



BRIEFING PAPER

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Obesity Statistics

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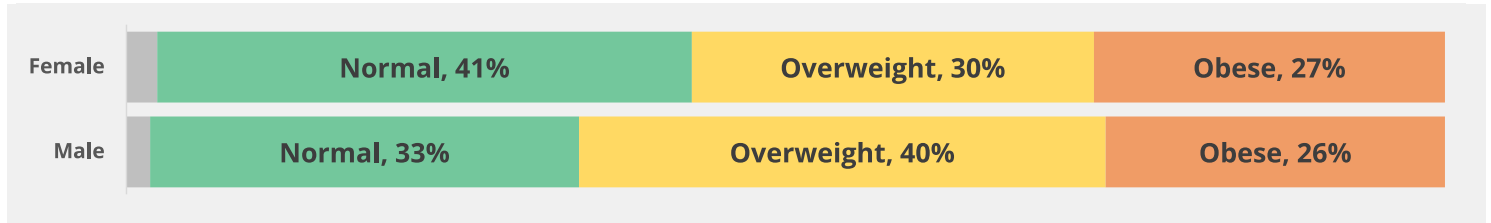


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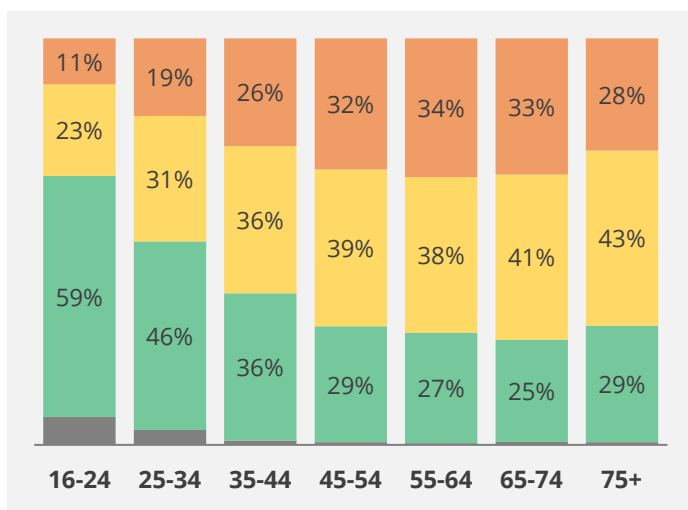
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Obesity in England: summary

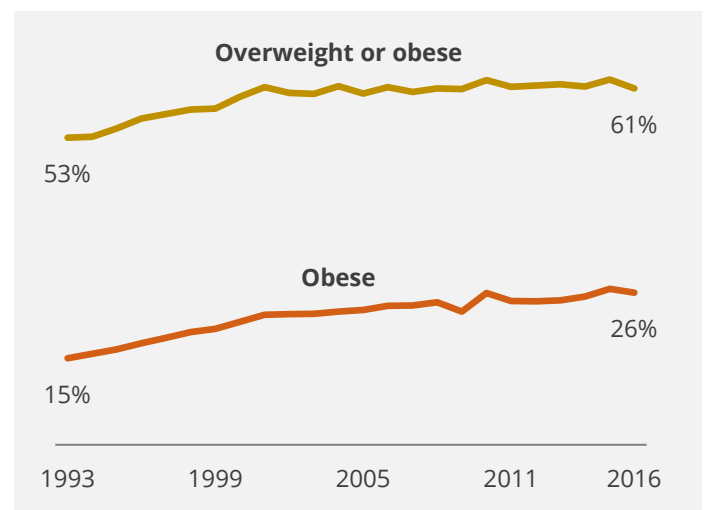
In England, men are more likely to have a body mass index measurement above normal weight.



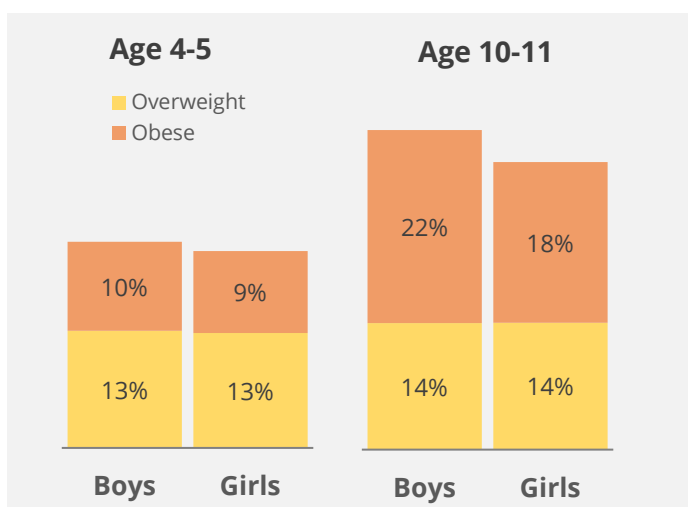
Obesity levels are highest among ages 45-74.



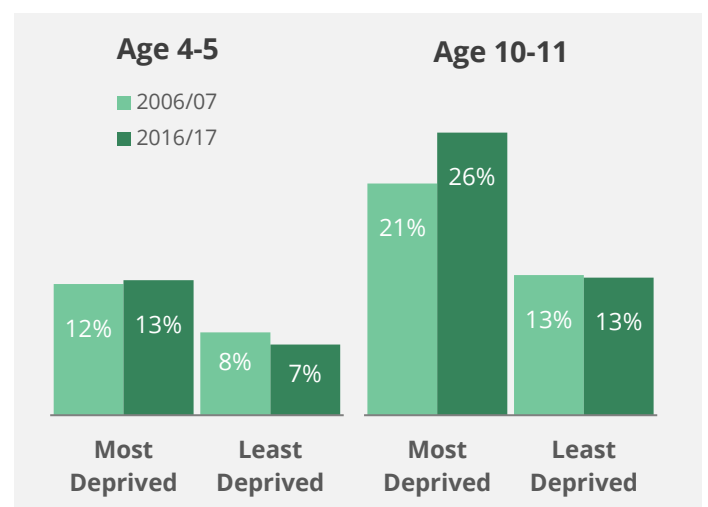
Obesity levels have increased from 15% to 26% since 1993.



One in ten children is obese by age 5, and one in five by age 11.



Deprived children are more likely to be obese, and the gap has risen.



This briefing also contains information on: adult and child obesity rates in Scotland, Wales, and Northern Ireland; GP prescribing for obesity; bariatric surgery for obesity; and international comparisons.

Measures of Obesity

The most widely used measure of obesity is the Body Mass Index (BMI), defined as weight divided by the square of height (kg/m^2). A person is classified as obese if their BMI is 30 or higher. A BMI of 40 or more is often known as 'morbid obesity'. The full range of classifications is as follows.

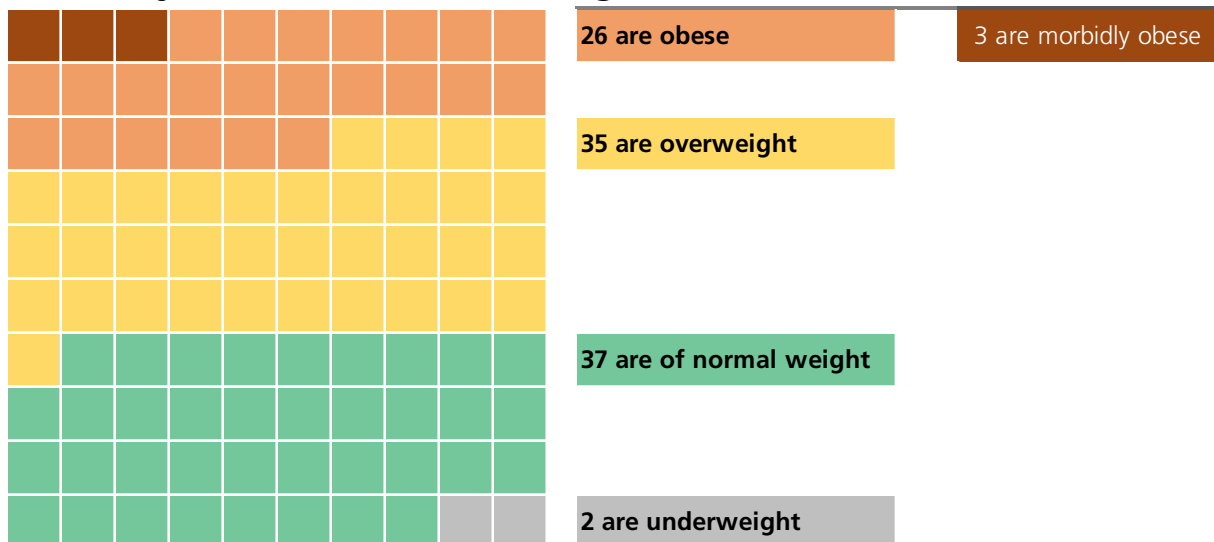
This measure is not always definitive, and in some cases other measures are used.¹ These include waist circumference and the waist-hip ratio (defined as the waist circumference divided by the hip circumference which provides an indication of the distribution of fat on the body).

Classification	BMI
Underweight	< 18.5
Normal weight	18.5 - 24.9
Overweight	25.0 - 29.9
Obese: Class I	30.0 - 34.9
Obese: Class II	35.0 - 39.9
Obese: Class III	40.0+

1. Obesity among adults, England

The Health Survey for England measures a representative sample of adults aged 16 and over to provide estimates of obesity levels in the country. In the 2016 survey, it found that 26.2% of adults in England are obese and a further 35.2% are overweight, making a total of 61.4% who are either overweight or obese.² Of obese adults, just over a tenth are morbidly obese (2.9% of all adults). Men are more likely than women to be overweight or obese (65.7% of men, 57.1% of women).

Of every hundred adults in England...



Trends over time

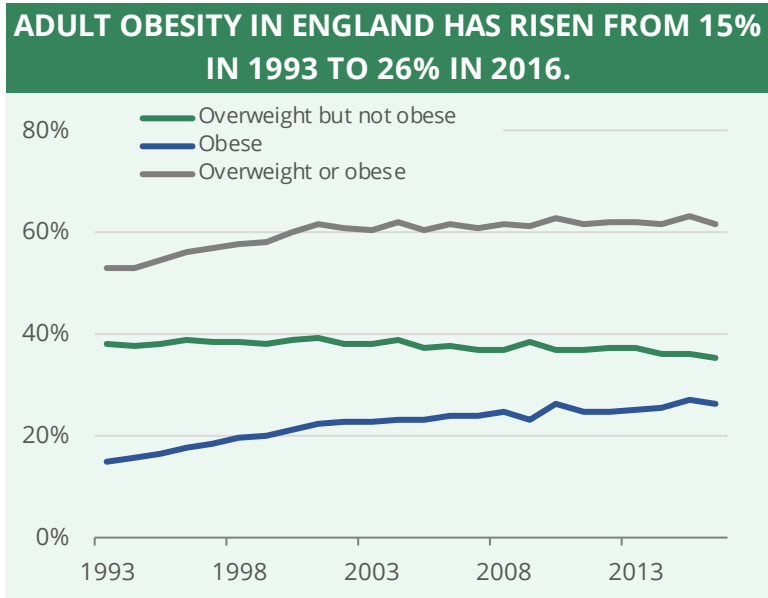
Between 2006 and 2016, the proportion of adults who were either overweight or obese has changed little. Obesity levels increase slightly,

¹ NHS Choices, Obesity <http://www.nhs.uk/conditions/Obesity/Pages/Introduction.aspx>

² Health Survey for England, 2015
<http://www.content.digital.nhs.uk/catalogue/PUB22610>

from 23.9% to 26.2%, although some annual fluctuation is to be expected since this data comes from a survey.

Looking further back, there has been a clear increase in obesity levels since 1993, from 15% to 26%. Correspondingly, the percentage of adults who are either overweight or obese has risen from 53% to 61%.



Perceptions of weight and weight loss

Although more than 60% of adults are classified as either overweight or obese, only 45% of people responding to the survey perceived their own weight as being too heavy. Of overweight men, more 52% thought they were the right weight and 42% thought they were too heavy. Of overweight women, 31% thought they were the right weight and 61% thought they were too heavy. 8% of obese adults thought that they were the right weight.

44% of overweight men said they were trying to lose weight, compared with 65% of overweight women. 68% of obese men said that they were trying to lose weight, compared with 80% of women. Overall, one-quarter of obese adults were not trying to change their weight.

Health Risks of Obesity

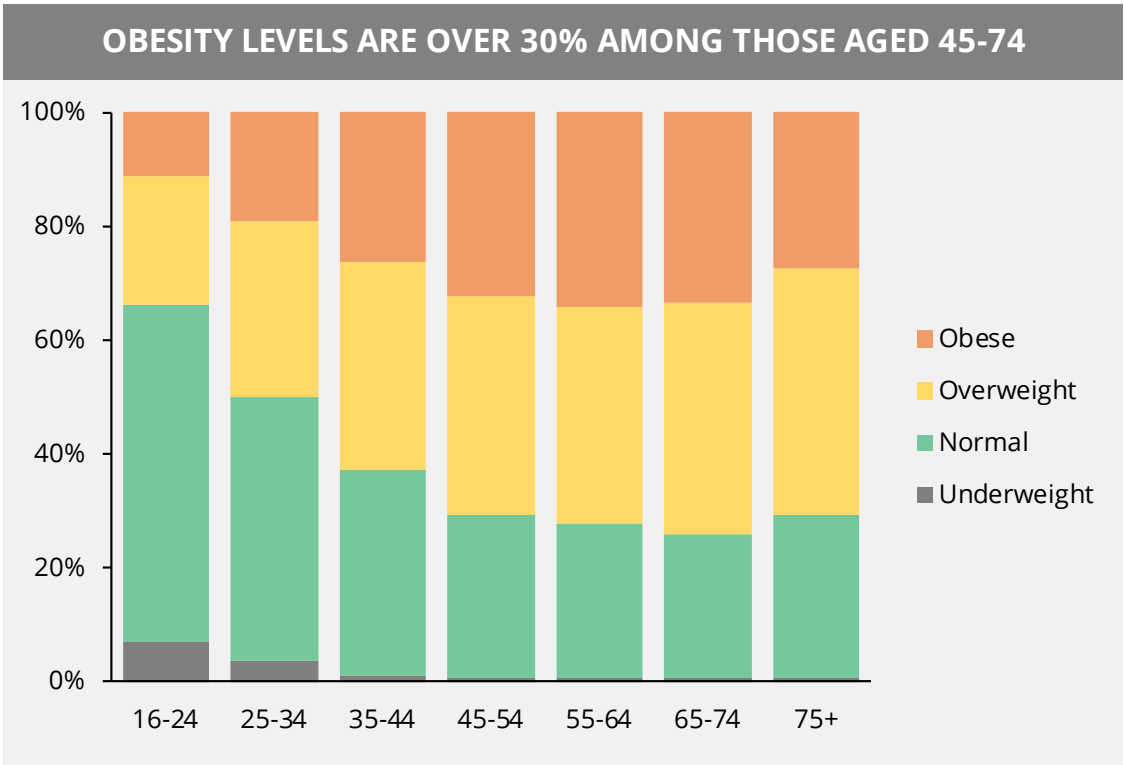
Obesity increases the risk of other health conditions, including:

- Joint problems
- Lower back pain
- Hypertension (high blood pressure)
- Coronary heart disease and stroke
- Deep vein thrombosis
- Type 2 diabetes
- Endometrial, breast and colon cancer
- Stress incontinence
- Menstrual abnormalities
- Erectile dysfunction
- Respiratory problems

Further information is available from [Public Health England](https://www.gov.uk/government/organisations/public-health-england).

Obesity by age

The age group most likely to be overweight or obese is age 55-64, but only by a small margin. Prevalence of overweight and obesity is above 70% among all age groups from 45 upwards. The adult age group least likely to be obese is 16-24 year olds, with 59% at normal weight and only 34% overweight or obese, as the chart below shows.



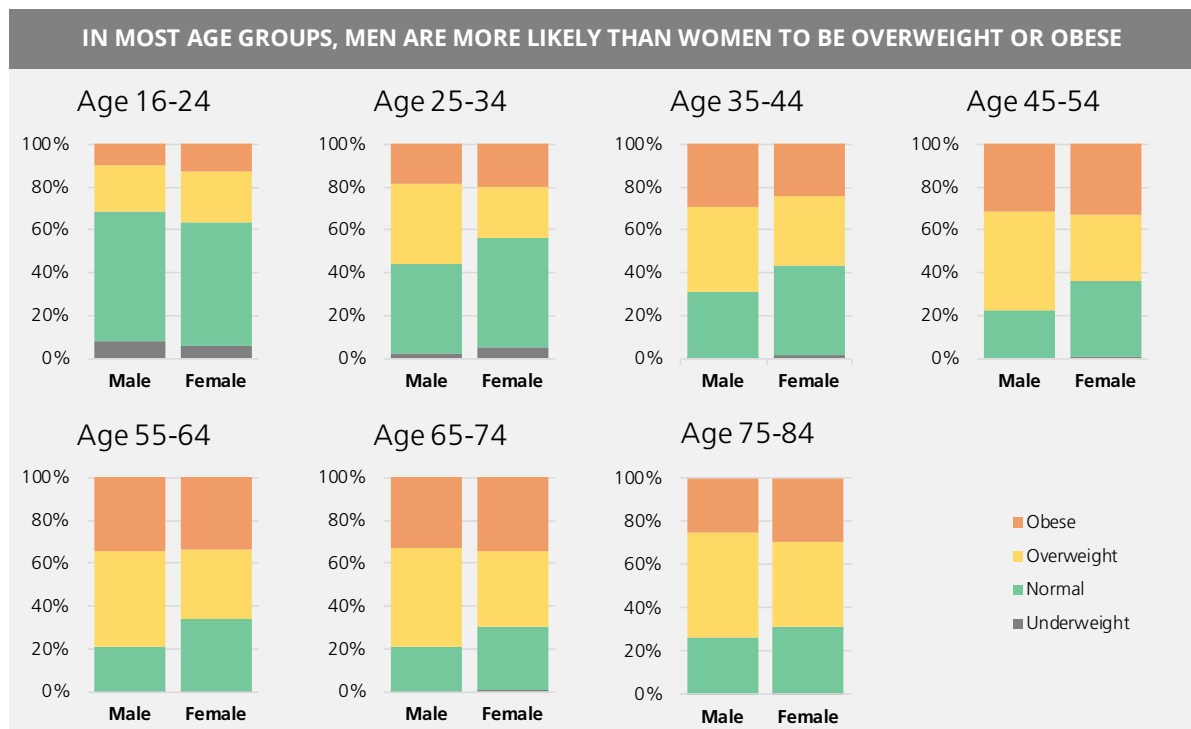
Obesity by gender and age

As noted above, men are more likely than women to be overweight or obese. However, obesity levels among women are slightly above (26.6%) those of men (25.7%) These proportions vary by age, as the collection of charts below shows. 16-24 is the only age group where women are more likely to be overweight or obese than men.

Other data related to obesity

Public Health England collates a range of data related to obesity, physical activity, and diet on its [Public Health Profiles](#) website. Data can be browsed for local areas on indicators such as:

- Percentage of people eating 5 fruit and veg a day
- Percentage of people who are physically active



Obesity and deprivation

Adults living in the most deprived areas of England are 46% more likely to be obese than adults living in the least deprived areas of England. In the most deprived quintile of areas 32% of adults are obese and a further 34% are overweight. In the least deprived quintile, 22% are obese and a further 35% are overweight.

Variation in overweight and obese adults across England

The Active Lives Survey allows us to estimate variation in the proportion of adults that are overweight or obese in different local authorities.³ The most recent available data covers surveys from 2015/16, and shows that levels of excess weight are estimated to be highest in the North East and Yorkshire and the Humber. The **map on the following page** shows data for each local authority in England, showing how rates compare to the national average.

Because of the small sample size for these local authority estimates there is some uncertainty around the exact levels of overweight and obesity. For instance, the central estimate for Doncaster is 73.4%, but the nature of the survey means that we can only say with relative certainty that the value is between 68.1% and 77.9%. So we do not know for sure that Doncaster has the highest rates. But we can be fairly certain that Doncaster's rates are higher than Sunderland's, which are estimated to be between 61.9% and 67.9%.

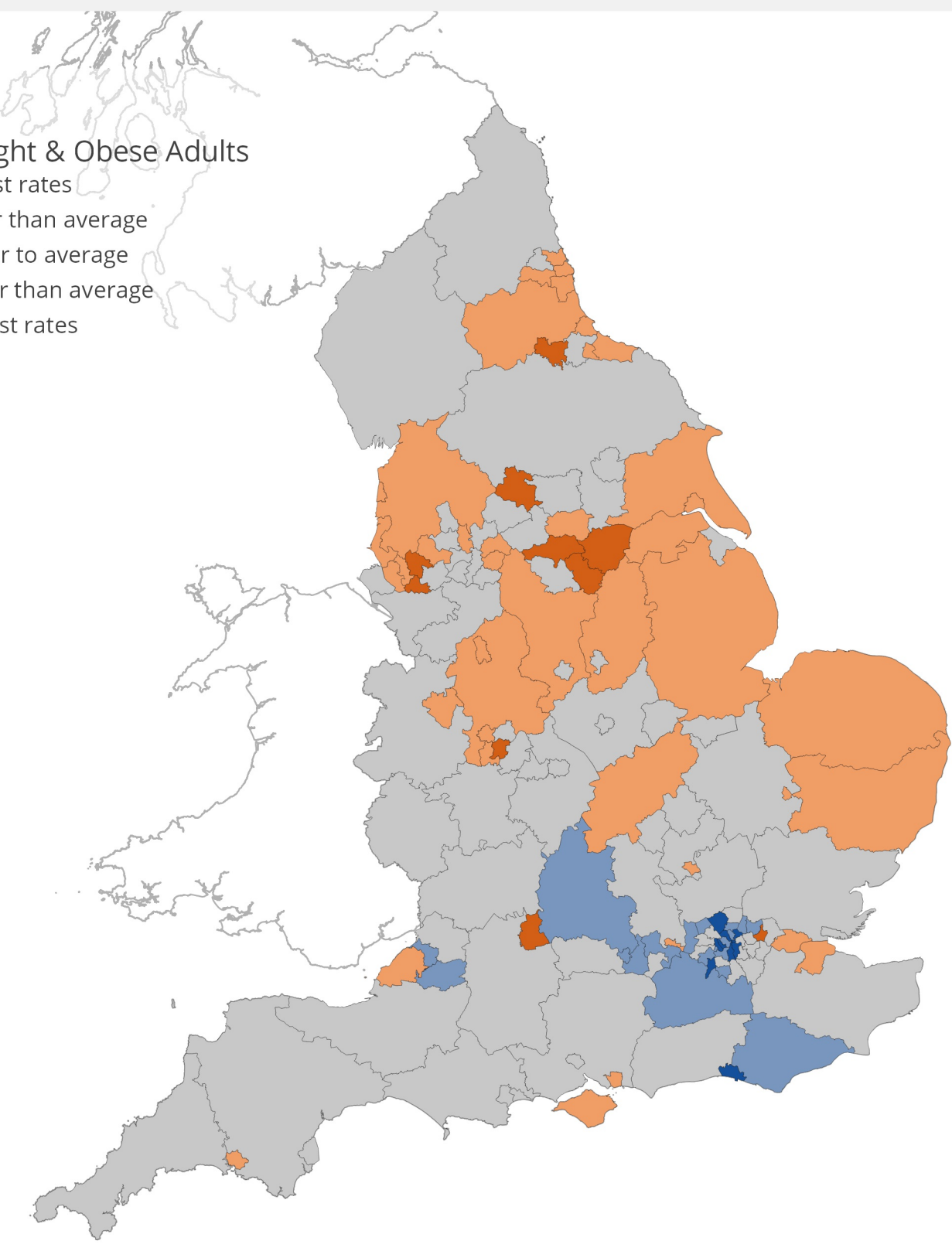
³ Active Lives Survey data 2015/16, extracted from [Public Health England Profiles](#)

OVERWEIGHT AND OBESE ADULTS IN ENGLAND, 2015/16

Legend

Overweight & Obese Adults

- Lowest rates
- Lower than average
- Similar to average
- Higher than average
- Highest rates



HIGH PERCENTAGE OVERWEIGHT OR OBESE

Local Authority	Low Estimate	High Estimate
Doncaster	68%	78%
St. Helens	68%	76%
Darlington	67%	77%
Rotherham	67%	76%
Barnsley	67%	75%
Halton	65%	76%
North Tyneside	65%	74%
Sandwell	66%	73%
South Tyneside	64%	74%
Swindon	66%	72%

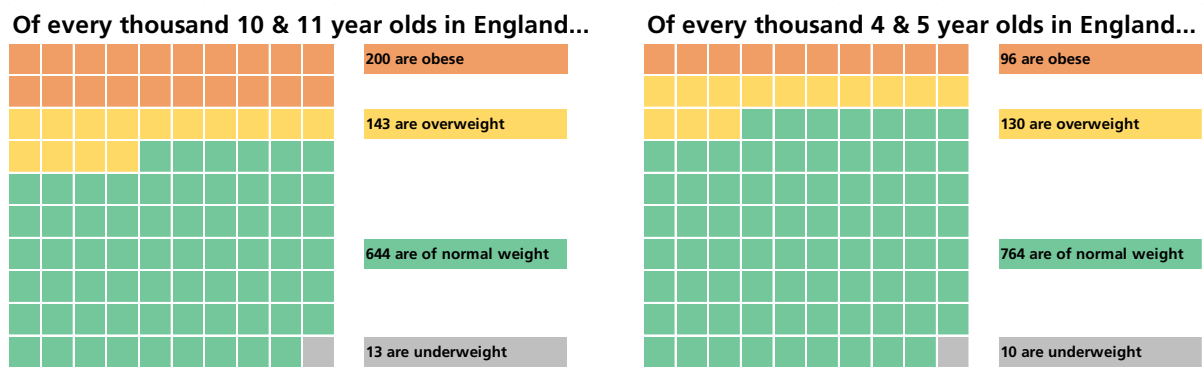
LOW PERCENTAGE OVERWEIGHT OR OBESE

Local Authority	Low Estimate	High Estimate
City of London	37%	48%
Camden	38%	47%
Kensington and Chelsea	41%	50%
Southwark	42%	52%
Hackney	44%	54%
Barnet	46%	53%
Brighton and Hove	46%	55%
Hammersmith and Fulham	46%	55%
Kingston upon Thames	46%	55%
Islington	46%	56%

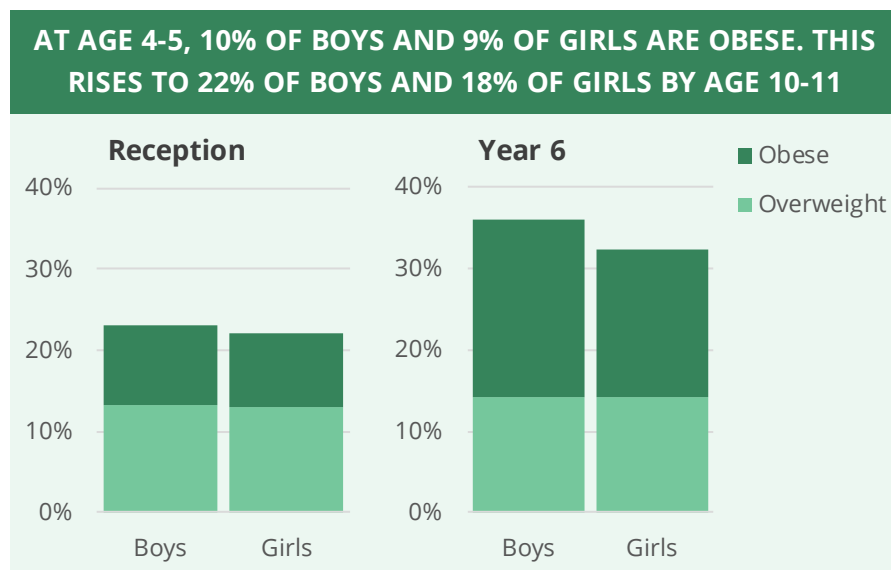
2. Obesity among children, England

According to data from the [National Child Measurement Programme](#) (NCMP), 9.6% of reception age children (age 4-5) are obese, with a further 13.0% overweight. These proportions are higher among year 6 children (age 10-11), with 20.0% being obese and 14.3% overweight.

Note that these categories are not directly comparable to those used for adults, since measuring BMI and obesity for children is more complex than for adults. In the NCMP, obese is defined as having a BMI in the 95th percentile or higher of the [British 1990 growth reference](#). Overweight is defined as a BMI in the 85th percentile or higher.



In both age groups, boys are slightly more likely than girls to be obese. This difference is one percentage point at age 4-5, but rises to almost four percentage points by age 10-11.



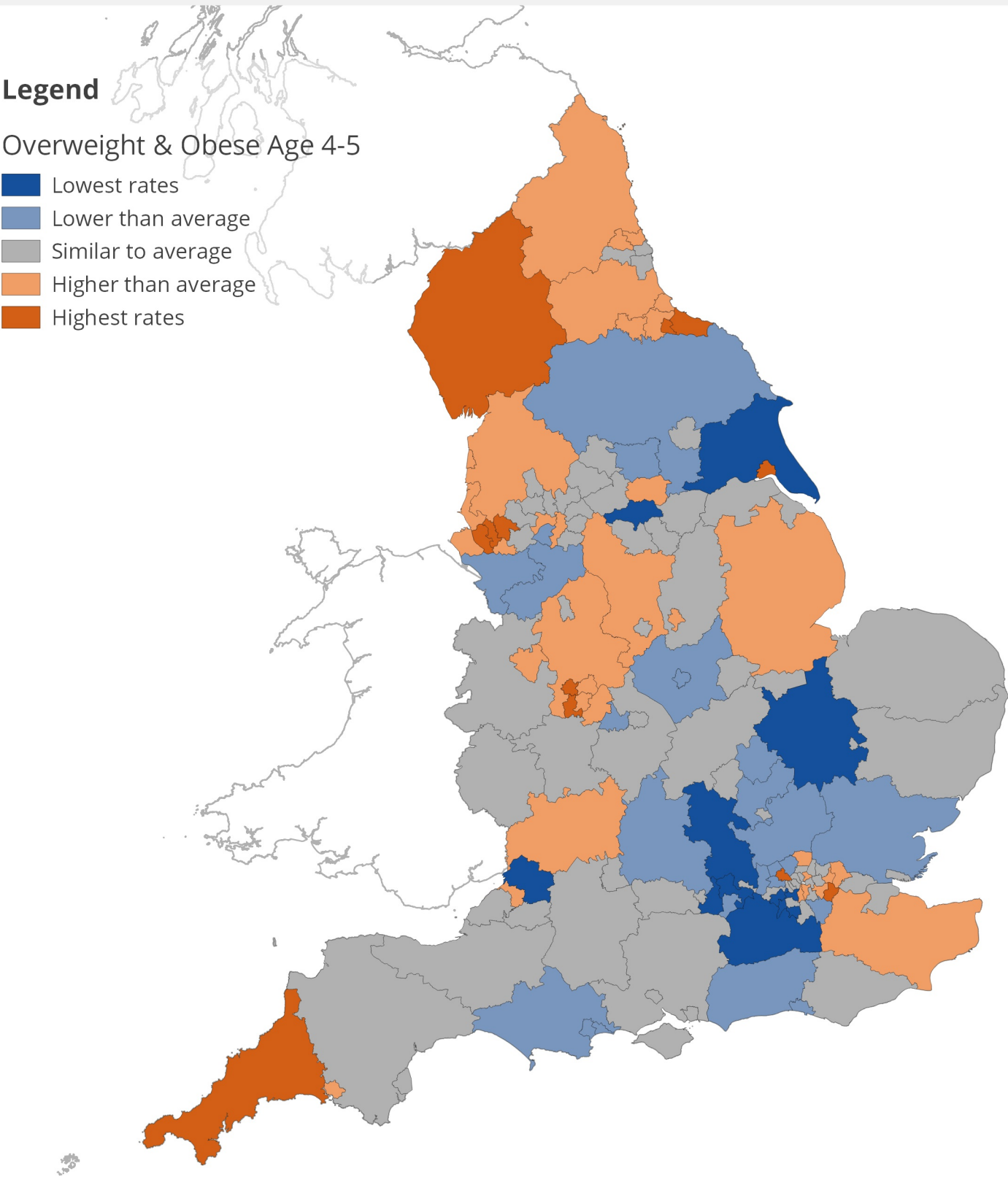
The maps on the following two pages analyse the NCMP data by local authority. The maps show whether the rate of obesity among children is above or below the English average. Although sample sizes are larger than for adults, there remains some uncertainty around precise values.

OVERWEIGHT AND OBESE CHILDREN AGED 4-5 IN ENGLAND, 2016/17

Legend

Overweight & Obese Age 4-5

- Lowest rates
- Lower than average
- Similar to average
- Higher than average
- Highest rates



HIGHEST PERCENTAGE OVERWEIGHT OR OBESE

Local Authority	Low Estimate	High Estimate
Cumbria	26.9%	29.5%
Kingston upon Hull	26.5%	29.4%
Wolverhampton	26.3%	29.4%
Brent	26.2%	29.0%
Middlesbrough	25.6%	29.6%
Knowsley	25.3%	29.3%
Redcar and Cleveland	25.0%	29.4%
Dudley	25.5%	28.4%
St. Helens	25.0%	28.8%
Liverpool	25.6%	28.0%

LOWEST PERCENTAGE OVERWEIGHT OR OBESE

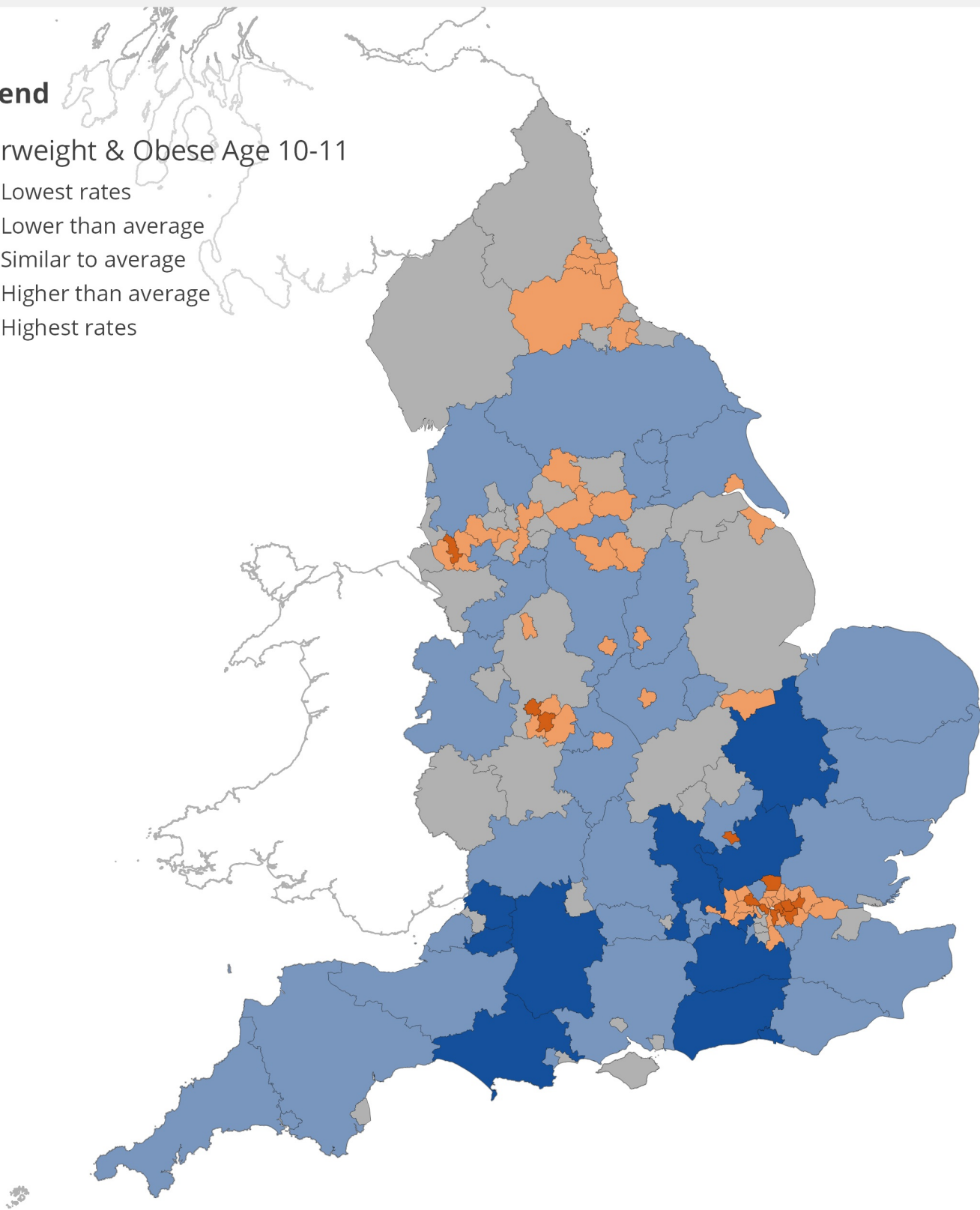
Local Authority	Low Estimate	High Estimate
Kingston upon Thames	13.5%	16.7%
Richmond upon Thames	15.0%	18.1%
Barnsley	15.5%	18.2%
Windsor and Maidenhead	15.3%	19.0%
Surrey	16.6%	18.0%
Sutton	15.9%	18.9%
Wokingham	16.2%	19.5%
Buckinghamshire	17.0%	19.0%
Wandsworth	16.8%	19.7%
East Riding of Yorkshire	17.0%	19.5%

OVERWEIGHT AND OBESE CHILDREN AGED 10-11 IN ENGLAND, 2016/17

Legend

Overweight & Obese Age 10-11

- Lowest rates
- Lower than average
- Similar to average
- Higher than average
- Highest rates



HIGHEST PERCENTAGE OVERWEIGHT OR OBESE

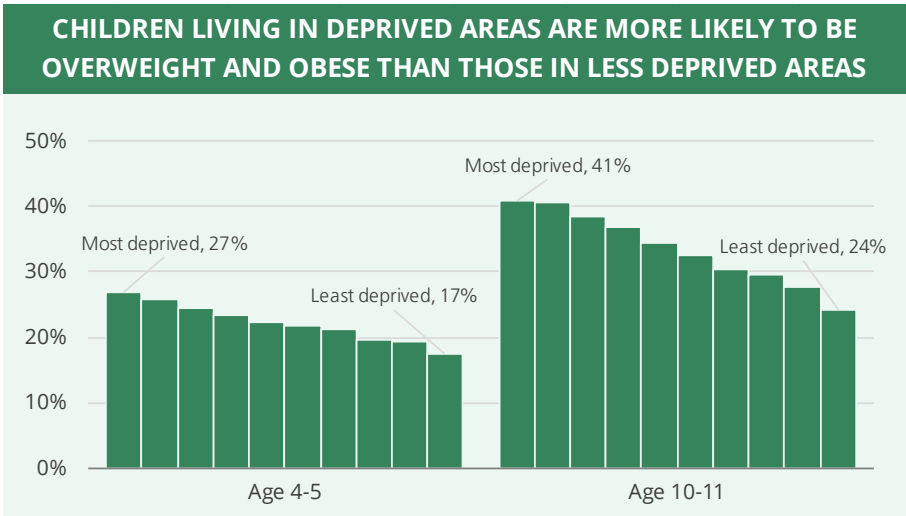
Local Authority	Low Estimate	High Estimate
Brent	42.3%	45.6%
Barking and Dagenham	42.0%	45.5%
Wolverhampton	41.4%	45.0%
Sandwell	41.7%	44.6%
Westminster	40.3%	45.9%
Southwark	41.2%	44.9%
Greenwich	41.0%	44.5%
Newham	41.1%	44.2%
Tower Hamlets	40.7%	44.2%
Knowsley	39.9%	44.5%

LOWEST PERCENTAGE OVERWEIGHT OR OBESE

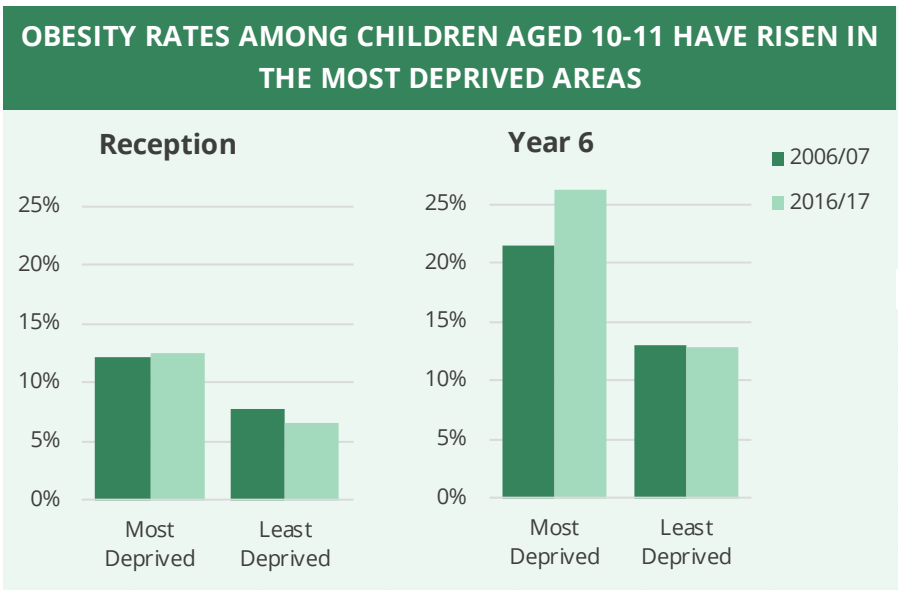
Local Authority	Low Estimate	High Estimate
Richmond upon Thames	23.3%	27.4%
Rutland	21.0%	30.3%
Brighton and Hove	23.7%	27.3%
Wokingham	24.6%	28.7%
Surrey	25.9%	27.7%
Cambridgeshire	26.0%	28.3%
Buckinghamshire	26.0%	28.5%
South Gloucestershire	25.6%	29.0%
Bath & NE Somerset	25.5%	29.9%
North Somerset	26.0%	30.0%

Childhood obesity and deprivation

Children living in deprived areas are substantially more likely to be obese. Among reception (age 4-5) children, 6.6% of those in the least deprived areas are obese compared with 12.5% of those in the most deprived areas. In Year 6 (age 10-11), 12.8% of children in the least deprived areas are obese, compared with 26.2% in the most deprived areas. So in both age groups, children in the most deprived areas are around twice as likely to be obese.



In both age groups, the obesity gap between the most deprived and least deprived areas has increased in the last decade. This is particularly pronounced among ages 10-11, where obesity rates in the most deprived areas have risen by almost five percentage points but were unchanged in the least deprived areas.



Economic Costs of Obesity

Estimates of the economic cost of obesity vary and are inherently uncertain. An influential [Foresight Report](#) from 2007 estimated that NHS costs attributed to elevated BMI (overweight and obesity) were £4.2 billion in 2007. This was forecast to rise to £6.3 billion in 2015, £8.3 billion in 2025 and £9.7 billion in 2050. This only reflects costs to the health service and not wider economic consequences for society. Estimates of future costs rely on the accuracy of obesity prevalence forecasts.

3. Obesity in Wales, Scotland and Northern Ireland

The data above covers obesity in England. Data for other UK countries is gathered and reported separately. Each country presents its data in a different format and level of detail.

In terms of comparability, a 2014 Government Statistical Society publication gave the following analysis:

Adult obesity is defined consistently across Scotland, England, Wales and Northern Ireland using the BMI scale. However, height and weight measurements are self-reported in the Welsh Health Survey and are therefore not directly comparable with equivalent statistics in Scotland, England and Northern Ireland, where direct measurements are taken.⁴

Because of this, no comparisons of adult obesity rates in England and Wales are made in this section.

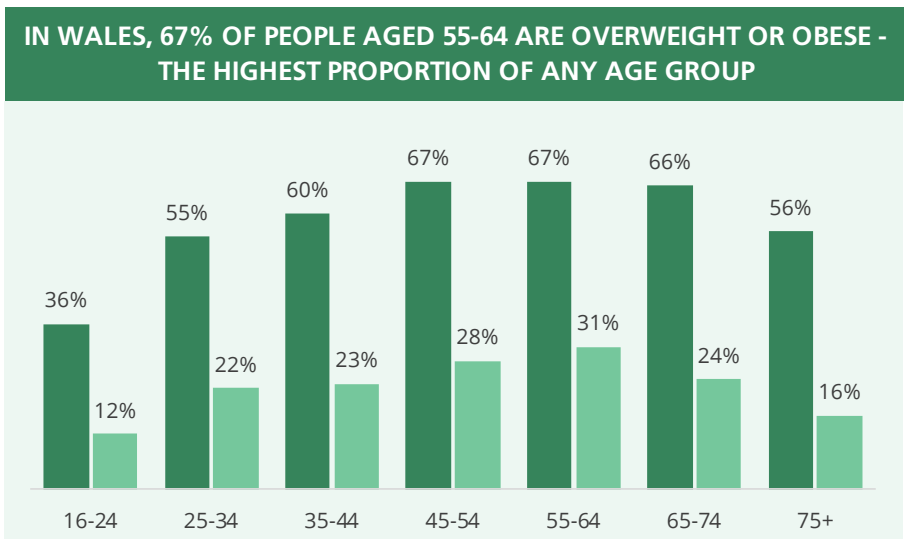
3.1 Adult Obesity in Wales

Information on obesity among adults in Wales is measured in the [National Survey for Wales](#) based on self-reported data. 23% of adults were obese in 2016, and a further 36% were overweight. 65% of men were either overweight or obese, compared with 53% of women.

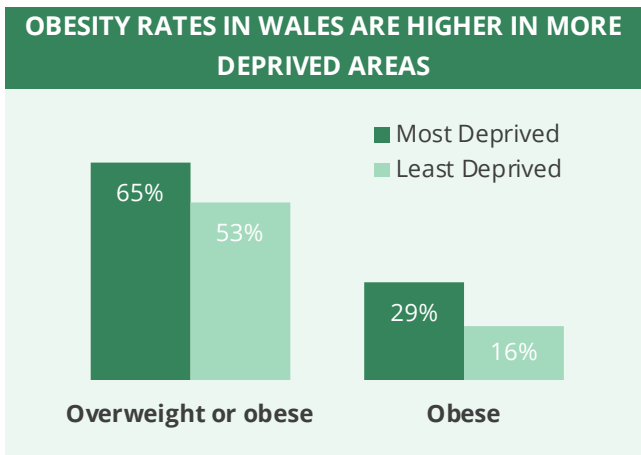
As noted above, these figures aren't comparable with the England data discussed in previous sections.

The chart below shows variation by age. More than two-thirds of those aged 45-74 were overweight or obese. The age group with the highest obesity levels was 55-64, at 31%.

⁴ Government Statistical Survey, [Comparing Official Statistics across the UK](#), 2014



Obesity rates are highest in the most deprived areas of Wales. 29% of adults in these areas were obese in 2016, compared with 16% of adults in the least deprived areas.



Residents of Cwm Taf Health Board area (Rhondda Cynon Taf & Merthyr Tydfil) and Aneurin Bevan Health Board area (Caerphilly, Blaenau Gwent, Torfaen, Monmouthshire & Newport) are estimated to have the highest obesity rates in Wales.

3.2 Child Obesity in Wales

According to the 2015/16 [Child Measurement Programme for Wales](#), 11.7% of children aged 4-5 in Wales are obese, and a further 14.5% are overweight. The total of 26.2% of children overweight and obese is higher than England's 22.6% for the same age group.

Childhood obesity rates are estimated to be lowest in the Vale of Glamorgan and highest in Merthyr Tydfil.

As in England, deprivation is a predictor of obesity. 13.5% of children are obese in the most deprived fifth of areas compared with 8.8% in the least deprived fifth.

3.3 Adult obesity in Scotland

Adult obesity in Scotland is measured as part of the [Scottish Health Survey](#). The 2016 edition of this survey found that 29% of people aged 16 or above in Scotland were overweight or obese. A further 36% were overweight. Obesity rates were similar for men and women, but men were more likely to be overweight but not obese (40%) than women (32%).

The charts below show a breakdown by age and gender. 36% of those aged 65-74 were obese, including 41% of men in that age group.



Obesity rates are higher in deprived areas than in the least deprived areas. However, rates are highest in the second-most deprived quintile (36%) than in the most deprived quintile of areas (32%).

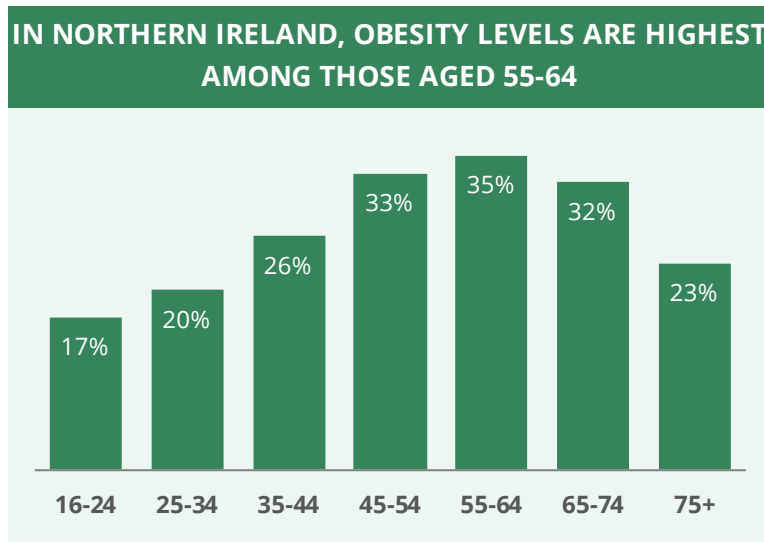
3.4 Child obesity in Scotland

Scotland records BMI data for children in Primary 1 (roughly ages 4-5).⁵ Data for 2016/17 indicates that 12% of children were at risk of being overweight and 10% were at risk of being obese. Risk of obesity is classified as those who are above the 95th percentile of the 1990 UK growth reference standards, and risk of overweight is classified as between the 85th and 95th percentile. Dumfries and Galloway had the highest percentage of children at risk of either overweight or obesity, at 29%.

⁵ ISD Scotland, [Child Weight & Growth Primary 1 Statistics](#)

3.5 Adult Obesity in Northern Ireland

According to the [Health Survey Northern Ireland](#), in 2016/17 27% of those aged 16 and over are obese and a further 36% are overweight, making a total of 63% who are either overweight or obese. Men are more likely to be obese or overweight (66%) than women (59%). The chart below shows a breakdown by age.



In contrast to other UK countries, obesity levels do not vary by the deprivation status of local areas.

Data is broken down by the five health board areas that make up Northern Ireland. However, because of the small sample size of the survey, the results don't allow us to say whether obesity levels are higher in particular parts of the country.

3.6 Child Obesity in Northern Ireland

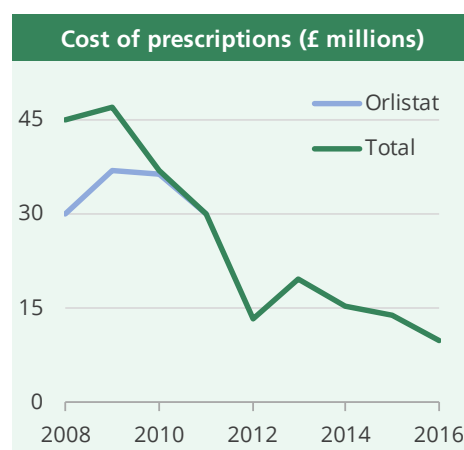
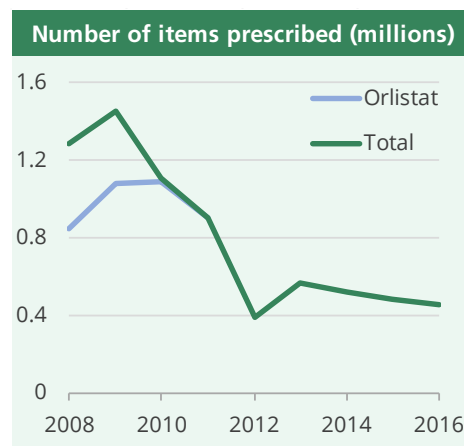
In 2016/17, the [Health Survey Northern Ireland](#) recorded 8% of children aged 2-10 and 7% of children aged 11-15 as being obese. However, the small sample size of the survey means that meaningful comparisons over time or between age groups can't be made.

4. GP prescribing for obesity

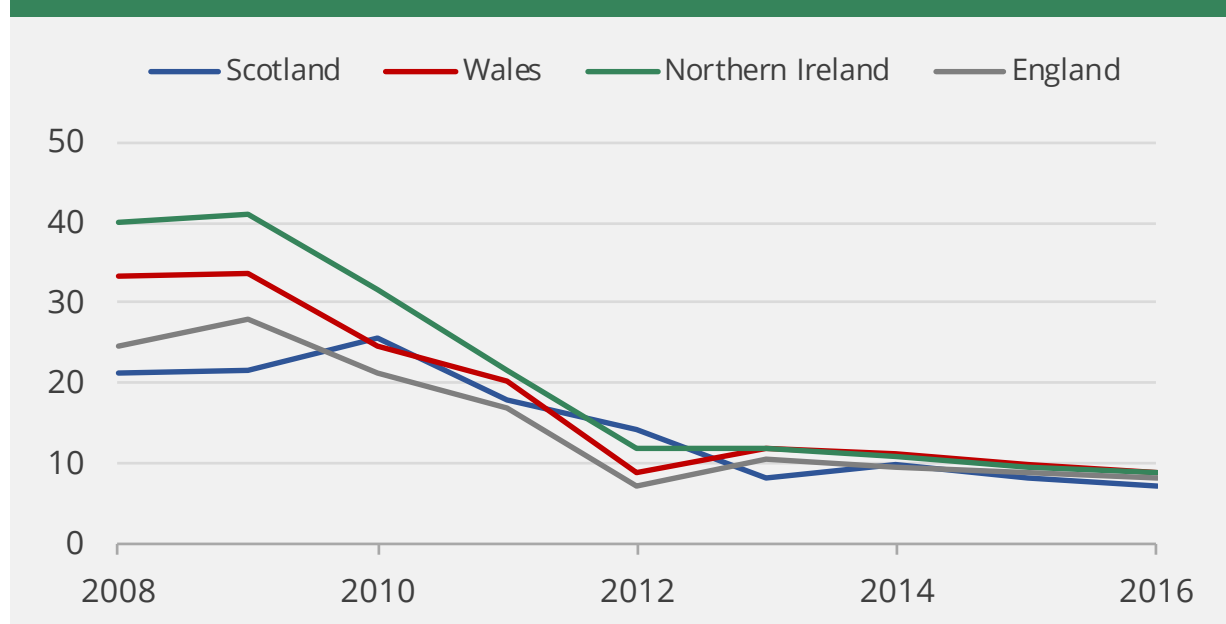
In England in 2016, pharmacies dispensed 450,000 items for treating obesity with a net ingredient cost of £9.9 million. Almost all of these prescriptions were for [Orlistat](#), which prevents the body from absorbing fat from food. This is down from a high of 1.45 million items (costing 47 million) in 2009.

The charts to the right show trends in the number and cost of items prescribed in England since 2008. The cost of obesity prescribing has fallen faster than the number of prescriptions in recent years. In 2016 the number of prescriptions for obesity fell by 7%, but the total cost fell by 29%.

The chart below shows comparisons between UK countries in the number of drugs for obesity prescribed relative to population size since 2008. In 2014 the four countries had similar prescription rates for obesity drugs, at around 8 items per 1,000 population over the course of the year. Previously, between 2008 and 2011, Northern Ireland had had the highest rates. All UK countries have seen a fall in prescriptions for obesity drugs over the period.



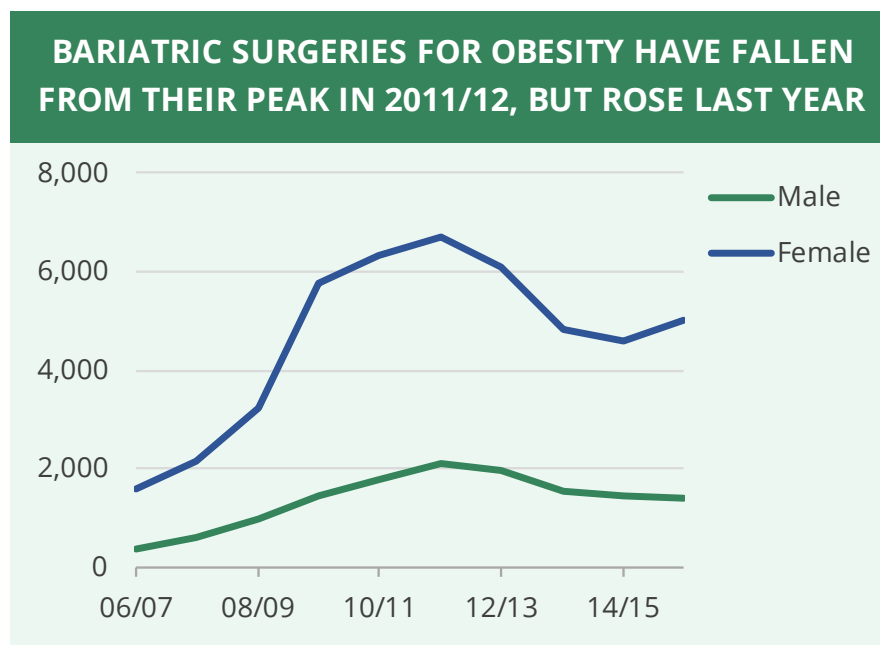
GP PRESCRIPTIONS FOR OBESITY HAVE FALLEN ACROSS THE UK (Items per 1,000 population)



5. Bariatric surgery

Bariatric surgery refers to a range of procedures including gastric bypasses, stomach stapling and gastric band maintenance, often performed to limit the amount of food that an individual can consume. It is mainly used to treat those with a BMI of above 40, and in some cases where BMI is between 35 and 40 if the patient has health problems such as heart disease or diabetes.⁶

The number of admitted episodes for bariatric surgery which followed a diagnosis of obesity rose sharply between 2006/07 and 2011/12, but has fallen since. In 2015/16 there was a rise in procedures on women but a fall in procedures on men. Three quarters of these procedures are carried out on women. The chart below illustrates these trends.



The age breakdown of bariatric surgeries after a diagnosis of obesity has changed. In 2005/06, 57% of all surgeries were carried out on those aged under 44. By 2015/16 this had fallen to 43%.

In 2015/16, bariatric surgery after a diagnosis of obesity was most common in North East England, where one in eight surgeries were performed. By comparison, one in every 21 people in England live in the North East. The local authorities with the highest rates were Telford & Wrekin and Stoke-on-Trent, followed by several North East areas (e.g. Sunderland and County Durham), and Portsmouth.

⁶ HSCIC, [Statistics on Obesity, Physical Activity and Diet 2015](#)

6. International comparisons

According to a 2017 OECD report, a majority of the population in the OECD area are overweight or obese.^{7,8} Among countries reporting measured data (rather than self-reported data), the UK has the sixth-highest rates of obesity. Around 11% fewer adults are overweight or obese in the UK than in the highest-ranked country, the USA. The table below illustrates this.

OBESITY LEVELS IN COUNTRIES WITH MEASURED DATA					
2015 or nearest year					
	USA	38%		Ireland	23%
	Mexico	32%		Luxembourg	23%
	New Zealand	31%		Turkey	22%
	Hungary	30%		Czechia	21%
	Australia	28%		Brazil	21%
	UK	27%		Belgium	19%
	Canada	26%		Estonia	18%
	Chile	25%		South Korea	5%
	Finland	25%		Japan	4%
	Germany	24%			

The [OECD report](#) contains further information on statistics and policy trends concerning obesity.

⁷ See [List of OECD Member Countries](#).

⁸ [OECD Obesity Update 2017](#).

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