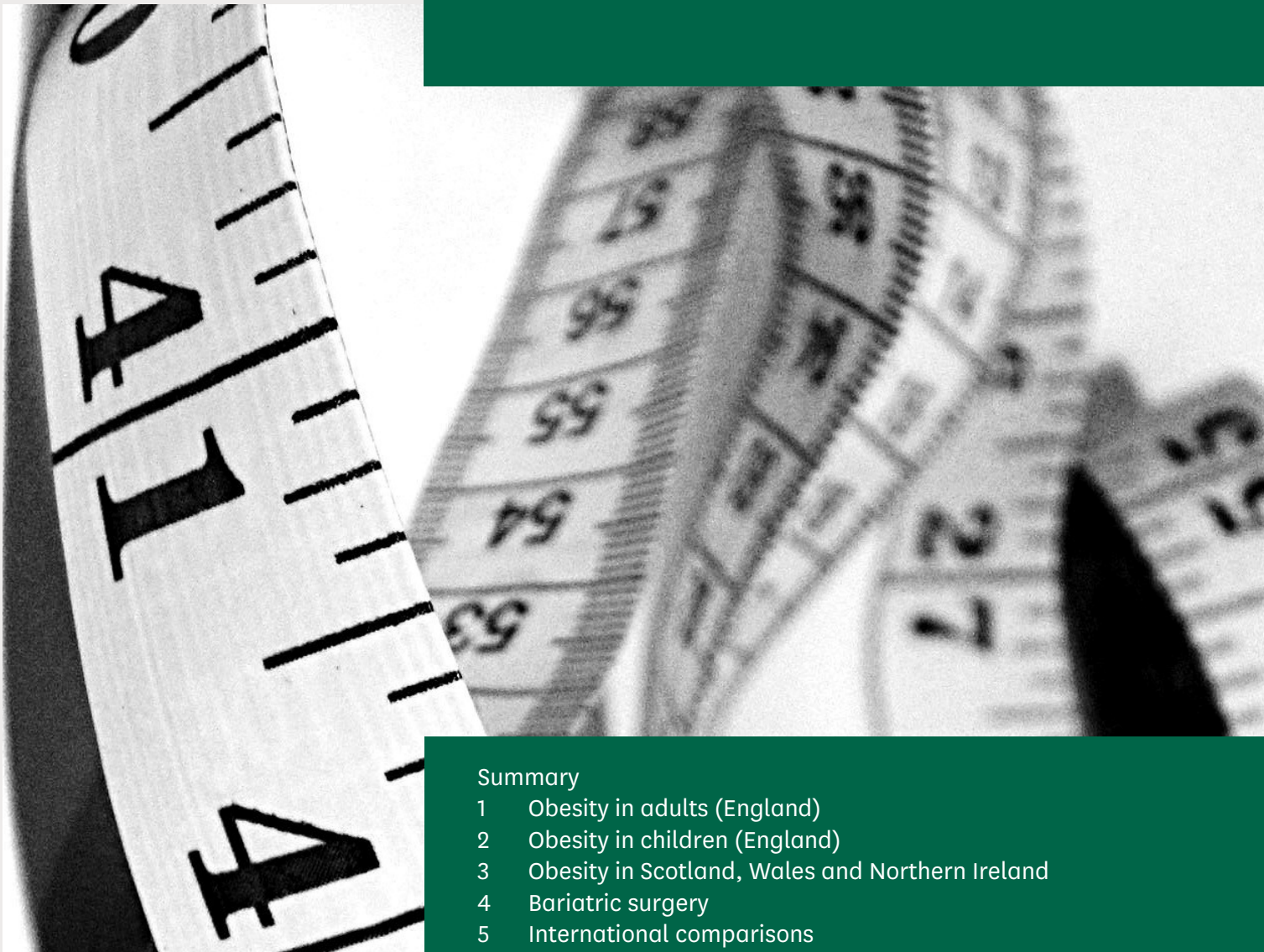


Research Briefing

By Carl Baker

16 March 2022

Obesity statistics



Summary

- 1 Obesity in adults (England)
- 2 Obesity in children (England)
- 3 Obesity in Scotland, Wales and Northern Ireland
- 4 Bariatric surgery
- 5 International comparisons

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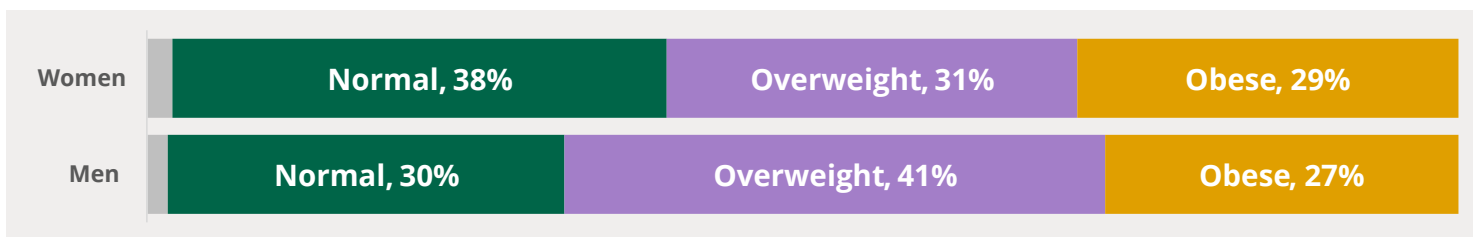
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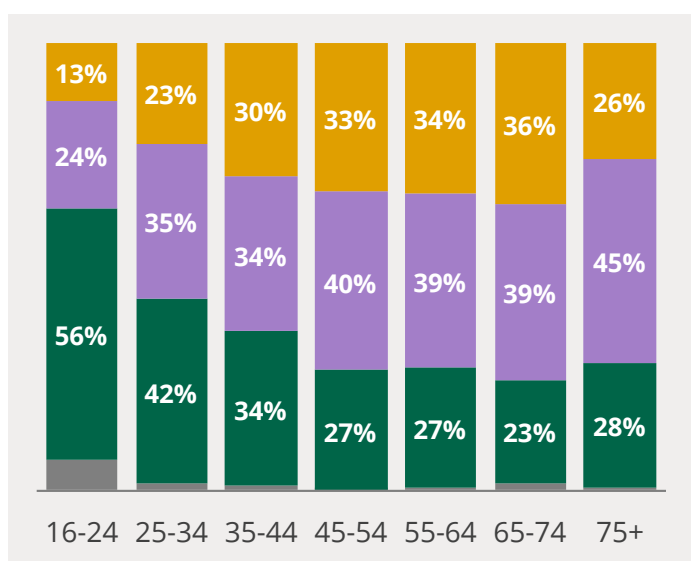
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Obesity in England: summary

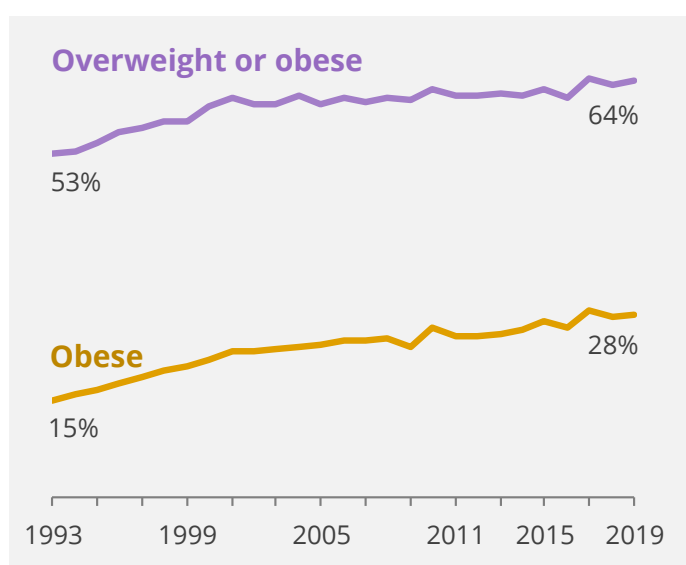
In England, men are more likely to have a body mass index measurement above normal than women.



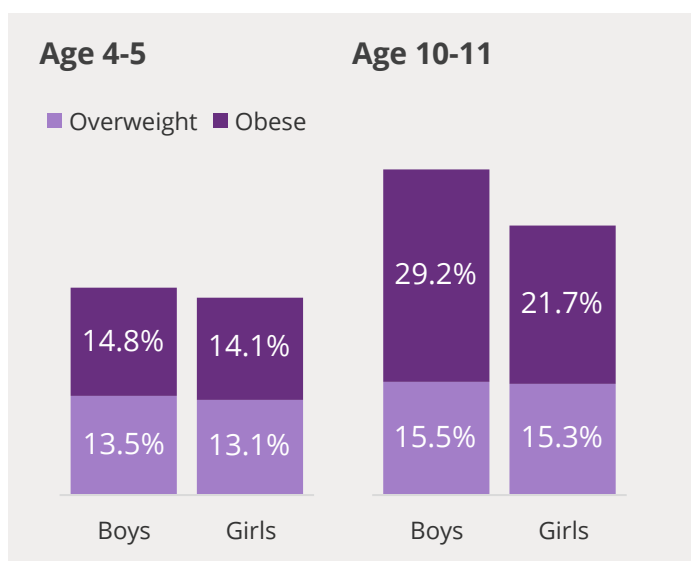
Around three quarters of those aged 45-74 are **overweight** or **obese**



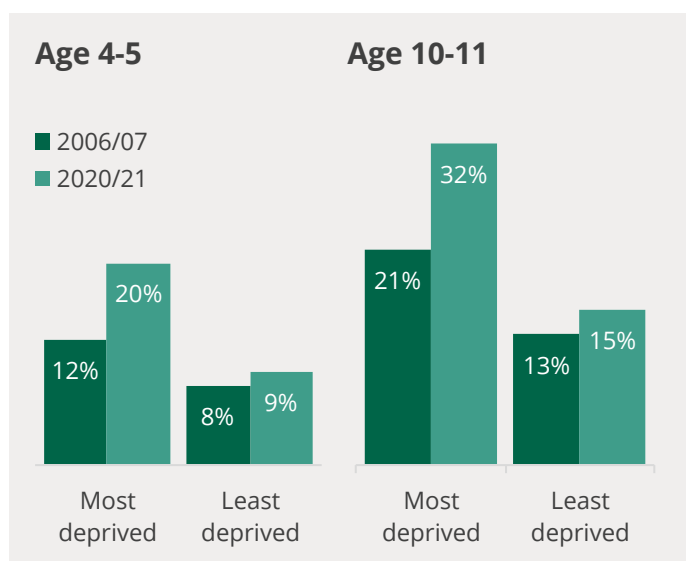
Obesity levels have increased from 15% to 28% since 1993.



One in seven children is obese by age 5, rising to one in four by age 11.



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



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

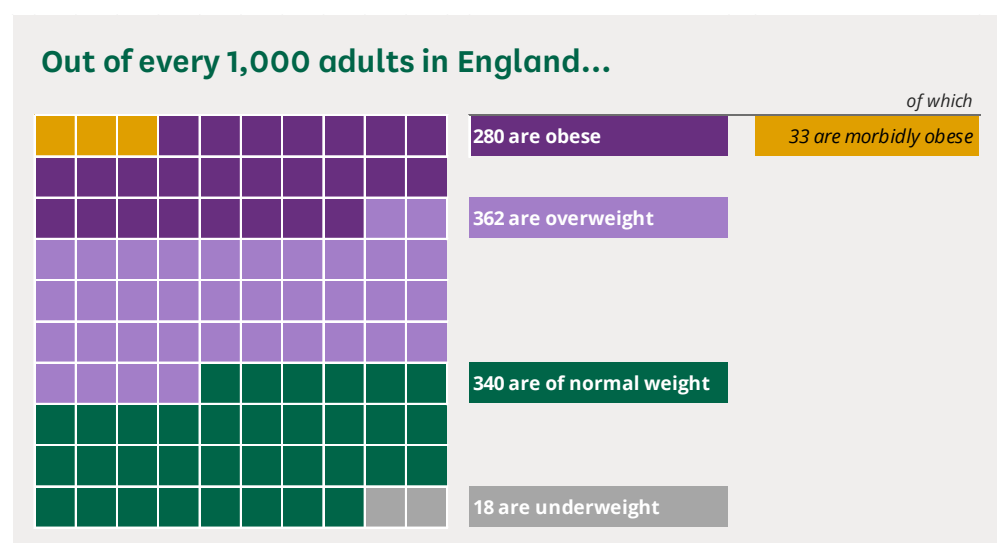
Graphic: @commonslibrary
Data: NHS Digital

1

Obesity in adults (England)

The Health Survey for England was [paused in 2020 due to coronavirus](#). This means that the most recent adult obesity data for England is from 2019.

[Health Survey for England](#) measures a representative sample of adults aged 16+ and provides estimates of obesity. In the 2019 survey, it found that 28.0% of adults in England were obese and a further 36.2% were overweight, making a total of 64.2% who were either overweight or obese.¹ Of obese adults, around one in eight were morbidly obese (3.3% of all adults). Men were more likely than women to be overweight or obese (68.2% of men compared with 60.4% of women).



Trends over time

There was a clear increase in the proportion of overweight or obese adults between 1993 and 2001. Since then, there have only been small changes, although the proportion has risen slightly over the past decade.² Some annual fluctuation in the data is likely to be because the data comes from a survey. These trends are shown in the chart overleaf.

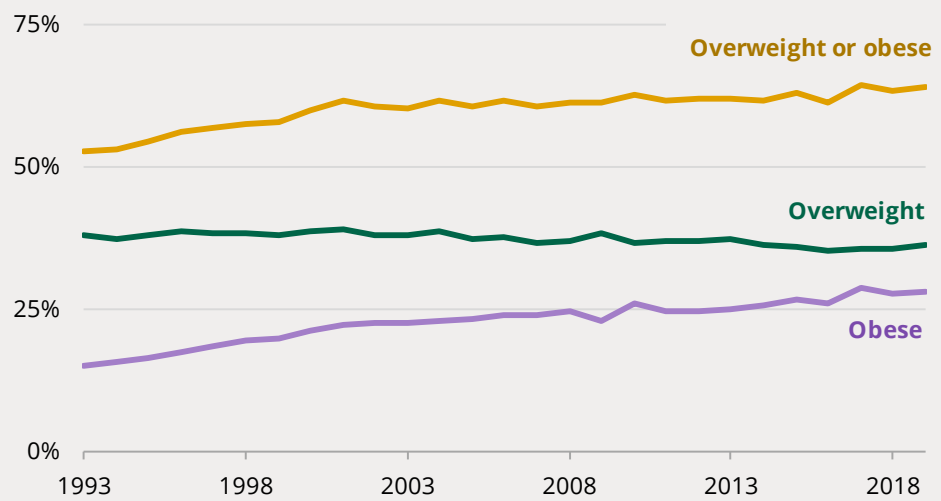
Since 1993 the proportion of adults in England who are overweight or obese has risen from 52.9% to 64.3%, and the proportion who are obese has risen from 14.9% to 28.0%.³

¹ NHS Digital, Health Survey for England, 2019 <https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england>

² Note that data before 2003 is unweighted, while data since 2003 is weighted for non-response.

³ NHS Digital, Health Survey for England, 2019 <https://digital.nhs.uk/data-and-information/publications/statistical/health-survey-for-england>

Adult obesity prevalence in England rose from 15% in 1993 to 28% in 2019



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/m²). 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.

Classification	BMI
Underweight	< 18.5
Normal weight	18.5 - 24.9
Overweight	25.0 - 29.9
Obese	30+
Obese: Class I	30.0 - 34.9
Obese: Class II	35.0 - 39.9
Obese: Class III	40.0+

This measure is not always definitive and may not be appropriate for all groups, and sometimes other measures are used. These include waist circumference and the waist-hip ratio.

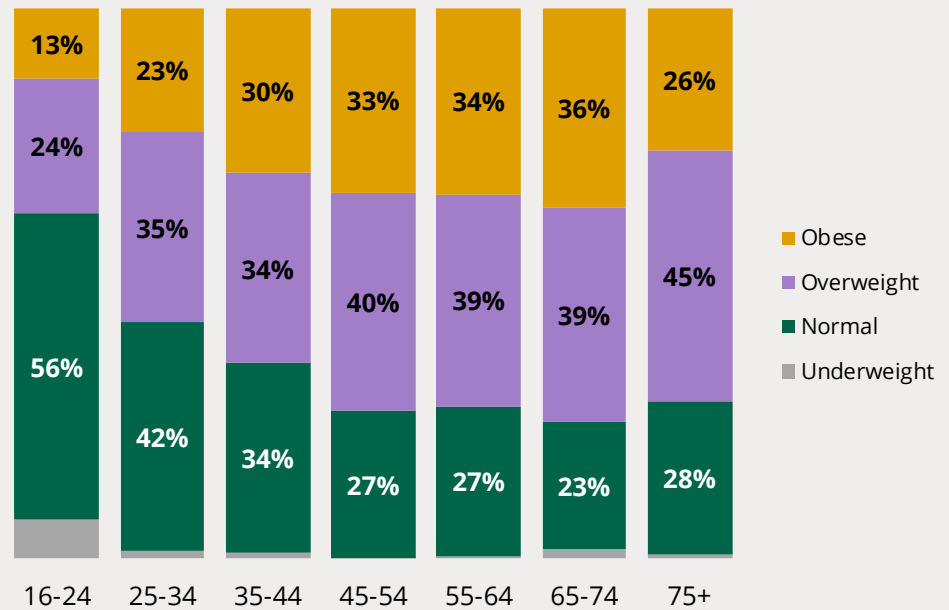
See our briefing paper [Obesity](#) for a wider overview of definitions and policy.

Age and gender differences

The age group most likely to be overweight or obese in 2019 was age 65-74. Prevalence of overweight and obesity was above 70% among all age groups from 45 upwards. The adult age group least likely to be obese was 16-24 year olds, with 56% at normal weight and 37% overweight or obese. The chart overleaf shows a summary of data for each age group.

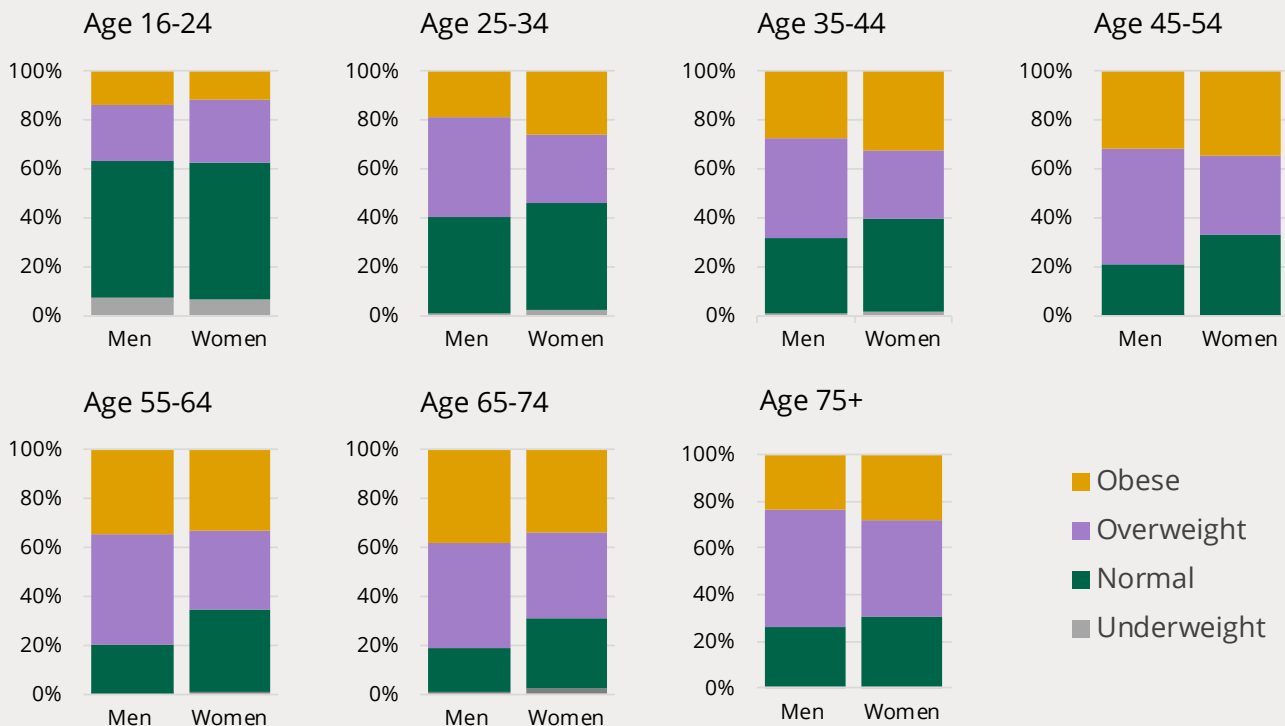
Obesity levels are over 30% among ages 45-74

Excess weight by age group, England, 2019



As noted above, men were more likely than women to be overweight or obese. However, obesity levels among women (29.1%) were slightly above those of men (27.0%), while more men were overweight but not obese (41.2%) than women (31.3%).

In most age groups, men are more likely than women to be overweight or obese

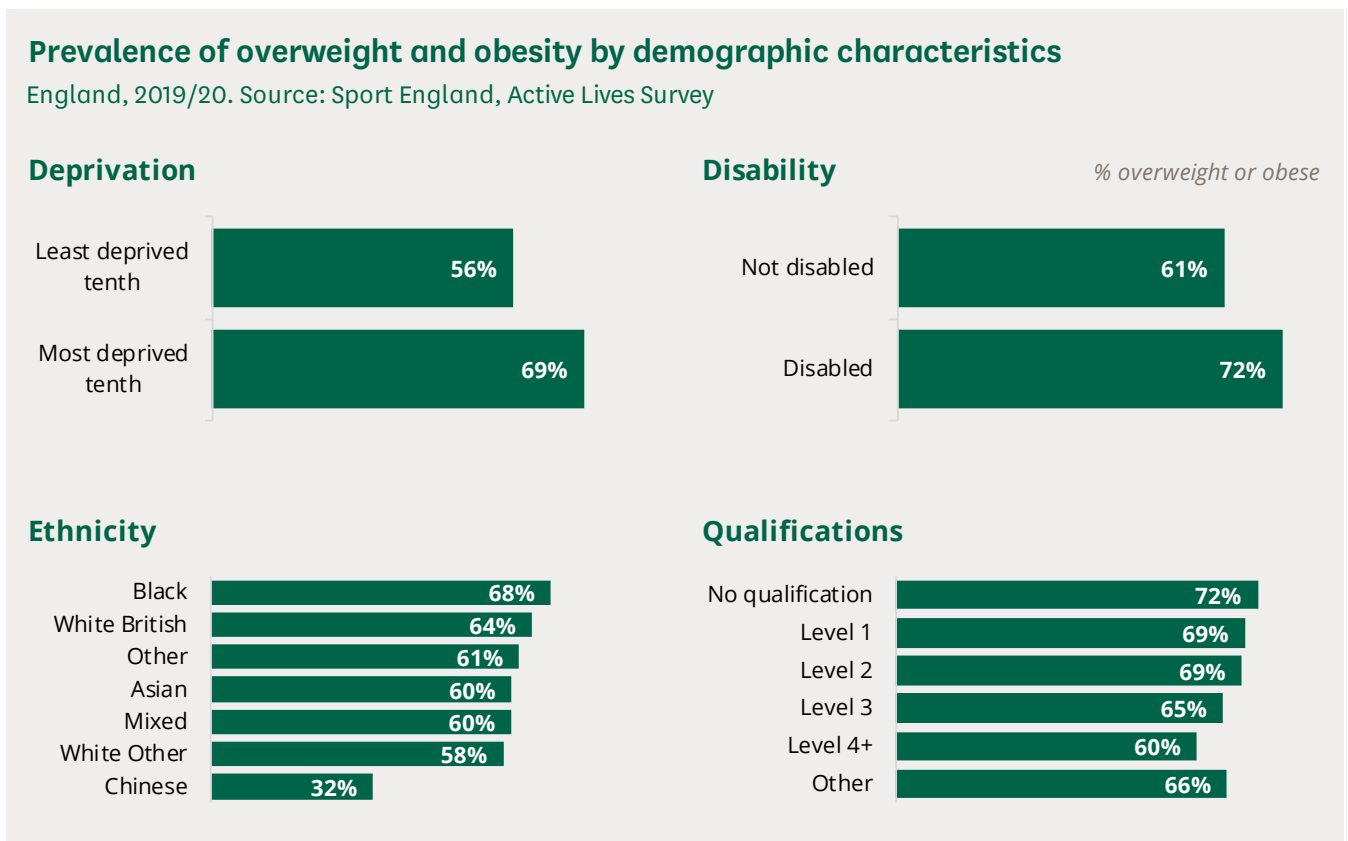


These proportions vary by age, as the charts above show. Ages 16-24 was the only group where women were more likely to be overweight or obese than men. Among men aged 45-74, over 80% were overweight or obese.

Other inequalities

The charts below show data from the Active Lives Survey as published via Public Health England’s data dashboard.⁴ The results show how excess weight in adults (the percentage either overweight or obese) is not equally distributed among social groups:

- **Deprivation:** in the most deprived areas in England, prevalence of excess weight is 13 percentage points higher than the least deprived areas
- **Disability:** among people with disabilities, excess weight is 11 percentage points higher than among those without disabilities.
- **Ethnicity:** Black people have the highest rates of excess weight, and White British people have higher rates of excess weight than all other ethnic groups except Black.
- **Education:** among people with no qualifications, rates of excess weight are 12 percentage points higher than among people with level 4 qualifications or higher (i.e. a degree).



⁴ Active Lives Survey data 2019/20, extracted from [Public Health England Profiles](#)

Variation in different parts of England

The Active Lives Survey allows us to estimate variation in the proportion of adults that are overweight or obese in different local authorities.⁵ The most recent available data covers surveys from 2019/20, and shows that levels of excess weight are estimated to be highest in the North East of England and the West Midlands. The **population-based map on the following page** and the tables that follow show data for each local authority in England.

Because these local authority estimates are based on a survey there is some uncertainty around the exact levels of overweight and obesity. For instance, the central estimate for Halton is 78.2%, but because it is based only on a sample of the population, this means we can only say with relative certainty that the true prevalence value is somewhere between 74.3% and 82.1% (labelled on the table as “Lower CI” and “Upper CI”, where “CI” stands for “confidence intervals”). So it is not certain that Halton had the highest prevalence in England and more broadly, you should be cautious when interpreting small differences between areas.

When two areas’ confidence intervals do not overlap, however, we can be fairly certain that their rates are different. So we can be confident that Thurrock had higher prevalence than Rochdale (not shown in the table below), where the survey estimate is 71.1% and the lower and upper confidence intervals are 67.9% and 74.2% respectively.

Adult excess weight by local authority, 2019/20

High percentage overweight or obese

Local Authority	Survey estimate	Lower CI	Upper CI
Halton	78.3%	74.4%	82.1%
Sandwell	76.7%	72.5%	80.7%
Bolsover	76.7%	72.6%	80.7%
Stoke-on-Trent	76.1%	72.1%	80.0%
North East Lincolnshire	74.6%	70.4%	78.8%
Fenland	74.5%	70.4%	78.4%
Rossendale	74.1%	70.2%	78.1%
Dudley	73.8%	69.4%	78.0%
Castle Point	73.7%	69.4%	77.6%
Sunderland	73.5%	69.1%	77.8%
East Lindsey	73.3%	68.8%	77.7%
Barrow-in-Furness	73.2%	68.7%	77.4%

Low percentage overweight or obese

Local Authority	Survey estimate	Lower CI	Upper CI
Hammersmith & Fulham	41.6%	36.7%	46.5%
Westminster	44.0%	39.1%	49.0%
Kensington and Chelsea	44.1%	39.3%	48.8%
Cambridge	46.4%	42.4%	50.4%
Camden	48.2%	43.4%	52.9%
Oxford	48.2%	44.3%	52.1%
Islington	49.2%	44.3%	54.0%
South Lakeland	49.2%	44.6%	53.8%
Brighton and Hove	49.3%	44.8%	54.0%
Lambeth	49.6%	44.8%	54.5%
Haringey	49.8%	45.0%	54.7%
Waverley	50.0%	45.3%	54.7%

⁵ Active Lives Survey data 2019/20, extracted from [Public Health England Profiles](#)

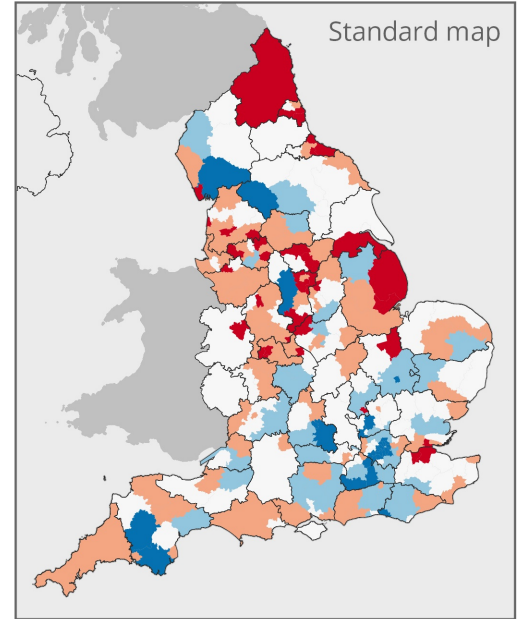
Excess weight in England: adults, 2019/20

How to read this population-based map

On this map, local authority areas are approximately **scaled in size according to their populations**. Areas are grouped by ceremonial counties, conurbations and other recognisable sub-national areas. These groups include unitary authorities (e.g. Nottingham City UA inside the Notts group) and don't all reflect current local gov structures.

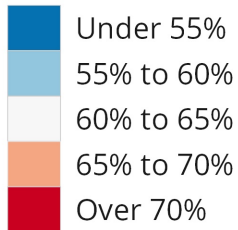
Lines between adjacent areas represent local authority boundaries. Extra labels are provided for large towns & cities to help you locate particular cities and towns (e.g. 'Lut.' = Luton). Grey shading between county groups doesn't represent data and serve only as a background.

On traditional maps (such as the inset, right), sparsely-populated rural areas are visually over-represented since they appear much larger than densely-populated urban areas. Since rural and urban areas can be very different to one another, this means that traditional maps don't always give a full picture of the data when viewed on their own.

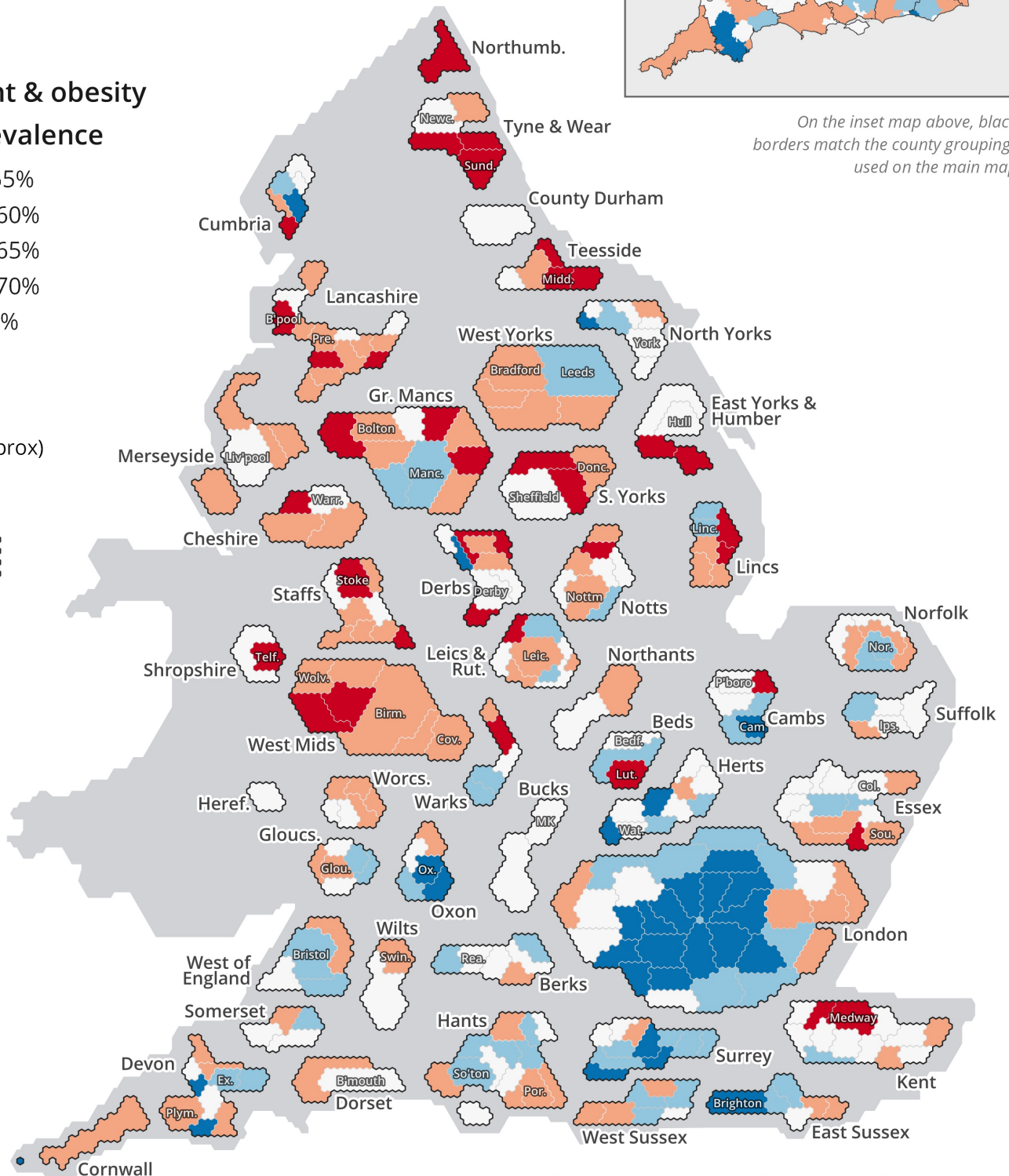
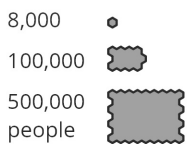


On the inset map above, black borders match the county groupings used on the main map

Overweight & obesity survey prevalence



Map scale (approx)



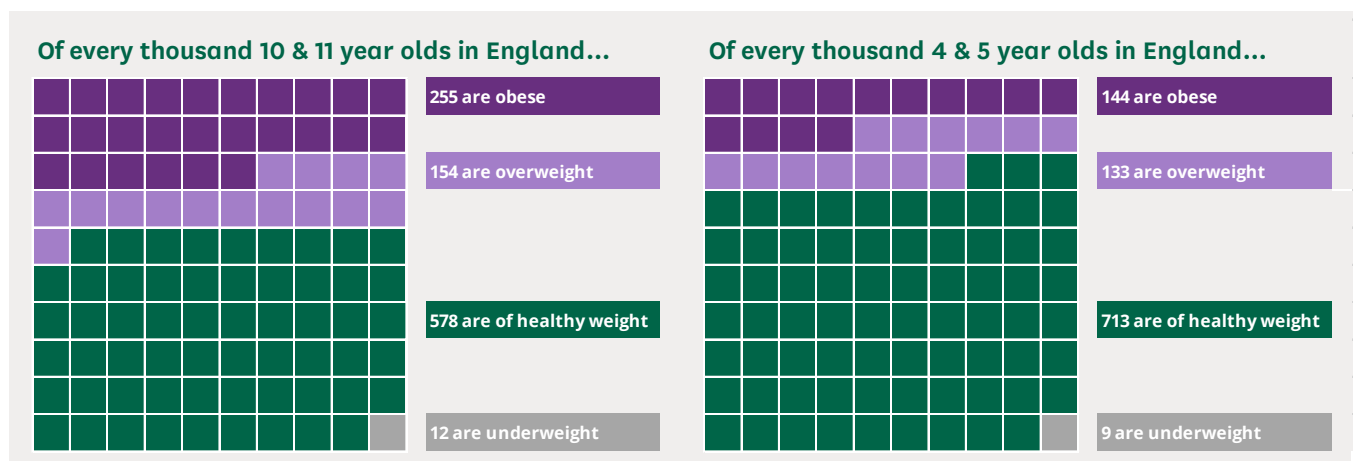
2

Obesity in children (England)

The [National Child Measurement Programme 2020/21 \(NCMP\)](#) found that 14.4% of reception age children in England (age 4-5) were obese, with a further 13.3% overweight. These proportions were higher among year 6 children (age 10-11), with 25.5% being obese and 15.4% overweight.⁶

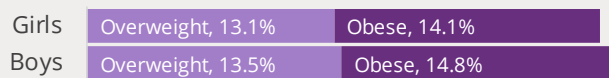
These figures show large increases on the previous year (2019/20), when 9.9% of children aged 4-5 and 21.0% of children aged 10-11 were obese.

Because of the coronavirus pandemic, the 2020/21 collection was carried out as a sample and statistical weighting was applied to the data to produce a national estimate. Nevertheless, NHS Digital says that the results are “broadly comparable” to previous years.

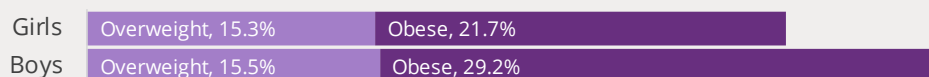


Boys are more likely to be obese than girls

Reception (2020/21)



Year 6 (2020/21)



⁶ 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](#).

In both age groups, boys are slightly more likely than girls to be obese. This difference is less than one percentage point at age 4-5 (reception), but rises to 8.5 percentage points among ages 10-11 (year 6).

The tables below, and the population-based maps on the following two pages, analyse the data by local authority. Note that local authority estimates are not available for 2020/21, so this data is from 2019/20. Please see the text on page 9 for information on how to interpret confidence intervals (the “Upper/Lower CI” columns in these tables) and differences between areas.

Reception (age 4-5) excess weight by local authority, 2019/20

High percentage overweight or obese

Local Authority	Survey estimate	Lower CI	Upper CI
Middlesbrough	32.0%	28.7%	35.4%
Knowsley	31.9%	29.1%	34.7%
Halton	31.7%	29.1%	34.5%
Gateshead	30.9%	27.9%	33.9%
Redcar and Cleveland	30.0%	27.6%	32.3%
Hartlepool	29.7%	26.3%	33.0%
St. Helens	28.7%	26.4%	31.2%
Blackpool	28.5%	26.5%	30.9%
Kingston upon Hull	28.5%	26.9%	30.1%
Wolverhampton	28.4%	26.5%	30.5%
Plymouth	28.2%	25.8%	30.5%
Stoke-on-Trent	27.7%	25.8%	29.9%

Low percentage overweight or obese

Local Authority	Survey estimate	Lower CI	Upper CI
Surrey	16.4%	15.3%	17.4%
Haringey	16.9%	14.5%	19.4%
Richmond upon Thames	17.2%	15.6%	19.3%
Kingston upon Thames	17.4%	15.1%	19.8%
Windsor and Maidenhead	17.8%	14.6%	21.2%
Buckinghamshire	18.0%	17.0%	19.2%
Hounslow	18.2%	16.5%	20.0%
Merton	18.6%	17.1%	20.3%
Oxfordshire	18.7%	17.6%	19.9%
Cambridgeshire	18.8%	17.6%	20.0%
Camden	18.9%	16.6%	22.0%
Barnet	19.0%	17.8%	20.2%

Year 6 (age 10-11) excess weight by local authority, 2019/20

High percentage overweight or obese

Local Authority	Survey estimate	Lower CI	Upper CI
Walsall	44.5%	42.2%	46.8%
Barking and Dagenham	44.3%	42.6%	46.0%
Greenwich	43.3%	41.6%	45.0%
Sandwell	43.3%	41.8%	44.8%
Knowsley	43.0%	40.4%	46.2%
Newham	42.8%	41.4%	44.4%
Luton	42.2%	40.4%	44.3%
Wolverhampton	42.2%	40.3%	44.0%
Manchester	42.0%	40.8%	43.2%
Dudley	41.9%	40.2%	43.5%
Hackney	41.8%	39.8%	43.8%
Southwark	41.8%	39.9%	43.8%

Low percentage overweight or obese

Local Authority	Survey estimate	Lower CI	Upper CI
Richmond upon Thames	23.1%	21.2%	25.1%
Surrey	26.7%	25.9%	27.6%
Rutland	27.4%	23.3%	32.4%
Windsor and Maidenhead	28.5%	26.3%	30.8%
Brighton and Hove	28.7%	26.9%	30.5%
West Sussex	28.8%	27.8%	29.8%
Shropshire	28.9%	26.3%	32.2%
South Gloucestershire	29.1%	27.5%	30.8%
West Berkshire	29.3%	27.1%	31.4%
Cambridgeshire	29.5%	28.2%	31.0%
Devon	29.5%	28.3%	30.7%
Oxfordshire	29.6%	28.2%	30.9%

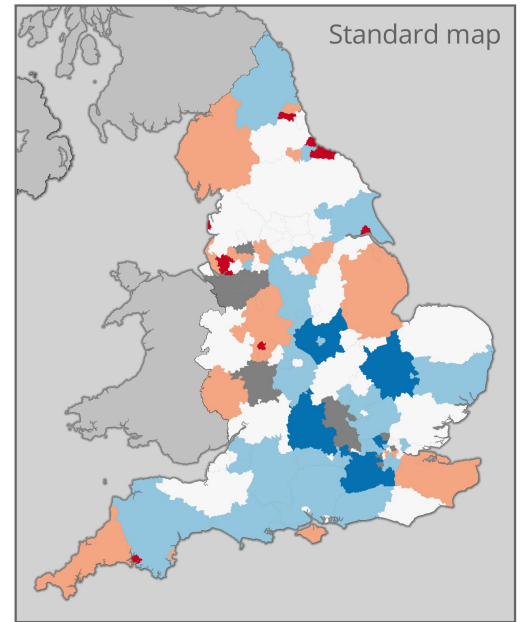
Excess weight in England: age 4-5, 2019/20

How to read this population-based map

On this map, local authority areas are approximately **scaled in size according to their populations**. Areas are grouped by ceremonial counties, conurbations and other recognisable sub-national areas. These groups include unitary authorities (e.g. Nottingham City UA inside the Notts group) and don't all reflect current local gov structures.

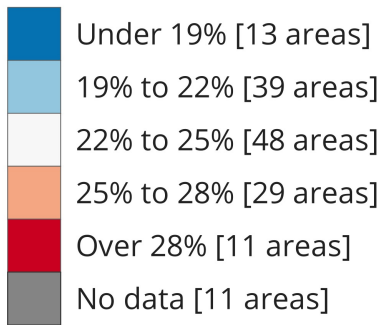
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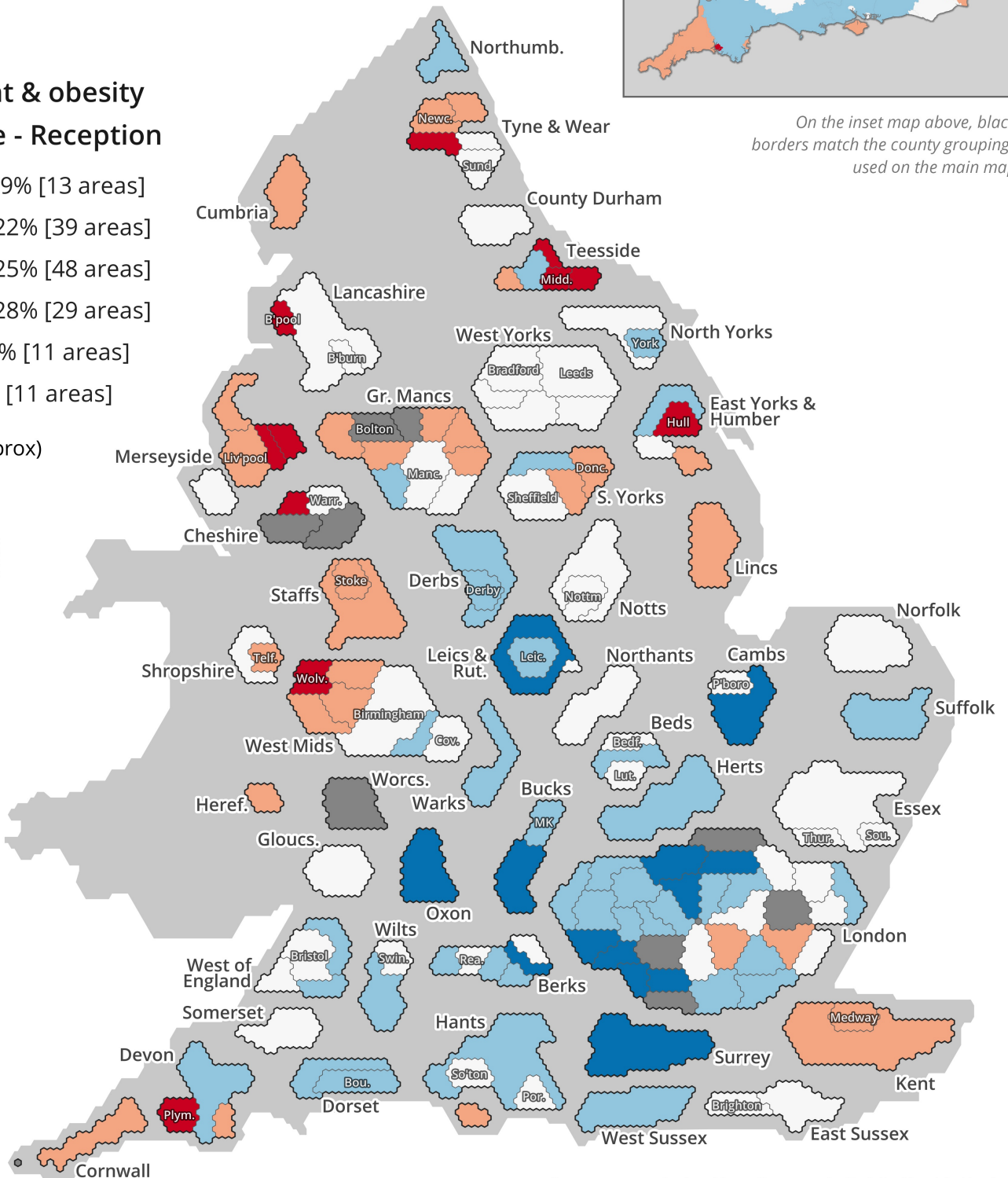
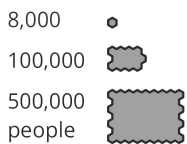


On the inset map above, black borders match the county groupings used on the main map

Overweight & obesity prevalence - Reception



Map scale (approx)



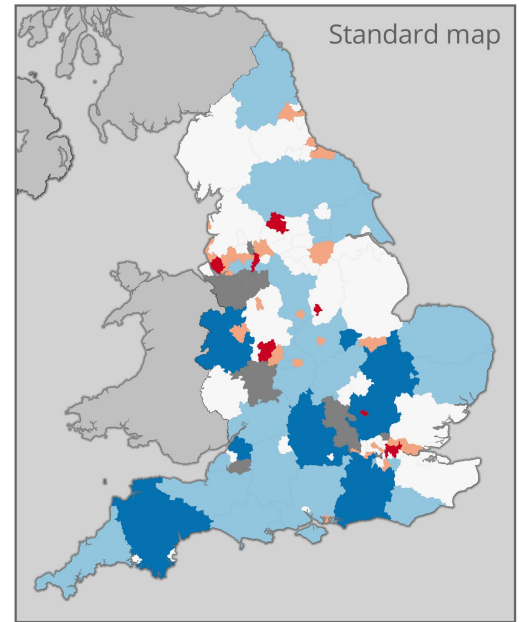
Excess weight in England: age 10-11, 2019/20

How to read this population-based map

On this map, local authority areas are approximately **scaled in size according to their populations**. Areas are grouped by ceremonial counties, conurbations and other recognisable sub-national areas. These groups include unitary authorities (e.g. Nottingham City UA inside the Notts group) and don't all reflect current local gov structures.

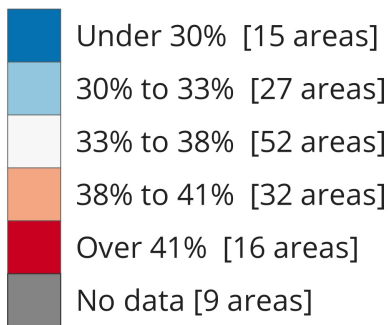
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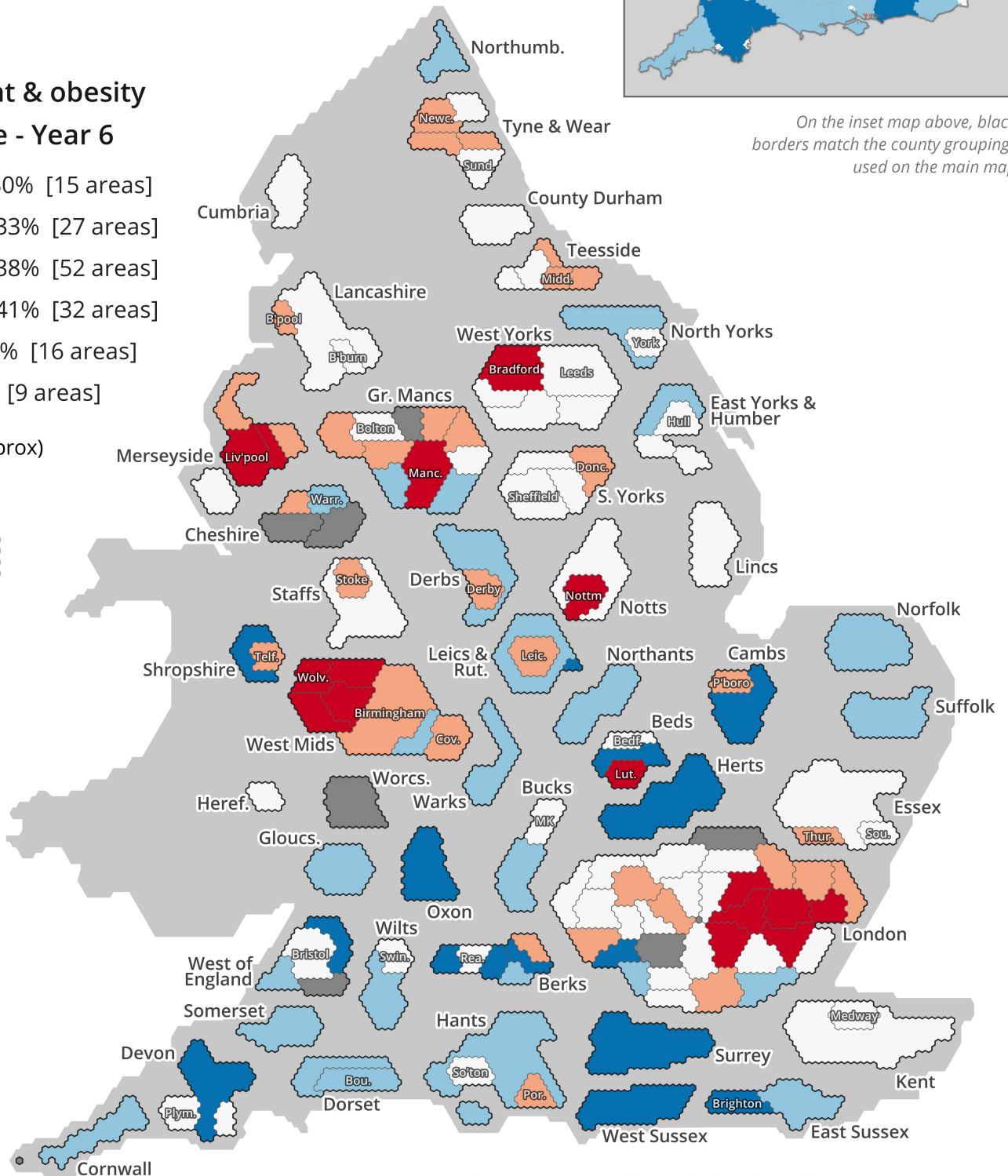
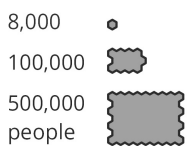


On the inset map above, black borders match the county groupings used on the main map

Overweight & obesity prevalence - Year 6



Map scale (approx)



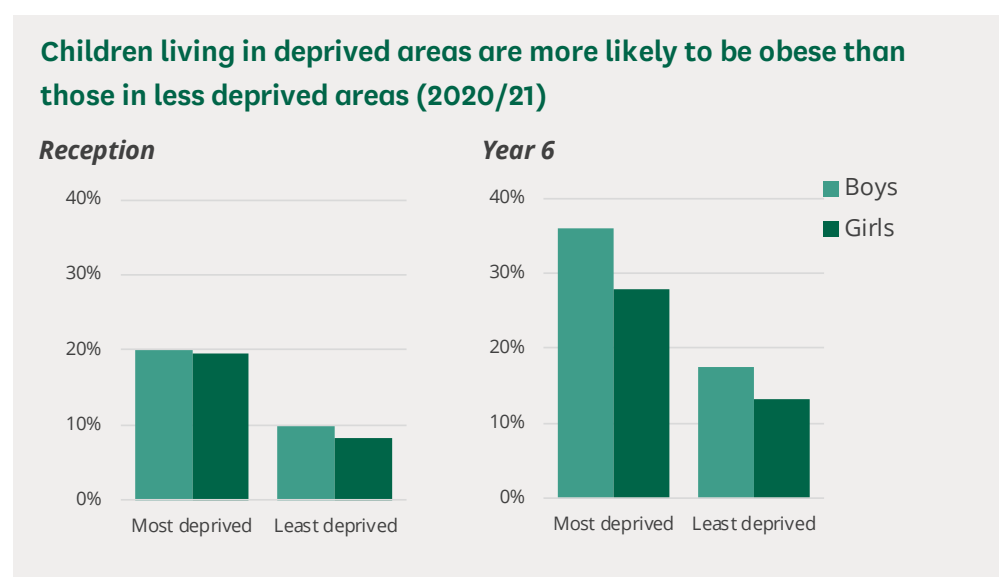
Note that the NCMP's fieldwork was also affected by the COVID-19 pandemic in 2019/20, meaning that a lower proportion of children were measured than in previous years. This means that:

- Some local authorities did not submit data
- Data for some local authorities was marked as 'unreliable'
- Data for some local authorities was marked as 'fit for publication but interpret with caution'

Local authorities with absent or unreliable data are shown in grey on the maps above. For a list of local authorities whose data was marked as 'fit for publication but interpret with caution', please see Table A in the [NCMP data tables](#).

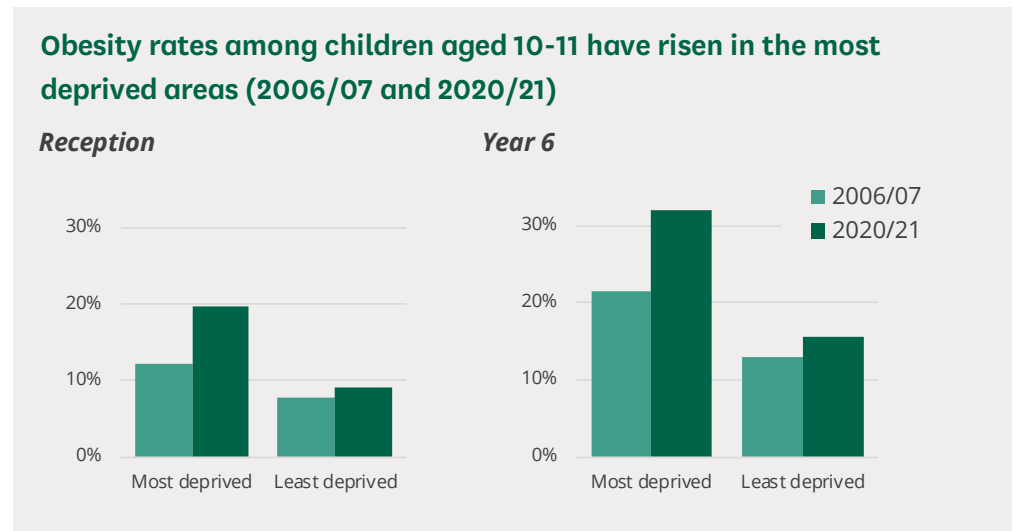
Childhood obesity and deprivation

Children living in deprived areas are substantially more likely to be obese. Among reception (age 4-5) children in 2020/21, 9.1% of those in the least deprived areas are obese compared with 19.7% of those in the most deprived areas. In Year 6 (age 10-11), 15.5% of children in the least deprived areas are obese, compared with 32.1% in the most deprived areas. So in both age groups, children in the most deprived areas are approximately twice as likely to be obese. Rates of severely obese children are around four times higher in the most deprived areas.



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 five percentage points but were almost unchanged in the least deprived areas.

The rise between 2019/20 and 2020/21 was also more pronounced in the most deprived areas than in the least deprived areas.



3

Obesity in Scotland, Wales and Northern Ireland

3.1

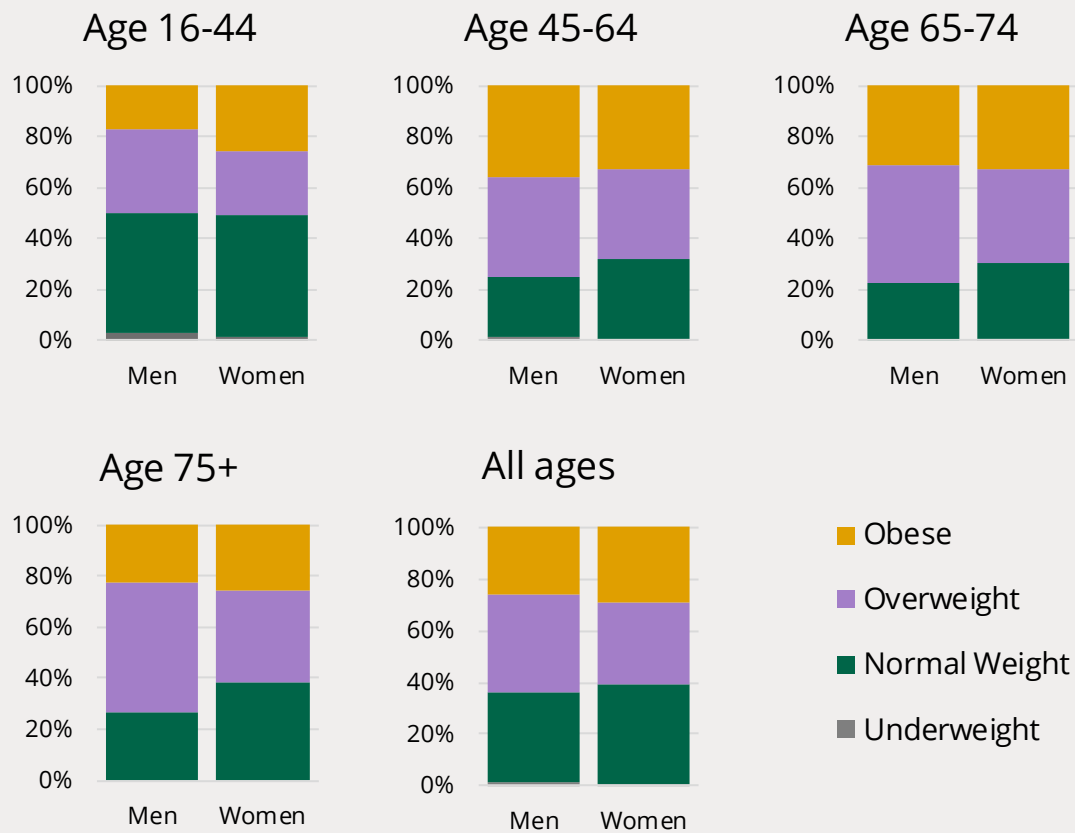
Scotland: adult obesity

Adult obesity in Scotland is recorded as part of the Scottish Health Survey. In 2020 this was a telephone survey due to the coronavirus pandemic and BMI/obesity figures were self-reported. 27.5% of adults were obese (reporting a BMI over 30) and a further 34.7% were overweight (reporting a BMI between 25 and 30).

A higher proportion of men than women were overweight, but a higher proportion of women than men were obese. In all age groups above 45, men were more likely to be overweight or obese (in total) than women.

The charts below show a breakdown by age and sex.

77% of Scottish men aged 65-74 were overweight or obese in 2020 - the highest of any age group



Source: [Scottish Health Survey 2020](#), Chapter 4 Tables

The survey also asked about changes since lockdown. 39% of adults reported that their weight had increased since lockdown, while 18% said that their weight had fallen. Women were more likely than men to say that their weight had risen.

3.2

Scotland: child obesity

The Scottish Health Survey also contains information on BMI for children. However, this was not included in 2020's telephone surveys.

The 2019 survey found that 30% of children aged 2-6 were obese, falling to 25% of children aged 7-11, and rising again to 33% of children aged 12-15. Overall, boys were more likely than girls to be obese.

Child obesity in this survey is classified as those who are above the 95th percentile of the 1990 UK growth reference standards.

3.3 Wales: adult obesity

Adult obesity in Wales is recorded in the [National Survey for Wales](#) based on self-reported data.

In 2020/21, 26% of women and 22% of men reported being obese (BMI over 30). 66% of men were overweight or obese, compared with 56% of women.

Obesity was highest in the 45-64 age group (28%). 69% of people aged 45-64 were either overweight or obese, the highest of any age group. Wales: child obesity

3.4 Wales: child obesity

The most recent data on child obesity for Wales is from the 2018/19 [Child Measurement Programme for Wales](#).

Among children aged 4-5, 12.6% were obese and a further 14.4% were overweight. Children living in the most deprived areas of Wales were almost twice as likely to be obese (15.3%) as those in the least deprived areas (8.3%).

There were only small differences between obesity rates for boys and girls.

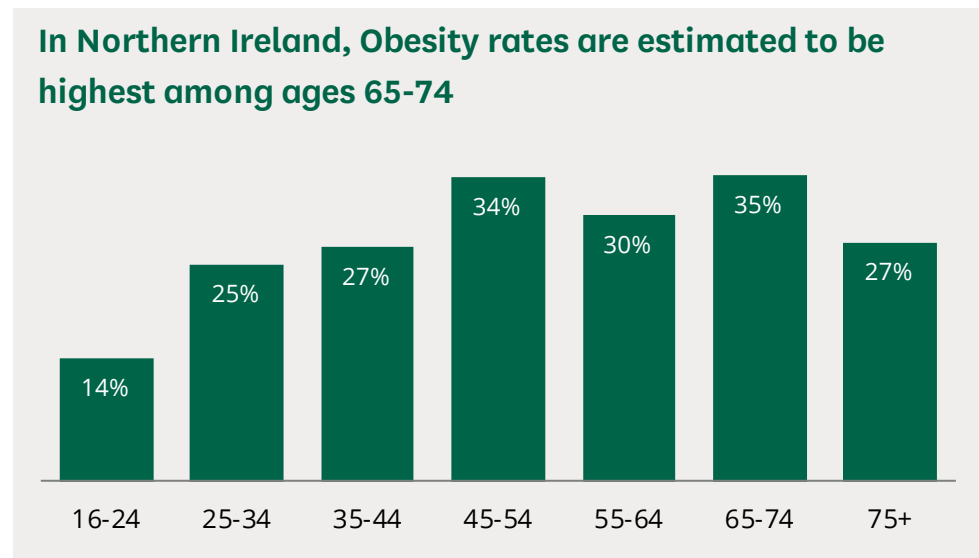
Obesity rates were estimated to be highest among children in Merthyr Tydfil and lowest in Monmouthshire and Vale of Glamorgan.

3.5 Northern Ireland: adult obesity

Data is available from the [Health Survey Northern Ireland](#), but BMI questions were not asked in 2020/21.

In 2019/20, 27% of adults in Northern Ireland were obese, with a further 38% overweight. 71% of men were overweight or obese, compared with 60% of women.

The chart below shows a breakdown by age.



Of respondents who were overweight, 48% of women said they were trying to lose weight, compared with 24% of men.

3.6

Northern Ireland: child obesity

In 2019/20, the [Health Survey Northern Ireland](#) recorded 7% of children aged 2-10 and 4% 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.

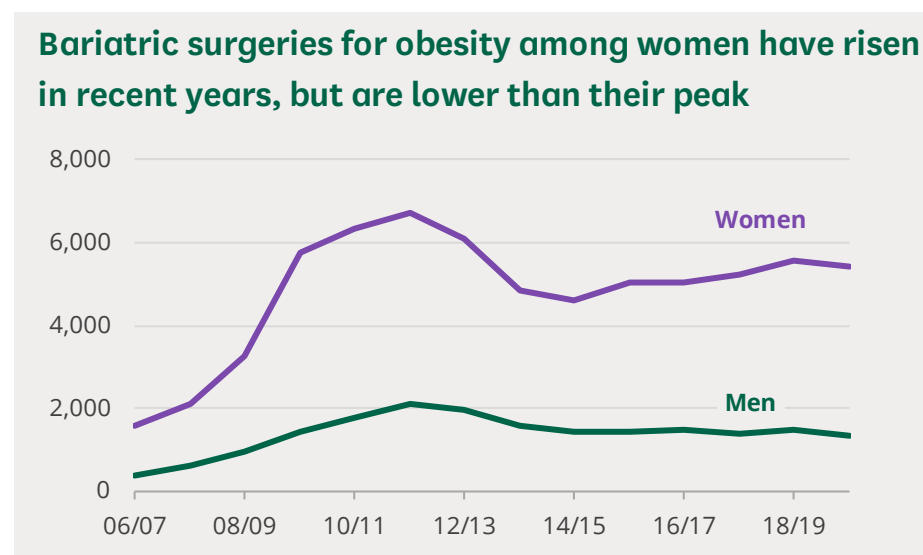
As mentioned above, this survey did not contain questions on BMI in 2020/21.

4 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.⁷

The number of hospital episodes for bariatric surgery which followed a diagnosis of obesity rose sharply between 2006/07 and 2011/12, and then fell until 2014/15. Since then, the number have risen each year, but remain 20% lower than in 2011/12.⁸

Note that in 2016/17, the treatment codes involved in this data changed, resulting in a reduction in the total count by 250-300 cases per year. This affects comparisons for data after 2016/17 with previous years.



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. This fell to 41% by 2016/17 but has since risen to 43%.

In 2019/20, bariatric surgery after a diagnosis of obesity was most common in North East England, where the surgery rate was almost double the England average. The local authorities with the highest admission rates per 100,000 population were South Tyneside, Sunderland, Southwark, Doncaster, Stoke-on-Trent, Lewisham, Portsmouth, and Telford & Wrekin.

⁷ NHS, [Weight loss surgery](#)

















⁸ NHS Digital, [Statistics on Obesity, Physical Activity and Diet, England, 2020](#)

5 International comparisons

According to a 2017 OECD report, a majority of the population in the OECD area are overweight or obese.^{9,10} Among countries reporting measured data (rather than self-reported data), the UK has the tenth-highest rates of obesity. The table below shows data for each country.

Obesity levels in countries with measured data

2016 or nearest year

 USA	40%	 Germany	24%
 Chile	34%	 Ireland	23%
 Mexico	33%	 Luxembourg	23%
 New Zealand	32%	 Estonia	19%
 Hungary	30%	 Czechia	19%
 Turkey	29%	 Belgium	19%
 Canada	29%	 Lithuania	17%
 Australia	28%	 Korea	6%
 Finland	27%	 Japan	4%
 UK	26%		

⁹ See [List of OECD Member Countries](#).

¹⁰ [OECD Obesity Update 2017](#).

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