



Statistics on Obesity, Physical Activity and Diet

England: 2017

Key findings

- In 2015, 58% of women and 68% of men were overweight or obese. Obesity prevalence increased from 15% in 1993 to 27% in 2015.
- In 2015/16, over 1 in 5 children in Reception, and over 1 in 3 children in Year 6 were measured as obese or overweight.
- In 2015/16 there were 525 thousand admissions in NHS hospitals where obesity was recorded as a factor.
- In 2015/16, there were 6,438 Finished Consultant Episodes (FCE's) in NHS hospitals with a primary diagnosis of obesity and a main or secondary procedure of bariatric surgery.
- Over three quarters of bariatric surgery patients were aged between 35 and 54, and over three quarters of patients were female.
- 26% of adults ate the recommended 5 or more portions of fruit and vegetables a day in 2015. Women (27%) were more likely to do so than men (24%).
- In 2014, 52% of 15 year olds reported they consumed 5 or more portions of fruit and vegetables a day.
- In 2015/16, 26% of adults were classified as inactive (fewer than 30 minutes physical activity a week).

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This report may be of interest to members of the public, policy officials and other stakeholders to make local and national comparisons and to monitor the quality and effectiveness of services.

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Part 1: Introduction

This statistical report presents a range of information on obesity, physical activity and diet drawn together from a variety of sources for England¹. More information can be found in the source publications which contain a wider range of data and analysis.

Newly published data includes:

- Analyses from NHS Digital Hospital Episode Statistics (HES).
- Analyses from NHS Digital prescribing data.

The latest information from already published sources includes data from:

- NHS Digital: The Health Survey for England (HSE).
- NHS Digital: National Child Measurement Programme (NCMP).
- NHS Digital: What About YOUth Survey (WAY).
- Organisation for Economic Co-operation and Development (OECD)
- European Health Interview Survey (EHIS)
- Sport England: Active Lives Survey (ALS)

1. Most figures quoted in this report have been rounded to the nearest whole number. Unrounded data may be found in related data sources.

Part 2: Obesity hospital admissions: background

- This chapter focuses on hospital admissions relating to being obese. Data is taken from the Hospital Episode Statistics (HES) databank produced by NHS Digital.
- The association between obesity and increased risk of many serious diseases and mortality is well documented and has led to the National Institute for Health and Clinical Excellence (NICE) developing guidelines on identifying and treating obesity¹.

Three measures are presented for the number of obesity related hospital admissions:

- NHS hospital finished admission episodes with a **primary diagnosis of obesity** (**admissions directly attributed to obesity**).
- NHS hospital finished admission episodes with **a primary or secondary diagnosis of obesity** (**admissions where obesity was a factor**).
- NHS hospital finished consultant episodes with a primary diagnosis of obesity, and a primary or secondary procedure for bariatric surgery (**obesity related bariatric surgery**).

1) [Link to NICE guidelines](#)

Obesity related hospital admissions – notes

- This section presents recorded Finished Admission Episodes (FAEs)¹ in England where there was a primary or secondary diagnosis of obesity, and recorded Finished Consultant Episodes (FCEs) in England where there was a primary diagnosis of obesity and a main or secondary procedure of bariatric surgery.
- An FAE is the first period of inpatient care under one consultant within one provider. Admissions do not represent the number of inpatients, as a person may have more than one admission within the year. In this section an FAE is referred to as a 'hospital admission'. The same applies to FCEs where one person may have more than one episode within the year.

Bariatric Surgery

- Bariatric surgery encompasses a group of procedures that can be performed to facilitate weight loss, although these procedures can also be performed for other conditions. It includes stomach stapling, gastric bypasses, sleeve gastrectomy and gastric band

maintenance. In general, such surgery is used in the treatment of obesity for people with a BMI above 40, or for those with a BMI between 35 and 40 who have health problems such as type 2 diabetes or heart disease.

Caveats

- The analysis presented here uses HES inpatient activity only although it is known that there has been a recent move to carry out some minor procedures in an outpatient setting such as gastric band maintenance. However, the quality of diagnosis codes collected in an outpatient setting is not sufficient to be sure the procedure was carried out for obesity reasons so they are excluded. This switch in commissioning practices may explain the recent changes over time.
- By contrast, the data quality of secondary procedures has increased over time so some of the increases compared to 10 years ago may partly reflect an improvement in data quality as well as an increase in activity.

Obesity related hospital admissions¹

Admissions directly attributed to obesity

In 2015/16 there were 9,929 Finished Admission Episodes (FAEs) in NHS hospitals with a primary diagnosis of obesity².

Around 3 in every 4 patients were female (74%).



Admissions where obesity was a factor

In 2015/16 there were 525 thousand admissions in NHS hospitals where obesity was recorded as the primary or secondary diagnosis. This is an increase of 19% on 2014/15³.

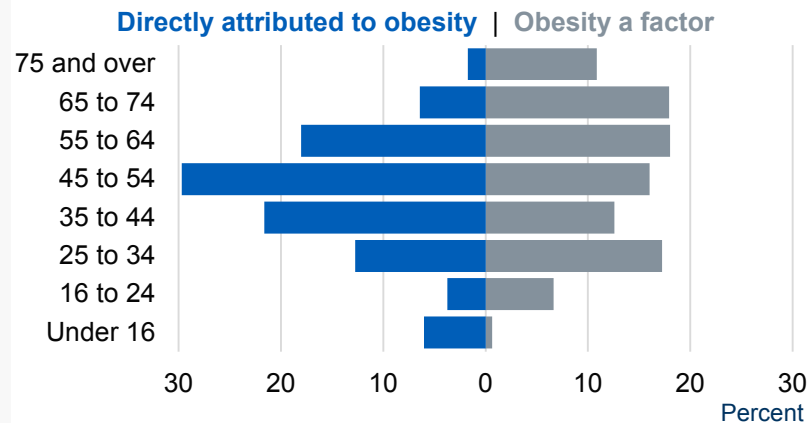
Around 2 in every 3 patients were female (67%).



Admissions by age group

For admissions directly attributed to obesity the majority of patients were aged between 35 and 64 (69%).

For admissions where obesity was a factor, the age distribution was more uniform.

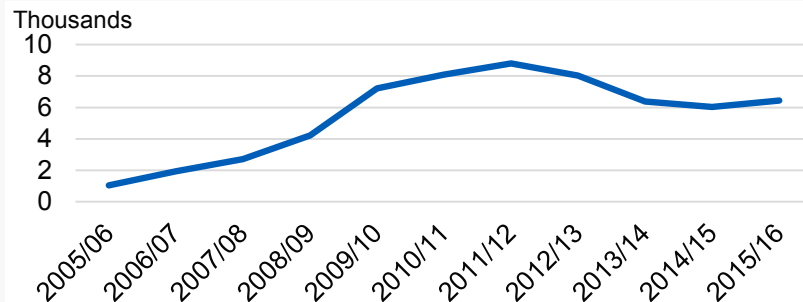


1) In inpatient settings only. 2) The majority of these admissions involved bariatric surgery procedures (see slide 9 for further details). 3) Some of this increase may be due to hospitals being more likely to record obesity as a secondary diagnosis than they were previously (see table 5 for further details).

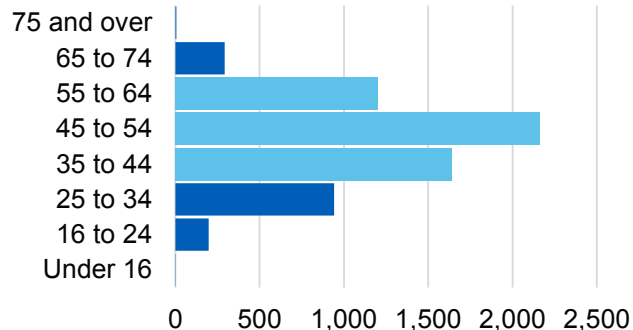
Obesity related hospital admissions for bariatric surgery¹

In 2015/16 there were 6,438 Finished Consultant Episodes (FCEs) in NHS hospitals with a primary diagnosis of obesity and a main or secondary procedure of bariatric surgery.

This is 27% less than the peak in 2011/12, but 7% more than in 2014/15².

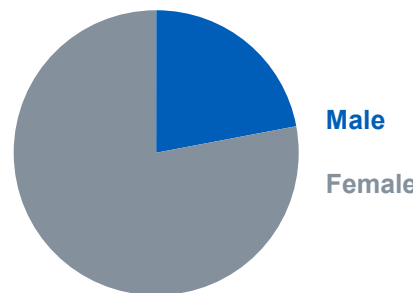


Bariatric surgery by age



Over three quarters of patients were aged between 35 and 64.

Bariatric surgery by sex



Over three quarters of patients were female

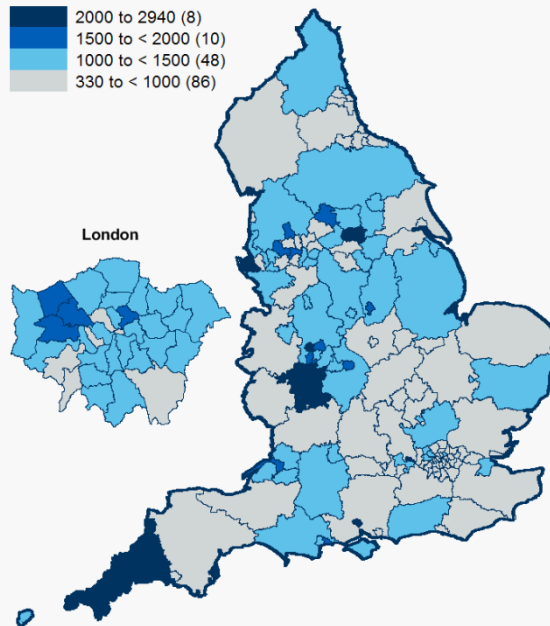
1) Data includes procedures carried out in inpatient settings only. 2) Some of the changes over time are due to changes in practice as to whether bariatric procedures are recorded as being carried out in outpatient or inpatient settings. e.g. over two-thirds of the increase in 2015/16 is due to one provider recording the majority of their gastric band maintenance procedures as inpatient activity compared to outpatient activity in 2014/15.

Obesity related hospital admissions by Local Authority

Admissions per 100,000 population

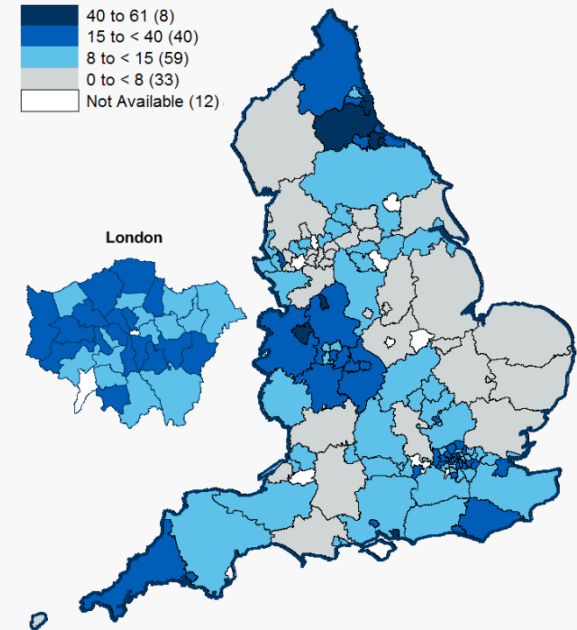
All where obesity was a factor¹

Wirral, Slough and Southampton all recorded admission rates of over 2,500 per 100,000 population.



Obesity related bariatric surgery²

Telford and Wrekin (61 per 100,000 population) and Stoke on Trent (50) had the highest rates of obesity related bariatric surgery.



1) With a primary or secondary diagnosis of obesity 2) With a primary diagnosis of obesity and a main or secondary procedure of bariatric surgery.
For more information: Tables 7 & 11 of [Statistics on Obesity, Physical Activity and Diet - England 2017](#)

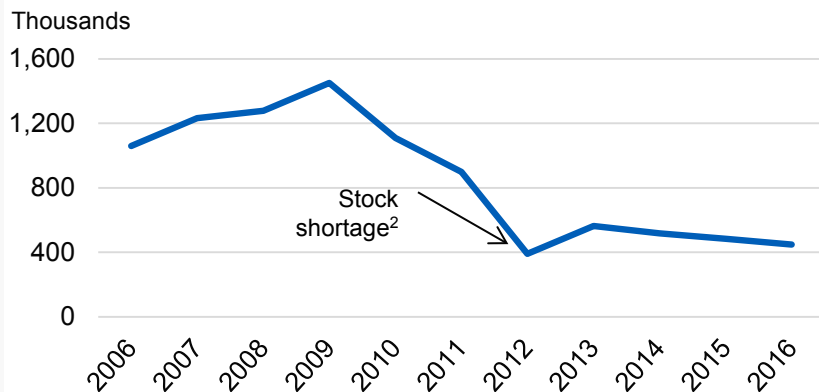
Part 3: Prescription items for the treatment of obesity: background

- This section presents information on the number of prescriptions for drugs used to treat obesity and the Net Ingredient Cost (NIC) of these prescriptions. The data source is Prescription Analysis and Cost (PACT) data from NHS Prescription Services.
- The NIC is the basic cost of a drug as listed in the Drug Tariff or price lists; it does not include discounts, dispensing costs, prescription charges or fees.
- Orlistat (Xenical®) is the main prescription item for treatment of obesity by General Practices in England. Orlistat is a capsule that prevents the absorption of fat in the intestine.

Prescription items for the treatment of obesity¹

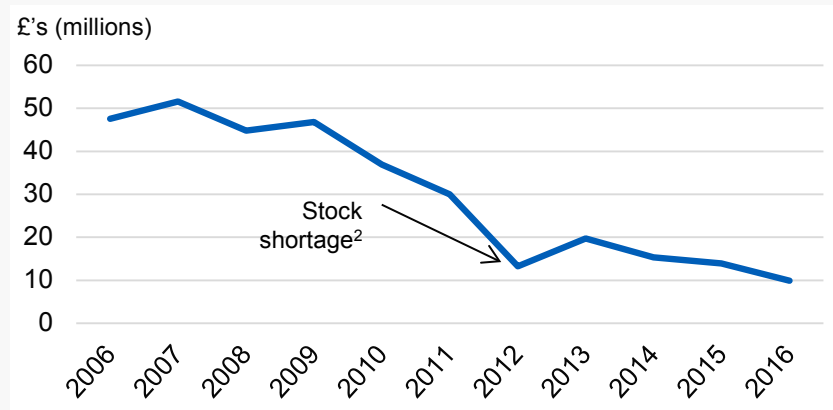
Items prescribed

449 thousand items were prescribed for the treatment of obesity in primary care in 2016. That is 7% less items than in 2015 and continues a downward trend since a peak of 1,450 thousand in 2009.



Net Ingredient Cost (NIC)³ of items

The NIC in 2016 was £9.9 million, which has fallen from £13.9 million in 2015, and from £51.6 million in 2007.



The NIC per item in 2016 was £22, which is £7 lower than 2015, and nearly half compared to 10 years ago.

1) Prescribed in primary care and dispensed in the community. 2) [Link to stock shortage details](#) 3) NIC is the basic cost of a drug, not taking into account discounts, dispensing costs, fees or prescription charge income.

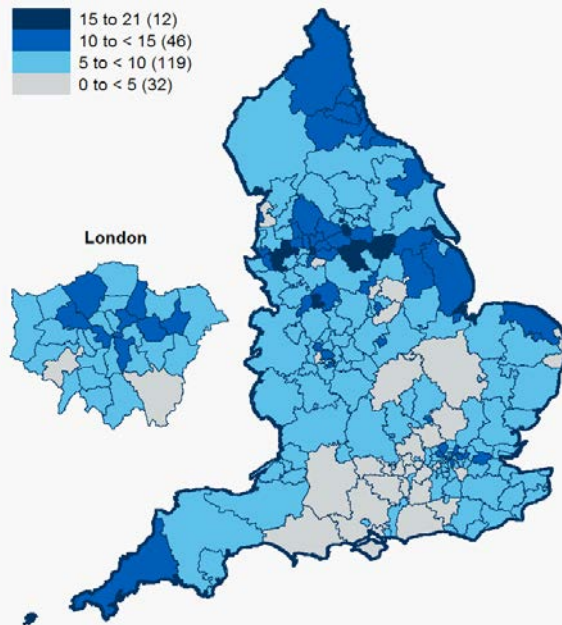
Prescription items for the treatment of obesity¹

Prescriptions per 1,000 population

By Clinical Commissioning Group (CCG)

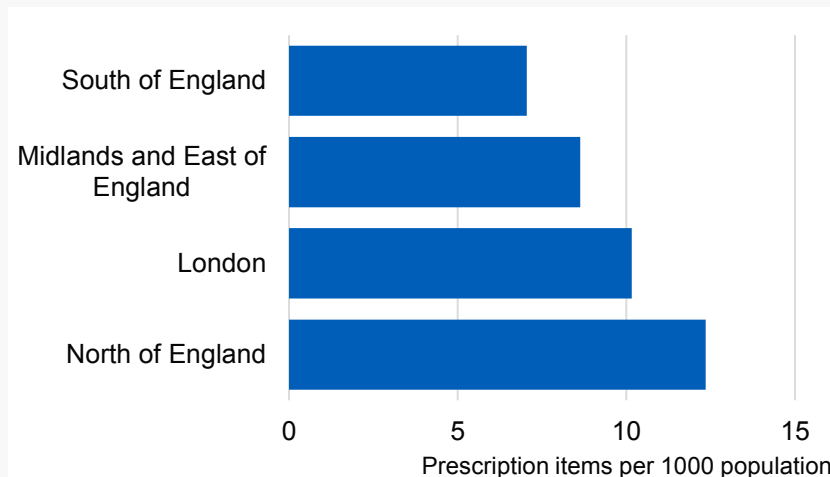
NHS Stoke on Trent and NHS Knowsley had the highest prescription rates with 20 items per 1,000 population.

NHS Nene and NHS Corby recorded almost zero rates.



By NHS Commissioning Region

North of England had the highest prescription rate with 11 items per 1,000 population, and South of England the lowest rate with 6.



1) Prescribed in primary care and dispensed in the community.

Part 4: Adult obesity: background

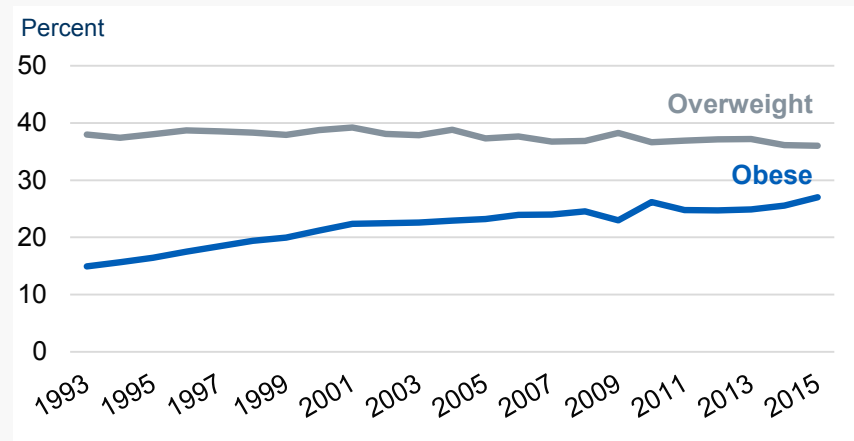
- Main source of the data on overweight and obesity prevalence is the Health Survey for England (HSE), the latest published being HSE 2015.
- Overweight and obesity are terms that refer to an excess of body fat and they usually relate to increased weight-for-height. The most common method of measuring obesity is the Body Mass Index (BMI)¹.
- In adults, a BMI of 25kg/m² to 29.9kg/m² means that person is considered to be overweight, a BMI of 30kg/m² or higher means that person is considered to be obese.
- The National Institute for Health and Clinical Excellence (NICE) recommends the use of BMI in conjunction with waist circumference as the method of measuring overweight and obesity and determining health risks.
- BMI does not distinguish between mass due to body fat and mass due to muscular physique, nor the distribution of fat. In order to measure abdominal obesity, waist circumference is measured, and categorised into desirable, high and very high, by sex-specific thresholds (cm):
Men: Desirable = Less than 94, High = 94-102, Very high = More than 102
Women: Desirable = Less than 80, High = 80-88, Very high = More than 88

1) BMI = Person's weight (kg) / Person's height (in metres)²

Adult obesity: Prevalence¹

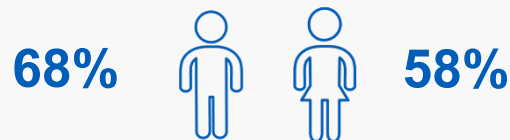
Prevalence over time

Obesity prevalence increased from 15% in 1993 to 27% in 2015.



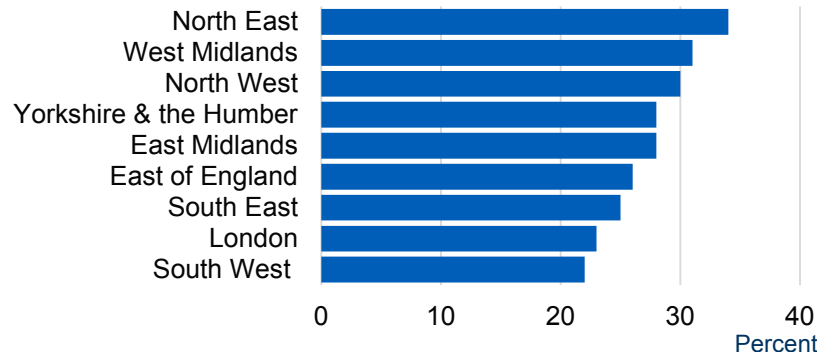
Prevalence of morbid obesity² has more than tripled since 1993, and reached 2% of men and 4% of women in 2015.

Prevalence by sex (overweight or obese)



Prevalence by region³

Obesity varied by region but was generally more prevalent in the North of England and Midlands than in the South of England.



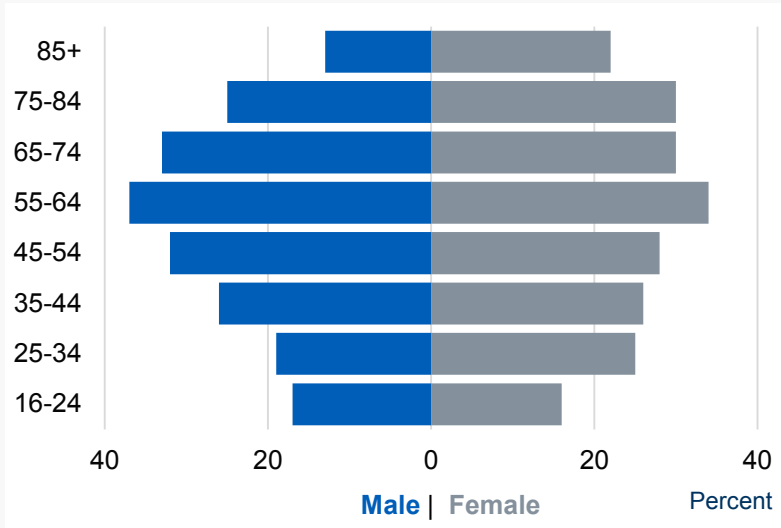
1) Prevalence is for obesity only (so excluding overweight) unless otherwise stated 2) BMI 40kg/m² or higher 3) Data has been age standardised

For more information: Tables 2 & 3, [Adult overweight and obesity: Health Survey for England, 2015](#)

Adult obesity: Prevalence

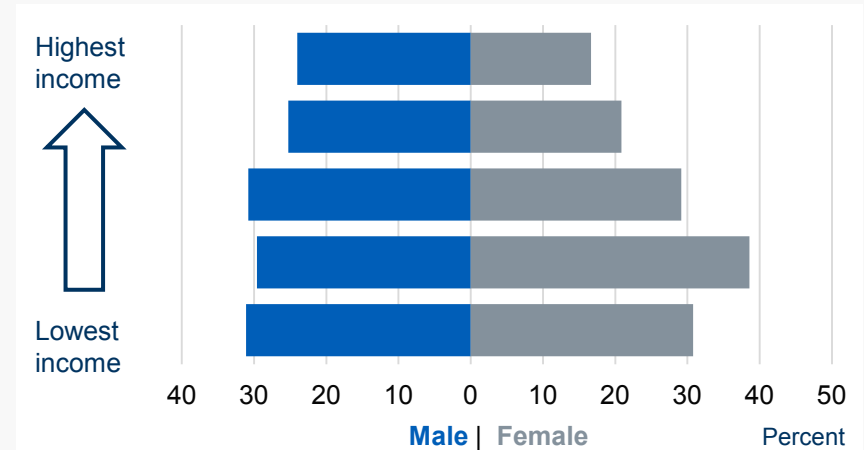
Prevalence by sex and age

Obesity prevalence varies with age for both males and females, with the highest obesity levels in the 55-64 age group.



Prevalence by sex and household income¹

Obesity prevalence varied with household income in women but not in men: 39% of women in the 2nd lowest household income quintile were obese, compared with 17% of women in the highest income quintile.

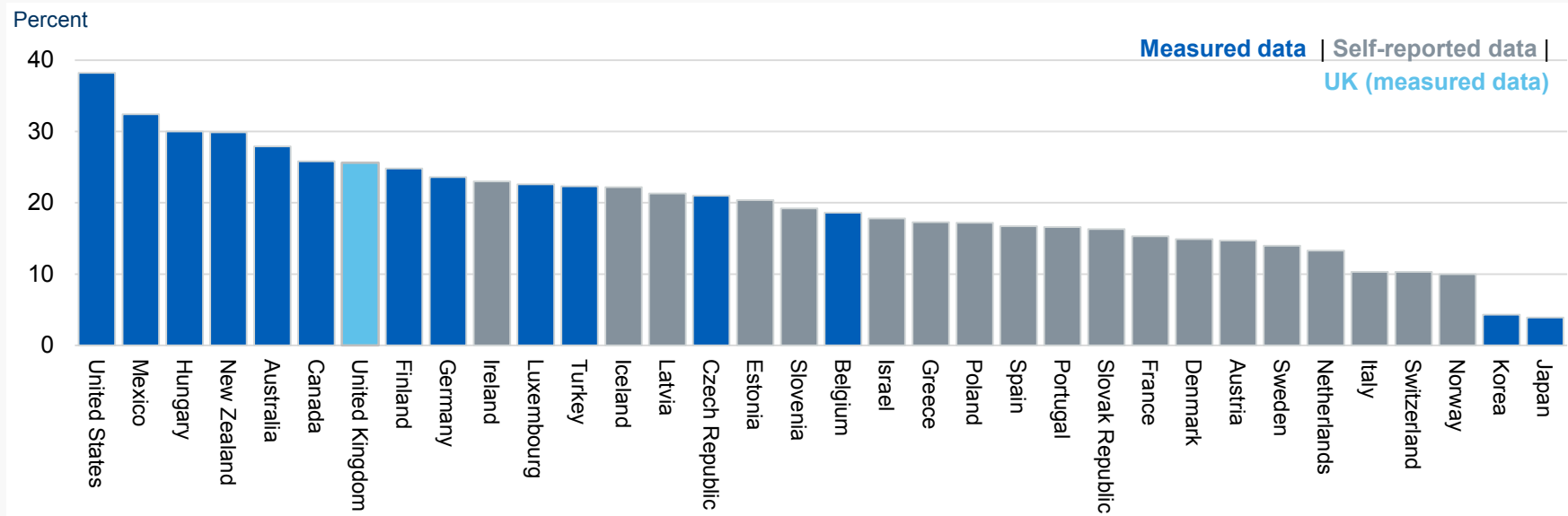


1) The HSE uses the measure of equivalised household income, which takes into account the number of adults and dependent children in the household as well as overall household income. Households are divided into quintiles (fifths) based on this measure.

Adult obesity: UK Comparison with other OECD (Organisation for Economic Co-operation and Development) countries¹

The UK reports an adult² obesity level of 26%. This is 13 percentage points lower than the USA which reports the highest adult obesity level.

Japan and Korea both report an adult obesity level of less than 5%.



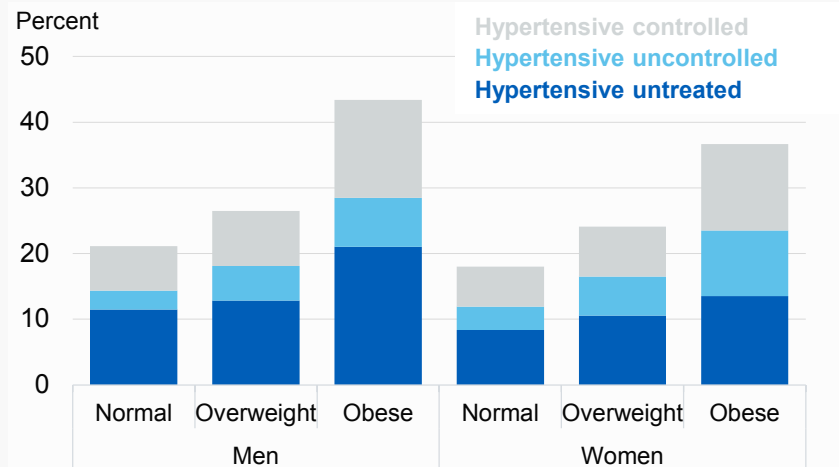
1) 2014 or latest available data since 2010. Measured data is included where available 2) Persons aged 15 and over.

For more information: [Organisation for Economic Co-operation and Development, Health Statistics 2016](#)

Adult obesity: Health conditions associated with obesity, overweight and waist circumference

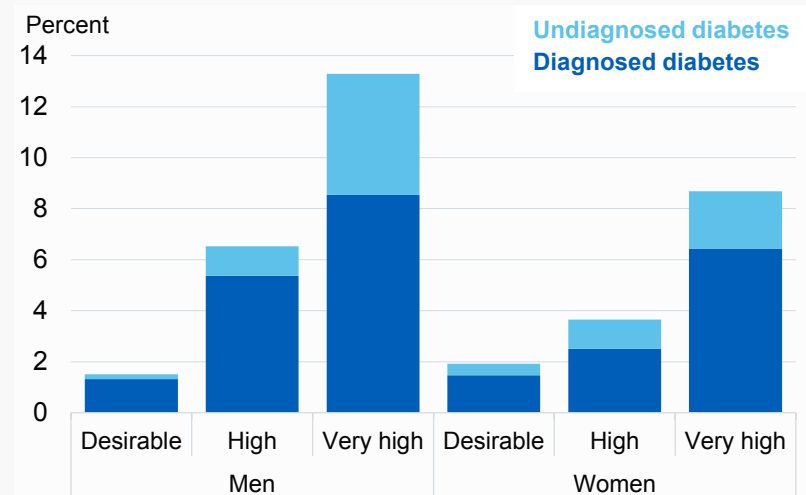
Hypertension¹ by BMI group

Hypertension was twice as common among obese adults as among those of a normal weight (43% of obese men and 37% of obese women, compared with 21% of men and 18% of women with BMI within the normal range).



Diabetes by waist circumference¹

Prevalence of diabetes (diagnosed and undiagnosed) among adults with desirable and very high waist circumference was 2% and 11% respectively.



1) See the Health Survey for England, 2015 report at the link below for definitions of hypertension and diabetes.

For more information: Tables 8 to 11, Adult overweight and obesity: Health Survey for England, 2015

Part 5: Childhood obesity: background

- The main source for this section is the National Child Measurement Programme for England (NCMP) which includes nearly all children in reception year (aged 4-5) and year 6 (aged 10-11)¹.
- Health Survey for England also collects data on childhood obesity; covering all children aged 2-15, although as a sample it has much lower coverage than NCMP and therefore the estimates are less precise.
- The NCMP and HSE collect height and weight measurements to calculate BMI² for each child. BMI (adjusted for age and gender) is recommended as a practical estimate of overweight and obesity in children as it takes into account different growth patterns in boys and girls at different ages. Each age and gender group needs its own level of classification and this section uses the British 1990 growth reference (UK90) to describe childhood overweight and obesity.

1) 95% of eligible children were measured in 2015/16.

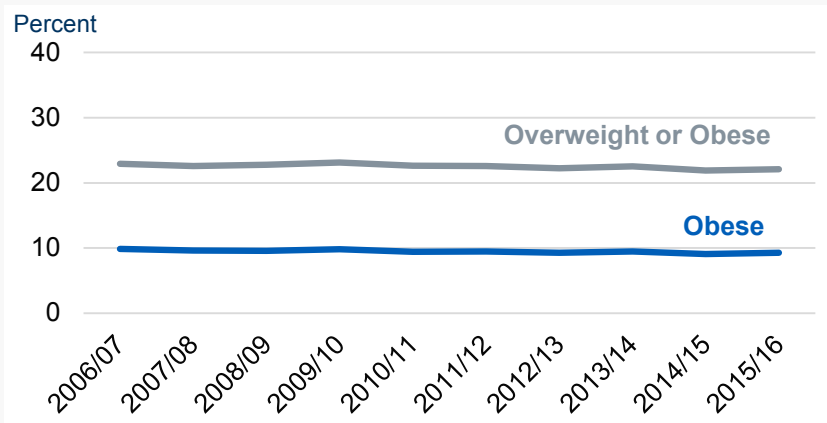
2) BMI = Person's weight (kg) / Person's height (in metres)²

Childhood obesity: Prevalence

Reception year

Over 1 in 5 were measured as obese or overweight in 2015/16.

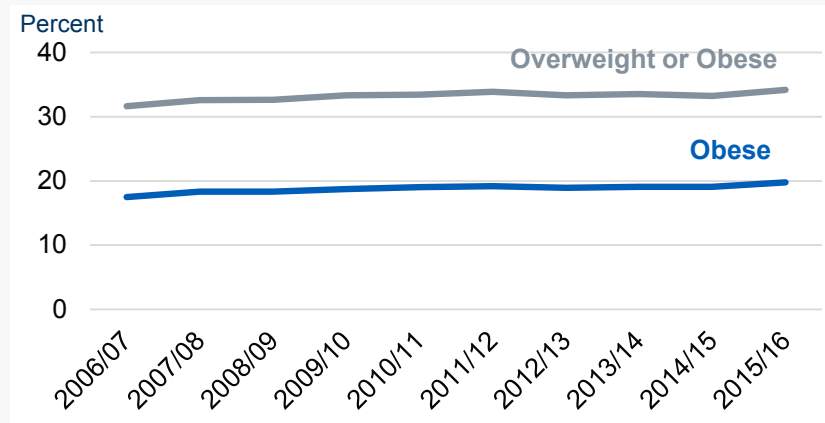
9% of children were obese in 2015/16, compared to 10% in 2006/07.



Year 6

Over 1 in 3 children were measured as obese or overweight in 2015/16.

20% of children were obese in 2015/16, compared to 17% in 2006/07¹.



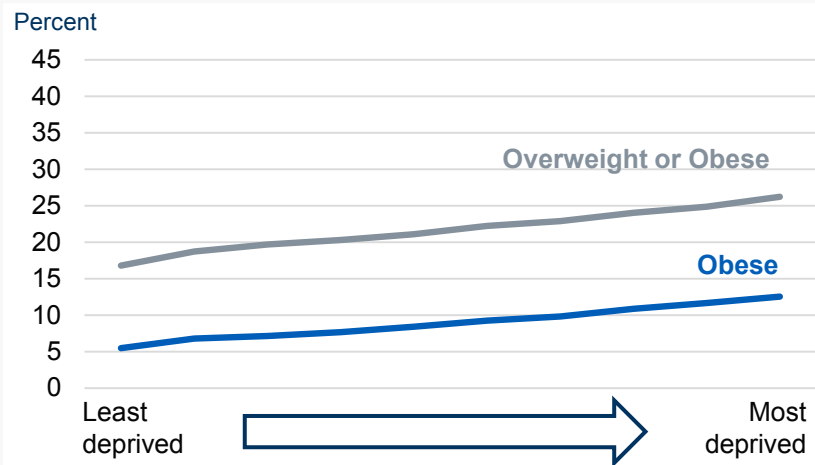
1) It is likely that year 6 obesity prevalence in the first years of the NCMP (2006/07 to 2008/09) were underestimates due to low participation. For more information see Annex B of the 2015-16 NCMP report at the link below.

Childhood obesity: Prevalence by level of deprivation¹

Children living in the most deprived areas are twice as likely to be obese than those in the least deprived areas.

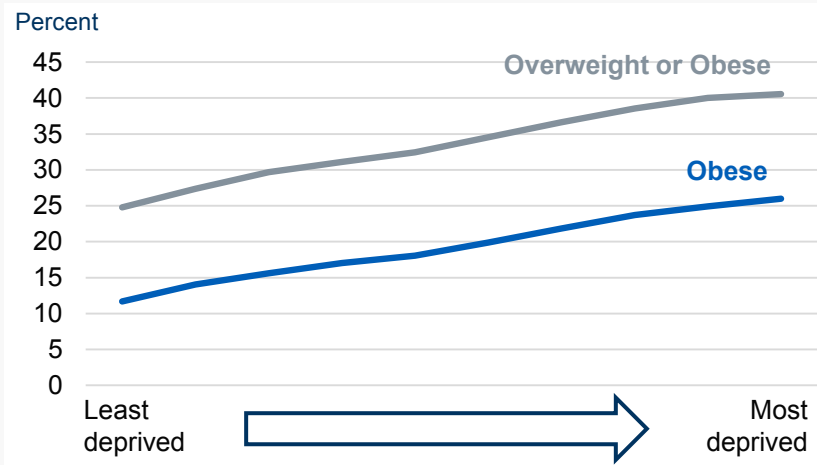
Reception year

13% of children living in the most deprived areas were obese compared to 5% of those living in the least deprived areas.



Year 6

26% of children living in the most deprived areas were obese compared to 12% of those living in the least deprived areas.



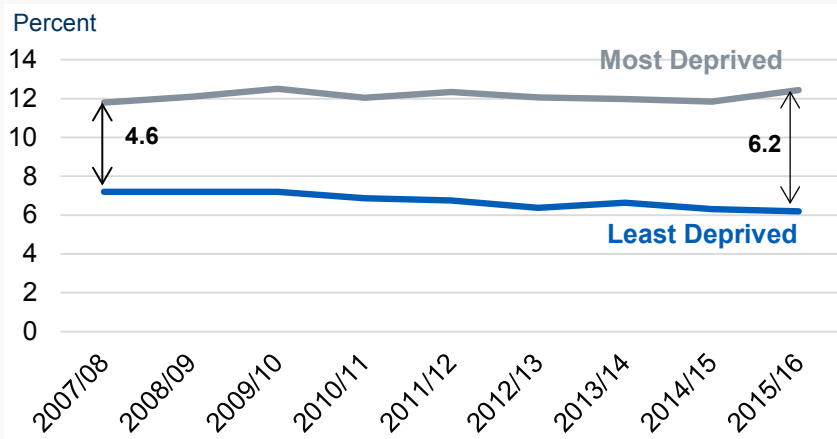
1) Based on the Department of Communities and Local Government Index of Multiple Deprivation deciles: [Link for more details](#)

Childhood obesity: Prevalence by level of deprivation¹

The difference in obesity prevalence between children attending schools in the most and least deprived areas has increased over time.

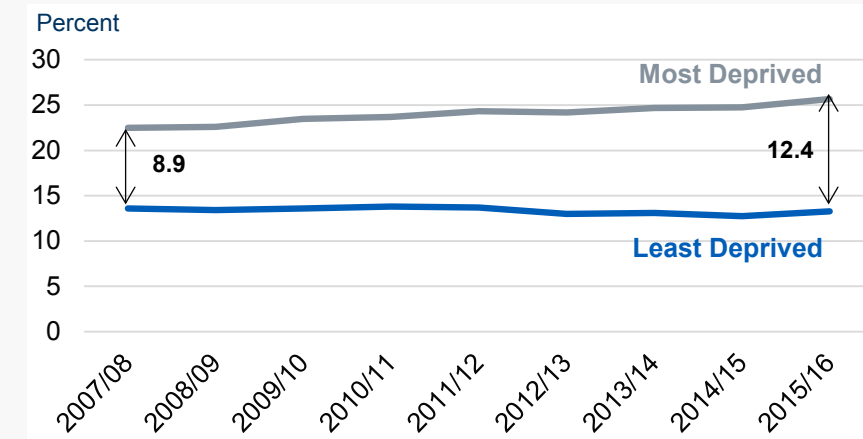
Reception year

Between 2007/08 and 2015/16, the difference between obesity prevalence in the most and least deprived areas has increased from 4.6 to 6.2 percentage points.



Year 6

Between 2007/08 and 2015/16, the difference between the most and least deprived areas has increased from 8.9 to 12.4 percentage points.



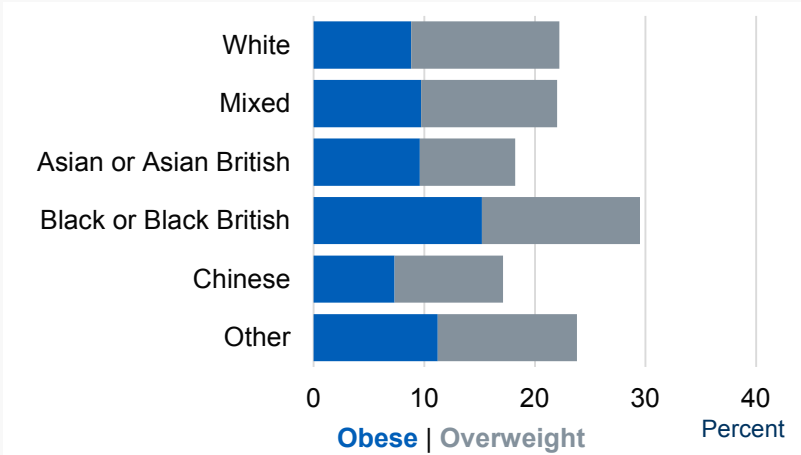
1) Based on the Department of Communities and Local Government Index of Multiple Deprivation deciles: [Link for more details](#)

Childhood obesity: Prevalence by ethnicity

Reception year

Obesity prevalence rates ranged from 7% for Chinese children to 15% for Black/Black British children.

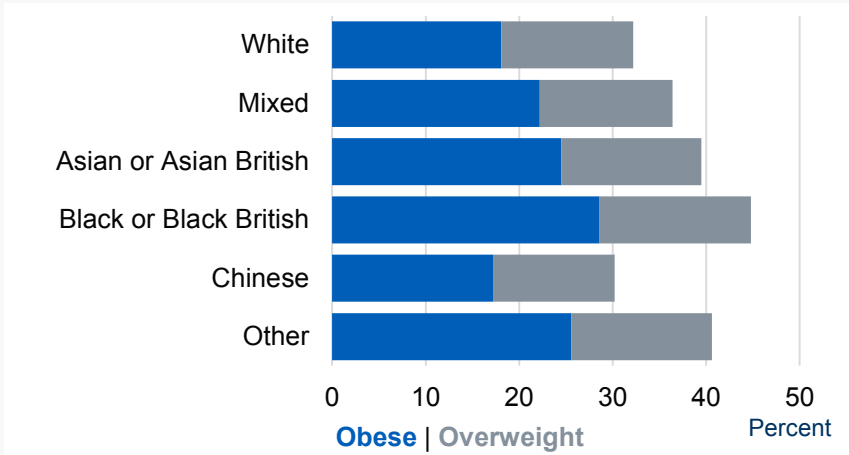
29% of Black/Black British children were either overweight or obese.



Year 6

Obesity prevalence rates ranged from 17% for Chinese children to 29% for Black/Black British children.

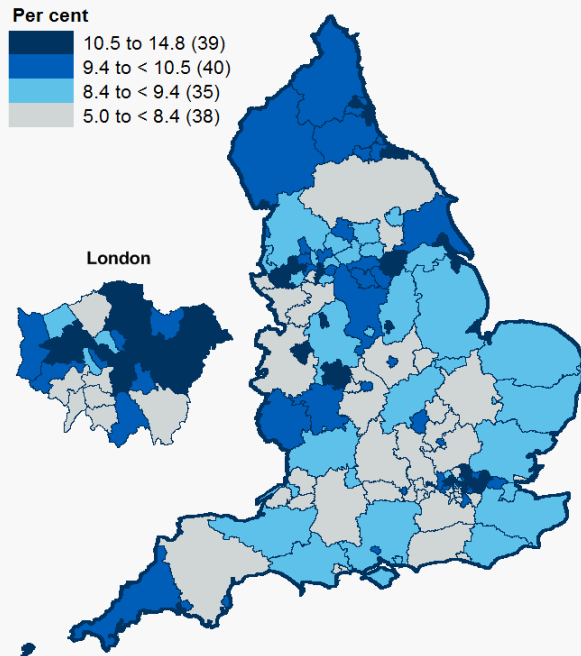
45% of Black/Black British children were either overweight or obese.



Childhood obesity: Prevalence by Local Authority

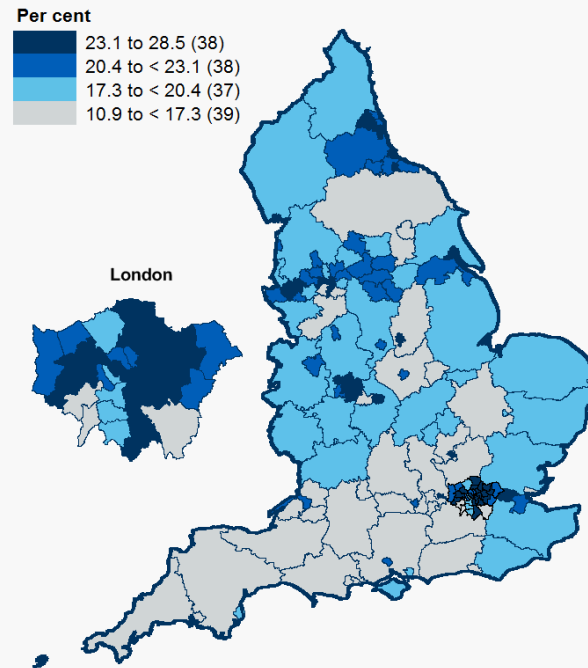
Reception year

Obesity prevalence ranged from 5% in Richmond upon Thames, to 15% in Middlesbrough.



Year 6

Obesity prevalence ranged from 11% in Richmond upon Thames, to 28% in Barking & Dagenham.

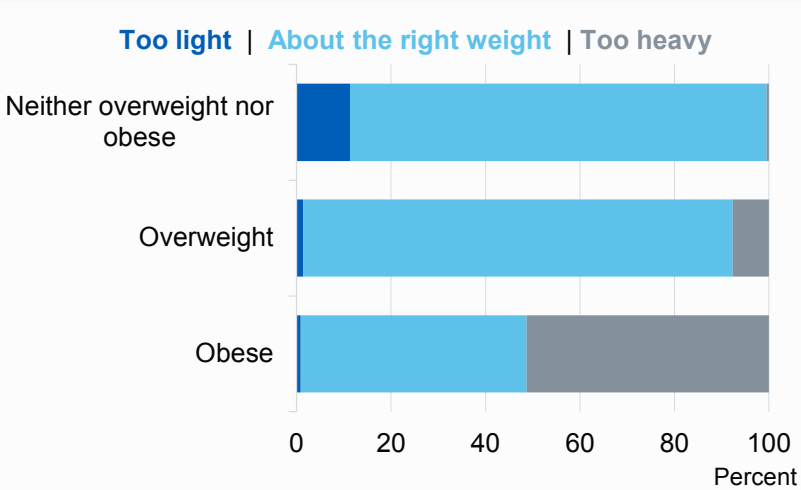


Childhood obesity: Parents perception of child's weight by BMI status

Parents of overweight and obese children often thought their child was the right weight.

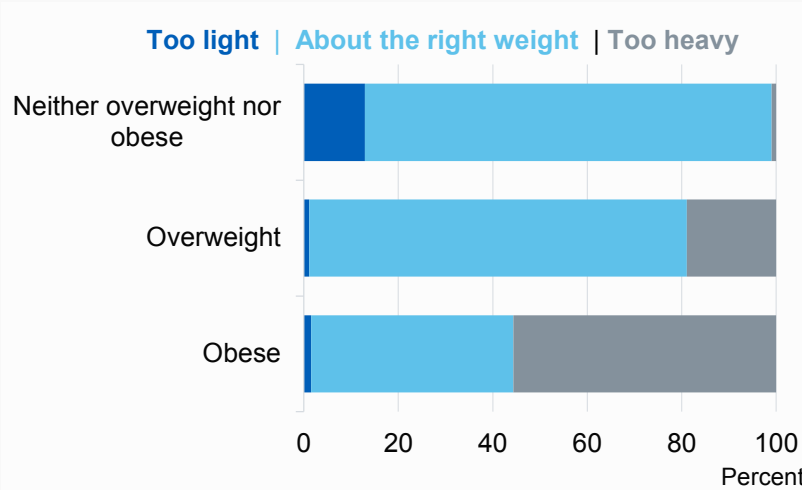
Mothers perception

For obese children, 48% of mothers said their child was about the right weight, with 51% describing their child as too heavy.



Fathers perception

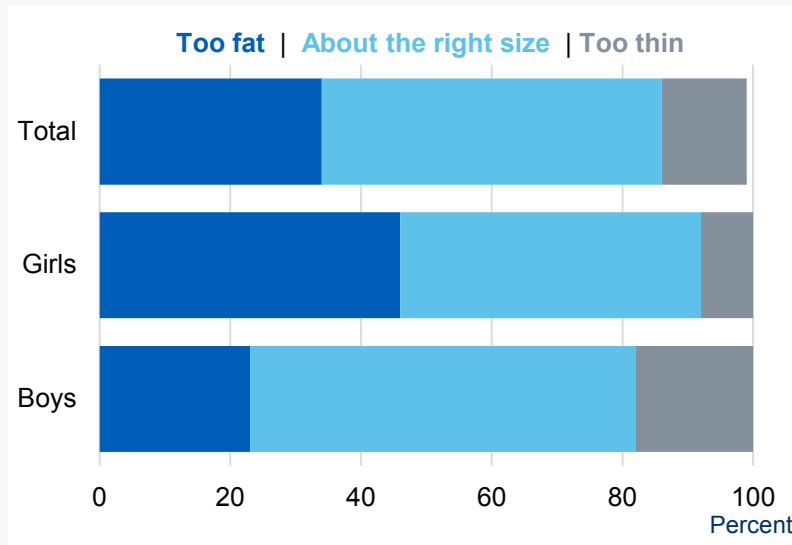
For obese children, 43% of fathers said their child was about the right weight, with 56% describing their child as too heavy.



Body image amongst 15 year olds

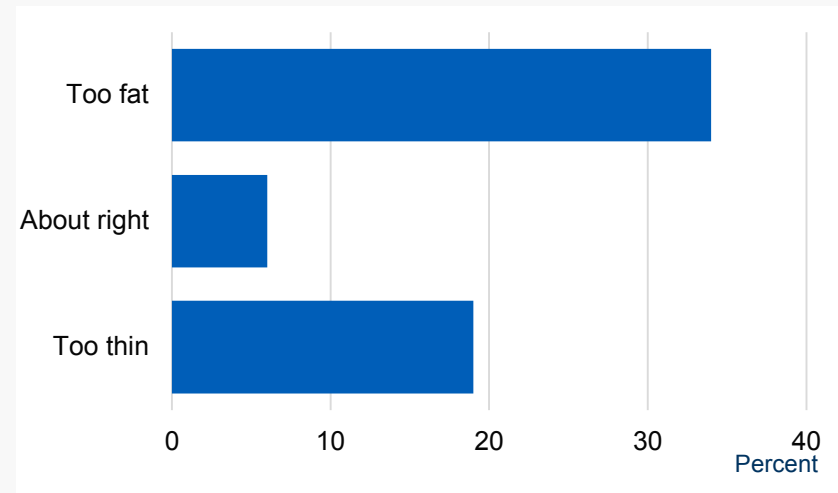
Body image

46% of 15 year old girls reported they were “too fat” compared to 23% of boys.



Bullied because of their weight

34% of 15 year olds who thought they were “too fat” reported that “other people made fun of me because of my body weight”, compared to 6% who thought they were the “right size”.



Part 6: Physical activity: background

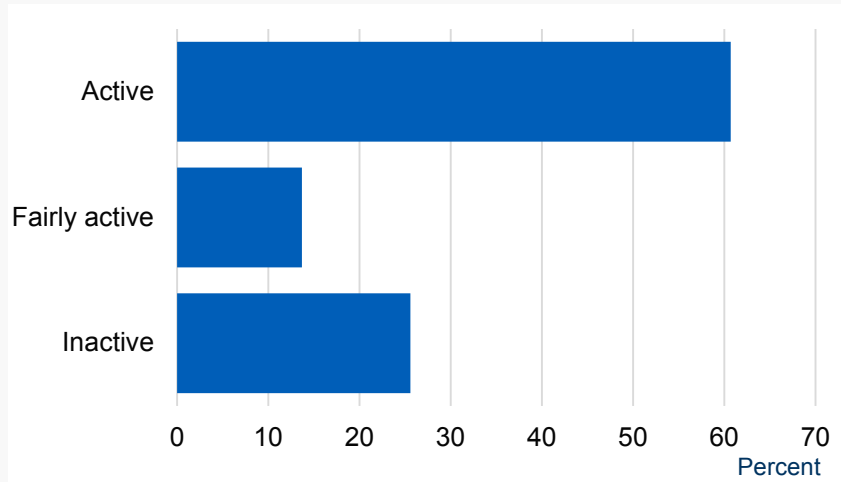
- The health benefits of a physically active lifestyle are well documented and there is a large amount of evidence to suggest that regular activity is related to reduced incidence of many chronic conditions. Physical activity contributes to a wide range of health benefits and regular physical activity can improve health outcomes irrespective of whether individuals achieve weight loss.
- In 2011 new guidelines on the amount of activity recommended for health were published by the Chief Medical Officers of the four UK countries¹.
- In 2015 the UK government published 'Sporting Future'², a new strategy for sport and physical activity, which includes 23 new key performance indicators to monitor outputs.
- The main data sources used in this section are:
 - The Active Lives Survey (ALS) published by Sport England provides information on participation in sport and recreation. It was conducted for the first time in 2015/16 and replaces the Active People Survey. The survey classifies activity level into active, fairly active and inactive based on the number of minutes of moderate intensity equivalent (MIE) physical activity³.
 - The Health Survey for England (HSE) 2015 gathered information on self-reported participation in physical activities by children.

Adult physical activity

All adults (16+)

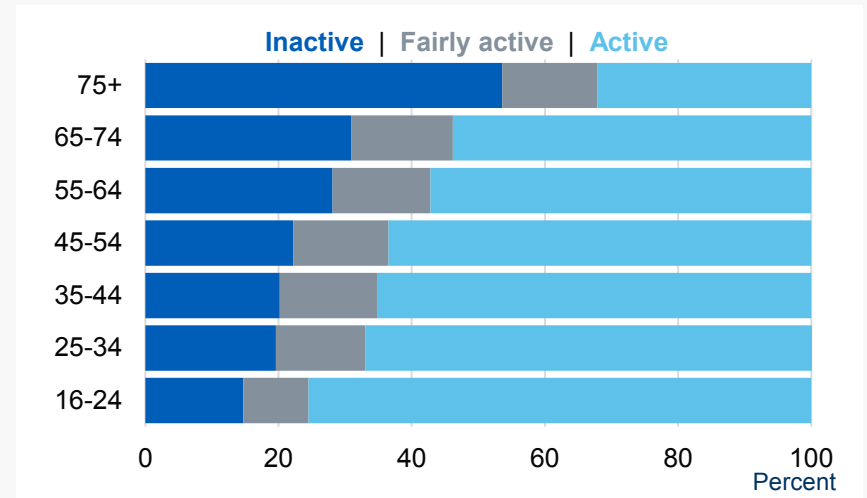
26% of adults were classified as inactive (fewer than 30 minutes physical activity a week).

61% of adults were classified as active (150 minutes or more a week).



Age group

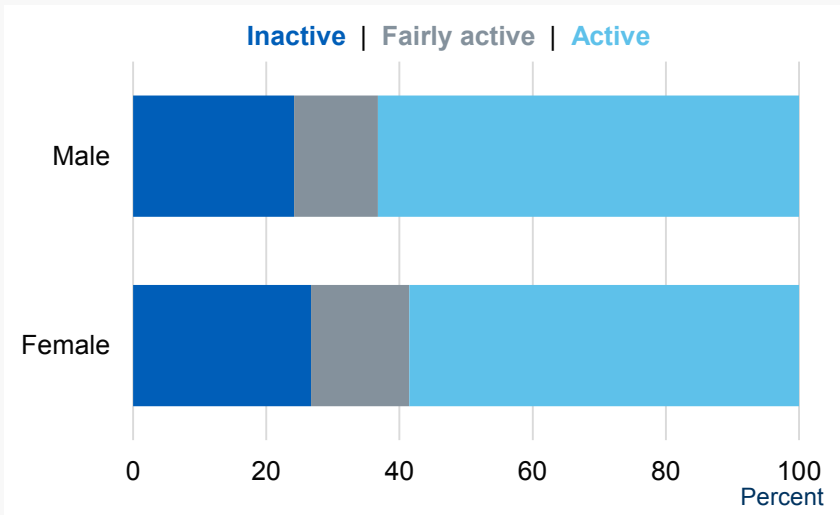
Inactivity levels increase with age. Those aged 16-24 were least likely to be inactive (15%) whilst those aged 75+ were most likely to be inactive (54%).



Adult physical activity

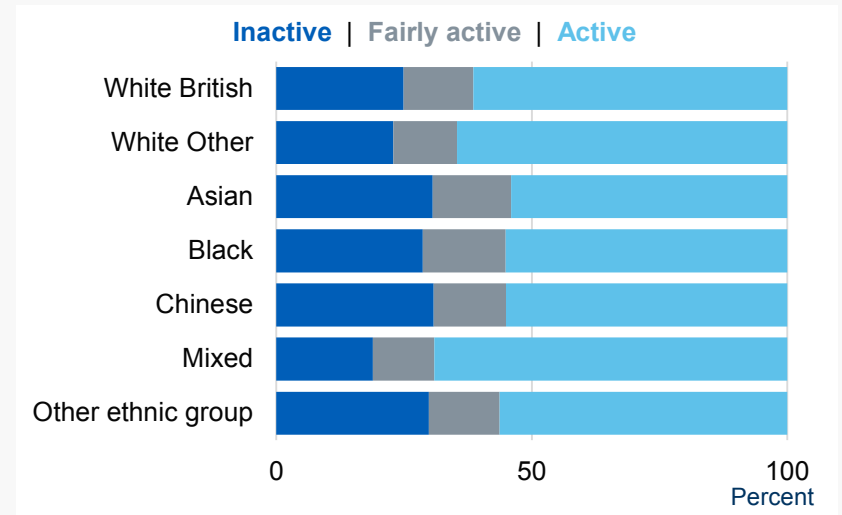
Gender

There is a difference in inactivity levels between men and women, with females (27%) more likely to be inactive than males (24%).



Ethnicity

People from Asian, Black and Chinese ethnic groups were more likely to be inactive than those from White and Mixed ethnic groups.

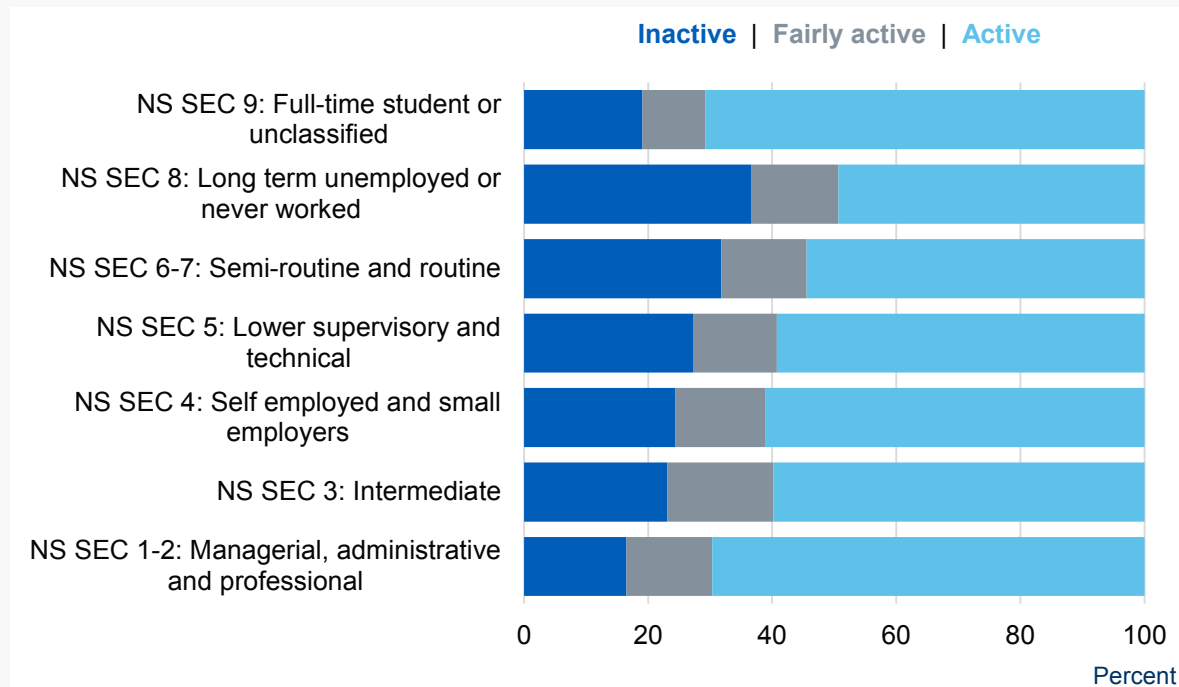


Adult physical activity

Socio-economic group¹

People who are long term unemployed or have never worked were most likely to be inactive (37%).

Those in managerial, administrative and professional occupations were the least likely to be inactive (17%).

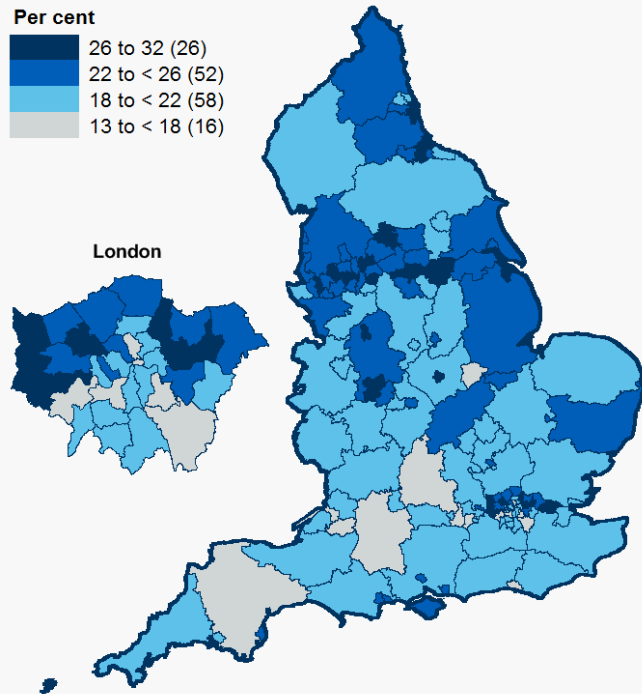


1) Based on the [National Statistics Socio-economic classification \(NS-SEC\)](#)

For more information: [Sport England, Active Lives Survey 2015/16](#)

Adult physical activity

Inactivity levels by Local Authority¹



The Local Authorities with the highest inactivity levels were South Tyneside, Leicester, Barking & Dagenham and Rochdale (all 31%).

The Local Authorities with the lowest inactivity levels were Wokingham (13%) and Brighton and Hove (14%).

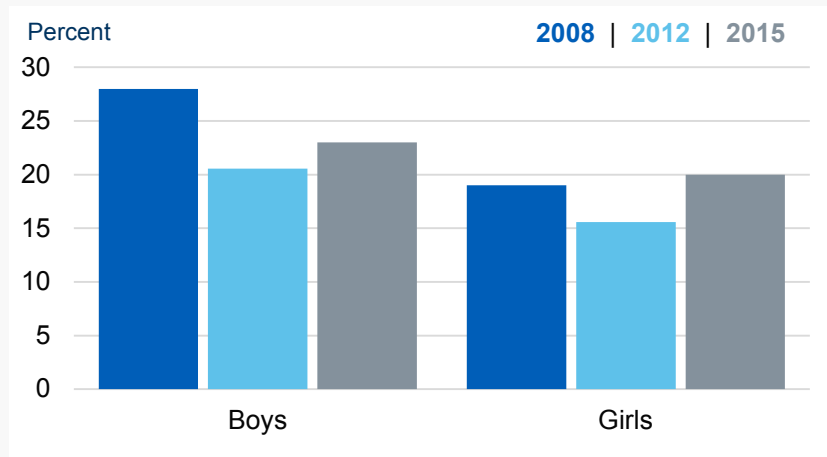
¹) Only upper tier LAs are shown. LA data includes gardening activity within the definition of physical activity.

Childhood physical activity¹

Met physical activity guidelines²

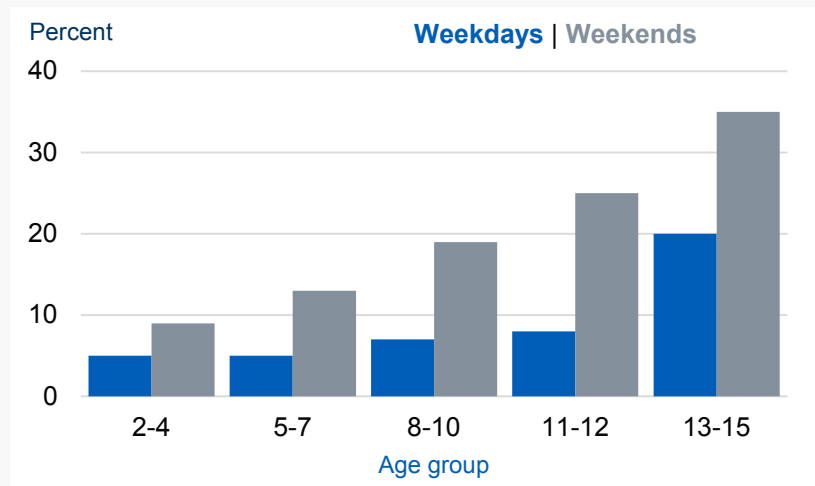
The proportion of boys who met the guidelines increased from 21% in 2012, to 23% in 2015.

The proportion of girls who met the guidelines increased from 16% in 2012 to 20% in 2015.



Proportion who were sedentary³ for 6 hours or more by age

Time spent being sedentary during the week and at weekends increased with age.



1) Excludes activity in school 2) Meets recommendations = 60 minutes or more on all 7 days

3) Sedentary behaviour is defined as activity with very low energy expenditure, undertaken primarily sitting or lying down.

Part 7: Diet: background

- Poor diet and nutrition are recognised as major contributory risk factors for ill health and premature death.
- The information for this section comes from three major national surveys:
 - Living Costs and Food Survey (LCF) (as reported in Family Food 2014).
 - Health Survey for England (HSE).
 - What About YOUth (WAY) Survey.
- The LCF collects information on the type and quantity of food and drink purchased in households.
- Data on fruit and vegetable consumption are taken from the HSE, and the WAY Survey, which is a postal survey of 15 year olds.

Adult diet: Purchases and expenditure on food and drink

In 2015, the percentage of spend on food and non-alcoholic drinks for the average UK household was 11%. The percentage of spend on food and non-alcoholic drinks is highest for households with the lowest 20% of income¹, at 16%.

Total expenditure £42.43			
Household £29.24		Eating out £13.18	
Food and drink £25.93	Alcohol £3.32	Food and drink £10.00	Alcohol £3.18

In 2015 the amount that an average household spent on all food and drink, including alcoholic drinks and food eaten out was £42.43 per person per week.

When inflation is taken into account, this was 0.1% more than 2014 and 3.7% less than 2012

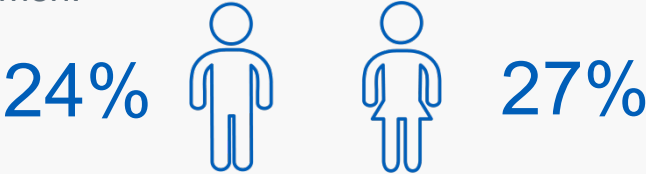
Purchases of various household foods are on a clear short term downward trends since 2012, including milk and cream, meat and meat products, potatoes, and bread. Fresh fruit are on a short term upwards trend since 2011.

1) Based on equivalised income. Equivalisation means adjusting a household's income for size and composition so that the incomes of all households are on a comparable basis.

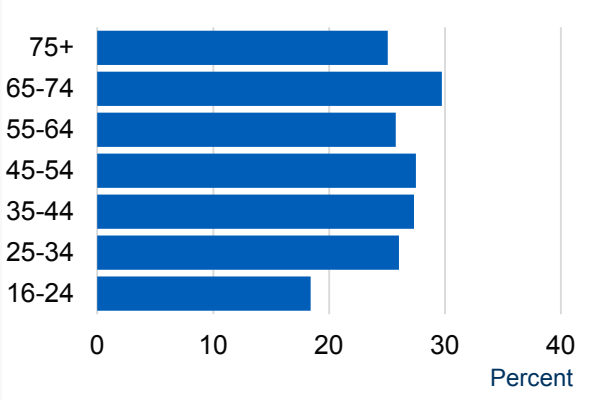
Adult diet: Fruit and vegetable consumption

Percentage eating 5 or more portions a day

26% of adults ate the recommended 5 portions a day in 2015. Women were more likely to do so than men.



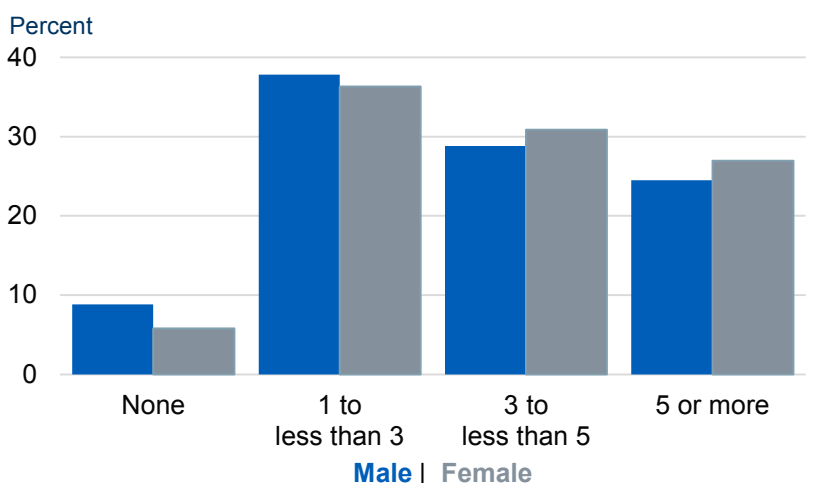
Adults aged 16-24 were least likely to eat the recommended 5 portions a day.



Mean number of portions a day

More adults ate fewer than 3 portions a day than met the recommended 5 portions.

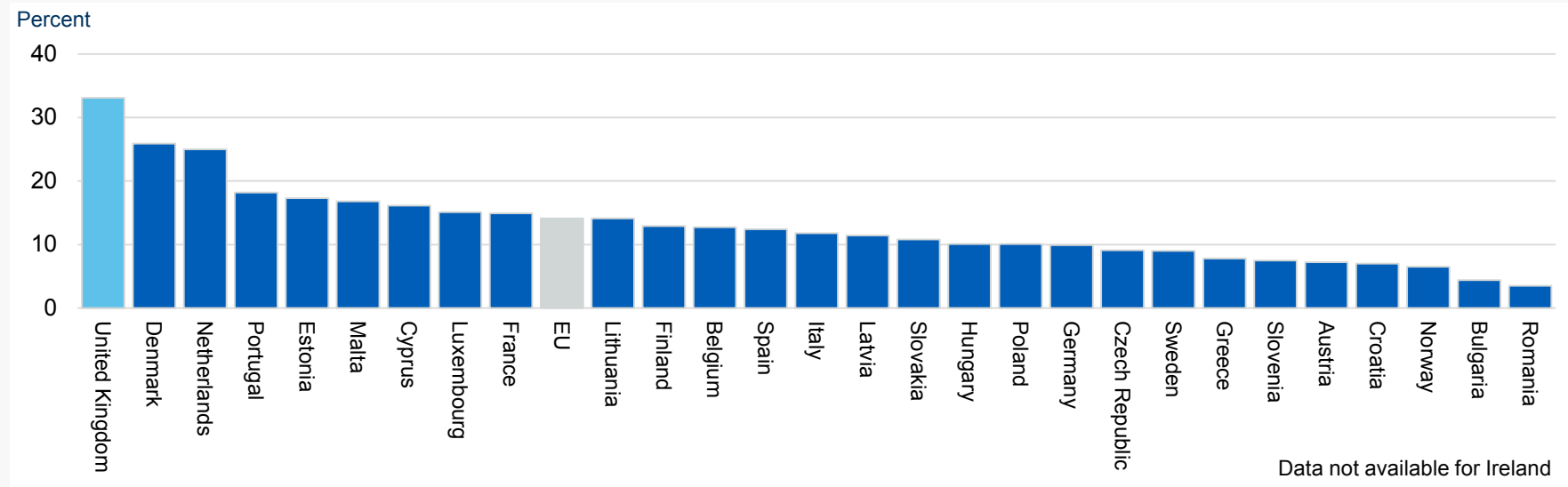
47% of men, and 42% of women ate fewer than 3 portions a day.



Adult diet: Fruit and vegetable consumption

Percentage eating 5 or more portions a day: UK comparison with other European Union countries ¹

Results from the European Health Interview Survey 2014 showed the UK as having the highest proportion of the population eating 5 or more portions of fruit and vegetables per day (33%). This compared to an EU average of 14%.

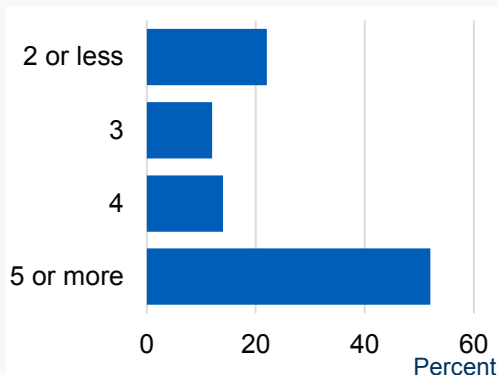


1) Based on persons aged 15+. Please note that the source of UK data differs from the statistics quoted for England on page 35.

Childhood diet: Fruit and vegetable consumption¹

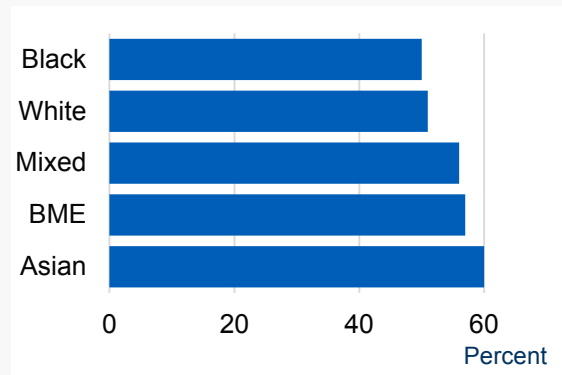
Portions consumed per day

52% of 15 year olds reported they consumed 5 or more portions of fruit and vegetables a day.



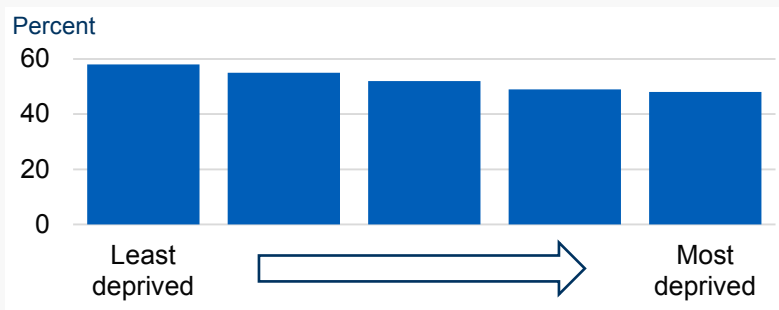
5 or more portions a day by ethnic group

60% of Asian children reported they ate 5 or more portions a day, compared to 50% of black children.



Consume 5 or more portions a day by level of deprivation²

The proportion of children reporting they consumed 5 or more portions a day varied from 58% in the least deprived areas to 48% in the most deprived areas.



1) Based on children aged 15 2) Based on [Department of Communities and Local Government Index of Multiple Deprivation deciles](#)

For more information: Tables 5.1, 5.2 & 5.4, Chapter 5, [What About YOUth \(WAY\) survey 2014](#)

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