



## HEALTHY WEIGHT FACT SHEET 1

### What does the data say about weight, nutrition and physical activity?

Over half of South Australian adults and a quarter of South Australian children are overweight or obese. Indications are that these rates are continuing to rise. The problem of overweight and obesity is of significant public health concern because of its association with a range of chronic conditions such as diabetes, hypertension, cardio-vascular disease and some cancers.

Overweight and obesity is a consequence of both 'over-eating' and 'underactivity', where energy intake<sup>a</sup> exceeds energy expenditure.<sup>b1</sup> Effective prevention requires increasing levels of physical activity as well as healthy eating, starting at the very beginning of life with breastfeeding.

The information in this Fact Sheet is based on the latest available data relating to weight, nutrition and physical activity. It should be noted that in some areas data is limited, sometimes due to the difficulty in accurately measuring or collecting particular types of data.

#### Weight

##### Measuring overweight and obesity

Overweight and obesity is measured using Body Mass Index (BMI), calculated by dividing weight in kilograms by height in metres squared.

$$BMI = \frac{\text{Weight (kg)}}{\text{Height (m)}^2}$$

The healthy weight range is defined by a BMI of 18.5 to less than 25. Overweight is defined by a BMI of 25 to less than 30, and obesity is a BMI of 30 or more.<sup>1</sup> A BMI calculator for adults can be found at: <http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-pubhlth-strateg-hlthwt-obesity.htm>

##### How many adults are overweight or obese?

National data from 2004-05<sup>c</sup> indicate that approximately half of Australian adults aged 18 years and over are overweight or obese. Rates were higher in men with 41% overweight and 19% obese, compared with women, 25% overweight and 17% obese.<sup>2</sup>

South Australian data from 2005 indicate a similar situation with 54% of adults aged 18 years and over overweight or obese.<sup>3</sup> South Australian men are more likely to be overweight or obese than women, 62% compared with 47%. Obesity rates are slightly higher in women (18%) than men (17%).<sup>3</sup>

In the 13 years between 1991 and 2003 rates of obesity in South Australian adults increased from 9% to 14% and current trends indicate that by 2013 the prevalence of obesity in South Australian adults will be 28%.<sup>4</sup>

South Australian men and women from the most disadvantaged and second most disadvantaged areas were more likely to be obese than individuals from the most advantaged areas.<sup>5</sup> This relationship is also observed at a national level, with lower socioeconomic status (SES) associated with obesity and long term weight gain.<sup>5</sup>

<sup>a</sup> Energy intake is measured in kilojoules, the sum of the energy consumed from food and drink

<sup>b</sup> Energy expenditure is measured in kilojoules, the sum of the energy used by the body throughout the day

<sup>c</sup> Crude rates.

#### References

- <sup>1</sup> World Health Organisation 2000, *Obesity: preventing and managing the global epidemic; Report of a WHO consultation on obesity*, World Health Organisation, Geneva.
- <sup>2</sup> Australian Institute of Health and Welfare, 2006. *Australia's Health, 2006*. <http://www.aihw.gov.au/publications/aus/ah06/ah06.pdf> page 183.
- <sup>3</sup> The South Australian Monitoring and Surveillance System (SAMSS), 2005, *Overweight and obesity in South Australia 2005*, Department of Health, South Australia.
- <sup>4</sup> Dal Grande E, Gill T, Taylor A, Chittleborough C & Carter P 2005, 'Obesity in South Australian adults – prevalence, projections and generational assessment over 13 years', *ANZJPH*, vol 29(4), pp 343-347.
- <sup>5</sup> Gill T, Appleton S, Dal Grande E, Taylor A, Carter P & Wilson D 2004, *A Weighty issue: The Status of Overweight and Obesity in South Australian Adults from 1991 to 2001*, Department of Human Services, South Australia.

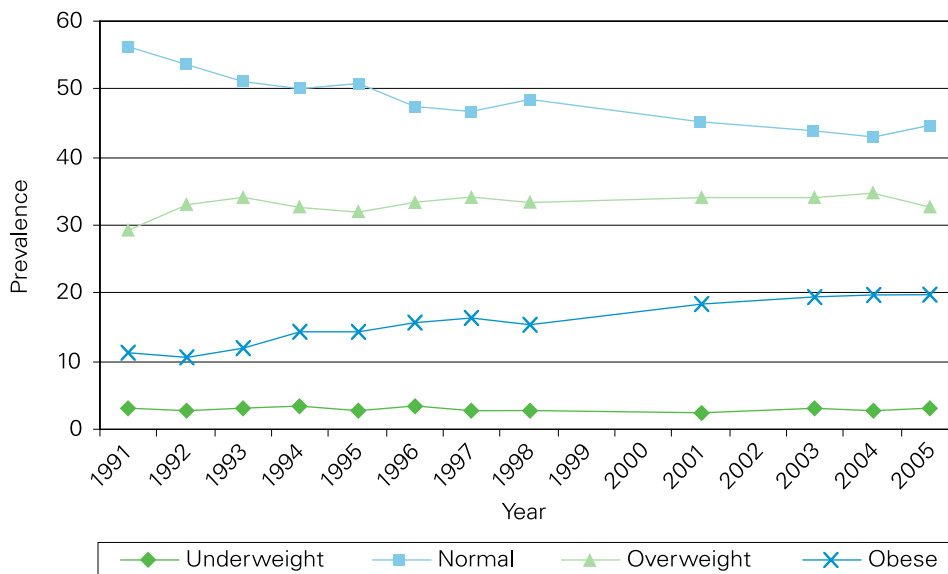


Table 1 - Age-sex standardised prevalence of overweight and obesity in South Australia 1991-2005  
Source: SA Department of Health. Health Omnibus surveys, people aged 18 years and over

### Overweight and obesity in children

Overweight and obesity in children and adolescents has a separate BMI classification based on age and sex.<sup>6</sup> In children, height and body composition are continually changing. Growth needs to be assessed regularly to allow early detection of a weight problem.

A quarter of Australian children are currently overweight or obese and the level is rising at an annual rate of 1%, suggesting that by 2025 half of all young Australians will be overweight.<sup>7</sup> From 1985 to 1995 overweight and obesity in Australian children more than doubled and the levels of obesity tripled in all age groups and for both sexes.<sup>7</sup>

In South Australia, the prevalence of overweight and obesity has also increased significantly (see Table 2). From 1995 to 2002, the proportion of overweight or obese 4 year old girls increased from 13% to 22% and the proportion of overweight or obese boys increased from 10% to 18%.<sup>8</sup> As with adults there is a link between weight and SES, with overweight and obesity greatest amongst children from families of lower SES.<sup>7</sup>



## Nutrition

### What should we be eating?

Dietary guidelines provide advice on the food to eat to promote health and prevent disease, including overweight and obesity.<sup>9-10</sup> The Australian Guide to Healthy Eating (AGHE) recommends how much to eat each day from each of the five food groups: breads and cereals, vegetables, fruit, meat and meat alternatives and dairy foods.<sup>11</sup> Eating enough fruit and vegetables is important for improving health and preventing overweight and obesity. It is recommended that adults consume two serves of fruit and five serves of vegetables each day.

The AGHE recommends that food and drinks of high energy density and poor nutrient value, such as potato crisps, biscuits and soft drinks, should be eaten only occasionally or in small amounts. Items like these can be considered 'extra'

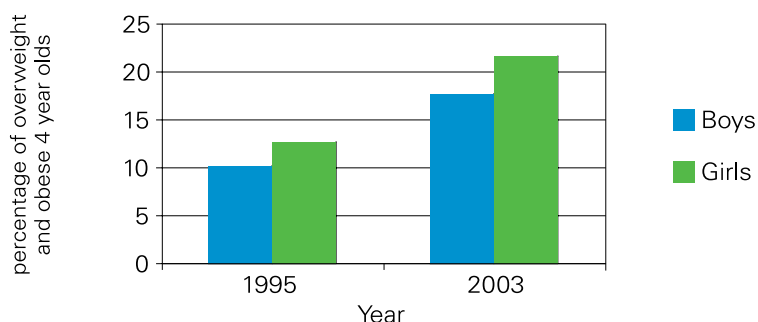


Table 2 - Percentage of overweight and obese 4 year old boys and girls in South Australia in 1995 and 2003

Source: Children, Youth and Women's Health Service (CYH) data collection

<sup>6</sup> Cole T, Bellizzi M, Flegal K, & Dietz W 2000, 'Establishing a standard definition for child overweight and obesity worldwide: international survey', *BMJ*, vol 320, p1240.

<sup>7</sup> Australian Society for the Study of Obesity, *Obesity in Australian Children: definition and prevalence*, viewed 20 February 2006, [http://www.asso.org.au/freestyler/gui/files/factsheet\\_children\\_prevalence.pdf](http://www.asso.org.au/freestyler/gui/files/factsheet_children_prevalence.pdf)

<sup>8</sup> Vaska V & Volkmer R 2004, 'Increasing Prevalence of Obesity in South Australian 4-year-olds: 1995-2002', *J. Paediatr. Child Health*, vol 40, p353. 2003 data provided by R. Volkmer, CYWHS.

<sup>9</sup> National Health & Medical Research Council, 2003, *Dietary Guidelines for Children and Adolescents in Australia incorporating the Infant Feeding Guidelines for Health Workers*, viewed 20 February 2006, [http://www.nhmrc.gov.au/publications/\\_files/n34.pdf](http://www.nhmrc.gov.au/publications/_files/n34.pdf)

<sup>10</sup> National Health & Medical Research Council 2003, *Dietary Guidelines for Australian Adults*, viewed 20 February 2006, [http://www.nhmrc.gov.au/publications/\\_files/n33.pdf](http://www.nhmrc.gov.au/publications/_files/n33.pdf)

<sup>11</sup> Australian Government Department of Health and Ageing, 1998. *Australian Guide to Healthy Eating*. <http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/health-pubhlth-strateg-food-guide-index.htm>

foods or 'junk' foods, as they do not fit into any of the five food groups needed for good health, but can add to the enjoyment of a healthy diet.

### What are we eating?

Most Australians and South Australians are eating far less fruit and vegetables than recommended, while eating 'extra' or 'junk' foods far above the recommended levels.

#### Fruit and vegetables

Only one-fifth of Australian adults eat the recommended amount of vegetables while half eat the recommended amount of fruit.<sup>12</sup>

In South Australia, 92% of adults are eating less than the recommended five or more serves of vegetables per day and around 60% are eating less than the recommended two or more serves of fruit per day.<sup>13</sup> Only 5% of South Australian adults are eating both the recommended number of serves of fruit and vegetables,<sup>14</sup> with men less likely than women to meet the recommended daily intake of fruit or vegetables.<sup>13</sup> South Australian adults who do not eat any fruit are more likely to be from an area of lower SES, while vegetable intake is not associated with SES or education level.<sup>15</sup>

#### 'Extra' or 'junk' foods

All Australian adults eat too much of foods outside of the five food groups. Adults aged 19-25 years consume the greatest proportion of energy from these foods, with more than one third (36%) of their daily energy from these 'extra' or 'junk' foods.<sup>16</sup>

### What are children eating?

#### Fruit and vegetables

According to the 1995 National Nutrition Survey (NNS 1995), Australian children's fruit intake worsened with age, with only 19% of 13-18 year olds eating the recommended amount. Approximately 30% of Australian children ate the recommended amount of vegetables and this was fairly consistent across all age groups.<sup>16</sup>

In South Australia, recent data show that the proportion of children eating the recommended amounts of both fruit and vegetables decreases as children get older. Only 31.5% of 12-18 year olds eat the recommended amount of fruit<sup>d17</sup> and just 15% of 12-18 year olds eat the recommended amount of vegetables.<sup>17</sup>

#### 'Extra' or 'junk' foods

1995 NNS data showed that of the top five foods eaten by Australian children at school, bread was the only food from the AGHE five food groups.<sup>18</sup> The remaining 'top five foods' included fast foods (pies, hot chips, pizza and hamburgers), cordial and fruit drinks, fat spreads and sweet biscuits and crackers - all 'extra' foods, which should only be eaten occasionally or in small amounts.<sup>17</sup>

According to 1995 NNS data, Australian children consume too much 'extra' food and drinks, particularly 5-18 year olds. Forty three percent of 5-12 year olds and 41.5% of 13-18 year olds energy from food came from 'extra' foods.<sup>19</sup> 'Extra' drinks also made a significant contribution to children and adolescents' energy from drinks, more so than younger age groups, contributing to 31% of children's and 37% of adolescents' energy intake from drinks.<sup>19</sup> In total 41% of children's and adolescents' total energy intake came from 'extra' food and drink, which represents two to three times the amounts recommended by the AGHE.<sup>19</sup>



### Breastfeeding

#### Why should we encourage women to breastfeed?

Breastfeeding is an important factor in the prevention of overweight and obesity. Breastfeeding provides many long term benefits for the mother and infant, including reducing the risk of childhood obesity in the infant and accelerating post pregnancy weight loss in the mother.<sup>20</sup> The National Health and Medical Research Council (NHMRC) recommends exclusive breastfeeding for the first six months of life, with breastfeeding beyond this age being of continuing benefit to baby and mother.<sup>9</sup> An initiation rate above 90% and

<sup>d</sup> Note this South Australian data cannot be directly compared with national data from the 1995 National Nutrition Survey as collection methods are different.

<sup>12</sup> Marks G, Rutishauser I, Webb K & Picton P, 2001, *Key Food and Nutrition Data for Australia 1990-1999*, Commonwealth Department of Health and Aged Care, Canberra.

<sup>13</sup> The South Australian Monitoring and Surveillance System (SAMSS) 2005, *Fruit and Vegetable Consumption in SA Adults – Demographic Differences*, Brief Report No.2005-13, Department of Health, South Australia.

<sup>14</sup> The South Australian Monitoring and Surveillance System (SAMSS) 2005, *Self-Reported Consumption of the Recommended Levels of Both Fruit and Vegetables in SA Adults – Demographic Differences*, Brief Report No. 2006-14, Department of Health, South Australia.

<sup>15</sup> The South Australian Monitoring and Surveillance System (SAMSS) 2005, *Self-Reported Fruit and Vegetable Consumption in SA Adults – Differences by Socio-Economic Conditions and Social Disadvantage*, Brief Report, 2006-16, Department of Health, South Australia.

<sup>16</sup> Magarey A 2004, *Secondary Analysis of the National Nutrition Survey 1995: Core and non-core food, fluids, fruit and vegetables*, Flinders University, South Australia.

<sup>17</sup> The South Australian Monitoring and Surveillance System (SAMSS) 2005, *Fruit and Vegetable Consumption in SA Children – Ages 1 to 18 Years*, Brief Report 2005-13, Department of Health, South Australia.

<sup>18</sup> Bell A & Swinburn B 2004, 'What are the key food groups to target for preventing obesity and improving nutrition in schools?' *European Journal of Clinical Nutrition*, vol 58, p258.

<sup>19</sup> Bell A, Kremer P, Magarey A & Swinburn B 2005, 'Contribution of 'noncore' foods and beverages to the energy intake and weight status of Australian children', *European Journal of Clinical Nutrition*, vol 59(5), p639.

80% infants being breastfed at the age of 6 months are the objectives for Australia.<sup>9</sup>

### How many women are breastfeeding?

According to 2001 Australian data, 83% of infants were breastfeeding at discharge from hospital. At 13 weeks postpartum, 64% were breastfeeding, falling to 49% at 25 weeks.<sup>21</sup> Breastfeeding rates have not changed from estimates in the 1995 National Health Survey (NHS).<sup>21</sup> While Australia has reasonable rates of initiation of breastfeeding, these levels are not maintained over time. Thus the rate of infants being breastfed at 6 months is well below the NHMRC goal of 80%.

The 1995 NHS showed a strong relationship between socio-economic status and breastfeeding.<sup>22</sup> In Australia higher breastfeeding rates have consistently been associated with higher socioeconomic status.<sup>2</sup>

## Physical Activity

Insufficient physical activity is a key cause of overweight and obesity.<sup>1</sup> Promoting physical activity and reducing sedentary behaviours is an important strategy in preventing overweight and obesity. Physical activity also contributes other benefits to the health and wellbeing of the population.

### How much physical activity should we be doing?

The National Physical Activity Guidelines recommends adults undertake at least 30 minutes of moderate intensity<sup>e</sup> physical activity on most, preferably all days.<sup>23</sup> Children need at least 60 minutes (and up to several hours) of moderate to vigorous<sup>f</sup> physical activity every day and should not spend more than two hours per day using electronic media for entertainment (eg computer games, television, or internet).<sup>24-25</sup>

### How much physical activity are we doing?

Approximately 44% of Australian adults aged 18-75 years do not undertake sufficient physical activity<sup>g</sup> at the levels recommended to achieve health benefits, and 15% of people reported undertaking no physical activity at all.<sup>26</sup> The 2004 South Australian Physical Activity Survey showed that 57% of adults did not undertake sufficient physical activity at the levels recommended to achieve health benefits.<sup>27</sup> This level of sufficient physical activity in South Australian adults has not significantly changed between 1998 and 2004.

### How much physical activity are children doing?

According to South Australian data, 92% of parents consider their child to be active or very active. In South Australia it is estimated that 99% of children spend some time each day engaged in screen based activity, with 24% engaging for more than two hours each day, which is above the recommended level.<sup>28</sup> The highest proportion of children engaging in more than two hours of screen based activity each day are in the 3-4 year age group (34.5%) and 11-15 year age group (30%). Boys were more likely than girls to engage in screen based activity for more than two hours per day.<sup>28</sup>

## Conclusion

It can be seen that South Australians, like the rest of the country's population, are far less physically active than is recommended for good health. Our diet is deficient in fruit and vegetables, with a large proportion of our daily food intake being 'junk' food and drinks. All of these factors are contributing strongly to the increasing incidence of overweight and obesity.

<sup>e</sup> Moderate intensity activity includes brisk walking, digging in the garden, mowing the lawn or medium paced swimming or cycling.

<sup>f</sup> Vigorous activities are those that make you "huff and puff" and can come from sports such as football or netball, aerobics, circuit training, speed walking, jogging or fast cycling.

<sup>g</sup> Sufficient physical activity is defined as at least 150 mins per week, using the sum of walking, moderate activity and vigorous activity. The activity must be undertaken over at least 5 sessions in the week.

<sup>20</sup> Fewtrell M 2004, 'The long term benefits of having been breastfed', *Current Paediatrics*, vol 14, pp97-103.

<sup>21</sup> Donath, S 2005, 'Breastfeeding and the introduction of solids in Australian infants: data from the 2001 National Health Survey', *ANZPH*, vol 129, pp171-175.

<sup>22</sup> Donath S & Amir L 2000, 'Rates of breastfeeding in Australia by State and socioeconomic status: Evidence from the 1995 National Health Survey', *J. Paediatr. Child Health*, vol 36, pp164-168.

<sup>23</sup> Department of Health and Ageing, National Physical Activity Guidelines For Adults, viewed 20 February 2006, [http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/phd-physical-activity-adults-pdf-cnt.htm/\\$File/adults\\_phys.pdf](http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/phd-physical-activity-adults-pdf-cnt.htm/$File/adults_phys.pdf)

<sup>24</sup> Department of Health and Ageing, Australia's Physical Activity Recommendations for 5-12 year olds, viewed 20 February 2006, [http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/phd-physical-activity-kids-pdf-cnt.htm/\\$FILE/kids\\_phys.pdf](http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/phd-physical-activity-kids-pdf-cnt.htm/$FILE/kids_phys.pdf)

<sup>25</sup> Department of Health and Ageing, *Australia's Physical Activity Recommendations for 12-18 year olds*, viewed 20 February 2006, [http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/phd-physical-activity-youth-pdf-cnt.htm/\\$FILE/youth\\_phys.pdf](http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/phd-physical-activity-youth-pdf-cnt.htm/$FILE/youth_phys.pdf)

<sup>26</sup> Bauman A, Ford I & Armstrong T 2001, *Trends in population levels of reported physical activity in Australia, 1997, 1999 and 2000*, Australian Sports Commission, Canberra.

<sup>27</sup> Be Active 2005, *Physical Activity in South Australian Adults 2004: Summary Report 1- Trends in Physical Activity*, viewed February 15 2006 <http://beactive.com.au/downloads/1trends.pdf>

<sup>28</sup> The South Australian Monitoring and Surveillance System (SAMSS) 2004, *Physical Activity of South Australian children: SAMSS 2002-2003*, Brief Report No. 2004-05, Department of Human Services, South Australia.

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