

## 15. Physical activities

Physical activity is important for the health of young people. Physical activity builds and maintains healthy bones, muscles and joints, and helps control weight and reduce body fat (CDC 1999). Studies also show that participation in physical activity is beneficial to mental health, reducing symptoms of depression and possibly stress and anxiety (Dunn et al. 2001). Physical activity has been shown to prevent and reduce high blood pressure in some adolescents (USDHSS 1996). Other benefits from exercise include improvements in confidence and self-esteem, energy levels, concentration and the ability to manage anxiety and stress, as well as helping with sleep and to manage anger (Heart Foundation 2003b; Reach Out! 2003). Among adults, physical activity has been associated with a lowered risk of premature mortality, coronary heart disease, high blood pressure, colon cancer, and Type 2 diabetes (USDHSS 1996). Physical inactivity is estimated to be responsible for 7% of the total burden of disease in the entire Australian population, with coronary heart disease and stroke accounting for 60% of this disease burden (AIHW: Mathers et al. 1999). People of all ages are encouraged to engage in moderate amounts of daily physical activity (USDHSS 1996). Young people are recommended to be physically active daily through activities such as walking, cycling, sports, games, and other general activities with family and friends (Heart Foundation 2003b).

Patterns of physical activity learned during adolescence if carried into adulthood, can lead to a lifelong maintenance of physical activity. However, the transition between school and higher education or the workforce can be a time when young people's physical activity patterns are altered considerably. Among young people aged 18–24 years, 18% of males and 32% of females are not sufficiently physically active to gain a health benefit (AIHW 2002).

Many activities widely undertaken by young people involve very little physical activity, including homework and studying, watching television and videos, and playing computer games. When young people obtain their driver's licence, they are more likely to drive and less likely to walk or cycle. Young people who are not sufficiently active may become overweight and are at risk of becoming inactive and overweight adults.

The National Physical Activity Guidelines (DHAC 1999) suggest people undertake at least 30 minutes of moderate-intensity physical activity on most, preferably all, days. Moderate physical activity is activity that uses large skeletal muscles and involves some effort, but does not necessarily lead to shortness of breath (Heart Foundation 2001). AIHW: Armstrong et al. (2000) suggest that at least 150 minutes of moderate-intensity physical activity accrued over 5 days a week reflect the current physical activity guidelines. There is no real consensus, however, on what constitutes 'sufficient' physical activity to confer a health benefit for young people under the age of 18 years.

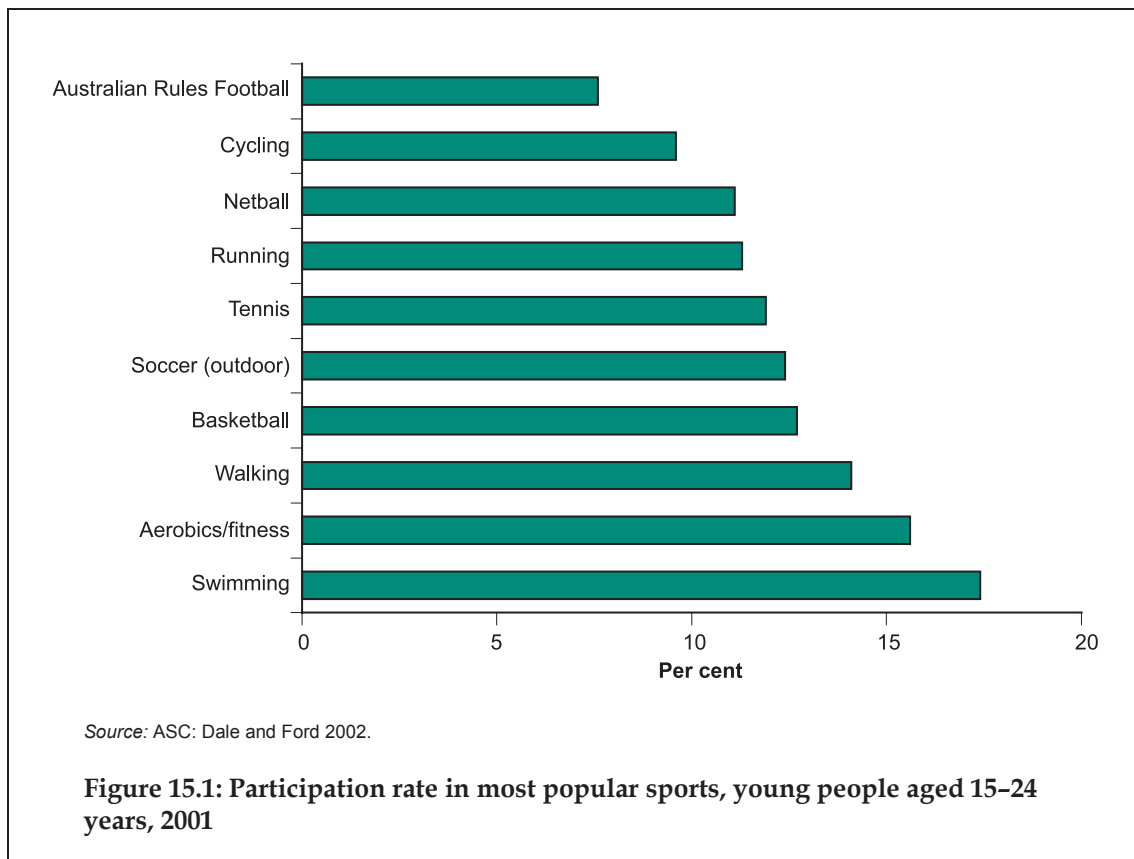
Data for this chapter come from a number of sources. In 2001 the Australian Sports Commission undertook a survey called Participation in Exercise, Recreation and Sport, which has some data on participation by people aged 15 years and over. The Housing, Income and Labour Dynamics Australia (HILDA) survey collected self-reported data on weekly participation in physical activity for people aged 15 years and over.

The National Physical Activity Surveys also collected data on participation in physical activity by those aged 18 years and over. There are also state data available on New South Wales schoolchildren, from the 1997 New South Wales Schools Fitness and Physical Activity Survey. This survey provides information on, among other things, physical activity for children aged 7–16 years.

## Participation in sport and physical activity

The 2001 Australian Sports Commission's survey on Participation in Exercise, Recreation and Sport found that 89% of people aged 15–24 years had participated in some sort of sport or physical activity in the 12 months before interview (91% of males and 87% of females). Among males, 65% participated in organised sport, and 66% in non-organised sport. Among females, the corresponding proportions were 60% and 63%, respectively. Young people had the highest participation rates of those surveyed, and participation rates decreased with age.

Participation in the most popular sports is shown in Figure 15.1.

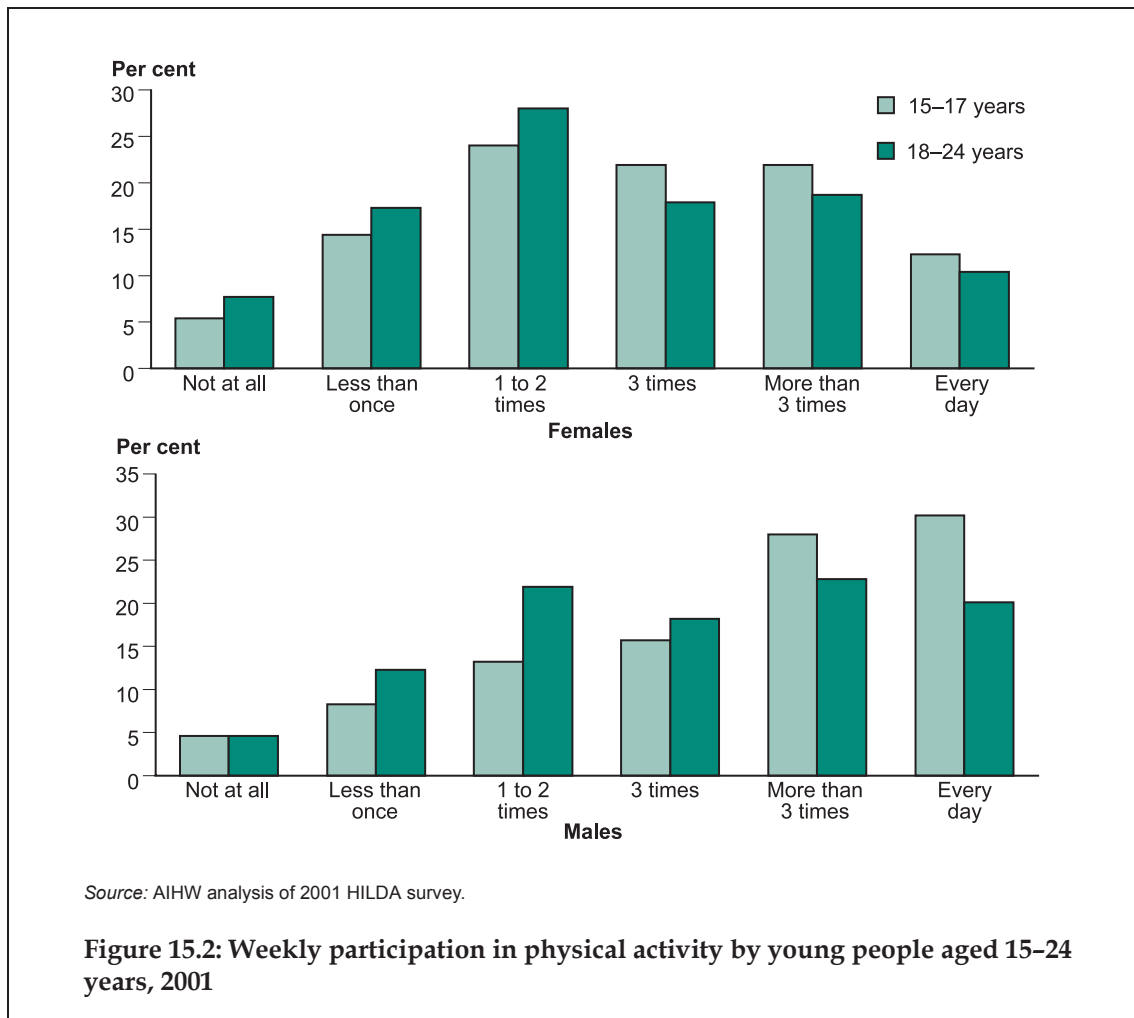


- The most popular sport in 2001 was swimming, which was undertaken by 17% of young people aged 15–24.
- Aerobics fitness activities were undertaken by 16% of young people, and walking was undertaken by 14% of young people.
- Basketball was the most popular team sport, undertaken by 13%.

## Levels of participation in physical activity

### The Housing, Income and Labour Dynamics Australia survey

The 2001 Housing, Income and Labour Dynamics Australia (HILDA) survey asked young people how often they undertook moderate or intensive physical activity for at least 30 minutes in a week. The results are shown in Figure 15.2.



- Around 1 in 5 young people didn't participate in physical activity or participated in less than one session in a week (16% of males, 23% of females). A higher proportion of those aged 18–24 years didn't participate in physical activity or participated in less than one session in a week than those aged 15–17 years (21% compared with 16%).
- Around 60% of young people undertook exercise 3 or fewer times per week (52% of males, 69% of females). A higher proportion of those aged 18–24 years undertook physical activity 3 times a week or less than those aged 15–17 years (64% compared with 54%).
- Exercise was undertaken more than 3 times a week (including every day) by 48% of males and 31% of females. A higher proportion of those aged 15–17 years than those aged 18–24 years undertook physical activity more than 3 times a week (46% compared with 36%).

### The New South Wales Schools Fitness and Physical Activity Survey

The 1997 New South Wales Schools Fitness and Physical Activity Survey looked at levels of moderate and vigorous physical activity among students in Years 8 and 10 during summer and winter terms. Students were considered to be 'moderately active' when they undertook a total of 210 minutes (3.5 hours) of moderate-intensity activity over five sessions during a normal week. They were 'vigorously active' when they participated in at least three 20-minute sessions of fairly vigorous activities per week.

**Table 15.1: Physical activity among Year 8 and Year 10 students in New South Wales, 1997 summer and winter terms (per cent)**

	Males		Females	
	Summer	Winter	Summer	Winter
<b>Moderately active</b>				
Year 8 (13–14 years)	16.3	12.6	17.7	21.4
Year 10 (15–16 years)	13.0	13.4	19.8	23.0
<b>Vigorously active</b>				
Year 8	64.6	63.0	63.1	48.0
Year 10	72.9	70.6	57.9	43.0
<b>Total active</b>				
Year 8	80.9	75.6	80.8	69.4
Year 10	85.9	84.0	77.7	66.0

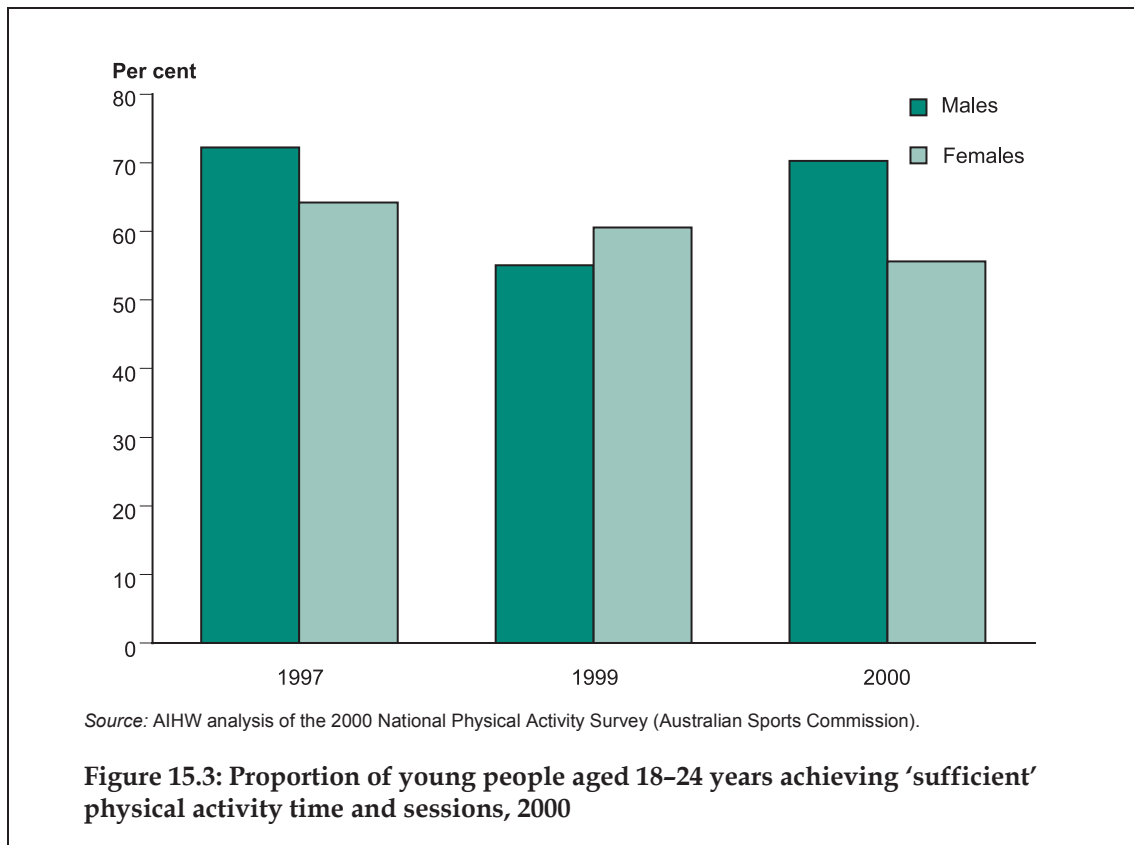
Source: Booth et al., 2002.

- In 1997, 81% of males in Year 8 and 86% of males in Year 10 were moderately or vigorously physically active during summer. These proportions declined in the winter term.
- Among females, 81% of those in Year 8 and 78% of those in Year 10 were moderately or vigorously active. These proportions declined to 70% and 66%, respectively, in the winter term.
- Among males, a greater proportion was vigorously active in Year 10 than in Year 8. The opposite was true for females.
- Kimm et al. (2002) found that a decline in physical activity among females began at the onset of adolescence, and that by age 18 and 19 years, most females undertook no regular physical activity except that required at school. The New South Wales data also suggest that physical activity declines with age among young females.

The most common activities for students in New South Wales in 1997 were similar to those most popular among young people aged 15–24 years in the ASC 2001 survey. For males in Years 8 and 10 (13–16 years), the most popular activities were recreational cycling, school sport, walking, soccer, cricket, swimming and basketball. The most common activities for females in Years 8 and 10 were walking, swimming, school sport, netball, recreational cycling and dancing.

### National Physical Activity Survey

Data from the National Physical Activity Survey have been analysed using the time and sessions definition for 'sufficient' physical activity, which most closely resembles the National Physical Activity Guidelines (Figure 15.3).



- The proportion of males who undertook sufficient physical activity in 2000 was 70%, compared with 55% in 1999 and 72% in 1997.
- The proportion of females who undertook sufficient physical activity in 2000 was 56%, compared with 61% in 1999 and 64% in 1997.

Although again not directly comparable, the HILDA survey showed that, in 2001, 61% of males and 56% of females aged 18-24 years undertook moderate or vigorous physical activity for at least 30 minutes, 3 times a week or more. These proportions are similar to the proportion of young people aged 18-24 years-undertaking sufficient physical activity according to the National Physical Activity Survey.

## Knowledge

The 2000 National Physical Activity Survey also asked people to rate their level of agreement with four physical activity knowledge statements in order to gauge understanding and awareness of the moderate physical activity message (Table 15.2). The four statements were:

1. Taking the stairs at work or generally being more active for at least 30 minutes each day is enough to improve your health.
2. Half an hour of brisk walking on most days is enough to improve your health.
3. To improve your health, it is essential for you to do vigorous exercise for at least 20 minutes each time, three times a week.
4. Exercise doesn't have to be done all at one time – blocks of 10 minutes are okay.

**Table 15.2: Proportion of respondents 18–24 years agreeing with physical activity knowledge statements, 2000 (per cent)**

	Statement 1	Statement 2	Statement 3	Statement 4
Males	82.3	88.7	69.4	75.3
Females	89.1	92.6	65.9	78.3
Persons	85.6	90.6	67.7	76.7
<b>Education</b>				
Secondary or below	82.9	89.3	69.7	76.3
Tertiary or higher	91.7	93.5	63.0	77.8
<b>Marital status</b>				
Single/never married	87.2	95.7	65.2	83.0
Married/de facto	85.3	89.8	68.1	75.8

Source: Australian Sports Commission 2000 National Physical Activity Survey, unpublished data.

- Most young people had a good knowledge of the moderate physical activity statements. The statement that the highest proportion agreed with was that 'half an hour of walking each day was sufficient to improve health' (no. 2): 89% of males and 93% of females agreed with this.
- Around three-quarters of young people agreed with the message that it is okay to do exercise in 10-minute blocks (no.4).
- It is not essential to do three sessions of vigorous exercise to improve health (no.3). Despite this, around two-thirds of young people agreed that it was.
- Those who had a tertiary or higher education had a higher level of agreement with the physical activity statements than those with secondary education only or below.