Activity 1
Frisbee Golf

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FRISBEE GOLF
People of all ages can enjoy Frisbee golf. It is an enjoyable activity that can help you relax and reduce stress. To play the game, you try to throw the Frisbee from each “tee” into each “hole,” or goal. You can design your own course using rope, baskets, plastic hoops, or chalk lines on the ground as holes.

Each hole has a “par,” which is the recommended number of throws to get the Frisbee in the goal. The object is to achieve par or less for each hole. Your score is the total number of throws for 18 holes of Frisbee golf.

If you are playing for relaxation, it is best not to be too competitive. You might want to compare your score to par and try to improve rather than compare your score to someone else’s.
Lesson 17.1

Facts About Stress

Lesson Objectives
After reading this lesson, you should be able to
1. Define stress and list its causes.
2. Explain the three stages in the general adaptation syndrome.
3. Explain how eustress and distress differ.
4. Discuss the effects of stress.

Lesson Vocabulary
alarm reaction (p. 293), distress (p. 294), eustress (p. 294), general adaptation syndrome (p. 293), stage of exhaustion (p. 293), stage of resistance (p. 293), stress (p. 293), stressor (p. 293)

How would you feel if a bear were running toward you? Most likely, you would feel frightened. Your heart rate would increase and your muscles would tense. Your body would release a chemical called adrenaline to give you energy to run away. These changes and those shown in the figure on the next page are part of the stress response, your body’s way of preparing you to deal with a demanding situation. If danger presents itself, your stress response prepares your body for bursts of energy you can use to face danger or avoid it.

Encountering a bear is an unusual situation. However, you probably face stressful situations every day that affect you both physically and emotionally. In fact, two thirds of Americans report feeling stressed out at least once a week.

In this lesson, you will read more about stress. You will learn about its many causes and you will find out how it can affect you.

What Is Stress?

Stress is the body’s reaction to a demanding situation. A series of physical changes takes place automatically when you are in a highly stressful situation.

A famous researcher, Hans Selye, helped us understand the effects of stress when he described the general adaptation syndrome. He showed that all people adapt in a general way when exposed to stressors. A stressor is something that causes or contributes to stress. The three phases of the general adaptation syndrome are shown in the figure below. First, the body uses its alarm reaction to react to a stressor. Anything that causes you to worry or get excited or anything that causes other emotional and physical changes can be a stressor and start your body’s alarm reaction. For adults, stressors might include bills, vacation plans, work responsibilities, and family conflicts. Stressors for teenagers include grades and schoolwork, family arguments, and peer pressures. Other common stressors for teenagers include moving to a new home, serious illness or death in the family, poor eating habits, lack of physical activity, feelings of loneliness, a change or loss of friends, substance abuse, and trouble with school or legal authorities.

Some of the physical changes that occur when the body starts its alarm reaction to a stressor are shown in the photo on the next page. The alarm reaction may cause your heart rate to increase and other physical changes to occur. After the body has had a chance to adjust, it enters the second stage of the general adaptation syndrome. This stage is called the stage of resistance because in this stage the immune system starts to resist or fight the stressor. In the case of an illness, antibodies are sent out to fight. In the case of a physical stressor, such as doing heavy exercise, the heart rate goes up to supply more blood and oxygen to the body. In most cases, our resistance is enough to overcome the stressor, and we adapt by returning to our normal state of being.

In extreme cases, the body is not able to resist well enough and it enters the third stage of the syndrome, the stage of exhaustion. Various medical treatments may be necessary to help us resist and overcome the stressor. If the stressor is too great, as in the case of a disease that the body and medicine cannot fight, death can occur.

![General Adaptation Syndrome](image-url)
Eustress and Distress

Not all stressful experiences are harmful. Scientists use the term **eustress** to describe positive stress. Situations that might produce eustress include riding a roller coaster, successfully competing in an activity, passing a driving test, playing in the school band, and meeting new people. Eustress helps make your life more enjoyable by helping you meet challenges and do your best.

Low levels of stress may help you prepare for more stressful situations in the future. For example, doing physical activity may be a stressor, but regular physical activity can help make you fit, healthy, and better able to handle future stressful situations. Ideally, you need to strive for the right level of stress—neither too much nor too little.

Causes of Distress

Distress can have a negative effect on your total health and fitness. To control stress in your life, you need to understand the cause of the stress you are experiencing.

Physical Stressors

Physical stressors are conditions of your body and the environment that affect your physical well-being. Examples include thirst, hunger, overexposure to heat or cold, lack of sleep, illness, pollution, noise, accidents, and catastrophes such as floods or fires. Even excessive exercise can be a stressor. Athletes who overtrain experience this kind of negative effect. However, healthy people who follow good exercise principles and achieve good fitness are better able to adapt to the changes produced by physical stressors.
Emotional Stressed
Stress Management
Emotions such as worry, fear, anger, grief, depression, or even falling in love are powerful stressors and can strongly affect your physical and emotional well-being.

Social Stressors
Social stressors arise from your relationships with other people. Each day, you have experiences that involve your family members, friends, teachers, employers, and others. As a teenager, you probably are exposed to many social stressors. Think about stressors in social situations in your life. Much of the stress you experience may be caused by social stressors.

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Effects of Stress
Stress can lead to both emotional and physical changes. Emotional effects of stress can include upset or nervous feelings; anger, anxiety, or fear; frequently criticizing others; frustration; forgetfulness; difficulty paying attention; difficulty making decisions; irritability; lack of motivation; boredom, mild depression, or withdrawal; or change in appetite. Some of these signs are illustrated in the figure above.

Have you ever experienced extreme fatigue, light-headedness, or upset stomach resulting from stress? These and other reactions shown in the figure at the left are common physical reactions to stressors. These reactions vary from one person to another. They usually last a short time, disappearing once the source of the stress is removed.

High levels of stress and prolonged periods of stress can be related to many physical conditions. For example, increased stomach acid resulting from stress can aggravate ulcers. High blood pressure can be related to stress and can lead to serious cardiovascular diseases and disorders. Prolonged stress can lower the effectiveness of the body’s immune system, making a person more susceptible to certain diseases. Some doctors think that many health problems in the United States requiring medical attention are stress related. The motivation to deal effectively with stress, especially distress, is clear.

Use your self-assessment record sheet to find out how prone you are to stress. If you are prone to stress, consider using the procedures for managing stress that are described in the next lesson.

Lesson Review
1. What are some of the most common causes of stress and why do they cause stress?
2. What are the three stages of the general adaptation syndrome?
3. How do eustress and distress differ?
4. What physical and emotional effects can stress have on the body?

FITNESS Technology
Many high-tech methods exist to determine whether your body is stressed. When stressors are present, your heart rate is elevated, so the heart rate monitors you use to check your target heart rate can also be used to see whether you are stressed, especially in nonactive situations. Your body temperature is another way to determine whether you are experiencing physiological stress. Special metallic strips (stress strips) have been developed to measure your skin temperature. When you are relaxed, your skin temperature goes up; when you experience stress, it goes down. Stress strips turn red when your skin temperature goes up, indicating that your stress level is going down. They turn blue when your skin temperature goes down, indicating that your stress level is going up. You can use stress strips and heart rate to help you learn to relax.
Identifying Signs of Stress

All people experience some negative stress in their lives. Your body sends off certain signals when you are experiencing such distress. In this self-assessment, you will learn to identify some of the body’s stress signals.

Table 17.1 lists some signs that commonly accompany stress. You may notice some of these signs when you are not under excessive stress. However, in times of great stress, these signs are often especially apparent.

One way to determine whether an activity is stressful to you is to self-assess signs and signals of stress before and after the activity. Work with a partner. Follow these steps to help each other look for signs and symptoms of stress indicated in table 17.1:

1. Lie on the floor, close your eyes, and try to relax. Have your partner count your pulse and your breathing rate. Ask your partner to observe for irregular breathing and unusual mannerisms. Then ask your partner to evaluate how tense your muscles seem. Report feeling butterflies in your stomach or other indicators of stress to your partner. Write your results on your record sheet. Have your partner lie down while you record your observations about him or her.

2. When directed by your instructor, all members of the class should write their names on a piece of paper and place the papers in a hat or a box. The teacher will draw names until only three remain in the container. The students whose names remain must give one-minute speeches about the effects of stress. Observe your partner before and during the name drawing. Look for the signs and signals of stress. Record your results on the record sheet. Also, try to remember your feelings during the drawing. Finally, observe the people who were required to make the speech. Record this information on the record sheet.

3. Finally, walk or jog for 5 minutes after your second stress assessment. Once again, work with a partner to assess your signs of stress. Write them in the third column of the record sheet. Notice that the exercise causes heart rate and breathing rate to increase. However, it may help reduce earlier signs of the emotional stress related to performing in front of the class.

| Table 17.1 |
| Signs of Stress |

<table>
<thead>
<tr>
<th>Heart rate</th>
<th>Is it higher than normal?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscle tension</td>
<td>Are the muscles tighter than usual?</td>
</tr>
<tr>
<td></td>
<td>• arms and shoulders</td>
</tr>
<tr>
<td></td>
<td>• legs</td>
</tr>
<tr>
<td>Mannerisms</td>
<td>Are unusual mannerisms present?</td>
</tr>
<tr>
<td></td>
<td>• frowning or twitching</td>
</tr>
<tr>
<td></td>
<td>• hands to face (nail biting)</td>
</tr>
<tr>
<td>Nervous feelings</td>
<td>Do you feel differently?</td>
</tr>
<tr>
<td></td>
<td>• feeling of butterflies in stomach</td>
</tr>
<tr>
<td></td>
<td>• tense or anxious feelings</td>
</tr>
<tr>
<td>Breathing</td>
<td>Have you noticed differences?</td>
</tr>
<tr>
<td></td>
<td>• irregular</td>
</tr>
<tr>
<td></td>
<td>• rapid or shallow</td>
</tr>
</tbody>
</table>
Lesson 17.2

Managing Stress

Lesson Objectives
After reading this lesson, you should be able to
1. Discuss how to manage stress in everyday life.
2. Describe health practices that can help a person deal with stress.
3. Describe competitive stress.

Lesson Vocabulary
competitive stress (p. 299), runner’s high (p. 298)

Perhaps you feel overwhelmed by the many causes of distress and its effects. Distress in life is unavoidable. These suggestions can help you deal effectively with it.

Effective Ways to Manage Stress
Fortunately, you can take steps to manage the stress in your life. When a situation seems distressful, follow these guidelines:

► Rest in a quiet place. Relax indoors or outdoors. The teenager in the picture is relaxing in a quiet place.

► Reduce your breathing rate. Sit or lie quietly. Take several long, slow breaths in through your nose and breathe out through your mouth.

► Reduce your mental activity. Sometimes, it is best to get rid of distressful thoughts until a later time. Try imagining a pleasant outdoor scene or listening to music.

► Reduce muscle tension. Relaxing your muscles can effectively help reduce distress. You will learn helpful relaxation techniques in the activity on pages 300 through 302.

► Use exercise as a diversion. An excellent way to relieve distress is through physical activity. Try sports or another type of physical activity you enjoy.

► Identify the stressor. Clearly identify the cause of your stress. For example, if anger is causing you stress, try to identify what is making you angry.

► Tackle one thing at a time. If several problems pile up, ask yourself, “What can I do now to change things? What can wait? What cannot be changed?”

► Take action. Rather than worrying about a problem, try to solve it. Make decisions and carry them out. When making a decision, look at several choices, consider the results of each, and choose the best one.

► Manage time effectively. Prioritize your activities so that you have time for the most important things. Learn to say “no” to new responsibilities or activities if you cannot give them the time required.

► Accept what cannot be changed. Not all problems can be solved as you would like, but you can still deal with them effectively. For example, suppose you are asked to trim the hedges. You do the job and then find that you did not do it correctly. You cannot change what you have already done, but you can deal with the stress by recognizing that all people make errors. You can learn from your mistake and get better directions the next time so that you can do a better job.

► Think positively. Positive thoughts can help reduce distress. For example, try thinking that you will get a hit in the softball game instead of worrying about striking out. Also, make an effort to perceive a stressor as a challenge rather than as a problem.

► Do not mask your problems. Sometimes people who are experiencing distress try to avoid the problem. Usually, masking the problem leads to more distress.

► Try not to let little things bother you. Many events in life are simply not worth stressful feelings. For example, if you are disappointed, remember that a situation might be better the next time.

► Be flexible. Learning to bend a little, or adjust to changes, can be helpful. You use this ability to help handle distress.

Sometimes taking a moment to rest in a quiet place can help you manage stress.
Stress Management, Fitness, and Good Health

Keeping your body physically fit and in good health can help you manage stress. Follow these health practices to help you deal with stress in your life:

- **Eat a nutritious, well-balanced diet.** Good nutrition helps lead to good health, which can help you deal better with stress. Chapter 14 discusses the importance of good nutrition.

- **Avoid unnecessary, distressful situations.** If you know a situation will be stressful, you often can avoid it. For example, you can choose to avoid an event at which alcohol might be served.

- **Get enough sleep.** Lack of sleep can contribute to distress. In fact, lack of sleep is itself a stressor. Some problems might be easier to handle when you feel rested. Try to sleep at least 8 hours each day.

- **Pay attention to your body.** Pay attention to how your body reacts in different situations. If you experience physical signs of distress, use some of the stress-management techniques described in this lesson.

- **Have fun.** Laughter can help reduce distress. Take time to laugh and have fun. Enjoy life!

- **Do regular physical activity.** Doing some form of regular physical activity can help you reduce your stress. For example, people who jog regularly report a runner’s high that comes from their activity. As you learned in lesson 17.1, sometimes competitive activities can cause stress. Taking time out in the form of a noncompetitive activity can help you get your mind off stressful situations.

Getting Help

Often people need help in managing their stress. Parents, family members, teachers, clergy members, and friends can be sources of help and support. School counselors, school nurses, physicians, and other specially trained people can provide advice about stress management. In addition, many communities have health professionals to help people manage stress. A doctor, a school counselor, or a hospital referral service can direct you to sources of help in your community.

Lesson Review

1. What are five ways to deal with a stressful situation?
2. What are some health practices that can help you deal with stress in your life?
3. What are some of the techniques you can use to cope with competitive stress?
Controlling Competitive Stress

In the next lesson, you will learn that doing regular, noncompetitive physical activity can help you reduce stress levels. However, competitive sports and other competitive activities, such as performing a music solo or giving a speech, can cause competitive stress. Some factors that make these activities stressful are competition, being evaluated by others, performing in front of a crowd, and feeling that the outcome is important. If you get involved in situations that cause competitive stress, follow these guidelines:

- **Learn to identify signs of stress.** Use the self-assessment in this chapter to help you learn to identify the signs of stress.

- **Avoiding competitive stress.** One way to prevent competitive stress is to avoid competitive situations or situations in which you perform for others. However, as a result, you may miss participating in activities that are fun. You also may fail to accomplish things that you are capable of doing and at which you would be successful.

- **Use muscle relaxation techniques.** Use the muscle relaxation techniques included in the activity for this chapter (pages 300-302).

- **Get experience.** Remember that most people feel stressed the first few times they compete or perform in public. With experience, competing and performing do become easier.

- **Practice and prepare.** Practice and preparation will help you experience eustress when competing and performing and will help you to achieve your full potential. When you practice, try to simulate the real event. Competitive practices with an audience can help you prepare.

- **Use mental imagery.** Some people do well in practice but not in actual competition. One method used by experienced competitors is mental imagery. During the real event, they imagine themselves as they are in practice—relaxed and confident.

- **Use a routine.** Golfers find that a regular routine when putting is very helpful. If you follow a routine before and during a competitive event, it can help you relax.

- **Take a deep breath and slow your breathing.** Taking a deep breath before a free shot or before a solo can be helpful. If you find yourself becoming tense, slow down your breathing—it can help.

- **Use other effective stress management procedures.** Use the effective ways of managing stress discussed earlier in this lesson.
Activity 2

Relaxation Exercises for Stress Management

Did your self-assessment indicate that you have a high level of stress? Most people need to deal with stress at one time or another. In this activity, you will get the opportunity to perform several exercises that are useful in reducing stress. You will also get the opportunity to practice a muscle relaxation procedure called contract-relax.

PART 1: Exercises for Muscle Relaxation

Notice that you can do some of these exercises at almost any time and almost any place. You might do them when you are sitting and studying or while you are riding or waiting for a bus. You can do most of them lying down or from a sitting position. You can even adapt some of these exercises to do them while you are standing. When you do these exercises, be sure to write your results on your record sheet.

Rag Doll

1. Sit in a chair (or stand) with your feet apart. Stretch your arms and trunk upward as you inhale.
2. Then exhale and drop your body forward. Let your trunk, head, and arms dangle between your legs. Keep your neck and trunk muscles relaxed. Remain relaxed like a rag doll for 10 to 15 seconds.
3. Slowly roll up, one vertebrae at a time. Repeat the stretch and drop.

Neck Roll

1. Sit in a chair (or on the floor with your legs crossed).
2. Keeping your head and chin tucked, inhale as you slowly rotate your head to the left as far as possible. Exhale and slowly return your head to the center.
3. Repeat the movement to the right.
4. Rotate 3 times in each direction, trying to rotate farther each time, so you feel a stretch in the neck.
5. Now, drop your chin to your chest and inhale as you slowly roll your head in a half circle to the left shoulder and then exhale as you roll it back to the center. Repeat the movement to the right shoulder.

Caution: Do not roll your head backward or in a full circle.
Body Board

1. Lie on your right side. Hold your arms over your head.
2. Inhale and stiffen your body as if you were a wooden board. Then exhale as you relax your muscles and collapse completely.
3. Let your body fall without trying to control whether it tips forward or backward.
4. Lie still as you continue letting the tension go out of your muscles for 10 seconds. Then repeat the exercise starting on your left side.

Jaw Stretch

1. Sit in a chair (or on the floor), head erect, arms and shoulders relaxed.
2. Open your mouth as wide as possible and inhale. (This may make you yawn.) Relax and exhale slowly.
3. Open your mouth and shift your jaw to the right as far as possible; hold 3 counts.
4. Repeat the movement to the left. Repeat it on both sides 10 times.
PART 2: The Contract-Relax Method of Muscle Relaxation

Lie on your back with a rolled-up towel placed under your knees. Contract your muscles in the order that they are named in the following instructions. Hold each contraction for 3 counts. Then relax the muscles and keep relaxing for 10 counts. Each time you contract, inhale. Each time you relax, exhale.

Do each exercise twice. Try this routine at home for a few weeks. With practice, you should eventually progress to a combination of muscle groups and gradually eliminate the contracting phase of the program.

1. Hand and forearm—Contract your right hand, making a fist. Relax and continue relaxing. Repeat the exercise with your left hand. Repeat it with both hands simultaneously.

2. Biceps—Bend both elbows and contract the muscles on the front of your upper arms. Relax and continue relaxing. Repeat the exercise.

3. Triceps—Bend both elbows, keeping your palms up. Straighten both elbows and contract the muscles on the back of the arm by pushing the back of your hand into the floor. Relax.

4. Hands, forearms, and upper arms—Concentrate on relaxing these body parts all together.

5. Forehead—Make a frown and wrinkle your forehead. Relax and continue relaxing. Repeat the exercise.


7. Lips and tongue—with your teeth apart, press your lips together and press your tongue to the roof of your mouth. Relax. Repeat the exercise.


9. Relax your forehead, jaws, lips, tongue, neck, and throat. Relax your hands, forearms, and upper arms. Keep relaxing all of these muscles.

10. Shoulders and upper back—Hunch your shoulders to your ears. Relax. Repeat the exercise.

11. Relax your lips, tongue, neck, throat, shoulders, and upper back. Keep relaxing these muscles all together.

12. Abdomen—Suck in your abdomen, flattening your lower back to the floor. Relax. Repeat the exercise.


14. Thighs and buttocks—Squeeze your buttocks together and push your heels into the floor. Relax. Repeat the exercise.

15. Relax your shoulders and upper back, abdomen, lower back, thighs, and buttocks. Keep relaxing these muscles all together.


17. Toes—Curl your toes. Relax. Repeat the exercise.

18. Relax every muscle in your body all together and keep relaxing.
Chapter Review

Reviewing Concepts and Vocabulary

Number your paper from 1 to 6. Next to each number, write the word (or words) that correctly completes the sentence.

1. To help reduce stress, contract and then ________ your muscles.
2. Excessive exercise, such as that done by athletes who overtrain, is a ________ stressor.
3. The ________ is your body’s way of preparing you to deal with a demanding situation.
4. Worry and fear are examples of ________ stressors.
5. Stress can affect the immune system, making a person more susceptible to certain ________.
6. Getting enough ________ every night can help prevent fatigue and help you deal effectively with stress.

Number your paper from 7 to 10. Next to each number, choose the letter of the best answer.

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. stress</td>
<td>a. positive stress</td>
</tr>
<tr>
<td>8. eustress</td>
<td>b. negative stress</td>
</tr>
<tr>
<td>9. stressor</td>
<td>c. the body’s reaction to a stressful situation</td>
</tr>
<tr>
<td>10. distress</td>
<td>d. causes or contributes to stress</td>
</tr>
</tbody>
</table>

Number your paper from 11 to 15. On your paper, write a short answer for each statement or question.

11. Describe some negative effects of competitive stress and explain how to deal with such stress in a positive manner.
12. Describe some ways of thinking that can help you deal with stress.
13. How can physical activity help you deal effectively with stress?
14. How can an activity cause both eustress and distress?
15. Name five sources of guidance and support for those who need help dealing with a stressful situation.

Thinking Critically

Write a paragraph to answer the following questions.

You have been invited to give a speech in front of your class. You are concerned that if you refuse the opportunity, you may feel disappointed in yourself. However, you are afraid that you will be too nervous to give a speech in front of a large group. What are the positive and negative consequences of each choice? What decisions would you make? How can you manage stress associated with whichever decision you make?