described in particular chapters.

**Accelerometer**
A small and lightweight device used to provide an objective measure of activity levels that records the frequency, intensity, and duration of both physical activity and sedentary behaviour. The accelerometer used in the HSE 2008 was the Actigraph model GT1M, worn on the waist using a belt. The GT1M is a dual axis accelerometer; however, it was originally supplied with only one axis ‘turned on’ and was used as a digital uni-axial accelerometer that records movement on the vertical axis. Full details are provided in Appendix A of Volume 2.

**Acute sickness**
An illness or injury which caused the participant to cut down on any of the things he or she usually does about the house, at work or school or in his or her free time (in the two weeks prior to the interview).

**Age standardisation**
Age standardisation has been used in order to enable different groups to be compared after adjusting for the effects of any differences in their age distributions.

When different sub-groups are compared in respect of a variable on which age has an important influence, any differences in age distributions between these sub-groups are likely to affect the observed differences in the proportions of interest.

Age standardisation was carried out for adults aged 16 and over, using the direct standardisation method. The standard population to which the age distribution of sub-groups was adjusted was the mid-year 2007 population estimates for England. All age standardisation has been undertaken separately within each sex.

Age standardisation was carried out using the age-groups: 16-24, 25-34, 35-44, 45-54, 55-64, 65-74 and 75 and over.

**Anthropometric measurements**
See Body mass index (BMI) and Waist circumference

**Arithmetic mean**
See Mean

**Blood analytes**
See Cholesterol (total and HDL), Glycated haemoglobin.

**Blood pressure**
Systolic (SBP) and diastolic (DBP) blood pressure was measured in participants aged 5 and over using a standard method (see Appendix B for measurement protocol). In adults, hypertension is defined as SBP at least 140 mmHg or DBP at least 90 mmHg or on drugs prescribed to control hypertension. See also Diastolic blood pressure, Systolic blood pressure

**Body mass index (BMI)**
Weight in kg divided by the square of height in metres. Adults (aged 16 and over) can be classified into the following BMI groups:
### BMI (kg/m²)

<table>
<thead>
<tr>
<th>Description</th>
<th>BMI (kg/m²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>Less than 18.5</td>
</tr>
<tr>
<td>Normal</td>
<td>18.5 to less than 25</td>
</tr>
<tr>
<td>Overweight</td>
<td>25 to less than 30</td>
</tr>
<tr>
<td>Obese</td>
<td>30 or more</td>
</tr>
</tbody>
</table>

In those with a BMI of 40 or more, the condition is defined as ‘morbid obesity’. Although the BMI calculation method is the same, there are no fixed BMI cut-off points defining overweight and obesity in children. Instead, overweight and obesity are defined using age and sex specific BMI cut-off points or BMI percentile cut-offs based on reference populations. In this report, overweight and obesity prevalence for children has been estimated using the 85th and 95th BMI percentiles of the 1990 UK reference curves as cut-offs respectively for overweight and obesity.

### Cholesterol (total and HDL)

Cholesterol is a fat-like substance (lipid) that is present in cell membranes and is a precursor of bile acids and steroid hormones. Cholesterol is essential for the body in small amounts. It is made in the liver and some is obtained from the diet. Serum total cholesterol concentration is positively associated with the risk of coronary heart disease (CHD). In this report, raised total cholesterol has been defined as at or above 5.0 mmol/l.

In a normal individual, high density lipoprotein (HDL) constitutes approximately 20-30% of total plasma cholesterol. HDL-cholesterol carries cholesterol away from the arteries back to the liver and is considered to be beneficial or ‘good’ cholesterol. Studies have demonstrated a strong direct relationship between coronary heart disease and low HDL-cholesterol. HDL-cholesterol was considered low at a level of less than 1.0 mmol/l.

### Cotinine

Cotinine is a metabolite of nicotine. It is one of several biological markers that are indicators of smoking. In this survey, it was measured in saliva. It has a half-life in the body of between 16 and 20 hours, which means that it will detect regular smoking (or other tobacco use such as chewing) but may not detect occasional use if the last occasion was several days ago. Anyone with a salivary cotinine level of 15 nanograms per millilitre or more is highly likely to be a tobacco user.

### Diastolic blood pressure

When measuring blood pressure the diastolic arterial pressure is the lowest pressure at the resting phase of the cardiac cycle. See also Blood pressure, Systolic blood pressure.

### Equivalised household income

Income was not included in the Health Survey series until 1997. Making precise estimates of household income, as is done for example in the Family Resources Survey, requires far more interview time than was available in the Health Survey. Household income was thus established by means of a card (see Appendix A) on which banded incomes were presented. Information was obtained from the household reference person (HRP) or their partner. Initially they were asked to state their own (HRP and partner) aggregate gross income, and were then asked to estimate the total household income including that of any other persons in the household. Household income can be used as an analysis variable, but there has been increasing interest recently in using measures of equivalised income that adjust income to take account of the number of persons in the household. Methods of doing this vary in detail: the starting point is usually an exact estimate of net income, rather than the banded estimate of gross income obtained in the Health Survey. The method used in the present report was as
follows. It utilises the widely used McClemens scoring system, described below.

1. A score was allocated to each household member, and these were added together to produce an overall household McClemens score. Household members were given scores as follows.

<table>
<thead>
<tr>
<th>Category</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>First adult (HRP)</td>
<td>0.61</td>
</tr>
<tr>
<td>Spouse/partner of HRP</td>
<td>0.39</td>
</tr>
<tr>
<td>Other second adult</td>
<td>0.46</td>
</tr>
<tr>
<td>Third adult</td>
<td>0.42</td>
</tr>
<tr>
<td>Subsequent adults</td>
<td>0.36</td>
</tr>
<tr>
<td>Dependant aged 0-1</td>
<td>0.09</td>
</tr>
<tr>
<td>Dependant aged 2-4</td>
<td>0.18</td>
</tr>
<tr>
<td>Dependant aged 5-7</td>
<td>0.21</td>
</tr>
<tr>
<td>Dependant aged 8-10</td>
<td>0.23</td>
</tr>
<tr>
<td>Dependant aged 11-12</td>
<td>0.25</td>
</tr>
<tr>
<td>Dependant aged 13-15</td>
<td>0.27</td>
</tr>
<tr>
<td>Dependant aged 16+</td>
<td>0.36</td>
</tr>
</tbody>
</table>

2. The equivalised income was derived as the annual household income divided by the McClemens score.

3. This equivalised annual household income was attributed to all members of the household, including children.

4. Households were ranked by equivalised income, and quintiles q1 – q5 were identified. Because income was obtained in banded form, there were clumps of households with the same income spanning the quintiles. It was decided not to split clumps but to define the quintiles as ‘households with equivalised income up to q1’, ‘over q1 up to q2’ etc.

5. All individuals in each household were allocated to the equivalised household income quintile to which their household had been allocated. Insofar as the mean number of persons per household may vary between quintiles, the numbers in the quintiles will be unequal. Inequalities in numbers are also introduced by the clumping referred to above, and by the fact that in any sub-group analysed the proportionate distribution across quintiles will differ from that of the total sample.


**Geometric mean**

A measure of the central tendency of a data set (the mean of n numbers expressed as the nth root of their product) that minimises the effects of extreme values.

**Glycated haemoglobin (HbA1C)**

The percentage of glycated haemoglobin is the percentage of haemoglobin in the circulation to which glucose is bound. Glycated haemoglobin (HbA1c) concentration is an indicator of average blood glucose concentration over the previous three months and is therefore used to assess glycaemic control in people with diabetes. It has also been suggested as a diagnostic or screening tool for diabetes. Diabetic patients with elevated glycated haemoglobin are at increased risk of microvascular and macrovascular events. Raised glycated haemoglobin has been taken as 7% or above.

**Government Office Region**

Government Office Region (GOR) is a key classification system used for regional statistics; it was used as the regional base for sampling and weighting in 2008. There are nine Government Office Regions in England: North East, North West, Yorkshire and the Humber, East
Midlands, West Midlands, East of England, London, South East and South West. The nine category system has been used since 1998, however, GOR boundaries may change from year to year as they reflect administrative boundaries.

**High blood pressure**
See **Blood pressure**.

**Household**
A household was defined as one person or a group of people who have the accommodation as their only or main residence and who either share at least one meal a day or share the living accommodation.

**Household Reference Person**
The household reference person (HRP) is defined as the householder (a person in whose name the property is owned or rented); if there is more than one such person in a household, it is defined as the person with the highest income. If there is more than one householder with equal income, then the household reference person is the oldest.

**Hypertension**
See **Blood pressure**.

**Income**
See **Equivalised household income**

**Index of Multiple Deprivation**
The Index of Multiple Deprivation 2004 (IMD) provides a measure of area deprivation, with deprivation based on measures in seven domains, namely income, employment, health deprivation and disability, education, skills and training, barriers to housing and services, crime and living environment. Within each domain, data are collected from a variety of sources.

For example, health deprivation is assessed on the basis of measures such as the years of potential life lost and emergency admissions to hospital for 32,482 Super Output Areas (SOAs) in England. SOAs are ranked on the basis of deprivation from 1 (most deprived) to 32,482 (least deprived). In the Health Survey, deprivation quintiles are used to reflect broad categories of deprivation.

**Logistic regression**
Logistic regression was used to investigate the effect of two or more independent or predictor variables on a two-category (binary) outcome variable. The independent variables can be continuous or categorical (grouped) variables. The parameter estimates from a logistic regression model for each independent variable give an estimate of the effect of that variable on the outcome variable, adjusted for all other independent variables in the model.

Logistic regression models the log ‘odds’ of a binary outcome variable. The ‘odds’ of an outcome is the ratio of the probability of its occurring to the probability of its not occurring. The parameter estimates obtained from a logistic regression model have been presented as odds ratios for ease of interpretation.

For continuous independent variables, the odds ratio gives the change in the odds of the outcome occurring for a one unit change in the value of the predictor variable.

Parameter estimates for categorical independent variables have been presented in two ways. In some cases, one category of the categorical variable has been selected as a baseline or reference category, with all other categories compared to it. Therefore there is no parameter estimate for the reference category and odds ratios for all other categories are the ratio of the odds of the outcome occurring between each category and the reference category, adjusted for all other variables in the model. In other cases, where there is no obvious reference category, the odds ratios for a given category of a categorical
independent variable gives the change in the odds of the outcome occurring compared to the overall odds (‘to average’).

The statistical significance of independent variables in models was assessed by the likelihood ratio test and its associated p value. 95% confidence intervals were also calculated for the odds ratios. These can be interpreted as meaning that there is a 95% chance that the given interval for the sample will contain the true population parameter of interest. In logistic regression a 95% confidence interval which does not include 1.0 indicates the given parameter estimate is statistically significant.

**Longstanding illness and limiting longstanding illness**

Longstanding illness was defined as an illness, disability or infirmity that had troubled the respondent over a period of time or was likely to affect them over a period of time. Longstanding illnesses were coded into categories defined in the International Classification of Diseases (ICD), but it should be noted that the ICD is used mostly to classify conditions according to the cause, whereas HSE classifies according to the reported symptoms. A longstanding illness was defined as limiting if the respondent reported that it limited their activities in any way.

**Mean**

Means in this report are **Arithmetic means** (the sum of the values for cases divided by the number of cases).

**Median**

The value of a distribution which divides it into two equal parts such that half the cases have values below the median and half the cases have values above the median.

**Morbid obesity**

See **Body mass index**.

**NS-SEC**

The National Statistics Socio-economic Classification (NS-SEC) was introduced from April 2001, and replaced Social Class based on occupation and Socio-economic Groups (SEG). NS-SEC is a social classification system that attempts to classify groups on the basis of employment relations, based on characteristics such as career prospects, autonomy, mode of payment and period of notice. Full details can be found in ‘The National Statistics Socio-economic Classification User Manual 2002’, ONS 2002.

There are fourteen operational categories representing different groups of occupations (see below) and a further three ‘residual’ categories.

<table>
<thead>
<tr>
<th>Descriptive definition</th>
<th>NS-SEC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large employers and higher managerial occupations</td>
<td>L1, L2</td>
</tr>
<tr>
<td>Higher professional occupations</td>
<td>L3</td>
</tr>
<tr>
<td>Lower managerial and professional occupations</td>
<td>L4, L5, L6</td>
</tr>
<tr>
<td>Intermediate occupations</td>
<td>L7</td>
</tr>
<tr>
<td>Small employers and own account workers</td>
<td>L8, L9</td>
</tr>
<tr>
<td>Lower supervisory and technical occupations</td>
<td>L10, L11</td>
</tr>
<tr>
<td>Semi-routine occupations</td>
<td>L12</td>
</tr>
<tr>
<td>Routine occupations</td>
<td>L13</td>
</tr>
<tr>
<td>Never worked and long-term unemployed</td>
<td>L14</td>
</tr>
</tbody>
</table>

The three residual categories: L15 (full time students); L16 occupation not stated or inadequately described and L17 (not classifiable for other reasons) are excluded when the classification is collapsed into its analytical classes.
The categories can be further grouped into:
Managerial and professional occupations  L1-L6
Intermediate occupations  L7-L9
Routine and manual occupations  L10-L13

This results in the exclusion of those who have never worked and the long term unemployed, in addition to the groups mentioned above.

The main differences between NS-SEC and SEG that users need to be aware of are:
• The introduction of SOC2000 which includes various new technology occupations not previously defined in SOC90,
• Definitional variations in employment status in particular with reference to the term ‘supervisor’,
• The inclusion of armed forces personnel in the appropriate occupation group,
• The separate classification of full-time students, whether or not they have been or are presently in paid employment, and
• The separate classification of long term unemployed who previously were classified by their most recent occupation.

This change has resulted in a discontinuity in time series data. The operational categories of NS-SEC can be aggregated to produce an approximated version of the previous Socio-economic Group. These approximations have been shown to achieve an overall continuity level of 87%.

The Health Survey for England generally uses the five category system of NS-SEC in which respondents are classified as managerial and professional, intermediate, small employers and own account workers, lower supervisory and technical, and semi-routine and routine occupations. In analyses presented in this report it is the NS-SEC of the household reference person which is used.

Obesity
See Body mass index.

Odds ratio
See Logistic regression

Overweight
See Body mass index.

Percentile
The value of a distribution which partitions the cases into groups of a specified size. For example, the 20th percentile is the value of the distribution where 20 percent of the cases have values below the 20th percentile and 80 percent have values above it. The 50th percentile is the median.

p value
A p value is the probability of the observed result occurring due to chance alone. A p value of less than 5% is conventionally taken to indicate a statistically significant result (p<0.05). It should be noted that the p value is dependent on the sample size, so that with large samples differences or associations which are very small may still be statistically significant. Results should therefore be assessed for their importance on the magnitude of the differences or associations as well as on the p value itself.

Quintile
Quintiles are percentiles which divide a distribution into fifths, i.e., the 20th, 40th, 60th and 80th percentiles.

Region
See Government Office Region, Strategic Health Authority.

Spearhead PCTs
Spearhead PCTs are the most health deprived areas of England. They are areas in the bottom fifth nationally for three or more of the following indicators:
- Male life expectancy at birth
- Female life expectancy at birth
- Cancer mortality rate in those aged under 75
- Cardiovascular disease (CVD) mortality rate in those aged under 75
- Index of multiple deprivation 2004 (LA summary), average score.

These local authority areas have been mapped onto primary care trust boundaries to identify Spearhead PCTs. This report uses Spearhead status as designated in 2008.

Standardisation
In this report, standardisation refers to standardisation (or ‘adjustment’) by age (see Age standardisation).

Step test
The step test used in the HSE 2008 was an indirect method of measuring physical fitness; this was chosen because the tests were conducted in participants’ homes during the nurse visit and direct measurement of oxygen consumption was therefore not possible. The test consisted of the step test originally developed by researchers at MRC Cambridge, and involved the subject stepping up and down a single step. The participant stepped up and down first at a slow pace for one minute, at a rate of one leg movement per second. This equates to one body lift (i.e. the respondent stepping up and back down from the step) over four seconds. Then the stepping pace gradually increased over the next seven minutes until, by the end of the eighth minute, the frequency was 33 body lifts per minute (i.e. one body lift in just under two seconds).

The participant’s heart rate was the primary outcome measure of the step test. The heart rate was recorded at 30 second intervals during the test and at 15 second intervals for two minutes after the step test ended. These heart rate measurements were then combined with the resting heart rate obtained earlier during blood pressure measurement to determine the submaximal relationship between heart rate and oxygen uptake. This relationship was then extrapolated up to age-predicted maximal heart rate to provide an estimate of the individual’s maximal oxygen uptake (VO$_{2\text{max}}$), the overall level of fitness. See Appendix B in Volume 1 for details of the data processing and variable definitions.

Strategic Health Authority (SHA)
From July 2006 a new configuration of Strategic Health Authorities (SHAs) was introduced in England, reducing the number from 28 to 10 SHAs. The boundaries are the same as those of the Government Office Regions with the exception of the South East that has been divided into South East Coast SHA and South Central SHA. SHAs have been used for regional analyses in this report.

Systolic blood pressure
When measuring blood pressure, the systolic arterial pressure is defined as the peak pressure in the arteries, which occurs near the beginning of the cardiac cycle. See also Blood pressure, Diastolic blood pressure.

Unit of alcohol
Alcohol consumption is reported in terms of units of alcohol; one unit of alcohol is 10ml by volume of pure alcohol. See Volume 1, Chapter 12 for revised conversion of drinks to units since 2007.

Waist circumference
Waist circumference is a measure of deposition of abdominal fat i.e. central obesity. A raised waist circumference has been taken to be greater than 102cm in men and greater than 88cm in women. According to NICE guidelines, for men, waist circumference of less than 94cm is defined as ‘low’ waist measurement, between 94 and 102cm is ‘high’ and more than 102cm is ‘very high’. For women,
waist circumference of less than 80cm is defined as ‘low’ waist measurement, between 80 and 88cm is ‘high’ and more than 88cm is ‘very high’. These waist circumference categories, in combination with BMI, have been used to identify categories of health risk.


The National Centre for Social Research is the largest independent social research institute in Britain, specialising in social survey and qualitative research for the development and evaluation of policy. NatCen specialises in research in public policy fields such as health, housing, employment, crime, education and political and social attitudes. Projects include ad hoc and continuous surveys, using face-to-face, telephone, online and postal methods; many use advanced applications of computer assisted interviewing. NatCen has approximately 300 staff, a national panel of over 1,000 interviewers and 200 nurses who work on health-related surveys.

The Research Department of Epidemiology and Public Health, chaired by Professor Sir Michael Marmot, is a leading centre for research into the social determinants of health. The department has a strong interdisciplinary structure. The Department houses over 170 staff, in 11 main research groups, namely the Joint Health Surveys Unit, part of the Health and Social Surveys Research Group; Cancer Research UK-funded Health Behaviour Research Centre; Central and Eastern Europe Research Group; Dental Public Health; Health Care Evaluation Group; International Centre for Life Course Studies; MRC Unit for Lifelong Health and Ageing (including the National Survey of Health and Development); Psychobiology Group; Clinical Epidemiology Group; Genetic Epidemiology Group; and the Whitehall II Study. Collaborative research is conducted through the International Institute for Society and Health and across the Division.

The Department’s research programme is concerned particularly with social factors in health and illness and inequalities in these, including national cross-sectional surveys of health and behaviour (such as diet), longitudinal studies of cardiovascular disease (Whitehall studies) and the English Longitudinal Study of Ageing (ELSA); international studies of cardiovascular disease and diabetes; sociodental indicators of need; and the socio-economic and policy implications of an ageing population.