

## Weight and Obesity [Download this section](#)

### Why is this an issue?

Obesity and being overweight contribute to a range of diseases such as coronary heart disease, type 2 diabetes, osteoarthritis and some cancers ([NICE, 2006](#)).

Being overweight or obese is defined as having abnormal or excessive fat accumulations that present a risk to health ([World Health Organisation, 2013](#)).

Globally, obesity has reached epidemic proportions. In 2008, more than 1.4 billion adults were overweight and more than half a billion were obese leading to at least 2.8 million people dying each year as a result of being overweight or obese ([World Health Organisation, 2013](#)).

Treating the effects of obesity is estimated to cost the NHS £5billion per year. The wider cost to the economy is estimated at closer to £20billion per year once factors such as lost productivity and sick days are taken into account ([Local Government Association, 2013](#)) and the resulting NHS costs attributable to overweight and obesity are projected to reach £9.7 billion by 2050 ([Foresight, 2007](#)).

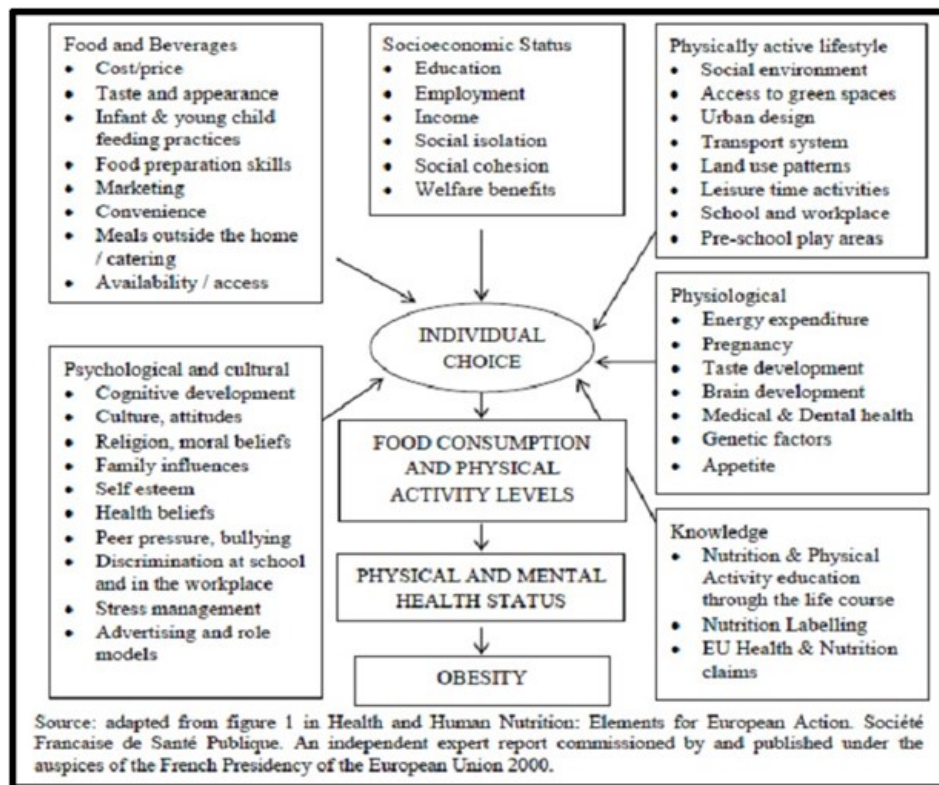
Excess weight gain is seen as the result of an energy imbalance – that is, the intake of more calories than are expended through exercise and activity. In order to maintain a healthy weight, an individual needs to achieve an energy balance between intake (food) and expended energy (exercise and activity).

The causes for this imbalance are a complicated mix of physiological, environmental and behavioural factors ([Department of](#)

Health, 2011). Most weight gain is gradual and people may not notice it happening (NICE, 2006).

The chart below taken from a report into [obesity and socio-economic groups](#) shows some of the key determinants of obesity.

Some of the key determinants of obesity



The link to obesity is one that begins in childhood, with breastfeeding being found to generally reduce the risk of obesity (Unicef). Exclusive breastfeeding is encouraged during the first 6 months of life (NICE, 2008), however, Britain has one of the lowest levels of breastfeeding in Europe (NICE).

Breastfeeding initiation at birth has increased since 2005 to the current England rate of 83%, however, only 34% of babies continued to be breastfed at 6 months old (Infant Feeding Survey, 2010).

### How is Obesity Measured?

Body Mass Index (BMI) is the most common and accessible way of measuring body fatness in adults. BMI is calculated by dividing weight in kilograms by height in metres squared and can be easily calculated using the [NHS Choices BMI Healthy Weight Calculator](#).

Because BMI gives a proxy measure of body fatness, there are some limitations with the measure. It does not account for factors of fitness (muscle mass), puberty, ethnicity and the distribution of body fat which can all affect body fatness measures using the BMI method. However, its ease of use and readily available threshold figures make it the most practical tool to measure body fatness (National Obesity Observatory, 2009).

### Adult BMI Threshold Measurements

Classification	BMI (kg/m <sup>2</sup> )
Healthy weight	18.5–24.9
Overweight	25–29.9
Obesity I	30–34.9
Obesity II	35–39.9
Obesity III	40 or more

SOURCE: National Institute for Healthcare & Excellence (NICE) (2013). Public Health Draft Guidance: Managing Overweight and

## Obesity in Adults.

The method of assigning a BMI score is different for children and adults. Defining children as overweight or obese is a more complex process, given that their height and weight change at the same time. The [National Child Measurement Programme](#) monitors the weight of UK children and uses [Growth Reference Charts](#) to define whether children are overweight or obese.

### Health Risks Linked To Obesity

Obesity and overweight contribute to a range of diseases such as coronary heart disease, type 2 diabetes, osteoarthritis and some cancers ([NICE, 2006](#)). BMI classification with a combined waist circumference measurement can identify level of health risk for an individual.

#### Health risk associated with BMI and waist circumference measurement

BMI classification	Waist circumference		
	Low	High	Very high
Normal weight (18.5 to less than 25kg/m <sup>2</sup> )	No increased risk	No increased risk	Increased risk
Overweight (25 to less than 30kg/m <sup>2</sup> )	No increased risk	Increased risk	High risk
Obesity I (30 to less than 35kg/m <sup>2</sup> )	Increased risk	High risk	Very high risk
Obesity II (35 to less than 40kg/m <sup>2</sup> )	Very high risk	Very high risk	Very high risk
Obesity III (40kg/m <sup>2</sup> or more)	Very high risk	Very high risk	Very high risk

### Diabetes

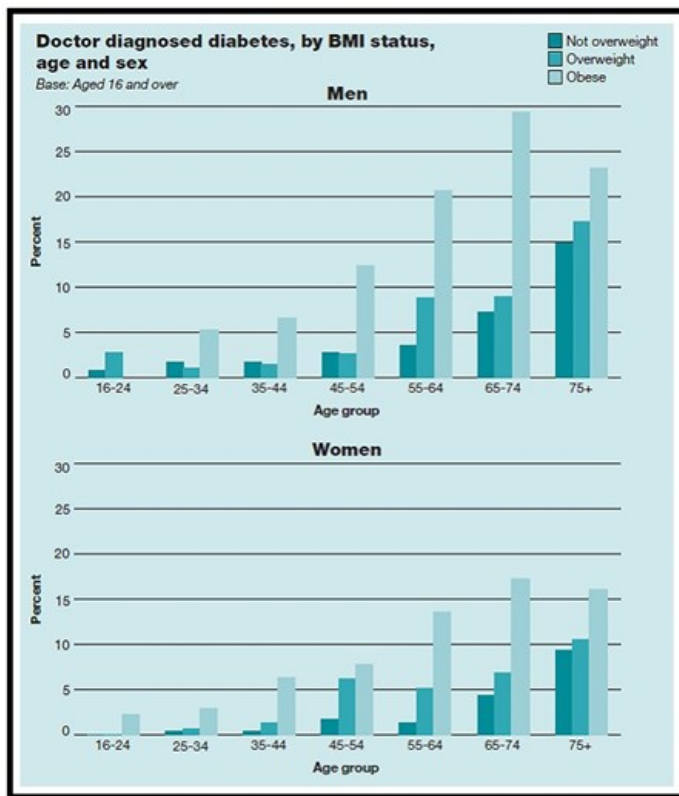
A larger proportion of those who are obese develop diabetes and at a younger age. The difference in diabetes prevalence is such that obese people aged 25-64 have a higher prevalence of diabetes than their normal weight people who are 20 years older. 21% of obese men aged 55-64 had diabetes, compared with 15% of men aged 75 and over who were not overweight. Similarly 14% of obese women aged 55-64 had diabetes, compared with 9% of women aged 75 and over who were not overweight ([Health Survey for England, 2011](#)).

People of Asian, Black African and African-Caribbean origin are at higher risk of developing diabetes than White populations ([Department of Health, 2001](#)).

[NICE \(2013\) Public Health Guidance 46](#) identifies that people from these ethnic groups are more likely to develop diabetes at a lower equivalent body mass index score than white populations and recommends that in addition to body mass index, waist band measurement should also be used to assess levels of body fat in people from these ethnic groups.

The guidance also identifies that health promotion information is not necessarily given to Asian, black African and African-Caribbean populations at lower body mass index levels even though the risk to poor health is greater. People from these ethnic groups are at greater risk of developing diabetes and other diseases at a lower body mass index than white populations but BMI and waist circumference cut-off points indicating a healthy range for these measures for ethnic groups are yet to be established.

#### Doctor diagnosed diabetes: by BMI status, age, and sex



SOURCE: Health Survey for England 2011. <http://www.hscic.gov.uk/catalogue/PUB09300>

What is the national picture?



What does this look like in York?



What else can be done?



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