Weight for height chart for males and females aged 18–64 years

How do we define overweight and obesity?
The most commonly used measure for overweight and obesity in adult populations and individuals is Body Mass Index (BMI). BMI is a measure of a person’s weight in relation to their height. It is calculated by dividing a person’s weight in kilograms by the square of their height in metres (kg/m²). BMI categories are displayed and defined in the following graph.

While the BMI categories in the graph can help to determine whether you are in a healthy weight range, they don’t provide a direct measure of your body fat. Despite this limitation, BMI provides a useful population-level measure of overweight and obesity as it is the same for all adults of both sexes.

Children and adolescents undergo many physiological changes as they mature and grow. BMI can alter substantially in this period making the standard adult BMI categories and their related cut-off points unsuitable for measuring overweight and obesity in children and adolescents. BMI categories in children are adjusted for age and sex.

How did obesity become such a problem?
A small, persistent imbalance between energy intake (food and drinks) and energy expenditure (including physical activity) will lead to weight gain over time. While genetics contributes to individual susceptibility to obesity, the rapid increase in the global prevalence of obesity can only be explained by widespread changes in lifestyle and the environment.

Over recent decades, urbanisation, economic growth and globalisation of food markets have contributed to excessive food consumption patterns and an increased reliance on technologies that discourage physical activity. The World Health Organization has described the effect of these changes as creating an obesity-promoting or ‘obesogenic’ environment that promotes over consumption of energy-dense foods high in sugar and saturated fats and increasingly sedentary lifestyles with lower levels of physical activity.

Overweight and obesity statistics in Queensland in 2011
In 2011, based on self report, 34.5% of adult Queenslanders (18 years and older) were overweight and 22.9% were obese. By physical measurement in 2007-08, 35.7% were overweight and 25.3% were obese.

Rates of overweight and obesity were higher in adult males than females by both self-reported BMI (64.1%, 50.7% respectively), and measured BMI (67.9%, 54.6% respectively) with similar differences across most age groups.

Prevalence of overweight for males increases quickly with age. The highest rates are reached by 35–44 years and remain high until 75 years and older. Female prevalence increases slowly, peaking at around 55 years and older and remaining at this level.

The occurrence of self reported overweight is similar in disadvantaged areas of Queensland compared to advantaged areas. In contrast, rates of obesity in disadvantaged areas are double that of advantaged areas regardless of the age and sex profile of the population.

Rates of overweight and obesity in 2011 were about 10–20% higher in regional areas of Queensland compared with cities and about 30% higher in remote and very remote areas. Rates of overweight and obesity in regional Queensland including local government areas and health service districts are published on the Queensland Health website. A greater proportion of Indigenous Queenslanders is overweight and obese compared with non-Indigenous (rates are about 20% higher).

NOTE: The relationship between measured and self reported prevalence is important. There is a tendency for people to over report their height or under report their weight or both. While BMI estimates from self report are generally lower than those obtained by measurement, the pattern over time is very similar and therefore self report BMI has been nationally adopted as a measure of trend.

How do we compare nationally and internationally?
Rates of measured overweight and obesity in males and females aged 15 years and older in Queensland in 2007-08 were similar to national rates. For males, Queensland rates were second highest after New South Wales and third highest for females (after South Australia and Western Australia). Northern Territory was excluded from rankings due to data related limitations.

Globally, obesity has reached pandemic proportions. An estimated 1.6 billion adults are overweight and at least 300 million of these are obese. Comparisons of rates of obesity internationally are limited by variable measures and recency of data. However, based on the most recent release of the Organisation for Economic Co-operation and Development (OECD) health data and using the most recent national data, Australia has the fourth highest rate of adult obesity in the OECD after the United States, Mexico and New Zealand.

Perception versus reality
Despite the fact that the prevalence of overweight and obesity is increasing, Australians are becoming less likely to perceive themselves as overweight. Recent research in Queensland has also shown that parents of overweight or obese children considerably underestimate their child’s weight status.
**Overweight and Obesity 2011**

**Obesity in children and young people**

Obesity rates in children are a concern. Globally, it was estimated that at least 20 million children under 5 years were overweight in 2005. The prevalence of overweight and obesity in Australian children increased substantially during the past 40 years and is projected to approach adult rates within 30 years.

In Queensland, 26.1% of children aged 5–15 years were overweight or obese in 2007-08, based on physical measurement. This compares with 26.5% in 2009 based on estimates from proxy reports (information collected from parents and carers).

Rates of proxy-reported overweight and obesity in 2009 were comparable in girls and boys aged 5–15 years and across all age groups. However, the rates of overweight and obesity in children living in disadvantaged areas of Queensland were more than double that in advantaged areas.

Overweight and obesity in childhood, especially in older children, can be a precursor for obesity and severe obesity in adulthood. Furthermore, childhood and adolescent obesity is associated with a higher risk of premature death and disability in later life.

There is evidence that in addition to the physical risks, overweight and obese children are at greater risk of social isolation and development of psychological disorders than those in the healthy weight range.

**How does overweight and obesity impact on health?**

Overweight and obesity is now the largest single contributing risk factor for premature death and disability in Queensland, overtaking tobacco. Obesity reduces life expectancy, with the average survival for obese people reduced by 2–4 years and for the severely obese a reduction of 8–10 years.

High body mass is the dominant risk factor for a number of chronic diseases, with about 40% of disease burden due to type 2 diabetes, 30% to coronary heart disease, 11% to stroke and 10% to colorectal, breast and uterine cancers.

In addition to major chronic illnesses, being overweight or obese increases a person’s risk of respiratory problems (sleep apnoea and breathlessness), chronic musculoskeletal problems (lower back pain and osteoarthritis), gall bladder disease and impaired fertility.

**Economics of obesity**

Obesity is expensive, and a major contributor to the burden on healthcare systems. In Queensland, the total health system cost for obesity in 2008 was estimated to be about $391 million.

Obesity puts people at higher risk of a number of disabling chronic conditions, resulting in the loss of healthy life. In 2008 overweight and obesity in Queensland was estimated to cost an additional $9.961 billion in lost wellbeing, and together with other financial costs, results in a total of $11.614 billion related to obesity.

**Toward Q2 target progress**

The Queensland Government is committed to making Queenslanders Australia’s healthiest people. Reduction of obesity is a key target in achieving this commitment. The Toward Q2 goal is to reduce the rate of adult overweight and obesity by one-third by 2020. If this goal is achieved, the prevalence of overweight and obesity in Queensland adults in 2020 will be 33%.

However, between 2002 and 2011, the prevalence of self reported adult overweight and obesity increased by 1 percentage point per year. If current upward trends continue, about 65% of Queensland adults (3.7 million) will be overweight or obese by 2020, nearly double the Toward Q2 goal.

Between 1995 and 2007-08 the proportion of people who measured as overweight remained steady, but the proportion measured as obese increased by about one-third from 19.2% to 25.1% in Queensland.

Overweight and obesity is perhaps the most important challenge facing the health system but it is also largely preventable. While good nutrition and regular exercise can influence a person’s weight, the focus cannot be on changing individual behaviours alone. Reversing the long term upward trends in overweight and obesity will require concerted and sustained action across all sectors of the community through multi-strategy interventions.

**References**