This glossary explains terms used in the report, other than those fully described in particular chapters.

**Acute sickness**

An illness or injury which caused the informant 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 2005 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), C-reactive protein, Fibrinogen, Ferritin, Haemoglobin and Glycated Haemoglobin**.

**Blood pressure**

Systolic (SBP) and diastolic (DBP) blood pressure were measured in informants aged 5 and over using a standard method (see Appendix B for measurement protocol). In adults, hypertension is defined as SBP $\geq 140$ mmHg or DBP $\geq 90$ mmHg or on drugs prescribed to control hypertension.

**Body mass index**

Weight in kg divided by the square of height in metres. Adults (aged 16 and over) can be classified into the following BMI groups:

<table>
<thead>
<tr>
<th>BMI ($\text{kg/m}^2$)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 18.5</td>
<td>Underweight</td>
</tr>
<tr>
<td>18.5 to less than 25</td>
<td>Normal</td>
</tr>
<tr>
<td>Over 25 to less than 30</td>
<td>Overweight</td>
</tr>
<tr>
<td>Over 30</td>
<td>Obese</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 several other...
methods including age and sex specific BMI cut-off points or BMI percentiles 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.

**Cardiovascular disease**
Informants were classified as having cardiovascular disease (CVD) if they reported ever having any of the following conditions diagnosed by a doctor: angina, heart attack, stroke, heart murmur, irregular heart rhythm, or 'other heart trouble'. In contrast with the definition used in early HSE reports but in keeping with the definition used in HSE 2003 and 2004, high blood pressure and diabetes are not included in this definition, since they are risk factors for CVD and are dealt with separately. For the purpose of this report, informants were classified as having a particular condition only if they reported that the diagnosis was confirmed by a doctor. No attempt was made to assess these self-reported diagnoses objectively. It is therefore possible that some misclassification may have occurred, because some informants may not have remembered (or not remembered correctly) the diagnosis made by their doctor.

**C-reactive protein (CRP)**
This is a marker for inflammation. Small amounts are found in the blood but when inflammation is present, levels rise.

**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 below 5.0 mmol/l. A lower cholesterol value has also been recommended for high risk individuals (at or below 4.0mmol/l, instead of 5.0mmol/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.

**Creatinine**
This is excreted in urine. Unlike sodium and potassium, the quantity of creatinine excreted is relatively stable over time. Therefore in the analysis of urinary salt, the ratio of sodium to creatinine and of potassium to creatinine are analysed as proxy measures for dietary sodium and potassium. See also Urine, Sodium, Potassium.

**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 McClements scoring system, described below.

1. A score was allocated to each household member, and these were added together to produce an overall household McClements 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 McClements 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.


**Ferritin**

Ferritin is the main form in which iron is stored in the liver, spleen and bone marrow. A small fraction of ferritin circulates in the bloodstream and this fraction correlates with body iron status.

**Fibrinogen**

Fibrinogen is a soluble protein involved in the blood clotting mechanism. Prospective population studies have established that
Fibrinogen is an independent predictor for ischaemic heart disease and stroke.


**Glycated Haemoglobin**

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 the key classification system used for regional statistics. 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.

**Haemoglobin**

The iron-containing molecule in red blood cells. Low haemoglobin (anaemia) is most commonly caused by iron deficiency or chronic disease.

**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) with the highest income. If there is more than one householder and they have equal income, then the household reference person is the oldest.

**Hypertension**

See Blood pressure.

**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.

**Income**

See Equivalised household income

**Ischaemic heart disease**

Informants were classified as having ischaemic heart disease (IHD) if they reported ever having angina or a heart attack diagnosed by a doctor.

**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) 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. There are fourteen operational categories representing different groups of occupations (for example higher and lower managerial, higher and
lower professional) and a further three ‘residual’ categories for full-time students, occupations that cannot be classified due to lack of information or other reasons. The operational categories may be collapsed to form a nine, eight, five or three category system. The Health Survey for England generally uses the five category system 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.

**Potassium**

The intake of potassium (K) can be estimated by measuring urinary excretion. This was analysed in HSE 2006 using a spot urine sample. There is an inverse association between potassium intake and blood pressure. See also **Urine, Sodium, Creatinine**.

**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**.

**Social class of household reference person**

A social class was assigned on the basis of the occupation of the household reference person using the Registrar General’s Standard Occupational Classification. Occupations are assigned to six social class categories:

<table>
<thead>
<tr>
<th>Social Class</th>
<th>Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Professional occupations</td>
</tr>
<tr>
<td>II</td>
<td>Managerial and technical occupations</td>
</tr>
<tr>
<td>III</td>
<td>Skilled occupations</td>
</tr>
<tr>
<td>(IIINM)</td>
<td>(non-manual)</td>
</tr>
<tr>
<td>(IIIM)</td>
<td>(manual)</td>
</tr>
<tr>
<td>IV</td>
<td>Partly skilled occupations</td>
</tr>
<tr>
<td>V</td>
<td>Unskilled occupations</td>
</tr>
</tbody>
</table>

In this report, these six social classes have been combined into two: non-manual (I, II, IIINM) and manual (IIIM, IV, V).

**Sodium**

The intake of sodium (Na) can be estimated by measuring urinary excretion. This was analysed in HSE 2006 using a spot urine sample. There is an association between sodium intake and blood pressure. See also **Urine, Potassium, Creatinine**.
**Standardisation**

In this report, standardisation refers to standardisation (or ‘adjustment’) by age (see Age standardisation).

**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, which has been divided into South East Coast SHA and South Central SHA.

**Unit of alcohol**

A unit of alcohol is 8g of ethanol. It is the amount contained in half a pint of ordinary beer or lager, or in a small glass of wine, or in a measure of spirits. See Volume 1, Chapter 9 for revised conversion of drinks to units for 2006.

**Urine analysis**

A spot urine sample was collected from adults (16 and over) in the core sample. This was used for the analysis of dietary Sodium, Potassium and Creatinine. Epidemiological, clinical and animal-experimental evidence shows a direct relationship between dietary electrolyte consumption and blood pressure (BP).

**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 94 cm is defined as ‘low’ waist measurement, between 94 and 102 cm is ‘high’ and more than 102 cm is ‘very high’. For women, waist circumference of less than 80 cm is defined as ‘low’ waist measurement, between 80 and 88 cm is ‘high’ and more than 88 cm is ‘very high’. These waist circumference categories, in combination with BMI, have been used to identify categories of health risk.
