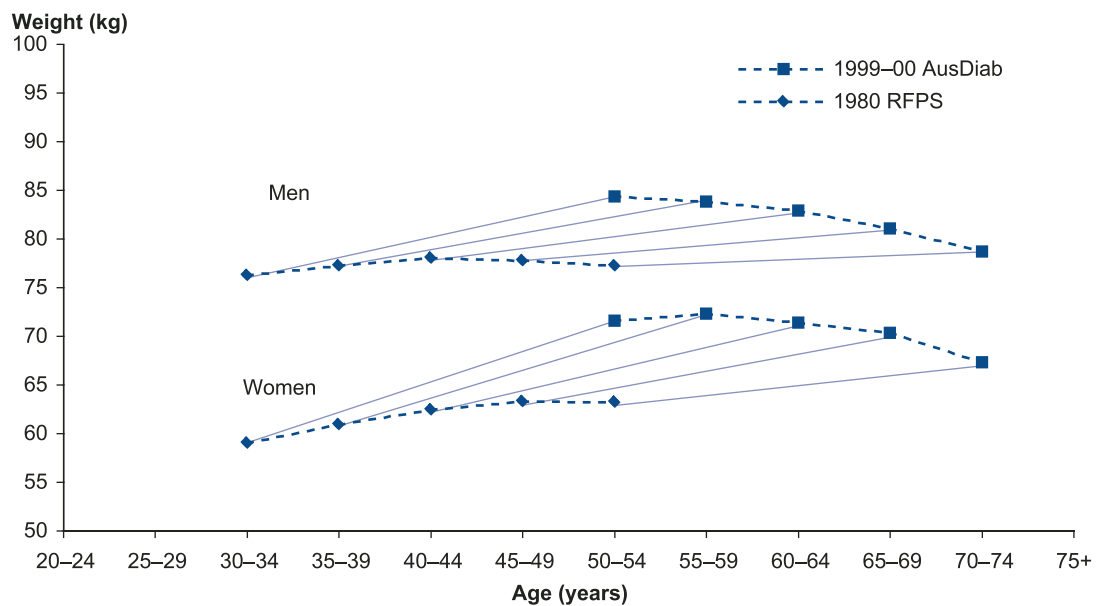


Obesity trends in older Australians

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).

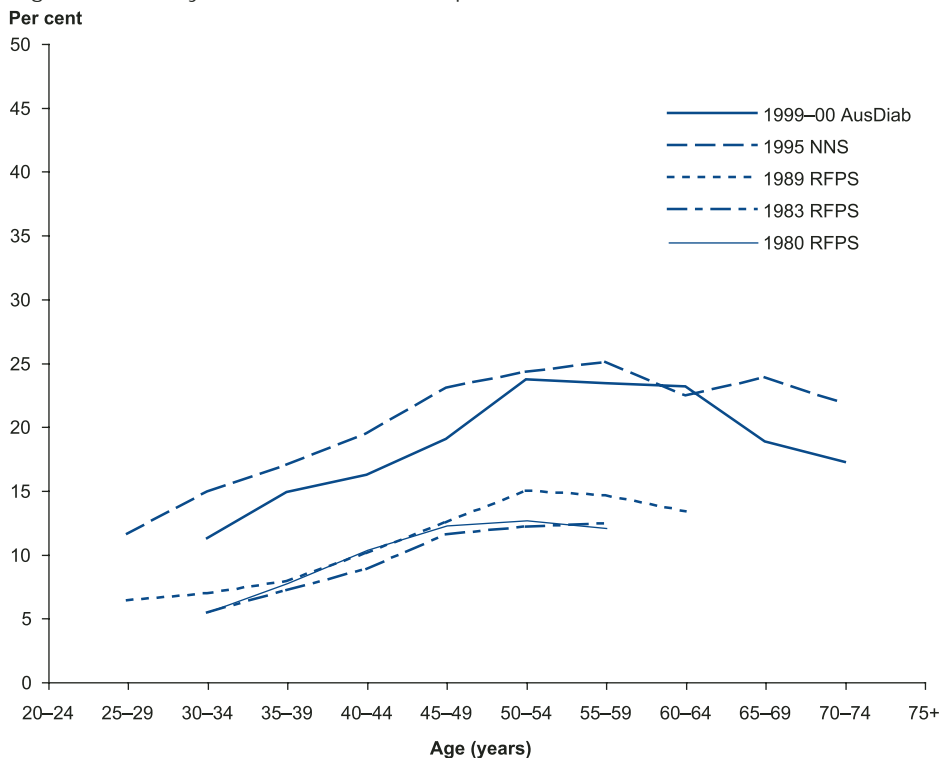
More older Australians are obese

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.

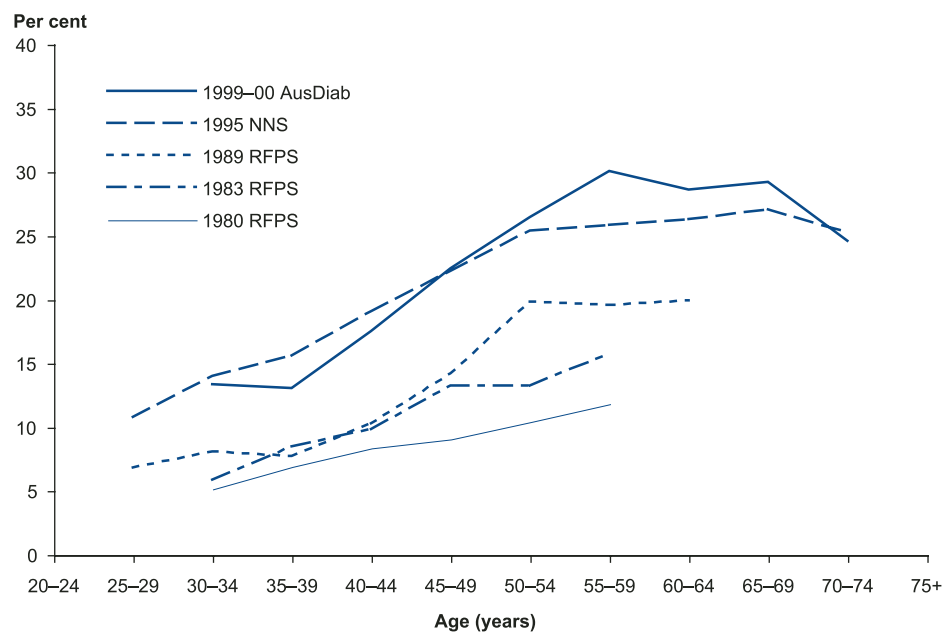
Figure 5: Obesity across the adult life span, men, 1980 to 2000



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 6: Obesity across the adult life span, women, 1980 to 2000

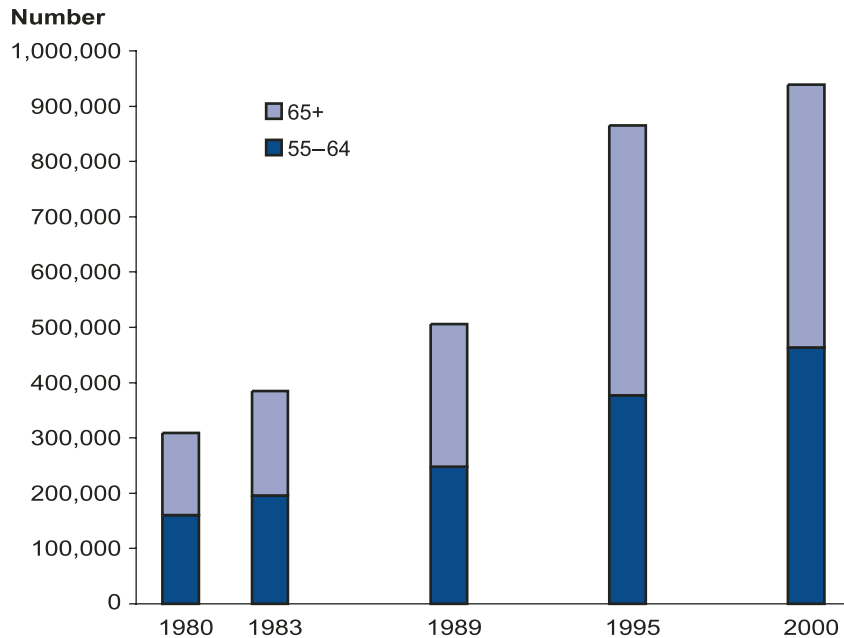


Note: Capital cities only.

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).

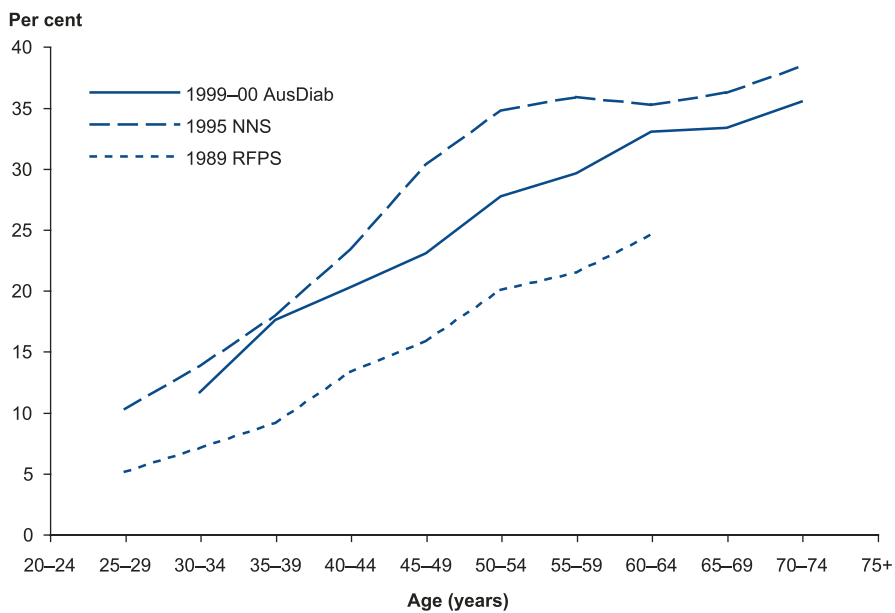
Obesity trends in older Australians

Figure 7: Number of obese older Australians, 1980 to 2000



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); ABS Australian Demographic Statistics 3101.0.

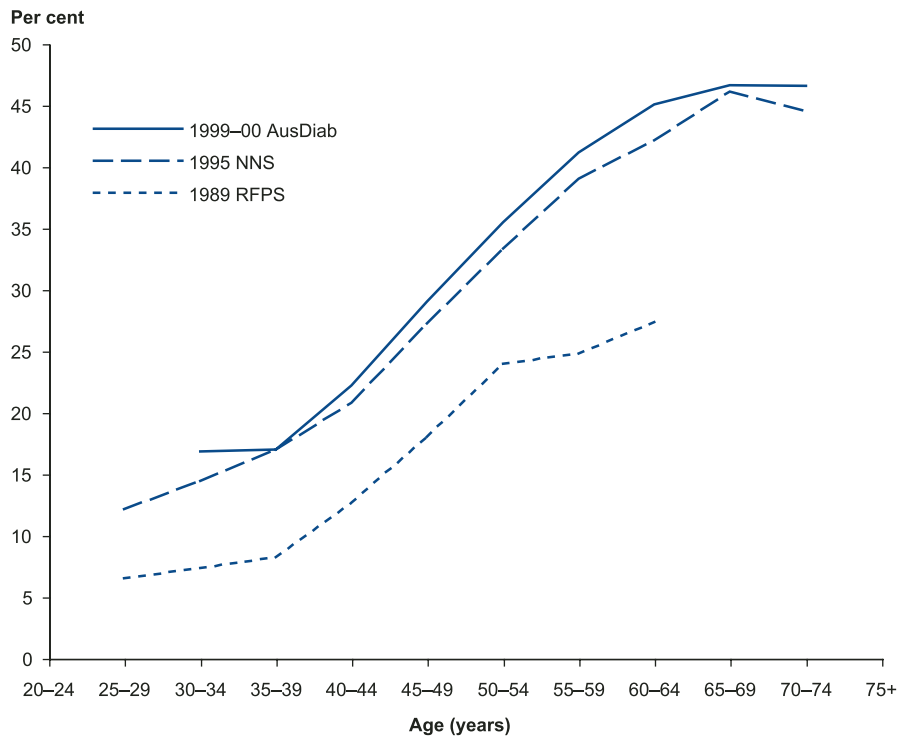
Figure 8: Abdominal obesity across the adult life span, men, 1989 to 2000



Note: Capital cities only.

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

Figure 9: Abdominal obesity across the adult life span, women, 1989 to 2000



Note: Capital cities only.

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

Older Australians are bigger around the waist

The data show that abdominal fatness increased markedly during the 1990s including among older Australians. Based on waist circumference, over 30% of older men and 44% of older women are currently at substantially increased risk of disease because of abdominal obesity (Figures 8 and 9). These proportions increase steadily over the adult lifespan, with rates highest during older age. Unlike body weight and obesity, the cross-sectional prevalence of abdominal obesity continues to increase past late middle age. This is consistent with a redistribution of body fat more into the abdominal area as age increases (Seidell & Visscher 2000).

Discussion

The trend towards excess body weight

The data reveal a dramatic increase in the weight of Australians in all age groups. Adults at every age now carry around 6–7 kg more than their same-age counterparts 20 years ago, which is equivalent in weight to 12–14 medium-sized tubs of butter or margarine, and represents an increase of about a gram a day.

This increase in average weight has resulted in marked increases during the same period in the prevalence of Australians who are obese—reaching around 25–30% among people approaching retirement. The prevalence of abdominal obesity, as indicated by

Obesity trends in older Australians

waist circumference, also increased during the 1990s for all ages. It is common among those in their early 50s, but it becomes even more common among older age groups.

These trends based on measured data are supported by data collected through self-reporting. Although lower, estimates based on self-reported data show the same pattern of increasing weight in the past decade at all ages, with average weight greatest among people in their late 40s and early 50s and progressively lower at older ages. Similar trends over the life span and over time have been reported recently for other developed countries (OECD 2003)—for example, the United States (Flegal et al. 2002) and the United Kingdom (National Audit Office 2001).

Increasing weight in an ageing population has resulted in a tripling within 20 years of the number of older Australians who are obese—to a figure approaching 1 million.

Perhaps surprisingly, even Australians of 'retiring age' are continuing to gain weight as they gain years, at least into their mid-70s. The effect of the obesity epidemic has far exceeded any 'natural' tendency that may exist for older Australians to lose weight as they age. Based on these data it cannot necessarily be expected that the problem of obesity among older people will solve itself as they age further .

The likely causes

A number of possible causes for the dramatic increase in the prevalence of obesity can be considered. Several seem unlikely. First, the increase has been much too rapid to be a result of genetic factors. Second, there has been no significant change in average height during the period under study (Bennett & Magnus 1994; Cook et al. 2001). Third, although smoking rates have fallen in Australia, and smoking cessation has been linked to an increase in body weight at the individual level, the decrease in the smoking rate has made little or no contribution to the increase in body weight at the population level (Simmons et al. 1996; Boyle et al. 1994).

The most plausible explanations are dietary over-consumption of energy or a decrease in physical activity, or both, over a considerable period. Dietary intake and physical activity are, however, difficult to measure and trend data are limited.

On the dietary side, a comparison of dietary intake surveys in 1983 and 1995 found an increase in average daily energy intake for adults. Overall, there was a statistically significant increase of around 350 kJ in average 24-hour energy intake among Australians aged 25-64 years. In food terms, this difference represents the equivalent of about a slice of bread a day. In the absence of compensatory increases in energy expenditure, this could be expected to result in significant increases in body weight over time (Cook et al. 2001).

Analysis of long-term trends in physical activity is made difficult by changes in definitions and methods. Broadly, the data suggest that physical activity patterns changed little during the 1980s and much of the 1990s, but that there was a significant decline during the late 1990s in the proportion of people doing the recommended levels of physical activity (AIHW 2002c). The data collected relate to leisure-time physical activity, however, and do not take into account physical activity throughout most of the day in contexts such as work, home and daily travelling—areas in which energy expenditure is thought to have declined (WHO 2000).

The overall picture is one of a persistent increase in energy intake combined with, at best, no increase in recreational physical activity and an increasingly sedentary lifestyle. Behind these trends lies a range of social, economic and cultural factors. In an affluent

country such as Australia, food is plentiful, easily accessible, often energy dense and heavily promoted, and daily tasks and recreation depend less and less on physical activity (NHMRC 1999). Other probable influences include trends in eating out, increases in recreational computer use and television viewing, numerous advances in labour-saving technology, less outdoor activity because of time pressures and fear of crime, greater reliance on motor vehicles for transport, and reductions in physical activity at work (NHMRC 1997; WHO 2000; Crawford 2002; Flegal et al. 2002).

The likely health consequences

Among the likely health consequences for individual adults, and older people in particular, of this marked trend towards increasing body fatness are premature death from life-threatening diseases and debilitating conditions that impair quality of life (WHO 2000). People with excess weight have a greater chance of developing chronic diseases such as type 2 diabetes, coronary heart disease, stroke, some cancers, osteoarthritis and kidney disease. They are also more likely to have high levels of blood pressure, cholesterol and triglycerides, and they have a greater chance of developing gall bladder disease, respiratory difficulties and musculoskeletal problems (AIHW 2002c). The particular health effects and outcomes are influenced by the degree of excess weight, the location of the excess weight, the extent of weight gain during adulthood, and a sedentary lifestyle (Rossner 2001).

Excess weight in older people can have negative effects on their daily functioning, their social lives and their mental health (Jensen & Rogers 1998). High BMI is associated with a greater risk of functional limitation, especially mobility, among older people. Many older people already have limited mobility, and obesity is likely to aggravate the problem. Functional impairment in older people can result in their withdrawal from social activities and dependence on others for assistance with activities of daily living. Depression is common in both obese and older people.

Because excess weight is associated with chronic disease, personal and national health care costs are increased for older obese people (Thompson et al. 2001; National Audit Office 2001). Nationally, the direct costs of obesity represent a significant proportion of the health care budget and potential savings from reducing the problem are great (NHMRC 1997; Wolf & Colditz 1998; National Audit Office 2001). International studies on the economic costs of excess body weight, including data from Australia (NHMRC 1997), have shown that, conservatively, between 2% and 7% of total health care costs may be directly attributable to overweight and/or obesity (WHO 2000). In Australia today this equates to about \$1.2 billion (John Goss, Head, Summary Measures Unit, AIHW: pers. comm., 21 October 2003). Workforce participation studies of indirect costs have shown increased rates of long-term sick leave and premature disability leading to loss of productivity (WHO 2000; National Audit Office 2001).

The growing number of obese older Australians suggests there could be a greater need for carers and an increased demand on aged care services. This is occurring at a time when there is an acute shortage of nursing staff in the aged care sector (Senate Community Affairs Committee 2002). The nursing workforce is itself ageing, but a decline in nursing resources per head of population over recent years may have levelled off (AIHW 2003b).

There is also an important health and safety concern. Nurses—especially those engaged in aged care nursing—already experience high rates of occupational injury (Senate Community Affairs Committee 2002). Rates of workers compensation claims are

Obesity trends in older Australians

highest for staff of residential aged care services and are predominantly related to manual handling such as lifting and transferring. Manual handling has been reported as a common cause of physical problems experienced by long-term carers (CAA 2000; Schofield et al. 1998). Thus the increasing number of obese older people raises health and safety concerns for all who care for them, both formally and informally.

What needs to be done?

The combination of population ageing and growing obesity raises important questions for those who formulate policy and programs on ageing. Among their aims are helping people to remain independent and active as they age and improving quality of life in older age. However, the increasing number of older Australians who are obese carry with them an increased risk of chronic disease and disability, and this works against these aims.

The National Strategy for an Ageing Australia (Commonwealth of Australia 2002) discusses strategies for supporting and encouraging good health throughout a person's life, as well as better health in older age. This perspective echoes the importance the World Health Organization places on reducing the risks of chronic diseases throughout the life course. It advocates a healthy lifestyle at all stages of life and argues against the myth that it is too late to adopt a healthy lifestyle in the later years: 'On the contrary, engaging in appropriate physical activity and healthy eating ... can prevent disease and functional decline, extend longevity and enhance one's quality of life' (WHO 2002).

The WHO recommends that policies and programs should encourage inactive people to become more active as they age and give them opportunities to do so. The benefits of regular physical activity for men and women of all age groups are well recognised (Rossner 2001). Apart from helping to reduce the likelihood of obesity, physical activity can delay functional decline and the onset of chronic disease. It can also reduce the severity of disability associated with chronic diseases, improve mental health, promote social contacts, prolong independent living, and reduce the risk of falls. Physical activity plays an important role in sustaining the health of muscles, bones and joints. Medical costs are substantially lower for older people who are active (WHO 2002).

Healthy eating includes not over-eating. Prolonged excess energy intake greatly increases the risk of obesity, chronic disease and disability as people age (WHO 2002). For older people, healthy eating also means eating foods that are rich in nutrients in order to counteract the decline in the amount of muscle in the body. Although older people can be encouraged to control their weight, it is important that weight loss does not adversely affect muscle mass, bone health or other aspects of nutritional status. Good nutrition for older Australians is important for minimising sickness and premature death and maintaining an independent lifestyle for as long as possible (NHMRC 1999).

From a public health perspective, the solution lies in helping people to maintain a healthy weight and not to become obese, as much as helping those who are already obese (National Audit Office 2001). From a life-course perspective, the stages when the risk of weight gain is greatest are childhood, early adolescence, pregnancy and menopause in women, and middle age in both men and women (NHMRC 2002). A successful prevention strategy will combine a life-course approach with the knowledge that most excess body weight is a consequence of lifestyle and environmental factors. Tackling the behavioural and environmental factors that make it difficult for people to maintain a healthy weight will require close cooperation and collaboration between social and health scientists.

At the clinical level, there is no single, effective treatment for obesity and the problem tends to recur after weight loss (NHMRC 2002). The answer might seem simple—eat less and move more—but in practice this is one of the most complex and difficult medical problems in modern disease management (NHMRC 2002, Crawford 2002). However the rewards are such that even modest weight loss, of 5–10 % can result in significant health benefits (NHMRC 2002).

Conclusion

The health of older Australians is one of the most important medical and economic challenges facing Australia. There will be an increasing number of older Australians in the coming decades, and there will be personal and national benefits if these people are healthy. Slimmer, physically active older Australians are less likely to leave the workforce for health reasons, and are likely to enjoy retirement more, have fewer health care needs, have less chronic disease and disability, and cost the national health budget less.

Taking action to prevent people becoming overweight or obese in the first place will most effectively reverse the current trend in older Australians. This requires long-term strategies that promote lifelong healthy eating and physical activity in early and mid-life as well as older age, along with changes to the environment that make it less conducive to weight gain.

During 2003, the National Obesity Taskforce was established to develop a national approach for tackling overweight and obesity. Its report to Health Ministers in November 2003 *Healthy Weight 2008 – Australia's Future* outlines a national action agenda for children and young people and their families. Ministers charged the Taskforce with leading and coordinating the implementation of the national action agenda to tackle obesity and developing further advice on strategies to reduce obesity in adults and older Australians. Their reports, along with the national dietary guidelines covering Australians of all ages, including older Australians (NHMRC 1999), will have an important part to play in combating the compounding effects of an obesity epidemic in an ageing population.

Acknowledgments

The Australian Government Department of Health and Ageing contributed funds for the production of this report. Through their work, several departmental officers also made significant contributions—Mr Mark Thomann and Ms Gillian King Rodda (Office for an Ageing Australia) and Dr Bronwen Harvey (Medical Adviser, Primary Care Division).

Within the Institute, Ms Kathleen O'Brien and Ms Tracy Dixon assisted with the graphical presentation, and Dr Anne Jenkins, Ms Rose Karmel, Ms Lynelle Moon and Ms Anne-Marie Waters provided comments.

Professor David Crawford (Deakin University) also provided valuable comments.

The contributions of all these people are gratefully acknowledged.