Australian Government
Australian Institute of Health and Welfare

bulletin 12

Obesity trends in older Australians

Summary

- Older Australians—people aged 55 years and over—are being strongly caught up in the national obesity epidemic.
- The number of obese older Australians is now approaching 1 million, which represents more than one in five of our senior people.
- Their number has trebled over the past 20 years, due to the combined effect of an ageing population and the obesity epidemic.
- These older Australians are about 6–7 kg heavier on average than their counterparts were 20 years ago.
- Even Australians in their 50s and 60s are gaining weight as they gain years, at least into their mid-70s.
- Obese older Australians are at greater risk of ill health from chronic diseases, disability and social impairment. Their increasing number has implications for health care costs, for carers and their wellbeing, and for aged care services.

Introduction: obesity in an ageing population

Australians have put on a lot of weight during the past 20 years. As a result, like many other industrialised nations (OECD 2003, WHO 2000), Australia is now in the grip of an obesity epidemic. There is now more than a 20% chance that an adult in Australia is obese, and this percentage has increased dramatically in recent decades (AIHW 2003a). The epidemic is also affecting children and adolescents (Magarey et al. 2001).

Although the increase in the prevalence of obesity among Australians generally is well documented, little information has been published specifically about the situation among older Australians. Population trends for adults can mask considerable differences across age groups, which could be important for planning and evaluating preventive and management strategies.

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This situation is potentially serious for the health of older Australians because of the strong association between excess body weight and various chronic health problems that continue into older age (AIHW 2002a). Excess body weight can place undue strain on the heart, joints and spine; increase the risk of high blood pressure, diabetes, respiratory diseases, osteoarthritis and other conditions; and exacerbate these conditions where they already exist.

Other things being equal, the obesity epidemic has increased the likelihood of these and related health conditions among middle aged and older Australians, and the serious negative economic and social outcomes that follow. People who are obese are less likely to remain in the workforce, their health care costs are higher and their social participation is often impaired (WHO 2002).

At the same time Australia is experiencing a rapid and sustained ageing of the population that will continue for several decades (AIHW 2002b). Life expectancy has been increasing and Australians can now expect to live to an average age of 80 years. The number of older Australians aged 55 years or older is increasing, as is their representation in the total population. Their number is projected to increase from 4.2 million in 2001 to 7.2 million in 2021, which is an increase from 22% to 31% of the population (ABS 2000). This trend, in combination with the obesity epidemic, is likely to result in an increase in the number of older, obese Australians, with implications for health status, medical and health care resources, and the national health budget.

This bulletin examines levels and trends in the prevalence of obesity in the context of an ageing population and the likely health and economic consequences. The focus is confined to obesity rather than lesser degrees of overweight because obesity has significant health consequences at all ages. The findings will inform policy makers and program deliverers who have the task of tackling the obesity problem, particularly among older Australians.

The data and how they are analysed

The trend analyses presented here are based on data collected in cross-sectional surveys conducted in Australia since the 1980s. Each survey provides an independent snapshot of the Australian population at the time of the survey, and together they enable an examination of trends over time. Brief descriptions of the surveys and their methods are covered in a related bulletin (AIHW 2003a).

What data are available

The survey data available are for height and weight as reported by participants or as actually measured according to a standard protocol.

The National Health Surveys conducted by the Australian Bureau of Statistics in 1989–90, 1995 and 2001 provide estimates of the prevalence of obesity based on self-reported height and weight. Prevalence estimates from this series are national, are based on a high response rate, and cover a wide age range. Although prevalence estimates of obesity based on self-reported data are known to underestimate the true prevalence (ABS 1998), they can be useful for assessing patterns and trends over time using repeat surveys and standardised methods.

Measured height and weight data are available from the series of Risk Factor Prevalence Surveys conducted during the 1980s by the National Heart Foundation, from the 1995 National Nutrition Survey and the 1999–2000 Australian Diabetes, Obesity and

Lifestyle Study (AusDiab). These surveys provide estimates that are not subject to the biases of self-reporting where weight tends to be under-reported and height over-reported. However, they did not all use common survey methods, they covered different age ranges, and they generally achieved lower participation rates than the surveys collecting self-reported data.

For all surveys, sample weights have been applied to produce representative estimates by five-year age groups, for men and women separately. The trend estimates for self-reported data are national, whereas trend estimates for the objectively measured data relate to capital cities, since this was the geographical area that was common to these surveys.

How 'obesity' and 'older Australians' are defined

Body mass index is the most common way of estimating the prevalence of obesity. BMI is calculated as a person's weight (kg) divided by their height squared (m^2). A BMI of 18.5 to less than 25 is defined as a normal (that is, healthy) weight; obesity is defined as a BMI of 30 or more (WHO 2000).

Although BMI provides a useful indicator of the prevalence of obese people, it does not distinguish between weight associated with muscle and weight associated with fat. A complementary measure is waist circumference: it can indicate excess fat in the abdominal region, which is associated with an increased risk of ill health. Some studies suggest that abdominal obesity is a more important indicator of health risk among older people than BMI (Rossner 2001). Both measures are used in this analysis.

Waist circumference was measured in the 1989 Risk Factor Prevalence Survey, the 1995 National Nutrition Survey and AusDiab. Trends in excess abdominal fat are examined using the standard indicators of abdominal obesity—namely, a waist circumference greater than or equal to 102 cm in men and 88 cm in women (WHO 2000).

The term 'older Australians' is used in this bulletin to describe people aged 55 years or over. This is also the age when there is a significant increase in the prevalence of a number of chronic conditions (AIHW 2002a).

Combining the data to show trends and 'cohort' changes

It is preferable to use measured data for the reasons already given. Unfortunately, surveys in the 1980s, which measured weight, did not include people aged 65 years or older. It is, however, possible to fill in this gap by adapting data from later surveys that included self-reported or measured weight for people aged 65 years or older. These surveys showed a consistent pattern in average weight between these age groups (Figures 1, 2 and 3) and it is reasonable to assume that this pattern would also have applied to the 1980s. Assuming this, 1980 estimates for age groups 65 years and older can be extrapolated from the data observed in 1980, based on the pattern observed in the 1990s. This makes it possible to estimate the increase in weight among older Australians over the two decades.

Further insight into weight change as people age can be obtained by constructing age 'cohorts'. This approach treats, for example, survey participants aged 30–34 in 1980 and survey participants aged 50–54 in 2000 as representative of the same group of people as they age 20 years. Unlike cross-sectional analysis, this approach makes it possible to analyse the change in average weight for a group of people of the same age as they become older.

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How the data are presented

The graphs presented show how average weight and the prevalence of obesity have changed over time across the adult years. Results are given separately for men and women, by five-year age groups and across as much of the adult lifespan as each data source permits. Age-specific prevalence estimates for a particular survey are connected to indicate that those estimates were made at the same time.

For estimates based on measured and self-reported data, a three-point moving average is used to smooth across five-year age groups to better show the underlying age pattern and to improve reliability. Approximate sample sizes for each data source are shown in Appendix Table 1.

Older Australians have gained weight

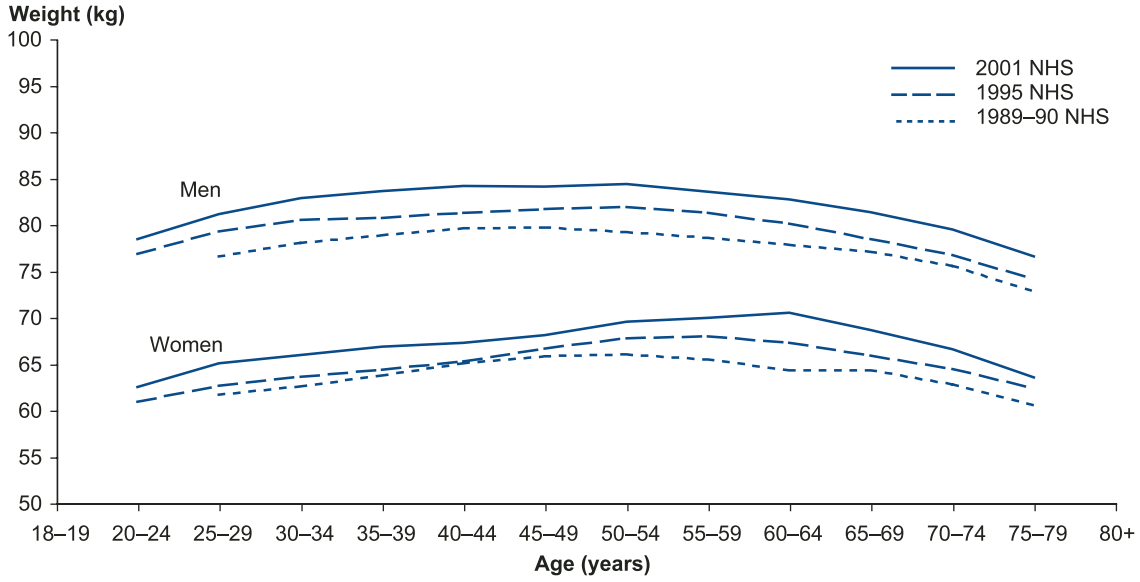
Data on self-reported and measured weight show that older Australians now are heavier than older Australians were a generation ago and that the gain has been substantial.

The increase in weight has occurred equally across all age groups: the average self-reported weight for every age group was higher in 2001 than for the same age group in 1995, which was in turn higher than its counterpart in 1989 (Figure 1).

Using the 25–64 years age range common to surveys that measured weight, the average measured weight increased during the 1980s and 1990s by around 6.5 kg for men and 7.1 kg for women (about one stone in imperial measure). This increase in average measured weight occurred in each five-year age group (Figures 2 and 3).

The most recent surveys that measured weight show that older age groups are progressively lighter, from around age 50 in men and age 60 in women (Figures 2 and 3). This is consistent with the pattern shown using self-reported data (Figure 1). Assuming the 1990s pattern of prevalence also applied to the 1980s, then it can be shown that weight gains among older Australians are likely to have been similar in extent to those in other age groups—that is, about 6–7 kgs.

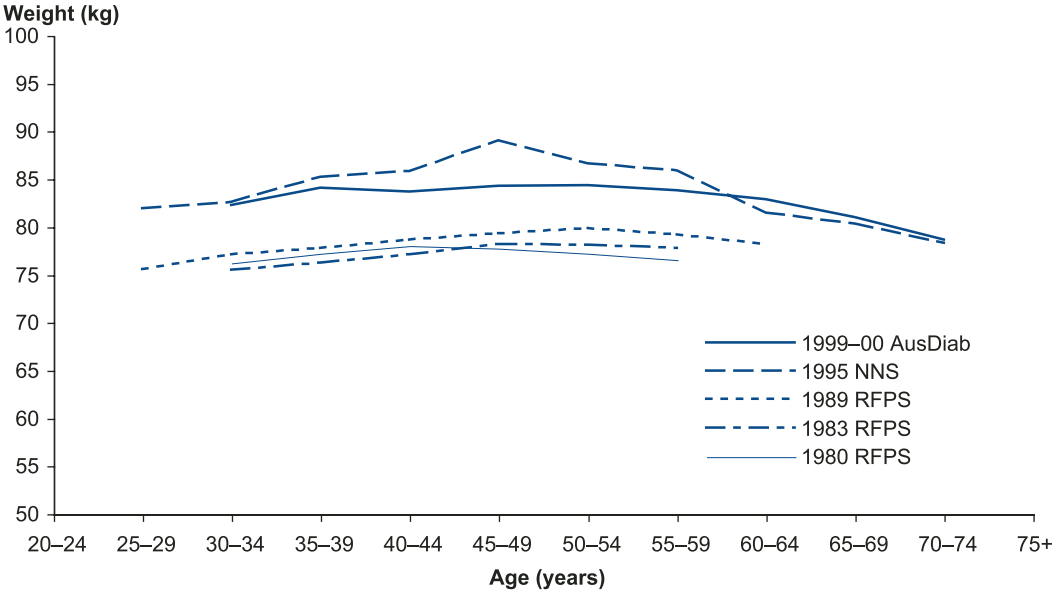
Figure 1: Average weight (self-report) across the adult life span, 1989 to 2001



Sources: AIHW analysis of the 1989–90, 1995 and 2001 National Health Surveys.

Using the cohort approach, as previously discussed, and measured weight, men aged 30–34 in 1980 gained over 8 kg as they aged to 50–54 years in 2000 (Figure 4). Similarly, women aged 30–34 in 1980 gained over 12 kg as they aged to 50–54 years. Weight gain has been so great that, rather than losing weight as they became older, men and women now aged 70–74 weigh more on average than they did when they were 20 years younger (Figure 4).

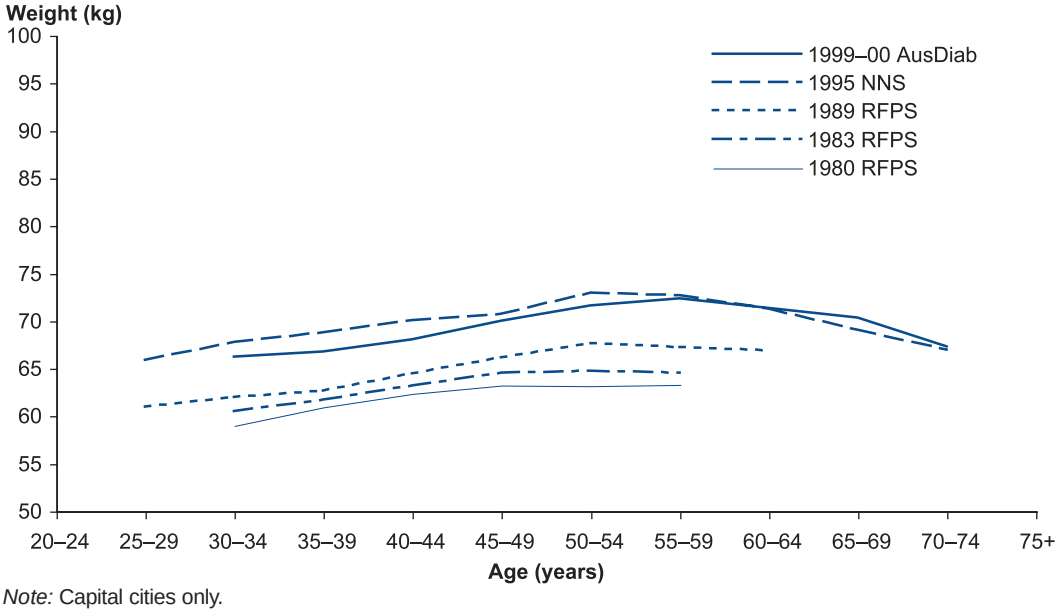
Figure 2: Average weight (measured) across the adult life span, men, 1980 to 2000



Note: Capital cities only.

Sources: AIHW analysis of the 1980, 1983 and 1989 Risk Factor Prevalence Surveys; 1995 National Nutrition Survey; 1999–2000 Australian Diabetes, Obesity and Lifestyle Study (AusDiab).

Figure 3: Average weight (measured) across the adult life span, women, 1980 to 2000



Note: Capital cities only.

Sources: AIHW analysis of the 1980, 1983 and 1989 Risk Factor Prevalence Surveys; 1995 National Nutrition Survey; 1999–2000 Australian Diabetes, Obesity and Lifestyle Study (AusDiab).

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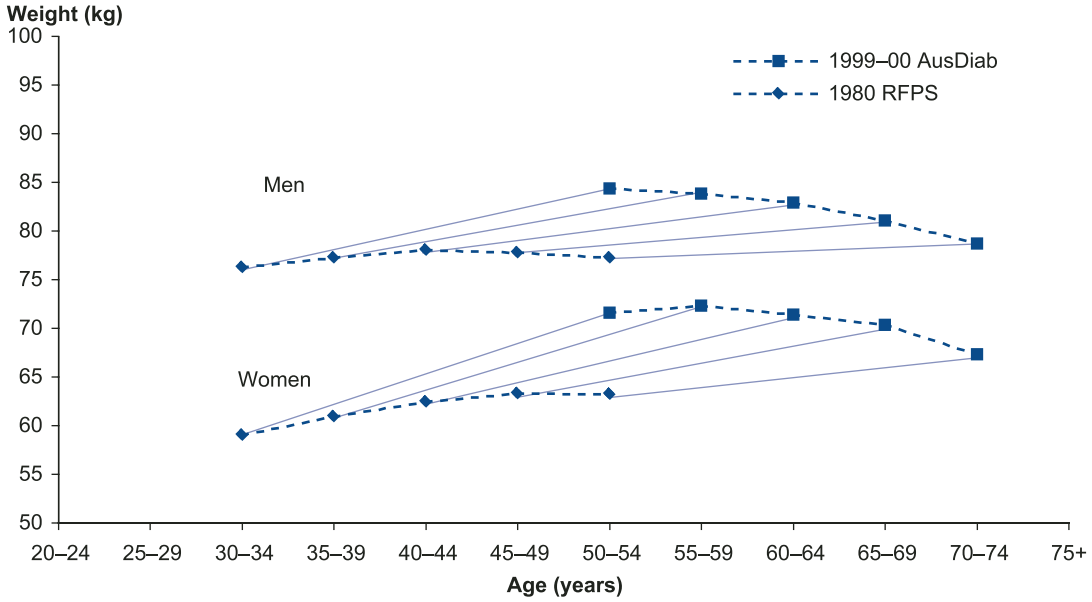
Hence, while cross-sectional data show that, at a point in time, average weight is highest among people of late middle age (Figures 1, 2 and 3), this does not mean that individuals tend to lose weight as they grow older than this. In fact, the cohort approach suggests that in recent times a typical individual has continued to gain weight at least to age 75 years (Figure 4).

Figure 4: Trends in weight (measured) by age cohort, 1980 to 2000



Note: Capital cities only

Sources: AIHW analysis of the 1980 Risk Factor Prevalence Survey; 1999–2000 Australian Diabetes, Obesity and Lifestyle Study (AusDiab).

More older Australians are obese

The prevalence of Australian adults who are obese has increased as a consequence of the increase in average weight. The most recent (cross-sectional) data show that the prevalence of obesity is greater in successive age groups and is most common around ages 50–59 years at about 24% for men and 30% for women, and less common in older age groups (Figures 5 and 6).

Although the prevalence of obesity among older Australians during the 1980s was not assessed, estimates can be made by assuming that the prevalence during this period for age groups 65 years and older would have formed a pattern similar to those observed in 1995 and 2000. This assumption that, at a point in time, older age groups weigh progressively less is consistent with ABS self-reported data, which cover a wider age range, and with overseas data. By applying estimates of the age-specific prevalence of obesity to national population estimates, it can be calculated that there has been a steady and substantial increase in the number of older Australians who are obese, from 310,000 in 1980 to 940,000 in 2000 (Figure 7). This represents an increase from 11% to 23% of older Australians who are obese. About one-third of the increase in number has been as a result of the ageing of the population and two-thirds a result of the increased obesity rates.

Self-report estimates, which are based on larger sample numbers at older ages (Appendix Table 1), confirm that the prevalence of obesity among older Australians has increased over time.