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### Appendix D: Further information

### Appendix E: How are the statistics used?
Appendix A: Key sources

Some of the sources referred to in this publication are National Statistics. National Statistics are produced to high professional standards set out in the Code of Practice for Official Statistics. It is a statutory requirement that National Statistics should observe the Code of Practice for Official Statistics. The United Kingdom Statistics Authority (UKSA) assesses all National Statistics for compliance with the Code of Practice.

Some of the statistics included in this publication are not National Statistics and are included here to provide a fuller picture; some of these are Official Statistics, whilst others are neither National Statistics or Official Statistics. Those which are Official Statistics should still conform to the Code of Practice for Official Statistics, although this is not a statutory requirement.

Those that are neither National Statistics or Official Statistics may not conform to the Code of Practice for Official Statistics. Unless otherwise stated, all sources contained within this publication are considered robust. A brief explanation and short review of the quality of each of the sets of statistics used or referred to in this publication are provided below.

1. Sources used in this report

1.1 The Active People Survey

Sport England

The Active People Survey (APS) is the largest ever survey of sport and active recreation to be undertaken in Europe. The APS, first conducted by Ipsos MORI on behalf of Sport England, started on the 15th October 2005 and was completed on 16th October 2006. The sample was evenly divided over each month and spread across the whole year for each LA to ensure the results are not biased by variations associated with different seasons.

Due to the success of the Active People Survey 2005/06, Sport England repeated the survey and plan to run it as a continuous survey.

The primary objective of the APS is to measure levels of participation in sport and active recreation and its contribution to improving the health of the nation.

This includes a wide range of sports, including activities such as running, golf, swimming, team sports, racket sports, gymnastics, boxing, climbing and mountaineering, winter sports, archery, gym, and fitness activities or classes. It does not include recreational walking but does include more strenuous walking activities, such as hill trekking, cliff walking, gorge walking and power walking.

When measuring sports participation the survey was concerned with not only the type of activity but also the frequency, intensity and duration.

Since 2009, the Active People Survey provides Official Statistics under the Statistics and Regulations Act 2007.

https://www.sportengland.org/research/who-plays-sport/
1.2 Family Food
Department for Environment, Food and Rural Affairs (DEFRA)

Family Food is an annual publication which provides detailed statistical information on purchased quantities, expenditure and nutrient intakes derived from both household and eating out food and drink. Data is collected for a sample of households in the United Kingdom using self-reported diaries of all purchases, including food eaten out, over a two week period. Where possible, quantities are recorded in the diaries but otherwise estimated. Energy and nutrient intakes are calculated using standard nutrient composition data for each of some 500 types of food. Current estimates are based on data collected in the ‘Family Food Module of the Living Costs and Food Survey’.


1.3 Health at a Glance
Organisation for Economic Co-operation and Development (OECD)

The Health at a Glance Europe edition is biennial publication that presents a set of key indicators of health status, determinants of health, health care resources and activities, quality of care, health expenditure and financing in 35 European countries, including the 27 European Union member states, 5 candidate countries and 3 EFTA countries. The selection of indicators is based largely on the European Community Health Indicators (ECHI) shortlist, a set of indicators that has been developed to guide the reporting of health statistics in the European Union. It is complemented by additional indicators on health expenditure and quality of care, building on the OECD expertise in these areas.

Every other year, Health at a Glance provides the latest comparable data on different aspects of the performance of health systems in all other OECD countries as well as Europe. It looks at variations across countries in the costs, activities and results of health systems. Key indicators provide information on health status, the determinants of health, health care activities and health expenditure and financing in OECD countries.

Each indicator in these publications is presented in a user-friendly format, consisting of charts illustrating variations across countries and over time, brief descriptive analyses highlighting the major findings conveyed by the data, and a methodological box on the definition of the indicator and any limitations in data comparability.


1.4 Health Survey for England
Health and Social Care Information Centre

The Health Survey for England series was designed to monitor trends in the nation’s health, to estimate the proportion of people in England who have specified health conditions, and to estimate the prevalence of certain risk factors and combinations of risk factors associated with these conditions. 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.
Each survey in the series includes core questions and measurements (such as blood pressure, height and weight, and analysis of blood and saliva samples), as well as modules of questions on topics that vary from year to year.

The Health Survey for England has been carried out since 1994 by the Joint Health Surveys Unit of NatCen Social Research and the Research Department of Epidemiology and Public Health at UCL (University College London).

The Health Survey for England is a National Statistic.


1.5 Hospital Episode Statistics (HES)  
 Health and Social Care Information Centre

The HES data included in this bulletin are not routinely published, but are available on request.

Hospital Episode Statistics (HES) processes over 125 million admitted patient, outpatient and accident and emergency records each year.

HES is a data warehouse containing details of all admissions, outpatient appointments and A&E attendances at NHS hospitals in England. This data is collected during a patient’s time at hospital and is submitted to allow hospitals to be paid for the care they deliver. HES data is designed to enable secondary use, that is use for non-clinical purposes, of this administrative data.

It is a records-based system that covers all NHS trusts in England, including acute hospitals, primary care trusts and mental health trusts. HES information is stored as a large collection of separate records, one for each period of care, in a secure data warehouse.

Strict statistical disclosure controls are applied in accordance with the HES protocol, to all published HES data. This suppresses small numbers to reduce the risk of an individual being identified to ensure that patient confidentiality is maintained.

HES provides data for a wide range of healthcare analysis for the NHS, government and others including:

- national bodies and regulators
- local commissioning organisations
- provider organisations
- researchers and commercial healthcare bodies
- patients, service users and carers.

HES was originally conceived in 1987 following a report on collection and use of hospital activity information published by a steering group chaired by Dame Edith Körner (1921-2000).

Before 1987, only a 10 per cent sample of admitted patient records were collected nationally. By comparison HES aims to collect a detailed record for each ‘episode’ of admitted patient
care delivered in England, either by NHS hospitals or delivered in the independent sector but commissioned by the NHS.

Admitted patient care data is available for every financial year from 1989-90 onwards. During this period, the mechanisms for collecting the data have changed considerably, often in response to changes in the organisation of the NHS. For example, HES was once initially collated sub-nationally by regional health authorities. In 1996 these bodies were abolished and the NHS-Wide Clearing Service (NWCS) was set up to provide a means of transmitting the records. In 2006 this work was taken over by the Secondary Uses Service, which is run by the Health and Social Care Information Centre and the National Programme for IT.

Initially, data for HES publications was collected annually from provider submissions. After a number of years the frequency of collections increased to quarterly to allow analysis and investigation (these were not published) and a final annual publication was released at the end of the year. HES data is now collected monthly.

Hospital Episode Statistics, Admitted Patient Care publications are national statistics.

http://www.hscic.gov.uk/hes

1.6 National Child Measurement Programme
Health and Social Care Information Centre

Established in 2005/06, the National Child Measurement Programme (NCMP) for England records height and weight measurements of children in state-maintained schools in reception (aged 4–5 years) and year 6 (aged 10–11 years). However, 2006/07 is the first year that the data were considered an acceptable quality as the prevalence rate was only 48 per cent in 2005/06 although obesity prevalence for year 6 children between 2006/07 and 2008/09 is felt to be an underestimate due to low participation. The national report holds UK National Statistics status. The programme provides robust data for the child excess weight indicators in the Public health Outcomes Framework, and is a key element of the Government’s approach to tackling child obesity. The data are regarded as a valuable tool for driving action to tackle child obesity both locally and nationally. Through provision of a child’s result to their parents, the NCMP also provides local areas with an opportunity to raise parents’ awareness of child obesity as an issue, raise parents’ awareness of their own child’s weight status and potential health impacts, and provide an opportunity to provide further support to families to make healthy lifestyle changes.

Public Health England (PHE) has responsibility for national oversight of the programme, and on its behalf, the central collation and analysis of the NCMP data is coordinated by the Health and Social Care Information Centre (HSCIC). Local Authorities have a statutory responsibility to deliver the National Child Measurement Programme.

The National Child Measurement Programme is a National Statistic.

http://www.hscic.gov.uk/ncmp

1.7 Prescription Pricing Division
Health and Social Care Information Centre
Prescription statistics in this report are for calendar years. All prescription statistics in this report are based on information systems at the NHS Business Services Authority Prescription Pricing Division (NHSBSA (PPD)). The system used is the Prescription Analysis and Cost Tool (PACT). This system is based on an analysis of all prescriptions dispensed in the community, i.e. by community pharmacists and appliance contractors, dispensing doctors, and prescriptions submitted by doctors for items personally administered. Each item written on the prescription form (FP10) is counted as a single prescription item regardless of the quantity prescribed. Therefore differences in prescribing practices between GPs are not reflected in this data. The counts include items that are prescribed by GPs, nurses, pharmacists and others in England and then subsequently dispensed in the community. Therefore prescriptions that are written but not actually dispensed to the patient (or their representative) are not counted. Prescriptions written in hospitals or clinics that are dispensed in the community, prescriptions dispensed in hospitals, dental prescribing and private prescriptions are also not included.

http://www.hscic.gov.uk/primary-care

2. Other resources related to obesity, physical activity and diet

2.1 Child Measurement Programme Report (Wales)
   Public Health Wales

The establishment of the Wales Child Measurement Programme follows the successful feasibility study carried out in 2008/2009 by the Public Health Wales Observatory with support from other Welsh organisations.

A team led by the Consultant in Public Health Intelligence ran the study in 457 Welsh schools to test the feasibility of measuring all children in reception year and year four to identify trends in childhood heights and weights. The report recommended that a national childhood heights and weights programme be established to help inform strategy and service development and provide the basis for further research in the area.

http://www.wales.nhs.uk/sitesplus/888/page/67795

2.2 Healthcare Resource Groups
   Health and Social Care Information Centre

Healthcare Resource Groups (HRGs) are standard groupings of clinically similar treatments which use common levels of healthcare resource.

HRGs help organisations to understand their activity in terms of the types of patients they care for and the treatments they undertake. They enable the comparison of activity within and between different organisations and provide an opportunity to benchmark treatments and services to support trend analysis over time.

http://www.hscic.gov.uk/hrg
2.3 National Diet Nutrition Survey
Public Health England

The National Diet and Nutrition Survey (NDNS) is designed to assess the diet, nutrient intake and nutritional status of the general population aged 1½ years and over living in private households in the UK. The NDNS is jointly funded by Public Health England (PHE), an executive agency of the Department of Health, and the UK Food Standards Agency (FSA) and carried out by a consortium of three organisations: NatCen Social Research (NatCen), MRC Human Nutrition Research (HNR) and the University College London Medical School (UCL).


2.4 National Travel Survey
Department for Transport

The National Travel Survey (NTS) is a survey on personal travel. It provides a databank of personal travel information for Great Britain which enables the Department for Transport to answer a variety of policy and transport research questions. It is part of a continuous survey that began in July 1988, following ad hoc surveys since the mid-1960s. The survey is designed to identify long-term trends and is not suitable for monitoring short-term trends.

The National Travel Survey is a National Statistic.


2.5 PE and Sport Survey
Department for Education

The survey covers research into the proportion of pupils doing 2 hours of curriculum PE in partnership schools, and those exercising for at least 3 hours a week.


2.6 Quality and Outcomes Framework
Health and Social Care Information Centre

Quality and Outcomes Framework (QOF) record prevalence, achievement and exceptions data which includes information on obesity.

This publication provides data across General Practices in England which participated in the Quality and Outcomes Framework (QOF) in the last year. Participation by practices in the QOF is voluntary, though participation rates are very high, with most Personal Medical Services (PMS) practices also taking part.

http://www.hscic.gov.uk/qof
2.7 The Scottish Health Survey
Scottish Government

The Scottish Health Survey (SHeS) provides a detailed picture of the health of the Scottish population in private households and is designed to make a major contribution to the monitoring of health in Scotland. It is essential for the Scottish Government’s forward planning, for identifying gaps in health services provision and for identifying which groups are at particular risk of future ill-health.

http://www.scotland.gov.uk/Topics/Statistics/Browse/Health/scottish-health-survey

2.8 Tackling Obesities: Future Choices 2nd Edition – Modelling Future Trends in Obesity and Their Impact on Health
Foresight, Government Office for Science

This project looked at how we can implement a sustainable response to obesity in the UK over the next 40 years. It gathered scientific evidence from across a wide range of disciplines to inform a strategic view of this issue.


2.9 Tackling Obesity in England
National Audit Office (NAO)

NAO research identified wide variation in the way general practices manage overweight and obese patients, and uncertainty about which treatment and referral options were the most effective.


2.10 The Taking Part Survey
Department for Culture, Media and Sport

The Taking Part survey provides reliable national estimates of adult and child engagement with sport, libraries, the arts, heritage and museums and galleries.

The Taking Part Survey is a National Statistic.

https://www.gov.uk/government/collections/sat--2

2.11 The Welsh Health Survey
Welsh Government

The Welsh Health Survey (WHS) provides unique information about the health and health-related lifestyles of people living in Wales. It presents a picture of the health of the Welsh
population, variations between sub-groups and areas, and changes over time, and makes an important contribution to informing and monitoring public health strategy in Wales.

The Welsh Health Survey is a National Statistic

Appendix B: Technical notes

These notes help to explain some of the measurements used and presented in this report.

1. Obesity

1.1 Adults Body Mass Index (BMI)

Overweight and obesity among adults is measured in the Health Survey for England (HSE) using Body Mass Index (BMI). The BMI is calculated by dividing weight in kilograms, by the square of the height in metres (kg/m²).

\[
BMI = \frac{Weight\ (kg)}{Height^2\ (m^2)}
\]

Adults are classified into the following BMI groups:

<table>
<thead>
<tr>
<th>BMI range (kg/m²)</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 18.5</td>
<td>Underweight</td>
</tr>
<tr>
<td>18.5 to less than 25</td>
<td>Normal</td>
</tr>
<tr>
<td>25 to less than 30</td>
<td>Overweight</td>
</tr>
<tr>
<td>30 and over</td>
<td>Obese</td>
</tr>
<tr>
<td>40 and over</td>
<td>Morbidly obese</td>
</tr>
<tr>
<td>25 and over</td>
<td>Overweight including obese</td>
</tr>
</tbody>
</table>

1.2 National Institute for Health and Clinical Excellence (NICE) guidance

NICE guidance suggests that the measurement of waist circumference should be used for people with a BMI less than 35kg/m² to assess health risks (as shown in the table below). For adults with a BMI of 35kg/m² or more, risks are assumed to be very high with any waist circumference.
Assessing risk from overweight and obesity

<table>
<thead>
<tr>
<th>BMI classification</th>
<th>Waist circumference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Normal weight (18.5 to less than 25kg/m²)</td>
<td>No increased risk</td>
</tr>
<tr>
<td>Overweight (25 to less than 30kg/m²)</td>
<td>No increased risk</td>
</tr>
<tr>
<td>Obesity I (30 to less than 35kg/m²)</td>
<td>Increased risk</td>
</tr>
<tr>
<td>Obesity II (35 to less than 40kg/m²)</td>
<td>Very high risk</td>
</tr>
<tr>
<td>Obesity III (40kg/m² or more)</td>
<td>Very high risk</td>
</tr>
</tbody>
</table>

For men, low waist circumference is defined as less than 94cm, high as 94-102cm and very high as greater than 102cm. For women, low waist circumference is less than 80cm, high as 80-88cm and very high as greater than 88cm

Further information on the NICE guidelines.
http://www.nice.org.uk/guidance/GG43

1.3 Children - UK National BMI percentile classification

Due to differences in growth rates among boys and girls at each age, it is not possible to apply a universal formula in calculating obesity and overweight prevalence in children. Each sex and age group therefore needs its own level of classification for obesity. The British 1990 growth reference (UK90) percentiles are therefore used which gives a BMI threshold for each age above which a child is considered overweight or obese; those children whose BMI is above the 85th percentile are classified as overweight and those children whose BMI is above the 95th percentile are classified as obese. The percentiles are given for each sex and age. According to this method, 15% and 5% of children in 1990 had a BMI above this level and were thus classified as overweight/obese. Increases over 15% and 5% in the proportion of children who exceed the reference 85th/95th percentiles over time indicate an upward trend in the prevalence of overweight and obesity. Unless otherwise specified figures relating to the prevalence of childhood obesity in this report are determined by this method.

2. Health Outcomes

2.1 Hospital Episode Statistics - coding for Bariatric Surgery used in tables 7 and 8

The term “bariatric surgery” is often used to define a group of procedures that can be performed to facilitate weight loss although these procedures can be performed for conditions other than weight loss. It includes stomach stapling, gastric bypasses and sleeve gastrectomy. Using Hospital Episode Statistics (HES) data held at The Health and Social Care Information Centre, the number of Finished Consultant Episodes (FCEs) for bariatric surgery has been determined where the primary diagnosis was obesity (ICD-10 code E66) and the main or secondary procedure was one of the following OPCS codes for the relevant time periods. OPCS-4.2 codes were used between 1996/97 to 2005/06, OPCS-4.3 codes for 2006/07, OPCS-4.4 codes for 2007/08 and 2008/09, OPCS-4.5 codes for 2009/10 and OPCS-4.6 codes for 2010/11, 2011/12 and 2012/13. There was a slight change to the
OPCS-4.6 codes used in 2012/13 details of which can be found in the Methodological Change Note. There have been no further changes since then.


Latest data are based on the tenth revision of the International Classification of Diseases (ICD-10). The FCE data for bariatric surgery are based on the Office for Population, Censuses and Surveys: Classification of Intervention and Procedures, 4th Revision (OPCS-4) codes.

The table on the next page shows how the coding has changed over time.

A * indicates that this code was included for that year.
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</tr>
</thead>
<tbody>
<tr>
<td>G01.1</td>
<td>Oesophagogastrectomy and anastomosis of oesophagus to stomach</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>G01.2</td>
<td>Oesophagogastrectomy and anastomosis of oesophagus to transposed jejunum</td>
<td>*</td>
<td>*</td>
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<td>*</td>
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<td>*</td>
</tr>
<tr>
<td>G01.3</td>
<td>Oesophagogastrectomy and anastomosis of oesophagus to jejunum NEC</td>
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<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>G01.8</td>
<td>Other specified excision of oesophagus and stomach</td>
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<td>*</td>
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</tr>
<tr>
<td>G01.9</td>
<td>Unspecified excision of oesophagus and stomach</td>
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<td>*</td>
<td>*</td>
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<td>*</td>
</tr>
<tr>
<td>G02.1</td>
<td>Total oesophagectomy and anastomosis of pharynx to stomach</td>
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<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>G02.2</td>
<td>Total oesophagectomy and interposition of microvacularly attached jejunum</td>
<td>*</td>
<td>*</td>
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<td>*</td>
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<td>*</td>
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<tr>
<td>G02.3</td>
<td>Total oesophagectomy and interposition of jejunum NEC</td>
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<tr>
<td>G02.4</td>
<td>Total oesophagectomy and interposition of microvacularly attached colon</td>
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<td>*</td>
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<td>*</td>
</tr>
<tr>
<td>G02.8</td>
<td>Other specified total excision of oesophagus</td>
<td>*</td>
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<td>*</td>
</tr>
<tr>
<td>G02.9</td>
<td>Unspecified total excision of oesophagus</td>
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<tr>
<td>G03.1</td>
<td>Partial oesophagectomy and end to end anastomosis of oesophagus</td>
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<td>*</td>
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<tr>
<td>G03.2</td>
<td>Partial oesophagectomy and interposition of microvacularly attached jejunum</td>
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<td>*</td>
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<td>G03.3</td>
<td>Partial oesophagectomy and anastomosis of oesophagus to transposed jejunum</td>
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<td>*</td>
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<tr>
<td>G03.4</td>
<td>Partial oesophagectomy and anastomosis of oesophagus to jejunum NEC</td>
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<tr>
<td>G03.5</td>
<td>Partial oesophagectomy and interposition of microvacularly attached colon</td>
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<td>Partial oesophagectomy and interposition of colon NEC</td>
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<td>G03.8</td>
<td>Other specified partial excision of oesophagus</td>
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<tr>
<td>G03.9</td>
<td>Unspecified partial excision of oesophagus</td>
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<td>*</td>
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<td>*</td>
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<tr>
<td>G27.1</td>
<td>Total gastrectomy and excision of surrounding tissue</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
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<td>*</td>
</tr>
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<td>G27.2</td>
<td>Total gastrectomy and anastomosis of oesophagus to duodenum</td>
<td>*</td>
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<td>*</td>
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<tr>
<td>G27.3</td>
<td>Total gastrectomy and interposition of jejunum</td>
<td>*</td>
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<td>*</td>
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<tr>
<td>G27.4</td>
<td>Total gastrectomy and anastomosis of oesophagus to transposed jejunum</td>
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<td>*</td>
</tr>
<tr>
<td>G27.5</td>
<td>Total gastrectomy and anastomosis of oesophagus to jejunum NEC</td>
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<td>G27.8</td>
<td>Other specified total excision of stomach</td>
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<td>Maintenance of gastric band</td>
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<td>Conversion from previous anastomosis of stomach to duodenum</td>
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<td>Closure of connection of stomach and duodenum</td>
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<td>G32.1</td>
<td>Bypass of stomach by anastomosis of stomach to transposed jejunum</td>
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<td>G33.0</td>
<td>Conversion from previous anastomosis of stomach to jejunum NEC</td>
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<td>G33.1</td>
<td>Bypass of stomach by anastomosis of stomach to jejunum NEC</td>
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<td>Revision of anastomosis of stomach to jejunum</td>
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<tr>
<td>G33.8</td>
<td>Other specified other connection of stomach to jejunum</td>
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<td>Unspecified other connection of stomach to jejunum</td>
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<td>Removal of gastric band</td>
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<td>G34.1</td>
<td>Insertion of gastric bubble</td>
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<td>G34.2</td>
<td>Attention of gastric bubble</td>
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<tr>
<td>G34.9</td>
<td>Unspecified excision of duodenum</td>
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</table>
3. Physical activity

3.1 Physical activity among adults – Health Survey for England

The physical activity module was first used in the Health Survey for England (HSE) in 1991, repeated in 1992 to 1994 with minor changes, and received more substantial revisions in 1997 and 1998 (producing what is generally referred to as the ‘long’ version of the questionnaire). A ‘shorter’ version of the questionnaire was introduced in 1999, when the focus was minority ethnic groups; the shorter questionnaire was repeated in 2002, 2003 and 2004. In 2006, a slightly modified version of the long (1998) form of the questionnaire was used. In 2008, a new occupational physical activity set of questions were included within the questionnaire and additional questions on sedentary behaviour were also asked. To enable continuation of these trend data, the same methods for analysis were used in 2008, as well as the more detailed definition possible for 2008 using the enhanced questionnaire. The Health Survey for England (HSE) 2012 is the most recent to include questions about physical activity and fitness, where physical activity and fitness was the main focus of the report.

3.2 Objective measures of physical activity - Summary activity levels

In 2011, the Chief Medical Officers of the four UK countries introduced revised guidelines for physical activity. The most recent information on whether physical activity guidelines are being met is derived by summarising different types of activity into a frequency-duration scale. It takes into account the time spent participating in physical activities and the number of active days in the last week.

In the HSE, the summary levels are divided into four categories:

- **Meets recommendations**: a minimum of 150 minutes of moderate intensity physical activity (MPA) per week in bouts of 10 minutes or more or 75 minutes of vigorous intensity physical activity (VPA) per week or an equivalent combination of the two.

- **Some activity**: 60-149 minutes/week of MPA, 30-74 minutes/week of VPA, or an equivalent combination of these.

- **Low activity**: 30-59 minutes/week of MPA, 15-29 minutes/week of VPA, or an equivalent combination of these.

- **Inactive**: less than 30 minutes/week of MPA, less than 15 minutes/week of VPA, or an equivalent combination of these.

For comparisons of summary activity levels over time, HSE 2008 self-report data have been analysed with the lower duration for activities set to 30 minutes, to be comparable with results obtained from the shorter questionnaire used in 2003 and 2004. 1997 and 1998 data were also reanalysed using this longer minimum duration, to enable data for the five years to be compared. In 2008 bouts of activity lasting at least 10 minutes counted towards meeting the recommendations. Therefore, three bouts of activity lasting at least 10 minutes each would be considered sufficient to meet the recommendations on that day. Because bouts of activity lasting a minimum of 30 minutes are being used for comparison with results from previous years, the results presented in this chapter are likely to be an underestimate of the proportion of the population that meets the revised recommendations.
3.3 Objective measures of physical activity - Fitness

Physical fitness, also called functional capacity, is the ability of an individual to perform work. The most common form of work capacity assessed is the aerobic component, measured by the maximal oxygen uptake (VO$_2$max). Oxygen uptake refers to the use of oxygen by the body's cells. Oxygen uptake rises rapidly on starting exercise and reaches a plateau (steady state VO$_2$) by three to five minutes of steady exercise. Maximal oxygen uptake is reached when oxygen uptake does not increase despite further increase in intensity of the exercise (e.g. running faster or up a steeper incline), although not everyone has such a plateau. VO$_2$max is typically achieved by exercise that involves only about half the total body musculature.

The physical fitness test consisted of the step test originally developed by researchers at Medical Research Council (MRC) Cambridge. The test involved the subject stepping up and down a single step. The pace was given digitally by the nurse's laptop and the stepping lasted a maximum of eight minutes. The pace of stepping increased through the duration of the test. 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. The participant wore a Polar heart rate monitor round the chest which transmitted the heart rate to a receiver worn on the participant’s wrist. Using a stop watch to mark the time intervals, the nurse recorded the heart rate detected by the monitor. 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$_2$max), the overall level of fitness.

3.4 English, Scottish and Welsh comparisons among adults

The Scottish Health Survey (SHS) physical activity module is based on the Allied Dunbar National Fitness Survey (ADNFS).

Participants were asked about their participation in 4 types of activities:

- Home-based activities (housework, gardening, building work and DIY);
- Walking;
- Sports and exercise;
- Activity at work.

Prior to the SHS 2008, duration of participation in physical activities was set to 15 minutes. However, as the CMO recommendations state that activity can be accumulated in bouts of 10 minutes the questionnaire was updated in 2008 to include activities of 10 to 14 minutes duration.
For the first three categories, participants were asked to report any activities that lasted at least 10 minutes and the number of days in the past four weeks in which they had taken part in such activities. For walking, participants were also asked on how many days they had taken more than one walk of at least 10 minutes. Where a participant had taken more than one walk, the total time spent walking for that day was calculated as twice the average reported walk time.

In addition, those in full or part-time employment were asked about activity while at work. These participants were asked to rate how physically active they were in their job (options were: very physically active, fairly physically active, not very physically active and not at all physically active). This question on intensity was used in combination with a new question on sedentary activity at work to produce estimates of the duration of moderate activity at work per week.

The Welsh Health Survey asked adults on which days in the past week they did at least 30 minutes of light, moderate, and vigorous exercise or physical activity. Blocks of activity lasting more than 10 minutes, which were done on the same day, count towards the full 30 minutes. (Prior to 2011 the Department of Health recommended that adults do at least 30 minutes of moderate intensity physical activity on at least 5 days a week, however guidelines were revised during 2011 to allow more flexibility in how target activity levels are met). The new guidelines recommend that adults should aim to do at least 150 minutes of moderate activity during the week – alternatively, comparable benefits can be achieved by 75 minutes of vigorous activity.

Respondents were asked to include physical activity which is part of their job. Examples of each type of activity are:

- Light activity - housework or golf
- Moderate activity - heavy gardening or fast walking
- Vigorous activity - running or aerobics.

### 3.5 Physical activity among children

In 2011 new guidelines on the amount of activity recommended for health were published by the Chief Medical Officers of the four UK countries. For the first time, guidelines were published for children under five. Even for those unable to walk, physical activity should be encouraged from birth onwards. Those able to walk unaided are recommended to be active for at least 180 minutes (3 hours) per day, spread throughout the day. Examples of suitable activities include: walking or skipping to local destinations (school, a friend’s home, park, or shops); energetic play, such as using a climbing frame or riding a bicycle; bouts of more energetic activity, such as running and chasing games; and activities that involve all the major muscle groups.

The 2011 recommendations for children aged 5 to 18 are twofold. As previously, it is recommended that children should

- be at least moderately active for at least 60 minutes every day, though it is stated specifically that this is a minimum and that children and young people should engage in MVPA for up to several hours each day.
- undertake vigorous intensity activity, including muscle- and bone-strengthening activities, at least three days each week.
In the HSE 2012, the summary activity levels for children and young people are divided into three levels.

### Classification of summary activity in children

<table>
<thead>
<tr>
<th></th>
<th>Aged under 5</th>
<th>Aged 5 to 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meets recommendations</td>
<td>At least 180 minutes (3 hours) of physical activity on all seven days in the last week</td>
<td>At least 60 minutes (1 hour) of moderate to vigorous intensity physical activity (MVPA) on all seven days in the last week</td>
</tr>
<tr>
<td>Some activity</td>
<td>60-179 minutes of physical activity on all seven days in the last week</td>
<td>30-59 minutes of moderate to vigorous intensity physical activity on all seven days in the last week</td>
</tr>
<tr>
<td>Low activity</td>
<td>Fewer than 60 minutes of activity on each day, or activity of 60 minutes or more on fewer than seven days in the last week</td>
<td>Fewer than 30 minutes of moderate to vigorous intensity activity on each day, or moderate to vigorous intensity activity of 60 minutes or more on fewer than seven days in the last week</td>
</tr>
</tbody>
</table>

Due to the revisions to the 2012 children’s physical activity questionnaire care should be taken when comparing the results reported with previous HSE reports that present findings on child physical activity.

#### 3.6 Objective measures of physical activity

The *HSE 2008* is the most up to date source of information on objective measures of physical activity. A sub-sample of children aged 4 to 15 were asked to wear an accelerometer during the week following the interview. The accelerometer provides a measure of frequency, intensity and duration of physical activity, allowing classification of activity levels as sedentary, light, moderate and vigorous. The accelerometer was worn on a specially provided belt and each child was asked to wear the accelerometer during waking hours for seven consecutive full days; parent co-operation was also required, particularly for younger children. The device was taken off for activities such as showering or swimming, as the Actigraph is not waterproof. Also, some children removed their monitor during contact sports such as karate or rugby.

For adults, current evidence suggests that moderate or vigorous activity should be accumulated in bouts of at least 10 minutes to count towards meeting the then government’s recommendations, as it is these bouts of sustained activity that provide health benefits. However, this is not a realistic requirement for children, since the nature of children’s physical activity typically differs from adults’, being less likely to involve clearly defined periods of specific activities. Thus children’s activity is much more likely to be sporadic, occurring in short bursts. For this reason, in keeping with other studies, all of children’s moderate or vigorous activity has been taken into account in assessing whether they have met the then government guidelines for physical activity, rather than imposing a requirement for bouts of 10 minutes or more.
4. Diet and nutrition

4.1 Fruit and vegetable portions

Fruit and vegetable consumption is measured in portions; using guidelines specified in the ‘5 a day’ programme. The government recommends that people should eat five portions of fruit and vegetables a day. Five portions are defined as 400g of fruit and vegetables per day, an average of 80g per portion. A variety of foodstuffs represent a portion, including vegetables (fresh, frozen, canned), vegetables in composite dishes (such as pies or curries), salads, pulses, fruit (fresh, frozen, canned, dried), fruit in composites (such as pies or crumbles) and fruit juice. Below is a table showing the recommended portions sizes of the different types of fruit and vegetables in terms of everyday household measures. These measures have been used by the Health Survey for England when collecting data through dietary recall and for estimation of the number of portions respondents have consumed. The Low Income Diet and Nutrition Survey also followed the government guidelines in terms of what and how much counts as a portion, but estimated the weight of the fruit and vegetables consumed and divided by 80 (or 157 in the case of fruit juice to convert grams to millilitres) to determine the number of portions.

According to the current guidelines, fruit juice, regardless of how much is drunk in excess of one small glass (150ml), only counts as a maximum of one portion per day. This is due to its low fibre content and its high content of non-milk extrinsic sugars, which, when consumed in too high a quantity can lead to tooth decay and dental health problems. Pulses (such as beans, lentils and chick peas) can also only contribute a maximum of one portion per day regardless of how much is consumed; whilst they do contain fibre, they do not provide the same mixture of vitamins, minerals and other nutrients that can be obtained from fruit and vegetables. Due to their high starch content, potatoes in any form (including sweet potato varieties) and other starchy vegetables, such as plantain and green bananas, do not count towards the ‘5 a day’ portions. Nuts and seeds do not count towards the ‘5 a day’ portions. These guidelines and quantities are based on adult requirements and while the government recommends that children over the age of five should also consume five portions of a variety of the foodstuffs shown below, their portion sizes may be smaller. However, survey measures of fruit and vegetable consumption among children are based on adult portion sizes.

<table>
<thead>
<tr>
<th>Food item</th>
<th>Portion size</th>
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<tbody>
<tr>
<td>Vegetables (fresh, raw, tinned and frozen)</td>
<td>3 tablespoons</td>
</tr>
<tr>
<td>Pulses</td>
<td>3 tablespoons</td>
</tr>
<tr>
<td>Salad</td>
<td>1 cereal bowl</td>
</tr>
<tr>
<td>Vegetables in composites, such as vegetable chilli</td>
<td>3 tablespoons</td>
</tr>
<tr>
<td>Very large fruit, such as melon</td>
<td>1 average slice</td>
</tr>
<tr>
<td>Large fruit such as grapefruit</td>
<td>Half a fruit</td>
</tr>
<tr>
<td>Medium fruit, such as apples</td>
<td>1 fruit</td>
</tr>
<tr>
<td>Small fruit, such as plums</td>
<td>2 fruits</td>
</tr>
<tr>
<td>Very small fruit, such as blueberries</td>
<td>2 average handfuls</td>
</tr>
<tr>
<td>Dried fruit</td>
<td>1 tablespoon</td>
</tr>
<tr>
<td>Frozen fruit / tinned fruit</td>
<td>3 tablespoons</td>
</tr>
<tr>
<td>Fruit in composites, such as stewed fruit</td>
<td>3 tablespoons</td>
</tr>
<tr>
<td>Fruit juice</td>
<td>1 small glass (150ml)</td>
</tr>
</tbody>
</table>
4.2 Estimated average requirements and reference nutrient intakes

In 1991 the Committee on Medical Aspects of Food and Nutrition Policy (COMA) recommended that population average intakes of different macronutrients should not exceed specified limits. For example the population average intakes of total fat, saturated fatty acids and non-milk extrinsic sugars (principally added sugars) should not exceed 35 per cent, 11 per cent and 11 per cent of food energy respectively.

Energy intake is compared against the Estimated Average Requirement (EAR) for a group. Estimates of energy requirements for different populations are termed EARs and are defined as the energy intake estimated to meet the average requirements of the group. About half the people in the group will usually need more energy than the EAR and half the people in the group will usually need less.

Nutrient intakes derived from surveys are compared with Reference Nutrient Intakes (RNIs). These RNIs represent the best estimate of the amount of a nutrient that is enough, or more than enough, for about 97 per cent of people in a group. If average intake of a group is at the level of the RNI, then the risk of deficiency in the group is very small.

Also in 1991, the Department of Health published Dietary Reference Values (DRVs) which cover a range of intakes for most nutrients. The Scientific Advisory Committee on Nutrition (SACN) published revised DRVs for energy in 2011 representing the estimated average requirement for the population. For total fat, saturated and trans fatty acids and non-milk extrinsic sugars, dietary reference values (DRV) are the recommended maximum contribution these nutrients should make to the population average diet. For total carbohydrate, cis monounsaturated fatty acids and non-starch polysaccharides (NSP) the DRVs are recommended population averages. For protein, vitamins and minerals, reference nutrient intake (RNI) values are set at the levels of intake considered likely to be sufficient to meet the requirements of 97.5 per cent of the population and the lower reference nutrient intake (LRNI) values (for vitamins and minerals) are set at levels considered likely to be sufficient to meet the needs of only the 2.5 per cent of the population with the lowest requirements.

Table 1 shows the current DRVs for macronutrients and Table 2 shows the maximum daily salt intakes for children and adults.

Table 1 Current recommendations for fat, carbohydrates (including sugars) and fibre for adults

<table>
<thead>
<tr>
<th>Population average % of food energy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Saturated fatty acids</td>
<td>Not more than 11</td>
</tr>
<tr>
<td>Polyunsaturated fatty acids</td>
<td>6.5</td>
</tr>
<tr>
<td>Monounsaturated fatty acids</td>
<td>13</td>
</tr>
<tr>
<td>Trans fatty acids</td>
<td>Not more than 2</td>
</tr>
<tr>
<td>Total fat</td>
<td>Not more than 35</td>
</tr>
<tr>
<td>Non-milk extrinsic sugars</td>
<td>Not more than 11</td>
</tr>
<tr>
<td>Intrinsic and milk sugars, and starch</td>
<td>39</td>
</tr>
<tr>
<td>Total carbohydrate</td>
<td>50</td>
</tr>
<tr>
<td>Fibre as non-starch polysaccharide (g/day)</td>
<td>18</td>
</tr>
</tbody>
</table>

Table 2 Recommended maximum daily salt intakes for infants, children & adults

<table>
<thead>
<tr>
<th>Age</th>
<th>Target average salt intake (g/d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-6 months</td>
<td>Less than 1</td>
</tr>
<tr>
<td>7-12 months</td>
<td>1</td>
</tr>
<tr>
<td>1-3 years</td>
<td>2</td>
</tr>
<tr>
<td>4-6 years</td>
<td>3</td>
</tr>
<tr>
<td>7-10 years</td>
<td>5</td>
</tr>
<tr>
<td>11 years +</td>
<td>6</td>
</tr>
</tbody>
</table>

Public Health England (PHE) guidance on healthier and more sustainable catering and a range of supporting tools were published in August 2014. The guidance directly supports those who must, or have chosen to, meet GBSF. It includes guidance on the scientific principles for developing nutrient based standards to use for planning nutritionally balanced menus, and guidance on serving food to adults including older people to provide healthier and more sustainable catering. Target recommendations for nutrient intake and nutrient based standards for adults aged 19-74 years set out in this guidance are provided in Tables 3 and 4.

PHE’s catering guidance and support tools are available at: https://www.gov.uk/government/publications/healthier-and-more-sustainable-catering-a-toolkit-for-serving-food-to-adults

Table 3 Target recommendations

<table>
<thead>
<tr>
<th>Percentage of daily intake</th>
<th>Energy</th>
<th>Protein</th>
<th>Fibre</th>
<th>Total fat, saturated fat, sugar, salt</th>
<th>Vitamins and minerals (where insufficiencies are apparent)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average population requirement</td>
<td>Target</td>
<td>Average population requirement</td>
<td>Target</td>
<td></td>
</tr>
<tr>
<td>Breakfast</td>
<td>20</td>
<td>20</td>
<td>No target</td>
<td>20</td>
<td>No target</td>
</tr>
<tr>
<td>Lunch</td>
<td>30</td>
<td>30</td>
<td>29</td>
<td>30</td>
<td>35-40</td>
</tr>
<tr>
<td>Evening meal</td>
<td>30</td>
<td>30</td>
<td>29</td>
<td>30</td>
<td>35-40</td>
</tr>
<tr>
<td>Snacks</td>
<td>20</td>
<td>20</td>
<td>No target</td>
<td>**</td>
<td>No target</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>98 or less</td>
<td>100</td>
<td>100 or more</td>
</tr>
</tbody>
</table>

* Target for nutrients where excess or insufficiencies are apparent.

** Snacks will provide additional micronutrients to contribute to the micronutrient target of 100% or more over the day. You should take care not to encroach upon maximum safe levels of intake.

---

### Table 4 Nutrient-based standards for adults aged 19-74yrs

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Average population requirement (provided as daily averages over 7 days)</th>
<th>Recommended target for areas of excess or insufficiency (provided as daily averages over 7 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy* (MJ/kcal)</td>
<td>9.4/2250</td>
<td>Less than 85.8</td>
</tr>
<tr>
<td>Total fat (g)</td>
<td>87.5</td>
<td>Less than 27.0</td>
</tr>
<tr>
<td>Saturated fat (g)</td>
<td>Max 27.5</td>
<td>Less than 27.0</td>
</tr>
<tr>
<td>Carbohydrate (g)</td>
<td>Min 300</td>
<td></td>
</tr>
<tr>
<td>NMES (g)</td>
<td>Max 66.0</td>
<td>Less than 64.7</td>
</tr>
<tr>
<td>Fibre (as NSP) (g)</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Protein (g)</td>
<td>Min 50</td>
<td></td>
</tr>
<tr>
<td>Sodium (mg)</td>
<td>Max 2400</td>
<td>Less than 2352</td>
</tr>
<tr>
<td>Salt (equivalent g)</td>
<td>Max 6.0</td>
<td>Less than 5.9</td>
</tr>
<tr>
<td>Calcium (mg)</td>
<td>700</td>
<td>More than 700</td>
</tr>
<tr>
<td>Iodine (µg**)</td>
<td>140</td>
<td>More than 140</td>
</tr>
<tr>
<td>Iron (mg)</td>
<td>14.8</td>
<td>More than 14.8</td>
</tr>
<tr>
<td>Magnesium (mg)</td>
<td>300</td>
<td>More than 300</td>
</tr>
<tr>
<td>Potassium (mg)</td>
<td>3500</td>
<td>More than 3500</td>
</tr>
<tr>
<td>Selenium (µg**)</td>
<td>75</td>
<td>More than 75</td>
</tr>
<tr>
<td>Zinc (mg)</td>
<td>9.5</td>
<td>More than 9.5</td>
</tr>
<tr>
<td>Riboflavin (mg)</td>
<td>1.3</td>
<td>More than 1.3</td>
</tr>
<tr>
<td>Folate (µg**)</td>
<td>Min 200</td>
<td>More than 200</td>
</tr>
<tr>
<td>Vitamin A*** (µg**)</td>
<td>700</td>
<td>More than 700</td>
</tr>
<tr>
<td>Vitamin D (µg**)</td>
<td>Min 10****</td>
<td></td>
</tr>
</tbody>
</table>

* If only considering adults aged 60-74 years average energy requirement is lower**

µg = micrograms.

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### 5. Blood pressure - Health Survey for England (HSE)

The levels of blood pressure used to define hypertension in the HSE are in accordance with the latest guidelines on hypertension management. To compute the prevalence of hypertension, adult informants were classified in one of four groups on the basis of their SBP (systolic blood pressure) and DBP (diastolic blood pressure) readings and their current use of anti-hypertensive medication.

<table>
<thead>
<tr>
<th>Not currently taking any prescribed drugs that lower blood pressure</th>
<th>SBP&lt;140 mmHg and DBP&lt;90 mmHg</th>
<th>SBP≥140 mmHg and DBP≥90 mmHg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Currently taking medication prescribed to lower blood pressure</td>
<td>Normotensive - untreated</td>
<td>Hypertensive - untreated</td>
</tr>
<tr>
<td></td>
<td>Hypertensive - controlled</td>
<td>Hypertensive - uncontrolled</td>
</tr>
</tbody>
</table>

The three ‘hypertensive’ categories are grouped as ‘hypertensive’ in HSE. The definition of hypertension used for clinical purpose talks about ‘sustained’ levels of high blood pressure, while HSE only measures blood pressure at one point in time. This needs to be taken into account when interpreting the results. Hypertensive controlled and hypertensive uncontrolled groups are all those who take drugs that were prescribed to lower their blood pressure.
6. Equivalised household income quintiles - Health Survey for England (HSE)

Household income was established in the HSE by means of a show-card on which banded incomes were presented. 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 depending, 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.
Appendix C: Government policy, targets and outcome indicators

This appendix covers government policy, targets and outcome indicators related to obesity, physical activity or diet. These are particularly relevant when looking at time series data elsewhere in the report.

1. Obesity

The Government will be launching its comprehensive Childhood Obesity Strategy in summer 2016. It will look at what contributes to a child becoming overweight and obese. It will also set out what more can be done by all.

1.1 Sugar reduction

Eating too much sugar can lead to weight gain, which increases the risk of heart disease, type 2 diabetes, stroke and some cancers. It is also a cause of tooth decay. In the Budget statement in March 2016 the Chancellor announced a soft drink industry levy. The levy has been designed to encourage producers to reformulate their overall product mixes by: reducing added sugar content, moving consumer choices towards low sugar and sugar-free brands, and reducing the portion sizes for high sugar drinks. This announcement is the first step in the Government’s Childhood Obesity Strategy.

1.2 Change4Life

Change4Life is the Government’s social marketing programme supporting the ambition to halt the rise in childhood obesity. Change4Life aims to inspire a social movement through which government, the NHS, local authorities, businesses, charities, schools, families and community leaders can all play a part in changing behaviour to help improve children’s diets and activity levels.

Further information is available at: www.nhs.uk/change4life

1.3 One You

Public Health England’s One You social marketing campaign, launched in March 2016, aims to inform, energise and engage millions to make changes to improve their health by eating well, moving more, quitting smoking and drinking less. One You provides tools and on-going support to help people reappraise their health and make and sustain changes. The campaign is supported by an extensive range of commercial and public sector partners so adults will encounter One You on their high streets and local services, in pharmacies and GP surgeries.

Further information is available at www.nhs.uk/oneyou
1.4 National Child Measurement Programme

The National Child Measurement Programme (NCMP) is a mandatory public health function of local authorities. The programme provides robust data on the weight status, including obesity and underweight prevalence, of over a million children in reception year and year 6 each year, around 95% of those eligible. The data enable local areas to plan services to tackle child obesity and monitor progress. In most local authorities, parents also receive feedback on their child’s weight status along with the offer of further advice and support on achieving a healthy weight for their child.


1.5 NHS Health Checks

The NHS Health Check programme aims to improve the health and wellbeing of over 15 million adults in England aged 40-74 years through earlier awareness, assessment, and management of the major risks factors and conditions driving premature death, disability and health inequalities in England.

In doing so it will help to prevent heart disease, stroke, diabetes and kidney disease, and raise awareness of dementia both across the population and within high risk and vulnerable groups. The benefits of the programme are likely to be extensive, as the same risks assessed during the check contribute to several cancers, lung disease, and certain types of dementia.

Further information is available at:
http://www.nhs.uk/Conditions/nhs-health-check/Pages/NHS-Health-Check.aspx

1.6 NHS Diabetes Prevention Programme

According to Public Health England there are currently 5 million people in England at high risk of developing Type 2 diabetes. If current trends persist, one in three people will be obese by 2034 and one in ten will develop Type 2 diabetes. However, evidence shows that many cases of Type 2 diabetes are preventable.

The Healthier You: NHS Diabetes Prevention Programme (NHS DPP), a joint commitment from NHS England, Public Health England and Diabetes UK, will identify those at high risk and refer them onto an evidence-based behaviour change programme to help reduce their risk. It will be the first at scale national diabetes prevention programme in the world.

Further information is available at:
2. Physical activity

2.1 National Ambition for Physical Activity

In January 2012, the Secretary of State for Health announced a new National Ambition for Physical Activity:

A year on year increase in the proportion of adults achieving at least 150 minutes of physical activity each week and a similar decrease in the proportion of those achieving less than 30 minutes of physical activity each week.

This is mirrored by the Public Health Outcomes Framework Indicator for physical activity and represents what could be achieved if all sector work together to drive up participation. In support of all sector working together, the Government published *Moving More, Living More* in 2014 as a cross-Government commitment to promote physical activity. This is part of the legacy from the London 2012 Olympic and Paralympic Games and the aim of the physical activity strand of the legacy is to have a much more physically active nation.


2.2 Physical Activity Guidelines

In 2011, the UK Chief Medical Officers published *Start Active, Stay Active*, which is a UK-wide consensus on the amount and type of physical activity we should all aim to do at each stage of our lives. The guidelines include recommendations for very young children (aged under-5), children and young people (5-18 years), adults (19-64 years) and older adults (65 years and over). It includes specific guidelines on muscle strengthening and minimising sedentary behaviour.

The guidelines are now available as infographic for professionals to understand the benefits of physical activity.


2.3 Children and Young People in Schools

As announced in the budget, revenue generated from the ‘soft drinks levy’ will be used to double the PE and sports premium for primary schools from £160m a year to £320m from September 2017, and will also provide funding to support 25% of secondary schools to offer a wider range of after-school activities. DH contribution for the year 2016/17 will be £60m pa towards the primary PE and sport premium, £7m to the School Games programme, and £1.26m to Change4Life Sports Club programme.
2.4 Everybody Active, Every Day

In October 2014, Public Health England published the national physical activity framework, *Everybody Active, Every Day*, following a nine-month coproduction process with other 1,000 national and local stakeholders and with full ministerial involvement. This framework presents an evidence-based approach to increase levels of physical activity and reduce physical inactivity in local communities based on international evidence of what works to increase population level physical activity.


2.5 Sport Strategy

In December 2015, the Government published *Sporting Future – A New Strategy for an Active Nation*.

This cross-government strategy will tackle head on, the flat-lining levels of sport participation and high levels of inactivity in this country. This strategy focuses on five key outcomes: physical wellbeing, mental wellbeing, individual development, social and community development and economic development.

Further information is available at: https://www.gov.uk/government/publications/sporting-future-a-new-strategy-for-an-active-nation

2.6 Cycling and Walking Investment Strategy

Active travel, such as cycling and walking, has a crucial role to play in improving public health. Walking and cycling are some of the easiest ways for people to build physical activity into their daily lives. The Government’s Infrastructure Act 2015 made clear our commitment to supporting cycling and walking over the long term by requiring Department for Transport to put a strategy in place which sets out the financial resources the Government will make available towards meeting the objectives. This Cycling and Walking Investment strategy (CWIS) will be published in 2016.

Further information is available at: https://www.gov.uk/government/publications/cycling-and-walking-investment-strategy-setting-the-scene

3. Diet

3.1 Eatwell Guide

The Eatwell Guide, launched in March 2016, replaces the eatwell plate and reflects Government dietary recommendations, including those recently updated on sugar, fibre and...
starchy carbohydrates from the Scientific Advisory Committee on Nutrition (SACN) report on Carbohydrates and Health in 2015.

The Eatwell Guide shows the revised proportions of the food groups that should be consumed to help us achieve a healthy balanced diet:

- Eat at least 5 portions of a variety of fruit and vegetables every day
- Base meals on potatoes, bread, rice, pasta or other starchy carbohydrates; choosing wholegrain versions where possible
- Have some dairy or dairy alternatives (such as soya drinks); choosing lower fat and lower sugar options
- Eat some beans, pulses, fish, eggs, meat and other proteins (including 2 portions of fish every week, one of which should be oily)
- Choose unsaturated oils and spreads and eat in small amounts
- Drink 6-8 cups/glasses of fluid a day
- If consuming foods and drinks high in fat, salt or sugar have these less often and in small amounts.


### 3.2 5-a-day programme

Current recommendations are that everyone should eat at least 5 portions of a variety of fruit and vegetables each day, to reduce the risks of chronic illnesses such as heart disease, stroke and some cancers. The 5-a-day programme aims to increase fruit and vegetable consumption by:

- raising awareness of the health benefits through targeted communications.
- improving access to fruit and vegetables.
- working with national, regional and local organisations.

Advice on the consumption of fruit juice and smoothies within the 5 A Day messaging has changed to reflect new, lower recommendations for sugar. It is now recommended to limit consumption of fruit juice and smoothies together to a total of 150mls (one portion) per day and to consume with meals to reduce the risk of tooth decay.

For further information: [http://www.nhs.uk/LiveWell/5ADAY/Pages/5ADAYhome.aspx](http://www.nhs.uk/LiveWell/5ADAY/Pages/5ADAYhome.aspx)

A new suite of refreshed government 5 A Day logos have been launched which are free of charge, easier to use on pack and are consistent with Change 4 Life branding. It has been decided not to extend the 5 A Day logo to include composite foods as there is a lack of consensus to achieve a consistent approach with industry, health and voluntary sectors and unilateral action would be potentially confusing for consumers and lead to wider misunderstanding.

For further information: [https://www.gov.uk/government/publications/government-5-a-day-logo](https://www.gov.uk/government/publications/government-5-a-day-logo)
3.3 Government Buying Standards for Food and Catering Services (GBSF)

GBSF provide mandatory standards and best practice criteria including aspects of diet/nutrition, sustainability and animal welfare. They form part of the toolkit associated with the Department for Environment, Food and Rural Affairs’ Plan for Public Procurement and are included within the NHS Contract and school food standards.

Public Health England (PHE) have published guidance on healthier and more sustainable catering and supporting tools to directly support those who must, or have chosen to, meet GBSF and are actively promoting and supporting delivery including at the local level.

For further information:
A Plan for Public Procurement and the supporting toolkit are available at: https://www.gov.uk/government/publications/a-plan-for-public-procurement-food-and-catering

PHE’s catering guidance and support tools are available at: https://www.gov.uk/government/publications/healthier-and-more-sustainable-catering-a-toolkit-for-serving-food-to-adults

4. Monitoring and guidelines

4.1 Public Health Outcomes Framework

Launched in January 2012, the Public Health Outcomes Framework is comprised of a number of key indicators against which Public Health delivery partners can focus action to improve population health. The framework acts as a stimulus to encourage public health delivery partners to make significant improvements in services and share best practice more widely. The intention is that the introduction of benchmarking (through the indicator measures) will have a strong impact on improving public health outcomes – this is consistent with recent evidence that the introduction of indicator measures can have a strong influence on achieving successful Health Outcomes - and will have a direct effect on protecting and improving the nation’s health.

The Public Health Outcomes Framework Indicators help to provide robust data on diet, body weight and physical activity. This enables local authorities to make decisions about where to target population level interventions to address these issues.

For further information: www.gov.uk/government/publications/healthy-lives-healthy-people-improving-outcomes-and-supporting-transparency

4.2 NICE guidance

The National Institute for Health and Care Excellence (NICE) has produced a suite of guidance on tackling obesity including Obesity: identification, assessment and management

Further information is available at: www.nice.org.uk
Appendix D: Further information

This report draws together statistics on obesity, physical activity and diet and forms part of a suite of statistical reports covering, in addition, drug misuse, alcohol and smoking.

Constructive comments on this report would be welcomed. Any questions concerning any data in this publication, or requests for further information, should be addressed to:

The Contact Centre
Health and Social Care Information Centre
1 Trevelyan Square
Boar Lane
Leeds
West Yorkshire
LS1 6AE
Telephone: 0300 303 5678
Email: enquiries@hscic.gov.uk

Press enquiries should be made to:
Media Relations Manager:
Telephone: 0300 303 5678
Email: enquiries@hscic.gov.uk

This report is available at:
http://www.hscic.gov.uk/pubs/sopad16

Previous reports on Statistics on Obesity, Physical Activity and Diet: England can be found on the Health and Social Care Information Centre website:

http://www.hscic.gov.uk/article/2021/Website-Search?q=title:"statistics+on+obesity,+physical+activity"&sort=Most+recent&size=10&page=1&area=both#top

Information on the main data sources used within this report are described in Appendix A and government plans and targets are presented in Appendix C. However further information regarding the topics discussed within this report maybe found from the following sources:
Annual Reports of the Chief Medical Officer

These reports provide an important record of the nation’s health and the major challenges faced by government in tackling the main health problems. The latest reports are available in the links below:


Association for the Study of Obesity

The Association for the Study of Obesity (ASO) was founded in 1967 and is the UK’s foremost charitable organisation dedicated to the understanding and treatment of obesity. The ASO aims to develop an understanding of obesity through the pursuit of excellence in research and education, the facilitation of contact between individuals and organisations, and the promotion of action to prevent and treat obesity.

Further information is available at: http://www.aso.org.uk

Food Standards Agency

The Food Standards Agency is an independent government department responsible for food safety and hygiene across the UK. They work with businesses to help them produce safe food, and with local authorities to enforce food safety regulations.

Further information is available at: http://www.food.gov.uk/

World Obesity Federation

World Obesity Federation represents professional members of the scientific, medical and research communities from over 50 regional and national obesity associations. Through their membership they create a global community of organisations dedicated to solving the problems of obesity. They aim to lead and drive global efforts to reduce, prevent and treat obesity.

Further information is available at: http://www.worldobesity.org/

National Institute for Health and Clinical Excellence (NICE)

The NICE website includes some information and clinical guidelines on the prevention, identification, assessment and management of overweight and obesity in adults and children.

Further information is available at: http://www.nice.org.uk/CG43
National Obesity Forum

The National Obesity Forum (NOF) was established by medical practitioners in May 2000 to raise awareness of the growing health impact that being overweight or obese was having on patients and the NHS.

Further information is available at: http://www.nationalobesityforum.org.uk/

Public Health England

The Public Health England Obesity website (formerly the National Obesity Observatory) provides a single point of contact for wide-ranging authoritative information on data, evaluation, evidence and research related to weight status and its determinants. They work closely with a wide range of organisations and provide support to policy makers and practitioners involved in obesity and related issues.

Further information is available at: http://www.noo.org.uk/

Scientific Advisory Committee on Nutrition

The Scientific Advisory Committee on Nutrition (SACN) is an advisory committee of independent experts that provides advice to the Food Standards Agency and Department of Health as well as other government agencies and departments. Its remit includes matters concerning nutrient content of individual foods, advice on diet and the nutritional status of people.

Further information is available at: www.sacn.gov.uk/

World Health Organisation

The WHO BMI database provides both national and sub-national adult underweight, overweight and obesity prevalence rates by country, year of survey and gender. The information is presented interactively as maps, tables, graphs and downloadable documents.

Further information is available at: http://apps.who.int/bmi/
Appendix E: How are the statistics used?

Users and uses of the report

From our engagement with customers, we know that there are many users of the Statistics on Obesity, Physical Activity and Diet report. There are also many users of these statistics who we do not know about. We are continually aiming to improve our understanding of who our users are in order to enhance our knowledge on what the uses of these data are via recent consultations and feedback forms available online.

Following last year’s publication, a consultation was implemented to gain feedback on how to make the report more user-friendly and accessible while also producing it in the most cost-effective way. The results of this consultation can be found at the below link.

http://www.hscic.gov.uk/article/6770/Consultation-on-Lifestyles-Compendia-Reports

Below is listed our current understanding of the known users and uses of these statistics. Also included are the methods we use to attempt to engage with the current unknown users.

Known Users and Uses

**Department of Health (DH)** - frequently use these statistics to inform policy and planning. The Public Health Outcomes Framework was published in January 2012. The document sets out the desired outcomes for public health and how these will be measured. The framework includes specific indicators for the proportion of physically active and inactive adults, excess weight in children (aged 4-5 years and 10-11 years old) and excess weight in adults. The data signposted to in this report will be used to monitor these indicators.

**Public Health England** - frequently use these data for secondary analysis.

**Media** - these data are used to underpin articles in newspapers, journals, etc.

**Public** - all information is accessible for general public use for any particular purpose.

**Academia and Researchers** - a number of academics papers have cited the Statistics on obesity, physical activity and diet as a source of information in peer reviewed papers, examples were under the users section of this document.

**NHS** - A wide range of organisations use the information to monitor and target services to tackle obesity, physical activity and diet recommendations. The aim is to provide a key source of obesity, physical activity and diet information for public health, commissioning and performance management colleagues at a national level.

**Public Health Campaign Groups** - data are used to inform policy and decision making and to examine trends and behaviours.

**Ad-hoc requests** – the statistics are used by the Health and Social care Information Centre (HSCIC) to answer Parliamentary Questions (PQs), Freedom of Information (FOI) request and ad-hoc queries. Ad-hoc requests are received from health professionals; research
companies; public sector organisations, and members of the public, showing the statistics are widely used and not solely within the profession.

**Unknown Users**

This publication is free to access via the HSCIC website [http://www.hscic.gov.uk/lifestyles](http://www.hscic.gov.uk/lifestyles) and consequently the majority of users will access the report without being known to the HSCIC. Therefore, it is important to put mechanisms in place to try to understand how these additional users are using the statistics and also to gain feedback on how we can make these data more useful to them. On the webpage where the publication appears there is a link on the right-hand side to a feedback form which the HSCIC uses to capture feedback for all its reports.

The specific questions asked on the form are:

- How useful did you find the content in this publication?
- How did you find out about this publication?
- What type of organisation do you work for?
- What did you use the report for?
- What information was the most useful?
- Were you happy with the data quality?
- To help us improve our publications, what changes would you like to see (for instance content or timing)?
- Would you like to take part in future consultations on our publications?

Any responses via this form are passed to the team responsible for the report to consider. We also capture information on the number of web hits the reports receive, although we are unable to capture who the users are from this. Statistics on Obesity, Physical Activity and Diet 2015 has generated approximately 24,814 unique web hits since it was published in March 2015.