Unit 2

Physical activity, sport and society

OUTCOME 1
Collect and analyse data related to individual and population levels of participation in physical activity and sedentary behaviour to create, undertake and evaluate an activity plan that meets the physical activity and sedentary behaviour guidelines for an individual or specific group.

OUTCOME 2
Apply a social-ecological framework to research, analyse and evaluate a contemporary issue associated with participation in physical activity and/or sport in a local, national or global setting.
INQUIRY QUESTION
What determines if you are physically active or sedentary? Is it possible to be both?
It’s important to understand what physical activity, physical inactivity and sedentary behaviour are so that we can make healthy decisions and changes to our behaviour.

KEY KNOWLEDGE
- Forms of physical activity such as play, games, sports, transportation, chores, exercise and recreational activities
- The concepts of physical activity, physical inactivity and sedentary behaviour
- Sociocultural influences on participation in physical activity across the lifespan such as historical, social, cultural, environmental, geographic and personal factors
- Enablers and barriers of physical activity behaviours including demographic, social, cultural and environmental factors

KEY SKILLS
- Participate in and reflect on a variety of different forms of physical activity, including a variety of culturally diverse physical activities
- Define and identify forms of physical activity, physical inactivity and sedentary behaviour
- Analyse sociocultural influences on physical activity participation across the lifespan
- Investigate and determine factors that influence an individual’s participation in physical activity across the lifespan

CHAPTER PREVIEW

Types

- Play
- Games
- Sports
- Active transport
- Chores
- Exercise
- Recreational

Influences: enablers and barriers

- Cultural
- Social
- Demographics/personal factors
- Environmental/geographic

Sedentary behaviour

Physical activity

Physical inactivity
10.1 Forms of physical activity

**KEY CONCEPT** Physical activity involves movement that expends energy and can be done in many ways. Generally it doesn’t matter what type of physical activity you participate in, as any physical activity is better than none.

There many ways to move and expend energy and, therefore, there are many different ways to be physically active. Most physical activities can be categorised as one of the following forms: play, games, sports, transportation, chores, exercise and recreational activities.

**Physical activity** is any movement of the body produced by skeletal muscles, resulting in energy expenditure.

**TABLE 10.1** Types of physical activity

<table>
<thead>
<tr>
<th>Type of activity</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play</td>
<td>Activities engaged in for enjoyment and recreation rather than a serious or practical purpose</td>
<td><img src="image1" alt="Example Image" /></td>
</tr>
<tr>
<td>Games</td>
<td>Activities that one engages in for amusement</td>
<td><img src="image2" alt="Example Image" /></td>
</tr>
<tr>
<td>Sports</td>
<td>Activities involving physical exertion and skill, in which an individual or team competes against another or others for entertainment</td>
<td><img src="image3" alt="Example Image" /></td>
</tr>
<tr>
<td>(active) Transportation</td>
<td>Travel between destinations by walking, cycling or other non-motorised modes</td>
<td><img src="image4" alt="Example Image" /></td>
</tr>
<tr>
<td>Type of activity</td>
<td>Description</td>
<td>Example</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Chores</td>
<td>Routine tasks, for example, jobs done around the home</td>
<td></td>
</tr>
<tr>
<td>Exercise</td>
<td>Activities requiring physical effort, carried out to sustain or improve health and fitness</td>
<td></td>
</tr>
<tr>
<td>Recreational activities</td>
<td>Leisure activities. Leisure is discretionary time, which is time outside of work and study commitments.</td>
<td></td>
</tr>
</tbody>
</table>

The type of physical activity people predominately engage in generally changes as they move through different stages of their lives. For example, it is likely that young children will be physically active through play and games and rarely through exercise or organised sport. This is because their physical and cognitive capabilities are still developing.

Primary school children are likely to engage in some play and games. Many also have plenty of opportunities to try sports through PE classes and modified sports, and some children possibly engage in active transport, but most probably don’t engage in much structured exercise. By the end of primary school many children are engaged in team sports such as netball, football, soccer and tennis.

Teenagers are likely to engage in less play and games, preferring to participate in sport, active transport, exercise, recreational activities and, hopefully, some chores around the house.

FIGURE 10.1 Recreational activities such as surfing have more appeal than play as teenagers get older.
10.1 Forms of physical activity

**TABLE 10.2 Children participating in organised sport 2012**

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th>NUMBER Males '000</th>
<th>Women '000</th>
<th>Persons '000</th>
<th>PARTICIPATION RATE Males %</th>
<th>Females %</th>
<th>Persons %</th>
</tr>
</thead>
<tbody>
<tr>
<td>5–8</td>
<td>354.7</td>
<td>273.8</td>
<td>628.5</td>
<td>61.4</td>
<td>50.1</td>
<td>55.9</td>
</tr>
<tr>
<td>9–11</td>
<td>309.5</td>
<td>237.3</td>
<td>546.9</td>
<td>73.3</td>
<td>59.0</td>
<td>66.4</td>
</tr>
<tr>
<td>12–14</td>
<td>284.8</td>
<td>215.9</td>
<td>500.7</td>
<td>66.3</td>
<td>52.9</td>
<td>59.8</td>
</tr>
</tbody>
</table>


Adults are unlikely to engage in play and games, and are likely to be most active through sport, active transport, exercise, recreational activities and chores, which may include physical activity in the workplace such as walking as a waitress or strength work as a builder. The elderly (65+ years) are most likely to be active through active transport (mainly walking), recreational activities and chores, such as gardening.

The Australian Bureau of Statistics has identified that participation in sport and physical recreation generally decreases with age. People aged 15 to 17 years report the highest participation rate in sport and physical recreation (74 per cent), while people aged 65 years and over have the lowest (47 per cent). Male and female participation rates were similar, except in the 25–34 age group, where participation rates were higher for males (67 per cent) than females (61 per cent).

**TEST your understanding**

1. Describe what is meant by recreational activity and provide two examples.
2. List six different forms of active transportation.
3. List four different forms of transport.
4. List the most common types of physical activity for each stage across the lifespan: children, youth, adults and the elderly.
5. Use the information in table 10.2 to answer the following questions:
   (a) What are some of the trends in the data?
   (b) Why are there differences between males and females?
   (c) Why does participation in organised sport peak between 9 and 11 years of age?
   (d) Suggest how the data would differ as age increases.

**APPLY your understanding**

6. Set up and observe a play space. Supply a variety of equipment (skipping rope and balls) in a set space (e.g. gym/oval). Invite students (preferably younger) to enter the space. Observe who uses the equipment and how they use it. Join in with students.
   (a) What is play and when did you see this occurring?
   (b) Who was most active and how?
   (c) Did you observe any sedentary behaviour? If so, by whom and where?
   (d) Based on your observations, outline three enablers and three barriers.

7. Set up and play a variety of games. In groups, choose a game to teach your classmates (e.g. Octopus tag, hopscotch, duck duck goose). Explain the rules of the game and then run the game for your classmates for 5–10 minutes.
   (a) How are games different to sport and play?
   (b) What are two advantages and two disadvantages of play?
   (c) Identify when throughout the lifespan you would be most likely to engage in games. Justify your answer.

8. Research and peer teach/participate in a game that originates in a different culture from your own. Some examples are listed below. Use the Games weblinks in your eBookPLUS to find out more information and rules.
   - Baseball
   - Bocce
Sepak takraw
Korfball
Lacrosse
European handball

(a) Suggest reasons why these sports are not as high profile in Australia as they are in other countries.
(b) Outline three barriers for people wanting to participate in these sports and suggest ways they can be overcome.
(c) How were these activities different from your usual physical activity, if at all. How did these differences make you feel?

9 Using pedometers, walk around the school campus for your daily timetable for a week. Graph your results and compare with a partner and then with your class.
(a) Discuss the similarities and differences between you and your partner, and your class.
(b) Using your knowledge of barriers and enablers, give reasons for these differences.
(c) Suggest two ways you could increase your use of active transportation.

10 Participate in a group fitness class (e.g. cycle/RPM, aerobics, body step, boot camp), preferably off campus. Monitor your intensity throughout the practical class. (heart rate, METs, talk test).
(a) Describe the class. What did you do? How did you feel? Who was part of the class?
(b) Discuss how this activity is different from playing a sport.
(c) Identify and justify at what stage of the lifespan these types of activities would be commonly used as the predominant form of physical activity.
(d) Outline a barrier and enabler for you to engage in these types of activities.
(e) Compare this activity with going on a run or bike ride. What are the advantages and disadvantages of each?
(f) Explain how these activities are exercise rather than sport.

11 Participate in a number of different dances. Go to your eBookPLUS to find the Fit for Feast weblink.
(a) Describe the different dances you participated in.
(b) Explain why these dances are most likely to be described as recreational activities and not exercise or sport.
**KEY CONCEPT**

Physical activity and inactivity were traditionally seen as being on opposite ends of the same continuum — a person could be either physically active or inactive. However, more recent studies indicate that a person can be both physically active and sedentary at different times of the day.

The relationship between physical inactivity and sedentary behaviour

There is a relationship between physical inactivity and sedentary behaviour. Generally, the greater the sedentary behaviour, the higher the levels of physical inactivity and vice versa. However, it is important we understand the difference between these two concepts.

**Physical inactivity** refers to lack of involvement in physical activity during an individual’s leisure time.

**Sedentary behaviour** is behaviour associated with sitting or lying down, including activities such as watching television, working or playing on a computer, driving or sitting in a car, bus or train. It also includes homework, studying or reading. **MET** of 1–2.

**METs (metabolic equivalents)** are commonly used to express the intensity of physical activities. A MET is the ratio of a person’s working metabolic rate relative to the resting metabolic rate. Your MET level would be 1 if you were generally sedentary (e.g. lying down, reading or sitting and talking). Participation in an activity of moderate intensity would result in a MET level of 3–6.

There is a relationship between physical inactivity and sedentary behaviour. Generally, the greater the sedentary behaviour, the higher the levels of physical inactivity and vice versa. However, it is important we understand the difference between these two concepts.

**Physical inactivity** is used to describe lack of involvement in any form of physical activity during an individual's leisure time, whereas **sedentary behaviour** is associated with sitting and lying down where energy expenditure is very low.

In the past we have often depicted physical activity and sedentary behaviour as being at opposite ends of the continuum of activity, implying that a person cannot be active and sedentary. More recent research has found that, on the contrary, a person may be both physically active and engage in sedentary behaviour. For example, consider an office worker who sits at work all day, jogs 30 minutes to and from work and then relaxes in front of the television for the rest of the evening at home. Is this person active because they spend an hour each day jogging? Or are they sedentary because they spend the majority of their day sitting down?

Researchers are now beginning to acknowledge that being active does not necessarily displace sedentary behaviour. People may engage in both types of behaviour at different times of the day. This has led to the recent modification of the National Physical Activity Guidelines to also include sedentary behaviour guidelines. They have now become the Australian Physical Activity and Sedentary Behaviour Guidelines (see also chapter 11). For maximal health benefits, including maintaining a healthy weight, we need to ensure we are seeking to be physically active and limiting sedentary behaviour.
When discussing physical activity, inactivity and sedentary behaviour, we must determine the parameters in which the concepts will be used. For the purpose of this discussion, sedentary behaviour is deemed to be a level of physical activity that falls below the level necessary to produce a health effect on the body. We will use the term \textit{inactivity} to encompass sedentary behaviour. The term \textit{physical activity} will imply sufficient physical activity to produce a health benefit for an individual. In the case of a person being both physically active and sedentary, if their level of physical activity is sufficient to induce a health benefit then they will be deemed to be physically active.

Australia is often referred to as the sporting capital of the world, yet we are also one of the highest ranked countries in the world for obesity. Our physical activity levels are decreasing and our obesity rates are increasing. Figure 10.2 shows that the majority of Australians are not active enough and this is a problem that is contributing to our rising obesity levels.

\textbf{FIGURE 10.3} More Australians report low and sedentary levels of physical activity than moderate and high levels. \textit{Source:} www.abs.gov.au

\textbf{FIGURE 10.4} Aware that office workers’ jobs are sedentary and therefore contributing to unhealthy lifestyles, some companies have introduced standing meetings and other methods to get their employees moving more.
## TEST your understanding

1. Define sedentary behaviour.
2. Discuss the relationship between sedentary behaviour and physical inactivity.
3. List five examples of common sedentary behaviours for the following age groups:
   - Children
   - Adults
4. Why are physical activity and sedentary behaviour no longer considered to be at opposite ends of the continuum of activity?
5. Using the graph in figure 10.2 answer the following questions:
   a. Describe what would be considered sedentary levels of physical activity.
   b. What does the graph suggest about the typical Australian’s physical activity levels?
   c. An individual’s physical activity levels were categorised into either High, Moderate, Low or Sedentary. Discuss the implications of this.

## APPLY your understanding

6. Go to the Baker IDI Heart and Diabetes Institute weblink in your eBookPLUS to read the article ‘Get up, Stand up’.
   a. Outline the sedentary behaviour guidelines for adults.
   b. According to the article, what are the health implications of prolonged sitting?
   c. Explain how someone can be physically active yet still be sedentary.
   d. Other than the suggestion in the article, outline three practical ways sedentary behaviour could be limited in the office and at school.
7. Explain how it is possible to meet the recommended guidelines for physical activity but not for sedentary behaviour and suggest two changes to behaviour that could be made to ensure both are met.
8. Analyse your own and one other person’s regular daily physical activity and sedentary behaviour patterns for a week using the table below. Evaluate your levels against the relevant guidelines (see chapter 11). Explain what changes could be made to your daily routine to improve the patterns.

<table>
<thead>
<tr>
<th>Day</th>
<th>Physical activity</th>
<th>Sedentary behaviour</th>
<th>Met physical activity guidelines</th>
<th>Met sedentary behaviour guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>30 mins walking to and from school 60 mins soccer training</td>
<td>School 2 hours of homework no breaks</td>
<td>Yes</td>
<td>No. Too much time sitting without breaks</td>
</tr>
<tr>
<td>Tuesday</td>
<td></td>
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<td>Wednesday</td>
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<tr>
<td>Sunday</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
10.3 Influences on physical activity and sedentary behaviour (enablers and barriers)

**KEY CONCEPT** While physical activity and sedentary behaviour are very different concepts, the factors that influence how much we participate in both of them are similar.

Research has identified that those least likely to be physically active are women, people with lower socioeconomic status, older adults, people born overseas, people with a disability and Indigenous Australians. However, it is important that we understand why this is the case, what influences behaviour and what the enablers and barriers are. Only when we understand these can we begin to plan for change.

**Individual factors: demographics and personal factors**

Individual factors include personal factors and demographics, such as age and gender. As we age, most of our personal factors will also change. This can have a significant impact on how we value physical activity and sedentary behaviour.

**Common barriers to individual participation in physical activity**

Australians who are physically inactive report lack of time (40 per cent) and injury or disability (20 per cent) as individual barriers to physical activity. Other factors that have an impact on participating in physical activity include:

- a lack of enjoyment
- having health problems
- feeling self-conscious/lacking confidence.

**Individual attitudes: enablers and barriers**

As people pass through the different phases of physical development, they are influenced by different groups of people, take on different commitments and develop individual identities and attitudes. This process plays an important role in determining a person’s attitude towards participation in physical activity.

**Childhood (5–12 years)**

Children participate in play (experimentation), modified games and competitive activities. They learn basic skills and have many opportunities to participate at home or at school. Having the skills to be active, for example, riding a bike, can act as an enabler; however, a lack of skill can be a barrier.

**FIGURE 10.5** Having increased skills, like riding a bike, can increase opportunities to be active.
Adolescence (12–18 years)
Experiences for boys and girls differ greatly at this stage, as both groups experience intense physical development and are developing their own identities and personalities. Attitudes towards physical activity and sedentary behaviour can be heavily influenced by a person’s knowledge of the benefits and consequences. Valuing health can act as an enabler, whereas not knowing or caring about the consequences of sedentary behaviour and inactivity can be a barrier to physical activity.

Adults (18–64 years)
Adult access to physical activity is related to individual priorities and motivations that are the result of lifestyle and experiences gained in adolescence. Opportunities for physical activity are based on time available, education, money and the influence of peer groups, all of which can act as either a barrier or enabler to physical activity.

For example, someone who works 40 hours a week in an office may struggle to find time to be physically active and therefore time can be a barrier. Whereas for someone who has more flexible hours, including later starts and earlier finishes, time can be an enabler as they can be physically active before and/or after work during daylight hours.

Older adults (65+ years)
The time available for physical activity increases greatly among older adults, mainly due to retirement. However, safety fears can be a significant barrier to physical activity for older people, as well as health issues and problems, such as poor eyesight or hearing.

Social factors: enablers and barriers
As discussed in chapter 1, social influences include power structures within society and social interactions and relationships, as well as political and economic factors. Put simply, social factors generally involve the influence of other people. Social factors include:
- **socioeconomic status** (SES). Opportunities and access to physical activity are often dictated by available money, time, facilities and equipment.
- **friends and family**. The people around you can have a major influence on your participation in physical activity. Parents and other adults can encourage participation by showing interest, providing money, transport, coaching and knowledge as well as serving as role models. As much of our time as children is spent in schools and much of our adult life in workplaces, other people in these environments can influence our behaviours.
- **the media**. The media can influence people to participate in physical activity by:
  - providing exposure to activities and so increasing people’s knowledge of opportunities for participation (e.g. competitions, venues)
  - depicting role models
  - advertising lifestyle campaigns (e.g. Get set 4 life).

The media can be powerful in promoting physical activity and limiting sedentary behaviour by the positive promotion of active role models and events.

Influence of social factors across the lifespan
**Childhood (5–12 years)**
Research has shown that children of parents who are physically active are more likely to be physically active themselves. If your siblings are active you are also more
likely to be active, as you are exposed to physical activity through their participation. During childhood parents are important role models and provide transport, money and access to facilities. Active parents and siblings create greater opportunities; however, a lack of role models and support from parents can be a barrier for children.

**Adolescence (12–18 years)**

Schools provide meaningful physical education and sports programs, along with access to activity facilities throughout the school day. This gives students both the motivation and opportunity to experience a wide variety of activities and become involved in physical activity. A peer group’s favourable attitude to participation in physical activity will be an enabling influence on individual members of the group, and a peer group’s negative attitude to participation will be just as powerful a barrier.

**Adults 18–64 years**

One of the most significant social influences for adults is the workplace. Some employers recognise the benefits of having a healthy workforce and develop strategies in the workplace to help employees maintain or work on their fitness (e.g. by providing free gym memberships and promoting corporate fun runs). Your colleagues, not unlike your peers at school, also influence your behaviour. Having workmates who walk or ride to work or during lunch breaks can be an enabler of physical activity. Having workmates who prefer to engage in sedentary behaviour during lunch breaks or who drive to work can act as a barrier.

**Older adults (65+ years)**

While older adults may have more time to be active once they have retired, they can often also experience financial limitations. Lower SES can be a barrier to physical activity, as many activities require equipment and the use of facilities which can cost money.

**Cultural factors enablers and barriers**

Cultural factors include ethnicity and cultural norms that affect physical activity and sedentary behaviour. Australia is a multicultural country and, therefore, cultural factors can impact significantly on participation in physical activity and sedentary behaviour. For many groups there may be barriers, such as racial discrimination, limited opportunities for sports of cultural importance, a lack of affordable activities and a lack of transport.

It is challenging for sports and activities to cater for all cultures; however, attempts are being made to ensure that programs and services are culturally appropriate, particularly for women. Common enablers include:

- Providing information about programs in multiple languages, and ensuring that they are accessible for different types of groups; for example, Netball Australia’s One Netball program.
- Allowing flexibility in programs so that people can still respect their cultural beliefs and traditions while being active; for example, Muslim AFL player Bachar Houli being allowed to pray during training.

**FIGURE 10.7** As a child, your parents and siblings have a great influence on how active you are.
Influence of cultural factors across the lifespan

The impact of culture can change across the lifespan. Generally, when a person is younger, the impact of culture will depend on parents and their beliefs. As a person grows up and gains more independence they may have more choice in how culture can influence their lives.
Environmental (including geographic) factors: enablers and barriers

The environment can either facilitate or discourage physical activity. Research has shown that the characteristics of a neighbourhood can influence a person’s participation in physical activity. People are influenced by environmental factors such as:

- access to facilities (e.g. opening times, gender restrictions)
- proximity to facilities (the distance that people have to travel to the facilities)
- safety of facilities and nearby surroundings (e.g. the safety of the equipment or the adequacy of the lighting)
- environmental changes (e.g. the creation of traffic-free zones, or safe streets with footpaths and cycle lanes, helps increase physical activity in children).
- climate and weather (e.g. wet or humid).

A lack of parks, footpaths, bicycle trails or safe walking paths close to home will reduce the chance of participation in physical activity. Similarly, if people live in an area that has a high crime rate, hills or heavy traffic, they will be less likely to participate in activities close to home. Many people use facilities such as health clubs, swimming pools, bike lanes and parks, so it is important to consider the convenience of these facilities. Having somewhere pleasant to walk or exercise has also been found to influence participation.

Influence of environmental factors across the lifespan

During childhood, youth and in older age, we are heavily dependent on others for transport, so the proximity and accessibility of facilities, and opportunities to be active, are vital to facilitating physical activity. Safety of surroundings can also heavily influence parents’ approval of physical activity. As we gain independence this can be less of a barrier as we have increased options. Proximity to facilities can not only influence how much physical activity we participate in but also in many cases what type. For example, Australia has a high participation rate in swimming. Our geographic location, with easy access to beaches, many inland waterways and warm weather, contributes positively to this.

Environmental factors play a significant role in influencing how much sedentary behaviour we engage in; for example, desks in schools and workplaces. If we have access to standing desks then this could help decrease sedentary behaviour; if we only have access to sitting desks this may increase sedentary behaviour.

The proximity and safety of paths and roads can determine whether we use active transportation or if we drive, thus influencing our physical activity and sedentary behaviour levels.
One of the most significant changes in recent times has been an increase in access to technology. This has coincided with an increase in sedentary behaviour and a decrease in physical activity. For children and youth there is increased access to digital media for entertainment. Now children can use games and apps to build cubby houses and play sports online instead of actually engaging in the physical activity.

For adults, increased technology in many cases has increased sedentary behaviour in the workplace and home as the manual jobs such as raking the leaves and going to see a colleague on another floor have been replaced by motorised leaf blowers and emails. But technology can also act as an enabler. We now have a multitude of apps and tracking devices that act as great motivational tools for physical activity. We also have greater access to resources, such as exercise plans and log books, which can help facilitate physical activity.

**TEST your understanding**

1. Parents are an important influence on the activity patterns of their children during childhood and adolescence. Explain why.
2. Evaluate how the media can influence activity patterns.
3. List four barriers to physical activity.
4. Suggest four barriers to limiting sedentary behaviour.
5. Outline three barriers and three enablers for physical activity, specific to older adults.
6. Discuss the influence of technology on physical activity and sedentary behaviour for young people.
7. Outline how technology can be seen as a barrier and an enabler for physical activity.
8. Explain how chores can be considered a form of physical activity.

**APPLY your understanding**

9. Discuss how including a variety of forms of physical activity, as opposed to just one or two, in your daily life is more likely to lead to healthy lifelong habits.
10 The environment in which we live influences our activity patterns. Examine your own immediate neighbourhood. Suggest what could be done to make the area more conducive to engaging in physical activity and decreasing sedentary behaviour?

11 Research your local physical activity facility (e.g. gym, oval, swimming pool). What programs/strategies, if any, do they offer to encourage people from other cultures to be active?

12 Consider a non-English speaking mother of two. Devise a program to help encourage her to be more physically active. When devising your program, consider what could facilitate and what could discourage involvement in physical activity.

13 Draw a timeline of your life so far and clearly label all barriers and enablers for physical activity. Now predict at least two possible barriers and enablers you may experience in your adult and older years.

14 Look at the graph in figure 10.15.

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**FIGURE 10.15** Trends in physical activity (PA) and sedentary behaviour over time

Source: www.euclid.org.

(a) Identify three trends in the graph.

(b) Suggest a reason for each of the trends you identified.

(c) These statistics were taken from the UK. Discuss how you think the information would be similar and different for Australian adults.

(d) Suggest a reason for your answer above based on social and environmental influences.

(e) Summarise the predictions for the future and justify them using an individual influence.

15 Choose a stage in the lifespan (children, youth, adult or older people). Consider the barriers and enablers in your local community and devise a program to help decrease sedentary behaviour. Look at figure 10.14 to help you identify barriers and enablers across the lifespan.

16 Interview an older person (65+ yrs) and draw a timeline of their physical activity and sedentary behaviour across their lifespan. Investigate the factors that influenced these behaviours. Determine the most significant enabler and barrier for physical activity and sedentary behaviour for each stage of their lifespan.

17 Watch the video found at the Piano stairs weblink in your eBookPLUS. Devise an activity for your school population that would be fun and lead to an increase in physical activity during free time.
KEY SKILLS
- Participate in and reflect on a variety of different forms of physical activity, including a variety of culturally diverse physical activities
- Define and identify forms of physical activity, physical inactivity and sedentary behaviour
- Analyse sociocultural influences on physical activity participation across the lifespan
- Investigate and determine factors that influence an individual's participation in physical activity across the lifespan

UNDERSTANDING THE KEY SKILLS
To address these key skills, it is important to remember the following:
- Enablers and barriers for physical activity across the lifespan.

PRACTICE QUESTION
A major aim of ABS surveys about sport and physical recreation participation is to find out about the wide range of physical recreation activities in which people take part. Table 10.3 presents summary information for the top ten sports and physical recreation activities participated in by men and women aged 15 years and over.

The physical environment can often be a key determinant as to whether a person participates in physical activity. Explain how the physical environment may have influenced at least two of the results in the table below.

4 marks

TABLE 10.3 Participants in selected sports and physical recreation activities by sex 2011–12

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number '000</th>
<th>Participation Rate %</th>
</tr>
</thead>
<tbody>
<tr>
<td>MALES</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walking for exercise</td>
<td>1474.1</td>
<td>16.5</td>
</tr>
<tr>
<td>Fitness/gym</td>
<td>1343.6</td>
<td>15.1</td>
</tr>
<tr>
<td>Cycling/BMXing</td>
<td>875.5</td>
<td>9.8</td>
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<tr>
<td>Jogging/running</td>
<td>775.3</td>
<td>8.7</td>
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<tr>
<td>Golf</td>
<td>732.5</td>
<td>8.2</td>
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<tr>
<td>Swimming/diving</td>
<td>671.9</td>
<td>7.5</td>
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<tr>
<td>Tennis</td>
<td>436.1</td>
<td>4.9</td>
</tr>
<tr>
<td>Soccer (outdoor)</td>
<td>368.6</td>
<td>4.1</td>
</tr>
<tr>
<td>Cricket (outdoor)</td>
<td>268.3</td>
<td>3.0</td>
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<tr>
<td>Basketball</td>
<td>245.6</td>
<td>2.8</td>
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<td>FEMALES</td>
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<td>Walking for exercise</td>
<td>2784.7</td>
<td>30.4</td>
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<td>Fitness/gym</td>
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<td>19.1</td>
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<tr>
<td>Swimming/diving</td>
<td>729.2</td>
<td>8.0</td>
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<td>Jogging/running</td>
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<td>6.4</td>
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<td>Cycling/BMXing</td>
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<td>5.4</td>
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<tr>
<td>Netball</td>
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<td>4.5</td>
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<tr>
<td>Tennis</td>
<td>314.2</td>
<td>3.4</td>
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<tr>
<td>Yoga</td>
<td>298.9</td>
<td>3.3</td>
</tr>
<tr>
<td>Dancing/ballet</td>
<td>229.1</td>
<td>2.5</td>
</tr>
<tr>
<td>Bush walking</td>
<td>216.8</td>
<td>2.4</td>
</tr>
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</table>

(a) Relates to persons aged 15 years and over who participated in physical activities for recreation, exercise or sport as players during the 12 months prior to interview.
(b) The top 10 activities for males and females in terms of total participation in a playing role in 2011–12.
Source: ABS. Participation in Sport and Physical Recreation, Australia, 2011–12 (cat. no. 4177.0).
Sample response
The presence of safe walking tracks (e.g. paved and shady) could result in more people walking; therefore, walking is ranked highly. Going to the gym is indoors and can be done in any type of weather and at any time of day at some gyms, so this removes the barrier of weather and this could explain why fitness/gym is ranked so highly.

PRACTISE THE KEY SKILLS
1 Outline how socioeconomic status could act as a barrier to physical activity for older people.
2 Outline how peer support can act as an enabler to physical activity for youth.
3 Explain how the physical environment, especially at school and in the workplace, can impact sedentary behaviour levels.
4 Explain why the factors affecting behaviour change throughout the lifespan.

KEY SKILLS EXAM PRACTICE
In 2011–12, while most Australians aged 15 years and over had undertaken exercise in the last week, the overall level of this activity was low. Taking into account the intensity, duration and frequency of individuals’ physical activity, 66.9 per cent of Australians were either sedentary or had low levels of exercise in the week prior to interview (comprised of 35.4 per cent sedentary and 31.5 per cent low levels of exercise). However, this is a decrease from 2007–08 when the proportion of people who were sedentary or had low levels of exercise in the week prior to interview (comprised of 35.4 per cent sedentary and 31.5 per cent low levels of exercise). However, this is a decrease from 2007–08 when the proportion of people who were sedentary or had low levels of exercise was 71.6 per cent.
1 After reading the information above, describe what is meant by the term ‘sedentary behaviour’ and give an example of this concept. 2 marks
2 Outline the sedentary behaviour guidelines for 15-year-olds. 1 mark
3 Suggest why there was a decrease in the proportion of people who were sedentary from 2007–08 compared to 2011–12. Use an example to support your response. 2 marks
4 Discuss the relationship between sedentary behaviour and physical activity. 1 mark

CHAPTER REVIEW
CHAPTER SUMMARY
- Physical activity is any activity that involves or requires some form of physical exertion. Physical inactivity refers to no involvement in physical activity during an individual’s leisure time.
- Sedentary behaviour involves activities requiring little to no movement.
- Recent research has found that a person may be both physically active and engage in sedentary behaviour.
- There are many types of physical activity, such as play, games, sports, transportation, chores, exercise and recreational activities.
- The type of physical activity generally engaged in changes across the lifespan.
- There are many factors — demographic, social, cultural and environmental — that affect a person’s participation in physical activity and sedentary behaviour. They can generally be categorised as barriers or enablers. They include:
  - gender
  - age
  - socioeconomic status
  - ethnicity
  - parents
  - schools/workplaces
  - peers
  - the media
  - the physical environment.
- The barriers and enablers of physical activity and sedentary behaviour can differ greatly from person to person and across the lifespan.

MULTIPLE CHOICE QUESTIONS
1 Which of the following would be most likely to be categorised as an organised sport?
   (A) Chasey
   (B) Skipping
   (C) Park runs
   (D) Cross-country running
2 Going for a 5 km jog around a park with a friend would be considered
(A) recreational activity.
(B) sport.
(C) exercise.
(D) leisure.

3 Which of the following is considered sedentary behaviour?
(A) Sitting
(B) Sleeping
(C) Standing still
(D) All of the above

4 Which of the following types of physical activity are older adults most likely to engage in?
(A) Games
(B) Sport
(C) Exercise
(D) Leisure

5 Family responsibilities are most likely to be a barrier to physical activity for which group?
(A) Children
(B) Youth
(C) Adults
(D) Elderly

6 Which of the following is most accurate about participation in physical activity across the lifespan?
(A) As age increases participation in physical activity increases.
(B) As age decreases participation in physical activity decreases.
(C) As age increases participation in physical activity decreases.
(D) Participation in physical activity increases and then decreases.

7 A social enabler for physical activity for adults is
(A) lack of income.
(B) family responsibilities.
(C) active workmates.
(D) access to facilities.

8 An environmental factor that could help reduce sedentary behaviour for the elderly is
(A) access to walking tracks.
(B) subsidised bus travel.
(C) stand up desks.
(D) water aerobics classes.

9 What types of physical activity are young children (aged 2–4) most likely to participate in?
(A) Games and active transport
(B) Organised sport and chores
(C) Exercise and organised sport
(D) Chores and exercise

10 Which of the following statements is true?
(A) Increasing physical activity will also result in decreased sedentary behaviour.
(B) Decreasing physical activity will also result in increased sedentary behaviour.
(C) Increasing physical activity will result in decreased physical inactivity and sedentary behaviour.
(D) You can increase physical activity but still be too sedentary, so you need to increase physical activity and decrease sedentary behaviour.

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**EXAM QUESTIONS**

The costs of physical inactivity

There is work in progress updating the costs of physical inactivity to the healthcare system. However, current evidence from the Be Active Australia Framework for Health Sector Action suggests:

- The direct healthcare costs due to physical inactivity, based on mid-1990s costings, are around $400 million per year.
• Physical inactivity causes more than 8000 deaths annually, including 77 000 potential years of life lost.
• The true costs of obesity have been estimated as $1.3 billion and are rising fast; physical inactivity is a major cause of obesity.
• Physical inactivity is responsible for about 6 per cent of the total burden of disease in males and 8 per cent in females and is a major contributor to high blood pressure (5 per cent of burden) and obesity (4 per cent of burden).

1. Explain how the below factors can positively impact the physical activity of children and young people. (2 marks)
   Parents:
   Media:

2. Think of two reasons commonly given by young people who do not exercise or participate in physical activity. Use the table below to list one strategy for each reason that could be used to overcome this barrier. (4 marks)

<table>
<thead>
<tr>
<th>Reasons for not participating in physical activity</th>
<th>Strategies/Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
</tbody>
</table>

3. Suggest a reason for the above trends. (1 mark)