

16. Overweight and obesity

Healthy weight can protect against many diseases and conditions; conversely, being overweight or obese is a risk factor for many diseases. Overweight and obesity are conditions of the human body which are predominantly defined using the body mass index (BMI), a measure of a person's weight relative to their height (weight in kilograms divided by height in metres squared). If a person's BMI is between 25 and 30, that person is considered overweight. A BMI of 30 or more defines obesity. These BMI cut-off points are used for adults, but other age- and sex-specific cut-off points have been endorsed as the Australian standards for determining the overweight and obesity levels in children and adolescents (Cole et al. 2000).

The health consequences of obesity range from increased risk of premature death to serious chronic conditions that reduce the overall quality of life (WHO 2000). In 2000, the World Health Organization estimated the number of obese adults in the world to be over 300 million. Obesity has been identified as a high-risk factor for chronic diseases, including type 2 diabetes, coronary heart disease, high blood pressure, stroke and certain forms of cancer. Obesity has serious social and psychological consequences that affect all ages and socioeconomic groups.

In Australia in 1999, about two-thirds of males (67%) and half of females (52%) of all ages were overweight or obese (AIHW 2002). The rapid increase in the rate of overweight and obesity among children and adolescents is of serious concern (Magarey et al. 2001).

In studies in the United Kingdom, parental obesity more than doubles the risk of adult obesity among their children. Irrespective of the weight status of the parents, childhood obesity increases the risk of adult obesity, and the majority (80%) of obese adolescents become obese adults (Whitaker et al. 1997).

Obese children and adolescents risk a number of particular health and psychosocial problems. In the United States, obese children and adolescents have higher than normal frequencies of hyperlipidemia (high blood fats), hypertension and abnormal blood glucose (Dietz 1997). Hill (2000) suggests that psychosocial problems are the most common problems associated with childhood and adolescent obesity. They include poor body image, decreased self-worth, peer teasing and victimisation – all of which have adverse effects on normal socialisation.

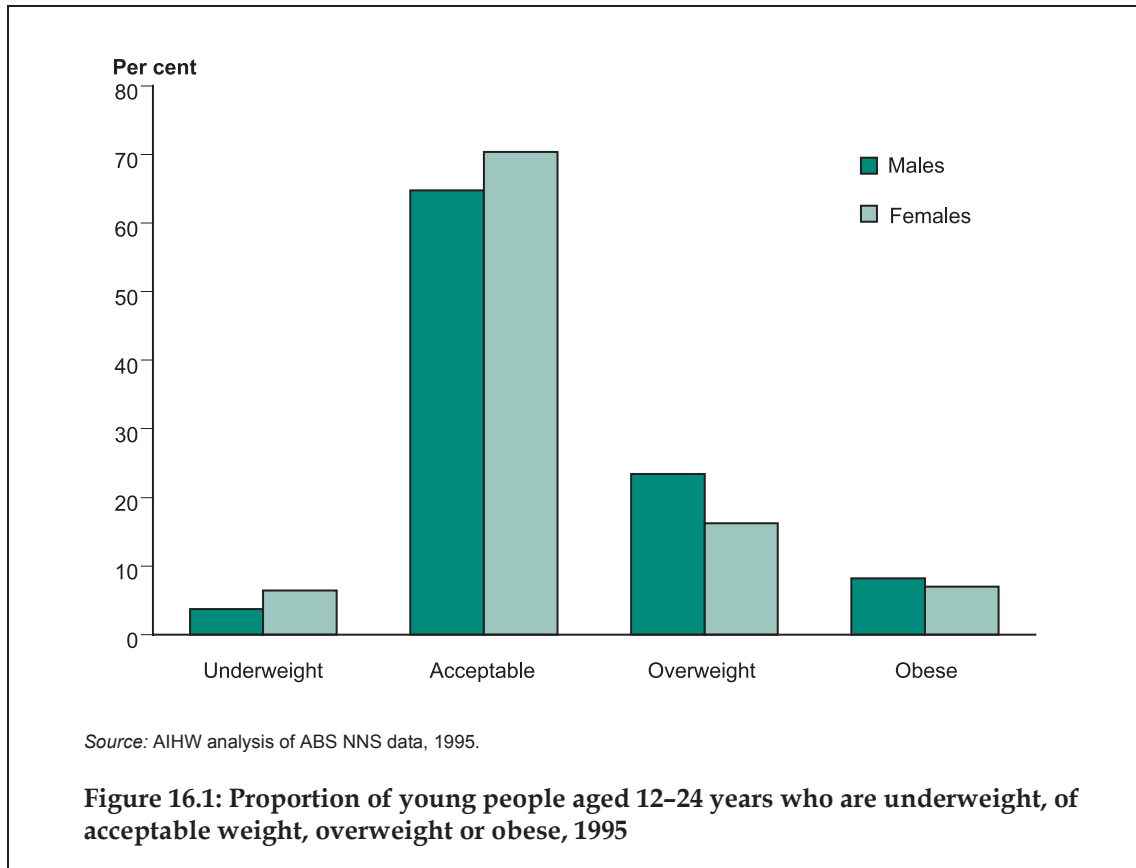
Adolescence is a period of continued growth and development. Overweight and obesity during this time of life used to be rare, and were usually related to metabolic or genetic problems. Although genetic factors can contribute to the development of obesity, they do not explain the rapid rise in the proportion of people in the total population who have become obese in the last 20 years. It is believed that changes in the type and amounts of food consumed and in the amount of physical activity undertaken and the resultant imbalance between the amount of energy consumed and the amount expended in physical activity are the main causes of the increased prevalence of obesity in young people (Tapsall & Batterham 2002).

The health costs of obesity and its resulting disease in Australia during 1989–90 were estimated to be around \$840 million (NHMRC 1997). AIHW: Mathers et al. (1999) estimated that obesity caused 4% of the total burden of disease in Australia in 1996, with cardiovascular disease and diabetes being the major contributors.

Data for this chapter are derived from two sources: the 1995 ABS National Nutrition Survey (NNS) which provides measures of height and weight used to derive obesity levels, and the 2001 National Health Survey, which provides more recent self-reported height and weight data. It is well known that when people are asked to self-report their weight and height, they overestimate their height and underestimate their weight (Hill & Roberts 1998). The prevalence of overweight and obesity based on self-reporting

in 1995 was 36% of women and 52% of men, compared with 49% and 64%, respectively, based on measured height and weight in the NNS (ABS & DHFS 1997; ABS 1997).

The distribution of young people aged 12–24 years according to their weight status is shown in Figure 16.1.



- In 1995, although the majority of young people aged 12–24 years were of an acceptable weight for their height – 65% of males and 70% of females – a relatively high proportion of young people were overweight and obese: 23% of males and 16% of females were overweight and 8% of males and 7% of females were obese.
- A small percentage of Australian young people were underweight: 4% of males, and 6% of females.

The weight status of young people aged 12–24 years by sex is presented in Table 16.1.

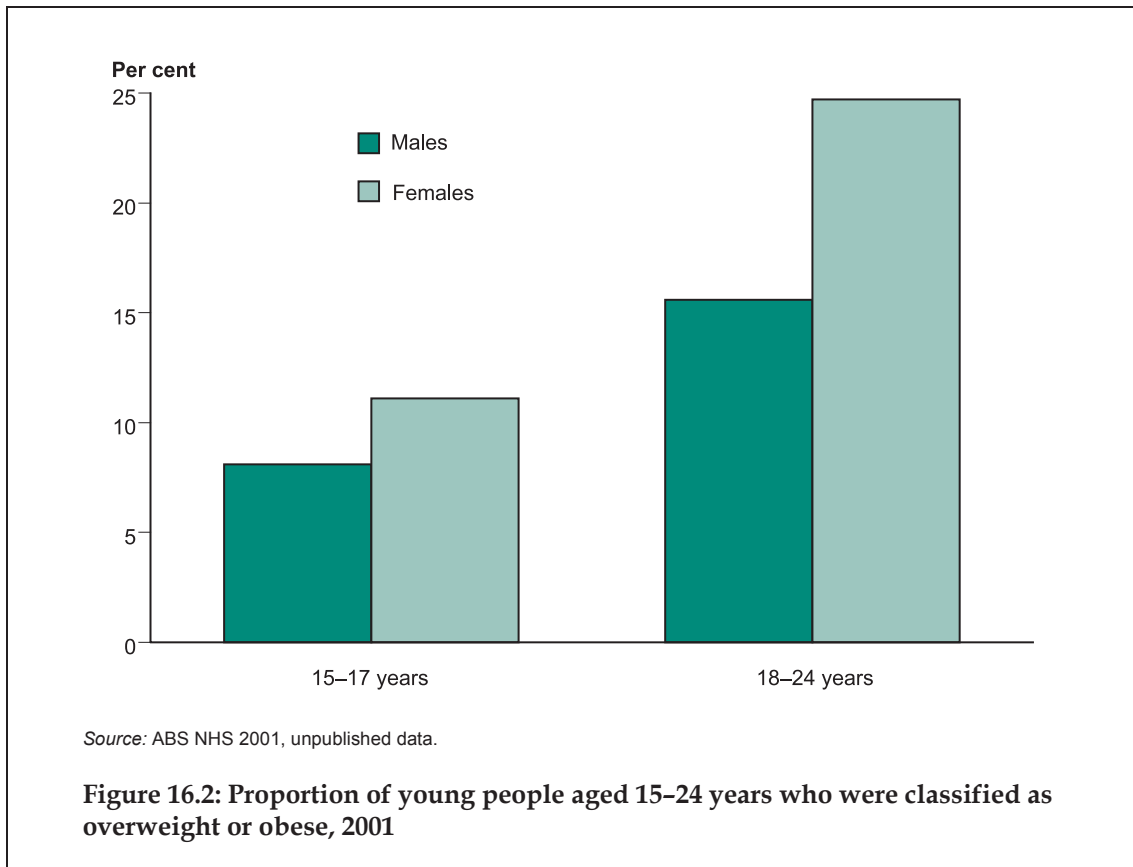
Table 16.1: Proportion and estimated number of young people aged 12–24 years who are underweight, of acceptable weight, overweight or obese, by sex, 1995 (per cent)

	Age (years)	Underweight	Acceptable	Overweight	Obese	Estimated population
Males	12–14	6.6	64.7	23.0	5.6	393,910
	15–17	3.3	72.6	18.0	6.1	383,595
	18–24	2.7	61.3	26.0	10.0	994,827
	12–24	3.7	64.7	23.4	8.2	1,772,332
Females	12–14	6.1	71.5	16.7	5.7	371,425
	15–17	7.3	78.1	11.4	3.2	365,448
	18–24	6.2	66.8	18.0	9.1	921,638
	12–24	6.4	70.3	16.2	7.0	1,658,511

Source: AIHW analysis of ABS NNS data, 1995.

- For males and females, the highest proportion of those overweight occurred among those aged 18–24 years, with 26% of males and 18% of females. Obesity was also more common among young people aged 18–24 for both males and females--10% of males and 9% of females.
- More males than females in all age groups were overweight or obese.

More recent data on weight are available from the 2001 ABS NHS (Figure 16. 2). The NHS data are not comparable to the NNS, because they are based on self-reported weight and height, whereas in the NNS, height and weight were measured.

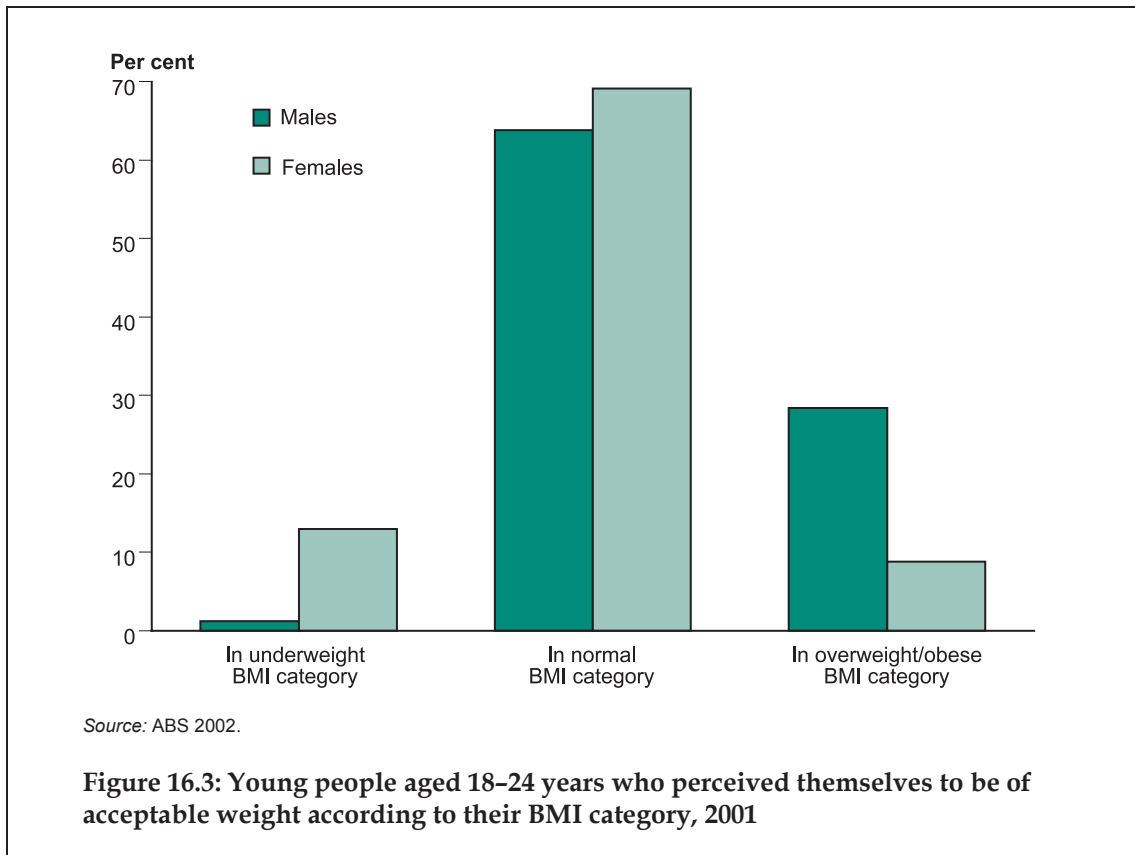


- In Australia in 2001, 8% of males and 11% of females aged 15-17 years were classified as overweight or obese, based on self-reported height and weight.
- For young people aged 18-24 years, the proportions were higher – 16% of males and 25% of females were classified as overweight or obese.

Perception

In Australia there are little data on weight control behaviour. In order to understand weight control behaviour, some knowledge is needed of how people perceive their weight.

The 2001 ABS NHS asked respondents to state whether their weight was acceptable, and compared these responses with BMIs derived from self-reported height and weight. The results are shown in Figure 16.3.



- The majority of young people who reported their weight as acceptable were in the normal BMI range (64% of males and 69% of females).
- A considerably greater proportion of males (28%) than females (9%) whose self-reported BMI placed them in the overweight class thought their weight was acceptable. However, some people with high BMI scores may have a high muscle mass, rather than an excess of body fat, and these people would be unlikely to consider themselves 'overweight'.
- In contrast, more young women (13%) than young men whose BMI placed them in the underweight class reported their weight was 'acceptable'.

