In this chapter...

Lesson 5.1  Active Sports and Recreation: Level 2 of the Physical Activity Pyramid
Moving Together: Following Rules
Take It Home: I Spy

Lesson 5.2  Benefits of Active Sports and Recreation
Biomechanical Principles: Velocity, Acceleration, and Deceleration
Two types of activities in the Physical Activity Pyramid are active sports and active recreation. Do you know what active sports are? Do you know what active recreation is? What are some types of active sports and recreation? Do you perform active sports and recreation? When you finish this lesson, you’ll know the answers to these questions. You’ll also know some guidelines for making sports and recreation more fun by following the rules.

**What Are Active Sports?**

You have probably played many different sports, but it may be hard for you to describe exactly what makes a physical activity a sport. **Sports** are physical activities that use the large muscles of the body. Sports have well-defined rules and typically involve competition between individuals or teams. Sports have winners and losers. Sports also typically require a **strategy** (an overall plan) and **tactics** (specific plans to meet your goals).

Chess and card games are typically not considered sports because they don’t use the large muscles of the body. **Games** that don’t have well-defined rules and that aren’t highly competitive, such as children’s games, aren’t considered sports even though they use large muscles.

Sometimes a sport can be done as a form of active recreation. For example, one person might run cross-country as a competitive sport, while another person might run long distances not for competition but as a form of active recreation.

There are several kinds of sports. Some are quite vigorous and get the heart to beat faster than normal, and others are less vigorous and are more similar to lifestyle activities. Vigorous sports are often called **active sports**. Soccer and tennis are examples of active sports.

Golf and bowling are examples of less vigorous sports. They’re similar in intensity to moderate lifestyle activities such as walking, gardening, and housework. These less active sports, like lifestyle activities, have health benefits but aren’t especially good for building cardiovascular fitness. As you’ll learn later in this chapter, active sports are a good way to build cardiovascular fitness.

Some sports are more popular than others. Sports that many people perform on a regular basis are considered **participation sports**. Some sports are called **spectator sports** because many people watch them on TV or in person. Sometimes a sport can be both a participation sport and a spectator sport. For example, you might play baseball and also enjoy watching it.

Sports in which many people participate at all ages are considered **lifetime sports**. All sports have benefits, but it’s better to learn active lifetime sports that you can participate in both now and as you grow older. Choosing an active sport is a good idea because you get both health and cardiovascular benefits if you do the sport regularly. Table 5.1 classifies some of the most popular sports in our society. The table also rates the popularity of sports by different age groups.
As indicated in Table 5.1, sports are often classified as individual sports or team sports.

- Individual sports are those that you can do by yourself or as an individual. For example, you can play golf by yourself. Tennis is also considered to be an individual sport even though you need at least one other player to play a game. One advantage of individual sports is that they’re easier to do for a lifetime because you need at most only one other person to play.

- Team sports require other players. Softball, basketball, and soccer are examples of team sports. Team sports are very popular with people of school age because schools and communities offer many opportunities. One disadvantage of team sports among adults is that there might be fewer community teams for adults, so it might be difficult to get enough people together to have a game.

Sometimes people who play individual sports are also members of teams. For example, several golfers can form a team. In tennis if you play doubles, you team up with another person. Even if you play alone against one opponent, scores from individual matches can earn points for the tennis team.

Active sports often require you to do vigorous physical activity for short bursts followed by periods of rest. For example, in basketball you might run up and down the court quickly three or four times and then stop for a free throw or a time-out. If you jog up and down the court, you’re doing aerobic activity. If you run fast, you’re doing anaerobic activity, which means that you’re using

![Table 5.1 Characteristics of Popular Sports](image)

<table>
<thead>
<tr>
<th>Sport</th>
<th>Active</th>
<th>Team</th>
<th>Individual</th>
<th>Popular with kids</th>
<th>Popular with teens</th>
<th>Popular with adults</th>
<th>Lifetime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archery</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Badminton</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Baseball</td>
<td>✓</td>
<td></td>
<td>✓ (P, S)</td>
<td>✓ (P, S)</td>
<td>✓ (S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basketball</td>
<td>✓</td>
<td>✓</td>
<td>✓ (P, S)</td>
<td>✓ (P, S)</td>
<td>✓ (P, S)</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Bowling</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Extreme sports</td>
<td>✓</td>
<td>✓</td>
<td>✓ (P, S)</td>
<td>✓ (P, S)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field hockey</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Football</td>
<td>✓</td>
<td>✓</td>
<td>✓ (P, S)</td>
<td>✓ (P, S)</td>
<td>✓ (S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Golf</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓ (P, S)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Gymnastics</td>
<td>✓</td>
<td>✓</td>
<td>✓ (P)</td>
<td></td>
<td></td>
<td></td>
<td>(S)</td>
</tr>
<tr>
<td>Handball</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hockey</td>
<td>✓</td>
<td>✓</td>
<td>✓ (P, S)</td>
<td>✓ (P, S)</td>
<td>✓ (S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ice skating</td>
<td>✓</td>
<td>✓</td>
<td>✓ (P, S)</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Skiing</td>
<td>✓</td>
<td>✓</td>
<td>✓ (P, S)</td>
<td>✓ (P, S)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Soccer</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓ (P)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Softball</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓ (P)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Swimming</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓ (P)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Tennis</td>
<td>✓</td>
<td>✓</td>
<td>✓ (P)</td>
<td>✓ (P)</td>
<td>✓ (P)</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Volleyball</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td>✓ (P)</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

A designation of popular is based on the number of people who typically perform this sport on a regular basis (P = participation) or watch this sport on a regular basis (S = spectator).
oxygen faster than your body can supply it. This is one reason you need to stop and rest every now and then. Even though sports such as basketball aren’t truly aerobic, they can have the same benefits as active aerobic activities if your heart rate is kept in the target zone most of the time. So active basketball is a good way to build both health and cardiovascular fitness benefits. Tennis is another example of an active sport that requires bursts of vigorous activity followed by rest periods. When played actively, it builds both health and cardiovascular fitness.

**What Is Active Recreation?**

Recreation refers to activities that you do during your free time. The word recreation means to recreate, or to be refreshed. Painting, enjoying music, reading, acting, and playing games such as cards or chess are forms of recreation that aren’t particularly physical. Recreation that uses the large muscles of the body is sometimes referred to as physical recreation. This type of recreation is done during your free time just for enjoyment and relaxation.

Physical recreation activities that are vigorous enough to get your heart to beat faster are forms of active recreation. Active recreational activities build cardiovascular fitness. Examples include cross-country skiing, orienteering, and kayaking. Many types of active aerobics (such as aerobic dance or jogging) and active sports (such as tennis and racquetball) could be considered active recreation because they can be done during your free time, they use the large muscles of the body, they’re vigorous, and they’re done for fun. However, this book uses the term “active recreation” to mean fun and vigorous physical activities that typically aren’t competitive and aren’t considered active sports or active aerobics. Some of the most popular forms of recreational physical activities are listed in table 5.2.

---

**Table 5.2**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Is It Active?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backpacking</td>
<td>Often</td>
</tr>
<tr>
<td>Biking</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Boating</td>
<td>Not often</td>
</tr>
<tr>
<td>Camping</td>
<td>Not often</td>
</tr>
<tr>
<td>Canoeing</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Fishing</td>
<td>Fresh water—not often</td>
</tr>
<tr>
<td>Games, including new games</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Hacky sack</td>
<td>Not often</td>
</tr>
<tr>
<td>Hiking</td>
<td>Often</td>
</tr>
<tr>
<td>Kayaking</td>
<td>Often</td>
</tr>
<tr>
<td>Orienteering</td>
<td>Often</td>
</tr>
<tr>
<td>Rock climbing</td>
<td>Sometimes</td>
</tr>
<tr>
<td>In-line skating</td>
<td>Often</td>
</tr>
<tr>
<td>Rowing</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Skateboarding</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Skating</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Sledding</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Skiing</td>
<td>Often</td>
</tr>
<tr>
<td>Swimming</td>
<td>Sometimes</td>
</tr>
</tbody>
</table>

*The way you perform an activity helps determine whether it is considered active.*

---

The “topspin” serve in tennis has a high bounce because the spin causes a downward curve that makes the ball hit the ground at a steep angle.

---

**Active sports such as tennis require good cardiovascular fitness.**
Have you ever played a game with someone who was cheating? How did it make you feel? What did you do about it? Would you break the rules in a game if no one would find out? Why or why not?

Several friends were discussing their experiences in sports. Julia told about playing in a school basketball game. Alexis, a player on the other team, was guarding her and kept hitting her in the arm every time she tried to shoot a basket. Julia felt that the referee didn’t call every foul that Alexis committed. She considered fouling back to get even.

Phung described a situation in a baseball game when he was the catcher. A player on the other team slid into home just as the ball arrived. The umpire called the runner “safe,” but Phung was sure that he had tagged the runner in time. He considered arguing with the umpire.

Max didn’t play on a sports team, but he liked to go boating with his family. There were several rules for using the boat, and one rule was to wear your life jacket. Max felt that the life jackets did need to be in the boat, but he didn’t want to wear one.

Discussion Questions

1. What advice would you have for Julia?
2. What advice would you have for Phung?
3. What advice would you have for Max?
4. Is it OK to violate the rules in some cases?
5. How can you control yourself and keep from being frustrated when others don’t play by the rules?

Guidelines for Maintaining Self-Control

- **Play by the rules.** Sometimes it’s hard to play by the rules when others don’t, but if you play by the rules, your example may give others the courage to play fairly, too. It’s true that some people won’t follow the rules no matter what, but you can only control your own behavior, not the behavior of others.
- **Remember that umpires and referees make mistakes.** Sports officials are people just like everyone else. Even when they try hard, they make mistakes just like we make mistakes when we play sports. Over the long haul mistakes will balance out. Sometimes a bad call will go against you, but other times calls will be in your favor.
- **Retaliation often backfires.** Bad calls or unnecessary fouls sometimes lead to retaliation. Nearly everyone who has played sports has learned that retaliation rarely pays off. Not only is the person who retaliates likely to get caught and penalized, but when a person retaliates, he or she often feels bad and has less fun.
- **Arguing doesn’t help you and leads to losing control.**

Decisions have to be made in sports and games. If a referee or an umpire makes a decision, the players must agree to accept that decision. If there is no official, the players must learn to make group decisions themselves to avoid arguments. Arguing can cause you to lose your focus and perform poorly, and it might cause you to lose control of your temper.

Good Reasons for Following Rules

- **Rules are meant to make games fair.** Rules aren’t always perfect, but if we all accept them and follow them, games will be more fun.
- **Rules keep people safe.** Many accidents result from ignoring safety rules and playing out of control.
- **Rules help officials and participants have self-control.** Because rules make games fair and safe, they help prevent people from getting angry and losing control.
Some forms of physical recreation, such as fishing and some forms of hiking, aren’t especially vigorous. These activities can be considered moderate lifestyle physical activities similar to those described in chapter 3. Recreation doesn’t always have to be active, but if cardiovascular fitness is your goal, the activity must cause your heart to beat in the target zone. Table 5.2 will help you to determine which recreational activities are active and which are not. You can tell the difference by paying attention to your heart rate and breathing while doing an activity.

As table 5.2 indicates, many recreational activities can be performed outdoors. For many people just being outdoors is relaxing because it gives them an opportunity to appreciate nature, such as leaves changing colors in the fall or snow drifting down in the winter. Recreational activities and sports vary from culture to culture. For example, people in colder parts of the world often choose winter activities such as skiing, sledding, and skating, and people in warmer parts of the world choose activities such as swimming and boating.

**Take It Home**

“I would be active, but there’s nowhere to go to do what I want to do.” Have you ever heard a person say something like that? Have you ever said something like that? Can you find recreation, sports, and activity clubs in your community that interest you, your family, and your friends? Can you find parks or school playgrounds that are safe and have the equipment you need? Are there other places that you and others can go to be active? Are there safe places to walk that have good lighting and good sidewalks?

Knowing where to look and whom to ask about sports and recreation opportunities requires detective skills. Use the worksheet supplied by your teacher to investigate active sports clubs and active recreation clubs in your area. Your searches might lead to a lifetime of enjoyable activities.

**Lesson Review**

- What are active sports, and how do they differ from games and other types of sports?
- What is active recreation, and how does it differ from other types of recreation?
- Name several sports. Are they team sports or individual sports? Are they spectator sports or participation sports? Are they most popular with kids, teens, or adults?
- Describe some guidelines for maintaining self-control and some good reasons for following rules when performing physical activities.
When you participate in active sports and recreation, you get health, wellness, and fitness benefits. Can you describe some of the most beneficial active sport and recreation activities? What are some of the best types of sports and recreation for you? When you finish this lesson, you’ll know the answers to these questions. You’ll also understand the importance of acceleration and velocity to your performance in physical activity.

Sports have many benefits. Perhaps the best benefit is that they’re fun. Even if you don’t enjoy all sports, you probably have found several that you do enjoy. Even the least active sports and recreation activities provide health benefits similar to those provided by lifestyle physical activities. Active sports and active recreation have the added advantage of building cardiovascular fitness. This is one reason why active sports and recreation are included along with active aerobics in level 2 of the Physical Activity Pyramid. To gain cardiovascular fitness, you must follow the FIT formula that you learned in chapter 3. You must perform active sports and recreation for at least 20 minutes at least three days a week, and your heart rate must be elevated into the target heart rate zone.

Sports and recreational activities can help you in many other ways as well. They can help you to relax and reduce the stresses in your life. They cause your body to expend calories that can help you maintain a desirable weight and feel and look your best. They provide a great way to meet friends and enjoy social interactions. They can help you learn to work as part of a team, which can benefit you in your adult career. Finally, participation in active sports and recreation can help you build parts of fitness other than cardiovascular fitness, including flexibility and muscle fitness. You’ll learn more about these in later chapters.

Use the worksheet supplied by your teacher to interview other students about their favorite active sports and recreation activity. Ask them about the fitness benefits they gain, why they enjoy the activity, and what advice they can give to others who want to try the activity.
No single sport or recreational activity is best for all people. Find activities that you enjoy and that you’ll do on a regular basis.
Velocity, acceleration, and deceleration are important in the performance of physical activities, especially those that require speed and fast movements.

Velocity refers to the speed of movement. The term acceleration means causing an increase in speed (velocity) of a movement. Deceleration refers to a reduction in velocity. When a car moves away from a stoplight, it’s accelerating. It continues to accelerate as long as its speed increases. The actual speed that the car is traveling at any point in time is its velocity. When it starts to slow down, it is decelerating.

Like a car, the body accelerates at the beginning of a race. The velocity of the body while running may be constant for a while, and then it decelerates after reaching the finish line. Runners with good acceleration and high velocity are fast runners.

The energy from food is used to contract the muscles to create force. The force causes the levers of the body to move. When the levers first begin moving, they cause acceleration. Acceleration requires a lot of energy. When a runner moves at a constant speed, energy expenditure is less than when accelerating.

Muscles can also be used to cause acceleration and high rates of velocity when using implements such as a baseball bat or a golf club. Good acceleration that results in fast bat speed or club speed allows you to hit a ball a long way. In fact, bat speed and club speed are more important than the heaviness of the bat or the club that you use. That is why metal bats and clubs are made with light metals. A light bat can be swung with high velocity, allowing a person to hit a ball a long distance.

Friction can affect the velocity of an object. For example, when a ball hits the ground, it slows down (decelerates) because of the friction created between the ball and the ground. Air resistance can also cause deceleration. For example, a strong headwind could slow the speed of a thrown ball.

Acceleration and velocity are important for good performances in some physical activities. Controlling movement during acceleration and high velocity is also important. For example, if you swing a bat too fast, you might lose control of the bat and fail to make good contact with the ball. When rollerskating or skiing, if you accelerate too fast and move at too high a speed, you might lose control and fall.

For optimal performance, you should know when acceleration and high velocity are needed. You also need to know when to limit acceleration and velocity to control movements for optimal performance and safety. A reckless driver is one who accelerates too fast and drives too fast. In physical activity you sometimes need to accelerate as fast as possible and to travel at a high speed. Sometimes too much acceleration and velocity is reckless and may result in poor performances.
Applying the Principle

To move effectively, you need to know when to accelerate quickly and when to have high-velocity movements. This is true for total-body movements such as running, skating, and skiing. It’s also true when using equipment such as a bat or a golf club, and for body levers such as those used when kicking and throwing a ball. Sometimes you want to throw a ball with maximum velocity—for example, throwing a fastball during a baseball game—but other times you may want to apply spin to cause the ball to curve. How might acceleration and velocity be needed in different ways for the following activities listed?

- Hitting a ball as far as possible
- Making sure you contact a ball in the center of a tennis racket
- Pitching a ball for accuracy
- Running as fast as possible
- Running so that you can change directions when needed
- Slowing down to avoid a collision in an activity

Principles in Practice

Velocity, acceleration, and deceleration are important for efficient and effective movement in normal daily activities. Controlling them is also important for safety when performing physical activities. Practice techniques that allow you to accelerate, decelerate, or maintain a constant velocity. Practice when moving your whole body (such as when running), when moving a piece of equipment (such as a tennis racket), and when using one of the levers of your body (such as throwing a ball with your arm).
Lesson Review

- How do active sports and recreation improve your health, wellness, and fitness?
- How much do you need to participate in active sports and recreation to build cardiovascular benefits?
- How are acceleration and velocity important to performance in physical activity?
- What types of active sports and recreation are best for you?

What Types of Sports and Recreation Are Best?

There is no best sport or recreational activity for all people. What is fun for one person might not be as fun for another. Each sport and activity has its benefits. You should choose an activity that’s fun for you and that provides benefits that are best for you.

Consider some of the following guidelines when choosing sport or recreational activities:

- **Select sports and recreational activities that provide benefits that you need.** For example, if you need to improve your cardiovascular fitness, choose an activity that causes your heart rate to increase.
- **Choose activities that match your abilities.** Teens with good cardiovascular fitness may choose soccer or cross-country running, and those with good flexibility may choose gymnastics or extreme sports (you can explore possibilities at the Fitness for Life: Middle School Web site).
- **Try many different activities.** By trying different activities, you can see which ones you like best and which ones match your abilities.
- **Choose activities that are accessible to you.** Be sure you have the space and equipment necessary to do the activity. If the activity is a team activity, you must have other people who are also interested in doing the activity.
- **Choose activities that you’ll practice.** As you know, practice helps you develop good skills. Good skills help you perform better and make the activity more enjoyable.
- **Choose activities for which you can get good instruction.** Good instruction helps you understand how to use the biomechanical principles that you’ve learned, as well as other principles that affect the activity. This knowledge can help you practice better, learn better, and perform better.

FIT FACT

Based on estimates from the International Sports Federations, the most popular sports in the world are soccer, basketball, volleyball, and table tennis.

Consider activities that you can enjoy now and also later in life. Being active should be a lifetime goal. Choose activities that you enjoy now, even if you may not do them later in life. But also choose activities that you enjoy now and that you’ll be able to perform and enjoy in the years ahead.
Chapter Review

Number your paper from 1 to 5. Read each question. After the number for the question, write a word or a phrase that best answers the question. The page number where you can find the answer is listed after the question.

1. Which type of physical activity described in this chapter has rules, is competitive, and has winners and losers? (page 53)
2. What do you call sports that can be done by people of all ages? (page 53)
3. What do you call recreational activities that use the large muscles of the body? (page 55)
4. What word describes an increase in velocity (speed) of movement? (page 60)
5. What word describes a decrease in the velocity (speed) of movement? (page 60)

Number your paper from 6 to 10. Next to each number, write the letter of the best answer.

6. playing cards  a. an example of a popular participation sport
7. kayaking       b. an example of active recreation
8. tennis        c. an example of a popular spectator sport
9. football      d. an example of a game
10. musical chairs e. an example of recreational activity that is not physical recreation

Number your paper from 11 to 15. Follow the directions to answer each question or statement.

11. How do recreation, active recreation, and physical recreation differ?
12. Give examples of why it’s important to play by the rules and keep self-control when playing sports.
13. Give examples of some of the benefits of participating in active sports and recreation.
14. Give examples of guidelines for selecting sports and recreational activities that are best suited to your needs and interests.
15. Define velocity, acceleration, and deceleration, and give examples of how each is important in sports.

Ask the Author

If you want to play sports, is it better to specialize in one sport or to learn several different sports?

Get the answer and ask your own questions at the Fitness for Life: Middle School Web site.

Click Student Info ← Topic 5.10