UNIT 6

Adjustment and Breakdown

Contents

Theater masks ▶

Stress and Health

PSYCHOLOGY JOURNAL

What are the major sources of stress in school? Can you pinpoint specific occasions, times, and events when many students feel stressed? Answer these questions in your journal. ■

PSYCHOLOGY Online

Chapter Overview
Visit the *Understanding Psychology* Web site at psychology.glencoe.com and click on **Chapter 15—Chapter Overviews** to preview the chapter.

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Sources of Stress

Reader's Guide

■ Main Idea
Stress results from our perceptions of demands placed upon us and our evaluations of situations we encounter.

■ Vocabulary
- stress
- stressor
- stress reaction
- distress
- eustress
- conflict situation

■ Objectives
- Define stress.
- Identify various sources of stress.

EXPLORING PSYCHOLOGY

Mental Tension
Brandon, an ambitious high school junior, fails his final exam in French; he is terrified that his chances of getting into college have been ruined, and a day or two later he develops an unsightly rash. Juanita, Brandon's classmate, learns that her parents cannot afford to pay her tuition for her first year of college; her friends wonder why she has suddenly become so bad-tempered. Angela gets her first leading role in a high school play; while running to call her boyfriend, she realizes that she cannot remember his phone number.

—**from** *Understanding Psychology,*
Richard A. Kasschau, 1995

Brandon, Juanita, and Angela may all suffer from the effects of stress. What exactly is stress? There are many definitions, and even researchers in the field use the term in several ways. To some psychologists, stress is an *event* that produces tension or worry. Others describe it as a person's physical or psychological *response* to such an event. Still other researchers regard stress as a person's *perception* of the event. A slight variation on these ideas is the definition that will be used in this chapter. **Stress** is the anxious or threatening feeling resulting from our appraisal of a situation and our reaction to demands placed upon us.

stress: a person's reaction to his or her inability to cope with a certain tense event or situation

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COMPONENTS OF STRESS

stressor: a stress-producing event or situation

To refer to the stress-producing event or situation, we shall use the term **stressor.** It is important to note that an event that is a stressor for one person may not be for another. For example, traveling in an airplane may be a stressor for someone who has never flown but not for a flight attendant. Stress, then, will be used to refer to a person's reactions—whether perceptual, cognitive, physical, or emotional—to a stressor. To discuss the body's observable response to a stressor, we shall use the term **stress reaction.**

stress reaction: the body's response to a stressor

Many people think of stress only as a condition to be avoided. Canadian researcher Hans Selye, however, distinguished between two types of stress. Negative stress, or **distress,** stems from acute anxiety or pressure and can take a harsh toll on the mind and body. Positive stress, or **eustress,** results from the strivings and challenges that are the spice of life (Selye & Cherry, 1978; Selye, 1982).

distress: stress that stems from acute anxiety or pressure

eustress: positive stress, which results from motivating strivings and challenges

Stress is a normal, even essential, part of life that goes hand in hand with working toward any goal or facing any challenge. In fact, as athletes gearing up for a game or students cramming for an exam can testify, stress can spur us on to greater effectiveness and achievement in some situations. In addition, whether we like it or not, we cannot escape stress; "Complete freedom from stress," notes one psychologist (Selye, 1974), "is death." We can, however, learn to cope with stress so that it makes our lives interesting without overwhelming us.

There is another component of stress. Richard Lazarus (1993) believes that how a person perceives and evaluates an event makes a difference. This is called the cognitive model of stress. People analyze and then evaluate a situation before it is labeled as stressful. For example, maybe you have accidentally cut your finger and did not realize it at the time. Only when you looked at the cut did you evaluate the situation as dangerous.

conflict situation: when a person must choose between two or more options that tend to result from opposing motives

Figure 15.1 **Suffering From Stress**

Most of us have experienced a headache, upset stomach, muscle tension, or sleeplessness as a result of feeling stressed. *What causes stress?*

CONFLICT SITUATIONS

In our daily lives, we often have to evaluate situations and then make difficult decisions between two or more options—for example, going to a movie with friends or staying home to study for tomorrow's exam. These alternatives tend to result from conflicting motives—say, the desire to socialize versus the desire to do well in school—and they are major sources of stress. These choices are **conflict situations** (Miller, 1944), and they fall into four broad categories (see Figure 15.2).

In an *approach-approach conflict,* the individual must choose between *two attractive alternatives.* For example, a high school senior has been accepted at two excellent colleges, and she must decide which

Figure 15.2 — Types of Conflict Situations

Conflict situations cause stress because you must give up something you want to get or face something you wish to avoid. *How is the double approach-avoidance conflict different from the approach-avoidance conflict?*

Approach-Approach	Avoidance-Avoidance	Approach-Avoidance	Double Approach-Avoidance
You must choose between two attractive options.	You must choose between two disagreeable options.	You find yourself in a situation that has both enjoyable and disagreeable consequences.	You must choose between multiple options, each of which has pleasurable and disagreeable aspects.
Do I want to go to the concert or ballgame on Saturday?	Should I stay up all night studying for my physics or math final?	Should I ask him to go to the party with me? (He may say yes, or he may say no.)	Should I stay home and wait for my girlfriend to call me, or should I just go out with my friends and maybe miss the call?

one to attend. Such a conflict is generally easy to resolve. The student in this situation will find some reason to attend one college rather than the other—perhaps better climate or more courses in her intended major field. An approach-approach conflict is a conflict in name only. It does not produce a great deal of stress, because both choices are satisfying.

An *avoidance-avoidance conflict* occurs when an individual confronts *two unattractive alternatives.* Consider the case of a college graduate unable to find a job after many months of searching. She is finally offered a position that has no future and does not pay well. Should she accept it, or should she continue to look for something better? Either course of action will be frustrating, and there is usually a high level of indecision and stress. The young woman in this example may decide that one option is the "lesser of two evils," or she may try to escape the decision—for instance, by registering with a temporary-employment agency until she finds a more satisfactory job.

An individual who wants to do something but has fears or doubts or is repulsed by it at the same time is experiencing an *approach-avoidance conflict.* For example, a man wants to ask for a raise, but he is afraid he will be fired if he does. In cases like this, the degree of stress depends on the intensity of the desire or of the perceived threat. Resolution of this type of conflict often is very difficult and depends generally on the person's finding added reasons to choose one alternative over the other. The man in this example may learn that his boss thinks his work has been excellent; therefore, he feels there is little risk of being fired if he asks for more money.

Probably the most common conflict situation is a *double approach-avoidance conflict* in which the individual must choose between *two or more alternatives, each of which has attractive and unattractive aspects.* To use a simple illustration, a young woman working in Chicago cannot decide

whether to spend her vacation in Paris or at her parents' home in North Carolina. She has never been to Paris, but the airfare and hotel bills will be more than she can really afford. Visiting her parents will be inexpensive and relaxing but not very exciting. As in an approach-avoidance conflict, the degree of stress generated depends on the intensity of the attractions and repulsions.

Appraising a Situation

Why is it that some people view a situation, such as looking for a parking space, as stressful while others do not? The level of stress you feel depends on how you appraise the situation. *Primary appraisal* refers to our immediate evaluation of a situation. For instance, can we meet the demands of this situation? Does this situation present us with more challenges than we think we can handle? There are three ways you can appraise a situation—as irrelevant, positive, or negative. For example, if your teacher suddenly announces a pop quiz, you may feel okay about the situation. You think you know the material, and your teacher does not give difficult quizzes. You may look forward to pop quizzes and feel positive about the situation because you know the material on the quiz and are assured of a good grade. You may also evaluate the situation as a negative one—you have not looked at your notes in days. In this last example, you feel stressed.

A *secondary appraisal* involves deciding how to deal with a potentially stressful situation. At this point an individual appraises the situation and then decides on a coping strategy. We will discuss coping strategies in Section 3.

✓ *Reading Check*
What is the difference between a primary and secondary appraisal?

ENVIRONMENTAL STRESSORS

Environmental conditions such as noise may cause stress on the job, and these factors can have similar effects on the public at large. In fact, surveys have shown that Americans regard noise as one of the foremost irritants in their lives. Noise is particularly aggravating when it is loud, irregular, or uncontrollable. Constant exposure to unpleasant noise levels can lead to hearing loss and can interfere with learning. One study found that third and fourth graders in the flight path of a major airport showed significant increases in blood pressure and stress hormones, such as cortisol, compared to those without noise (Evans et al, 1998). People exposed to excessive noise at work have reported more headaches, nausea, and moodiness than others.

It was long assumed that crowding was an environmental stressor. Indeed, most people dislike certain high-density situations and can feel stress when other people get too close. Studies on crowding have found a relationship between high-rise apartments with many crowded people and aggression. Crowding itself,

Did You Know?

Personal Space The subway system in Tokyo hires people to push more people onto the subways during rush hours. It is an accepted part of Japanese culture to be able to function effectively within a small personal space. People in Middle Eastern societies also tend to have markedly small personal spaces compared to North Americans. As a result, they stand much closer in a conversation than is comfortable for most natives of the United States or Canada.

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Figure 15.3	The Social Readjustment Rating Scale				
Rank	Life Event	Mean Value	Rank	Life Event	Mean Value
1	Death of spouse	100	23	Son or daughter leaving home	29
2	Divorce	73	24	Trouble with in-laws	29
3	Marital separation	65	25	Outstanding personal achievement	28
4	Jail term	63			
5	Death of close family member	63	26	Spouse begin or stop work	26
6	Personal injury or illness	53	27	Begin or end school	26
7	Marriage	50	28	Change in living conditions	25
8	Fired at work	47	29	Revision of personal habits	24
9	Marital reconciliation	45	30	Trouble with boss	23
10	Retirement	45	31	Change in work hours or conditions	20
11	Change in health of family member	44			
			32	Change in residence	20
12	Pregnancy	40	33	Change in schools	20
13	Sex difficulties	39	34	Change in recreation	19
14	Gain of new family member	39	35	Change in church activities	19
15	Business readjustment	39	36	Change in social activities	18
16	Change in financial state	38	37	Mortgage or loans less than $10,000	17
17	Death of close friend	37			
18	Change to different line of work	36	38	Change in sleeping habits	16
19	Change in number of arguments with spouse	35	39	Change in number of family get-togethers	15
20	Mortgage over $10,000	31	40	Change in eating habits	15
21	Foreclosure of mortgage or loan	30	41	Vacation	13
			42	Christmas	12
22	Change in responsibilities at work	29	43	Minor violations of the law	11

Reprinted with permission from T.H. Holmes and R.H. Rahe, "The Social Readjustment Rating Scale," *Journal of Psychosomatic Research*, 1967, Table 3, p. 216. © 1967, Pergamon Press Ltd.

The SRRS lists 43 items that require individuals to make the most changes in their lives. Each number (mean value) refers to the expected impact that event would have on one's life. To obtain your score, add the numbers associated with each event you experienced in the past year. The total number reflects how much life change you have experienced. *Which of the life events have the greatest impact on an individual?*

however, is not the problem. The problems occur not when you are crowded but when you *feel* crowded (Taylor, 1991).

Jonathan Freedman (1975) has concluded that the effects of crowding depend on the situation. If the situation is pleasant, crowding makes people feel better; if the situation is unpleasant, crowding makes them feel worse. In other words, being packed together *intensifies* people's reactions, but it does not *create* them.

Life Changes and Stress

Major life changes—marriage, serious illness, a new job, moving away, and a death in the family—are important sources of stress. Common to most of these events is the separation of an individual from familiar friends,

What stresses teenagers?

The SRRS lists events considered stressful for adults. Assume your job is to develop a similar scale for teenagers. In what ways would your scale be different?

Procedure

1. First, develop a list of life events that you deem stressful to teenagers and rank them from 1 to 20, with 1 being the most stressful. Assign each event a value based on how much adjustment the event requires.

2. Provide a copy of your list to several friends and ask them to circle the events that they have experienced in the past year.

3. Ask each person to indicate any illnesses they have had in the past year.

Analysis

1. For each person, add up the values for the events they have circled. Note the illnesses they recorded.

2. Does your rating scale show any relationship between stressful events that teenagers face and illnesses they experience? Explain.

See the Skills Handbook, page 622, for an explanation of designing an experiment.

relations, or colleagues. Even marriage—a positive change—may involve breaking free from many longstanding ties.

Many stress researchers have concentrated on these life changes to determine how much stress they are likely to cause. Two of the foremost life-change researchers are Thomas H. Holmes and Richard H. Rahe (1967), who developed a scale to measure the effects of 43 common events, ranging from the death of a spouse to going on a vacation. Holmes and Rahe asked a cross section of the population to rate each of these events on a scale of 1 to 100, with marriage assigned a value of 50, on the basis of how much adjustment the event required. The figures they obtained form the basis of their Social Readjustment Rating Scale (SRRS), which is shown in Figure 15.3. Please note that the SRRS was created in 1967 and was based on the stress in men's lives (Holmes and Rahe's participants were male). It is also important to note that one life change can trigger others, thus greatly increasing the level of stress. Marriage, for example, may be accompanied by a change in financial status, a change in living conditions, and a change in residence—collectively much more stressful than any one source listed in Figure 15.3.

Rahe (1975) administered this scale to thousands of naval officers and enlisted men and found that the higher a man's score, the more likely he was to become physically ill. Men with scores below 150 tended to remain healthy, while about 70 percent of those with scores over 300 became sick. There are problems, however. Some of the items on the SRRS may result from illness, rather than cause it (Brett et al., 1990). Some of the items, such as marriage, are joyful events that are not related to illness (Taylor, 1991). Several studies suggest there is only a small relationship between stressful life events and illness (Brett et al., 1990). The scale also fails to measure stress caused by ongoing situations such as racism and poverty.

Hassles

In addition to the impact that major stressful events such as a divorce or a death in the family can have, psychologists have studied the effects that relatively minor, day-to-day stressors have on health. These more common stressors are called *hassles*. Examples of hassles include losing your car keys, being caught in a crowded elevator with a smoker, or being late for work or school because you were stuck in traffic (see Figure 15.4). Research has found a connection between hassles and health problems. It may be that hassles gradually weaken the body's

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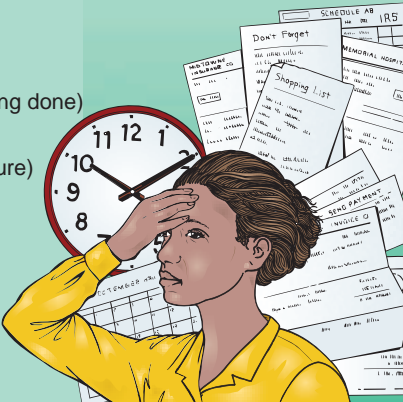defense system, making it harder to fight off potential health problems.

It has also been suggested that small, positive events, called *uplifts*, can protect against stress. Uplifts are things that make a person feel good, such as winning a tough chess match, going out to lunch with a good friend, or doing well on a semester exam. Some psychologists claim that uplifts can have the opposite effect of hassles; they can reduce stress and protect a person's health.

| Figure 15.4 | Some Daily Hassles |

We face frustrations every day—these are the daily hassles of life.
How can we combat the effects of hassles?

- Household duties (cleaning, cooking, shopping)
- Concerns about health
- Time pressures (not enough time to get something done)
- Environmental hassles (noise, pollution, crime)
- Financial hassles (paying bills, saving for the future)
- Worries about your job
- Concerns about your future
- Inner hassles (feelings of low self-esteem or loneliness)

Source: Lazarus et al., 1985.

Every one of us faces many daily hassles—traffic, arguments, car trouble, and so on. Could it be that the primary effects of stress are the accumulation of little things that just constantly seem to hassle us (Weinberger, Hiner, & Tierney, 1987)? Seventy-five married couples recorded their everyday hassles, and it turned out that those with more hassles had significantly more health problems such as sore throats and headaches, which they experienced later (DeLongis, Folkman, & Lazarus, 1988).

SECTION 1 Assessment

1. **Review the Vocabulary** What is the difference between eustress and distress? Should stress always be avoided? Explain.

2. **Visualize the Main Idea** Use a chart similar to the one below to list examples of the different conflict situations.

Conflict Situation	Example
Approach-approach conflict	

3. **Recall Information** Why are life changes sources of stress? What are other sources of stress?

4. **Think Critically** Many people have criticized the SRRS. Can you think of a better way to measure stress? Explain.

5. **Application Activity** Select a day and keep a log of your daily hassles and uplifts. At the end of the day analyze your general mood—were you in a bad or good mood? Did your hassles outnumber your uplifts? Briefly outline a strategy by which you pay more attention to uplifts and brighten your mood.

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Reactions to Stress

Reader's Guide

■ Main Idea
People react differently to life's stressors. These reactions may be beneficial or harmful.

■ Vocabulary
- anxiety
- anger
- fear
- social support

■ Objectives
- Give examples of the psychological, physical, and behavioral reactions to stress.
- Identify stages of the stress reaction.

EXPLORING PSYCHOLOGY

Beating the Odds

As a child, Joel Block couldn't reconcile who he knew he was with how he was perceived by his teachers.

"Every week, tests were given," he says. "The students were seated for the rest of the week according to their grades. I vied with another boy for the most weeks in The Dummy Row at the back. I remember vividly when he spit across the room at the 100 percent papers posted on the wall. The teacher yelled at him. He threw a chair in her direction and walked out. He never came back, so I held the record for the longest stay in The Dummy Row."

—**from** *Resilency: How to Bounce Back* **by Tessa Albert Warschaw and Dee Barlow, 1995**

A person who encounters a stressor that is intense or prolonged will react to it. There is a wide variety of stress reactions, and their effects range from beneficial to harmful. Joel encountered stress throughout his educational career. Faced with sitting in "The Dummy Row" and not performing well on exams, Joel probably reacted in various ways—acting out, pouting, and feeling bad. Eventually (in college) Joel discovered he had a natural aptitude for psychology. He became a straight-A student and earned a Ph.D. in psychology. His reactions to stress may have changed from negative to positive ones.

Many of the physiological responses to stress are inborn methods that probably evolved to cope with stress effectively. In addition, many responses to stress are automatic. Just as the body reacts to a cut by producing new tissue, it has methods to heal the wounds of stress—crying, for example.

Coping mechanisms that worked for our remote ancestors are not necessarily successful in our modern technological society. Human beings are often slow to give up anything that is well established. We are more likely to depend solely on these ancient stress responses than to make conscious attempts to modify them or adopt others that we now know are more appropriate to our modern lifestyle.

The ways in which different people react to stress vary considerably; each person's response is the product of many factors. Stress reactions may be physical, psychological, or behavioral, but these categories are not clear-cut. The human body is a *holistic* (integrated) organism, and our physical well-being affects how we think and behave. For example, poor mental health can trigger physical illness and so on.

FIGHT-OR-FLIGHT RESPONSE

Regardless of the stressor, the body reacts with immediate arousal. The adrenal glands are stimulated to produce: (a) hormones that increase the amount of blood sugar for extra energy; and (b) adrenaline, which causes rapid heartbeat and breathing and enables the body to use energy more quickly. These responses are designed to prepare a person for self-defense and are often called the *fight-or-flight response*. Wild animals experience the fight-or-flight response in reaction to attacks (see Figure 15.5). This response is needed for survival. Although you do not need to fight wild animals, the fight-or-flight response prepares you in the same way to face potentially danger-ous situations. However, if stress persists for a long time, the body's resources are used up. The person becomes exhausted and, in extreme cases, dies.

GENERAL ADAPTATION SYNDROME

Hans Selye (1956, 1976) identified three stages in the body's stress reaction: alarm, resistance, and exhaustion. Selye called this the *general adaptation syndrome*. In the *alarm* stage, the body mobilizes its fight-or-flight defenses; heart-beat and breathing quicken, muscles tense, the pupils dilate, and hormones that sustain these reactions are secreted. The person becomes exceptionally alert and sensitive to stimuli in the environment and tries to keep a firm grip on his or her emotions. For example, a hiker who confronts a rattlesnake on a mountain trail freezes in his tracks, is suddenly aware of every sound around him, and tries not to panic. If the alarm reaction is insufficient to deal with the stressor, the person may develop symptoms such as anxiety.

In the *resistance* stage, the person often finds means to cope with the stressor and to ward off, superficially at least, adverse reactions. Thus an airline passenger who recovers from the shock and frustration of losing her luggage may tell

Figure 15.5 **Fight-or-Flight Reaction**

When an animal senses possible danger, its endocrine system directs great sources of energy to its muscles and brain, preparing the creature for rapid action. You react the same way. *How is stress necessary for survival?*

Figure 15.6   **Stressful Situations**

Our reactions to various events depend on our personalities and on the severity of the event itself. The family facing the destruction of their home, the high school senior waiting for her college admissions interview, and the man coping with a terminal illness are all experiencing various levels of stress. *What happens during the resistance stage of stress?*

herself to keep calm when reporting its disappearance to airline officials, calling her insurance company, and so on. At this stage, the person may suffer psychosomatic symptoms, which result from strain that he or she pretends is nonexistent. (Psychosomatic symptoms are real, physical symptoms that are caused by stress or tension.)

If exposure to the stressor continues, the individual reaches the stage of *exhaustion.* At this point, the adrenal and other glands involved in the fight-or-flight response have been taxed to their limit and become unable to secrete hormones. The individual reaches the breaking point. He or she becomes exhausted and disoriented and may develop delusions—of persecution, for example—in an effort to retain some type of coping strategy. The problem is that the very responses that were good for immediate resistance to stress, such as reducing digestion and boosting blood pressure, are detrimental in the long run. Think about the importance of control over environmental stressors in keeping stress at bay discussed earlier. Some investigators have found that assembly-line workers in repetitive jobs over which they exercise very little control are likely to show the effects of stress. It is not surprising that the corporate executives running the company, who can control their own destiny to some degree, are less likely to show such stress (Karasek & Theorell, 1990).

EMOTIONAL AND COGNITIVE RESPONSES

Short-term psychological stress reactions may be either emotional or cognitive. The most common response to a sudden and powerful stressor is **anxiety,** which is a feeling of an imminent but unclear threat. An employee whose boss passes by in the hall without saying hello may develop anxiety about her future on the job. **Anger** is likely to result from frustration. A student who does not make the lacrosse team may fly into a rage when he puts his favorite CD in the player and it skips. **Fear** is usually the reaction when a stressor involves real danger—a fire, for example. Fear directs the individual to withdraw or flee, but in severe cases he or she may panic and be unable to act. Common examples of short-term emotional stress reactions are overreacting to minor irritations, getting

anxiety: a vague, generalized apprehension or feeling of danger

anger: the irate reaction likely to result from frustration

fear: the usual reaction when a stressor involves real or imagined danger

no joy from daily pleasures, and doubting one's own abilities, while feeling tense, short-tempered, and more anxious.

Cognitive reactions to stress include difficulty in concentrating or thinking clearly, recurring thoughts, and poor decision making. A student who must give an oral presentation may worry about it but find himself unable to prepare for it. Another student wants to surprise her father with the news that she has been admitted to her first-choice college, but she cannot recall where his office is. Another type of cognitive stress reaction is unjustified suspicion or distrust of others.

Continued frustration can lead to burnout. People feel *burned out* when they feel they are incapable of doing their job well and they are physically worn out and emotionally exhausted from giving too much time or energy to a project while not receiving sufficient gratification. Pro-

D r. Deepak Chopra is a major figure in the trend of holistic healing. *Holistic healing* refers to the idea that a person's mind and body are not independent matters; they function together as a unit. Instead of prescribing drugs to heal patients, Chopra believes that healing is a process that involves integrating the mind and the body.

A writer of both fiction and nonfiction, Chopra argues that what we think and feel can actually change our biology. He believes that by finding an inner peace and by relieving the stress of living, we can become healthy in mind and body.

Chopra blends Western medicine with the techniques of an ancient health care called Ayurveda. The basic idea behind Ayurveda is that a person's physical health is achieved through the integration of body, mind, and spirit. Chopra is a popular writer and adviser because he helps many people get past the hassles of daily existence and find pleasure in life.

longed stress, such as burnout, in combination with other factors, adversely affects mental health. It does not necessarily cause mental illness, but it may contribute to the severity of mental illness. There is an increased likelihood of developing a psychological disorder following a major life change, for example. Among those who attempt suicide and those with depression or anxiety-based disorders, there seems to be quite a definite link between stress and subsequent symptoms.

In Chapter 16, we will discuss a psychological disorder called *post-traumatic stress disorder*. This is a condition in which a person who has experienced a traumatic event feels severe and long-lasting after-effects. This disorder is common among veterans of military combat and survivors of acts of terrorism, natural disasters such as floods and tornadoes, other catastrophes such as plane crashes, and human aggression such as rape and assault (see Figure 15.7). The event that triggers

the disorder overwhelms a person's normal sense of reality and ability to cope. The high stress levels associated with this disorder could result in a range of psychosomatic symptoms, such as insomnia, high blood pressure, and stomach problems.

BEHAVIORAL REACTIONS

There are many short-term behavioral changes that result from stress. A person may develop nervous habits (trembling or pacing, for example), gulp meals, smoke or drink more, take drugs, or feel tired for no reason. That person may develop a shaky voice, tremors, or strained expressions. There may be changes in his or her posture. He or she may temporarily lose interest in eating, grooming, bathing, and so on. Aggression toward family members is another way some people react to stress.

Some behavioral reactions are positive, however. In a tornado, for example, some people will risk their lives to save or help others. Such stressors often create attitudes of cooperation that override individual differences and disagreements.

Escape is another behavioral stress reaction, and it is often the best way to deal with frustration. For example, a woman who is on a bus that is caught in snarled traffic may get off and walk to her destination.

| Figure 15.7 | How Will This Affect Them? |

In September 2001, terrorists flew two hijacked airplanes into the World Trade Center in New York City. Many survivors may suffer from the effects of post-traumatic stress disorder. *What is post-traumatic stress disorder, and whom does it affect?*

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Figure 15.8 **The Fight-or-Flight Response**

Our fight-or-flight response is triggered by potentially dangerous or stressful situations, such as a scare in the middle of the night or giving a speech in public. As soon as you feel threatened, your body prepares itself for action. *Why do our pupils dilate during the fight-or-flight reaction? Why do our muscles tense?*

1. You appraise a situation as physically or psychologically threatening.

2. Your thoughts activate the hypothalamus (in the brain). The hypothalamus stimulates the pituitary gland to secrete ACTH (adrenocorticotropic hormone)—a stress-fighting hormone. The hypothalamus also activates the sympathetic division of the autonomic nervous system.

3. The sympathetic nervous system stimulates a variety of physical responses to prepare the body for the stressful situation—this is the fight-or-flight response. (The parasympathetic nervous system later returns the body to its normal state.)

Fight-or-Flight Response

- heart rate increases
- blood pressure increases
- respiration becomes rapid and shallow
- liver releases stores of glycogen, raising blood sugar level
- digestive system shuts down and blood reroutes to muscles
- pupils dilate
- hair stands up on end
- excitatory hormones secreted (epinephrine and norepinephrine)
- muscles tense

While many people can endure great amounts of stress without marked behavioral responses, others may be seriously affected. Severe stress can be significant to the development of escapist personality styles—alcoholism, drug addiction, chronic unemployment, and attempted suicide, for example. Stress has also been noted as a contributing cause of aggressive personalities, delinquency, and criminal behavior.

PHYSICAL REACTIONS

Why do the daily hassles of life and major life changes sometimes make people ill? Your thoughts and emotions can produce physiological changes in your body. For example, some people develop *psychosomatic symptoms* as a result of stress. As mentioned earlier, psychosomatic symptoms are real, physical symptoms that are caused by stress or tension. They can include headaches, stomachaches, and muscle pains.

The physiological fight-or-flight response—accelerated heart rate and so on—is the body's immediate reaction to stress. This response is geared to prepare human beings to fight or run from an enemy such as a

Figure 15.9　Attacking Pathogens

An immune system cell attacks a foreign invader—a bacteria cell. When the immune system is not suppressed by stress, for instance, it destroys pathogens that enter the body. *What effect does the fight-or-flight response have on your immune system?*
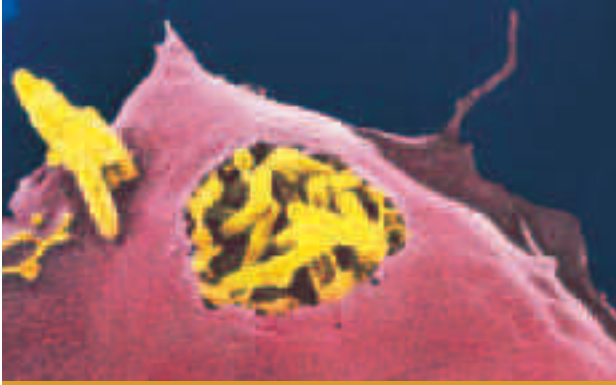
savage animal or band of warriors, and it was probably useful earlier in human history. We cannot deal with most modern stressors—a financial problem, for instance—in this manner, and physical responses to stress are now generally inappropriate. In fact, prolonged physical arousal can cause health problems, including difficulty in breathing, insomnia, migraine headaches, urinary and bowel irregularities, muscle aches, sweating, and dryness of mouth.

Stress is certainly a contributing cause of illness. We have already discussed the study by Rahe (1975) that linked low scores on the Holmes-Rahe scale to reports of good health for the following year, while high scores were linked with becoming sick in the following year.

Emotional stress clearly is related to such illnesses as peptic ulcers, hypertension, certain kinds of arthritis, asthma, and heart disease. Those who work in high-stress occupations may pay a high price. Air-traffic controllers, for example, juggle the lives of hundreds of people on air routes where a minor error can mean mass death. They are said to suffer from the highest incidence of peptic ulcers of any professional group (Cobb & Rose, 1973). Further, controllers at busy, high-stress airports have more ulcers than those at low-stress airports (Ballieux, 1984). Similarly, a student may come down with the flu on the day before an important exam.

Stress can be at least partly responsible for almost *any* disease, as shown by the scope of illness associated with high Holmes-Rahe scores. Stress can contribute to disease in several ways. Sometimes it can be the direct cause of illness. A migraine headache, for example, is usually a physical reaction to stress. Stress may also contribute indirectly to illness. It reduces our resistance to infectious disease by tampering with the immune defense system (O'Leary, 1990). The *immune system* is your body's natural defense system against infection.

Have you ever caught a cold right in the middle of final exams week? Why did this happen? When you experience stressful situations for a long period of time, it decreases your immune system's ability to cope. Your body is constantly exposed to millions of pathogens (disease-causing bacteria or viruses). When these pathogens enter your body, they attack your body cells and use these cells to grow and multiply. The end result is an infection. Most of the time your body manages to stay free of infection because of the immune system. However, recall the third stage of Selye's general adaptation syndrome—exhaustion. When your body is continually involved in the fight-or-flight response, it reaches the breaking point. You become exhausted, and the immune system is suppressed. Your body becomes more susceptible to the diseases and infections caused by the pathogens that continually assault it.

FACTORS INFLUENCING REACTIONS TO STRESS

People's reactions to stress vary considerably. These reactions help people meet challenges in life, but they may also determine the amount of stress one feels.

Personality Differences

In some cases, an individual's personality may make him or her more vulnerable to stress. Some psychologists have suggested that people who exhibit a behavior pattern they call Type A are very likely to have coronary artery disease, often followed by heart attacks, in their thirties and forties. Those who do not have this pattern (Type B people) almost never have heart attacks before the age of 70 (Friedman & Rosenman, 1974).

Whereas Type B people are generally relaxed, patient, and do not easily become angry, the Type A person's body is in a chronic state of stress with an almost constant flow of adrenaline into the bloodstream. This adrenaline apparently interacts with cholesterol or other chemical agents to block the coronary arteries that lead to the heart. It may be that high levels of adrenaline prevent the normal chemical breakdown of cholesterol in the blood.

Reading Check
What is a Type A personality?

Type A people are always prepared for fight or flight. They have a great deal of free-floating hostility, that is, anger that has no real object or focus. They are extremely irritable, and one of the things that irritates Type A people most is delay of any kind. They become impatient waiting in line, tend to move and eat rapidly, often try to do two or three things at once (such as reading while eating), and feel guilty when they are not actively doing something. They are also extremely competitive. In short, Type A people are always struggling—with time, other people, or both. Note that this describes an extreme version of the Type A personality. Most people respond to the world with Type A behavior at times, but they are not in a constant state of stress. It is important to note that psychologists disagree about both the definition of Type A personality and its relation to heart disease.

Another personality trait that can affect the strength of a stress reaction is emotional expressiveness. Some research suggests that people who neither express nor admit to strong feelings of despair,

Psychology and You

Road Rage

You may have witnessed road rage, or the inability to handle frustrations while driving. Going beyond aggressive driving, road rage involves a desire to retaliate and punish another driver. It may result in criminal behavior, such as violence or threatened violence. Psychologists believe road rage reflects a driver's anger and lack of self-control (Rathbone & Huckabee, 1999). It has become a national epidemic, with at least 218 people killed and 12,610 injured as a result of road rage between 1990 and 1996 (AAA Foundation for Traffic Safety, 1997).

What should you do to avoid road rage?
- Do not retaliate against another driver.
- Before you react to another driver, consider if this episode is worth risking your life.
- Be polite and courteous, even when others are not.
- If you are harassed by another driver and being followed, go to the nearest police station.
- Slow down and relax.
- Allow enough travel time.
- Remember that although you cannot control the behavior of other drivers, you can control your own behavior. Be calm and drive safely.

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depression, and anger are more likely to develop cancer than those who can give vent to their emotions. Some investigators have proposed a cancer-prone behavior pattern. People who deny their negative emotions tend to express feelings less freely, show a high tendency toward social conformity, and have a greater risk of getting cancer (Baltrusch, Stangel, & Titze, 1991). Negative life events such as those measured by the Holmes and Rahe scale do seem to be related to an increased likelihood of cancer in later life (Forsen, 1991).

Perceived Control Over Stressors

The accepted view today is that physical disorders are more likely when we do not have control over stressors. Most evidence to support this theory comes from experiments on animals. J.M. Weiss (1972), for example, gave two groups of rats identical electric shocks. In one group, a rat could avoid the shock by touching its nose to a panel, while the other group had no control over the shocks. The group that could regulate the shocks developed far fewer ulcers than those that could not.

Subsequent experiments showed that feedback is also an important factor. Animals that responded to avoid shock and then heard a tone to signal that they had done the right thing suffered fewer ulcers than those that responded to avoid the shock but were given no feedback.

Weiss (1971) found that lack of feedback could harm human beings as well. His research showed that people develop ulcers when they have to make large numbers of responses but receive no feedback about their effectiveness.

So, in general, people prefer to have predictable stress over unpredictable stress. For example, when you know that a teacher has certain preferences in grading essay questions, it makes writing the paper a little easier. If you do not have any idea how the teacher plans to grade the essay, the writing is much harder. In one study (Matthews et al., 1989), psychologists exposed people to predictable and unpredictable noise, concluding that people may prefer predictable noise because it allows us to prepare and thus cope better. Our physical and psychological well-being is profoundly influenced by the degree to which we feel a sense of control over our lives (Rodin & Salovey, 1989).

Social Support

Much research has pointed to the importance of social support in helping people work to decrease the effects of stressful situations. Social support can buffer an individual from the effects of stress. Sidney Cobb (1976) has defined **social support** as information that leads someone to believe that he or she is cared for, loved,

social support: information that leads someone to believe that he or she is cared for, loved, respected, and part of a network of communication and mutual obligation

Figure 15.10 **Stressful Jobs**

Some work, such as air traffic control, construction, and rescue operations, involves stress because of the job itself. People in these fields must deal with stress over which they have no control. *How does your perceived control over stressors affect your stress levels?*

respected, and part of a network of communication and mutual obligation. He has found that social support can reduce both the likelihood and the severity of stress-related diseases—a finding often replicated (Cohen, 1988). Social support benefits have been documented for cancer, crowding, military combat, natural disasters, and AIDS.

Social groups seem to offer at least four kinds of support. First, *emotional* support involves concerned listening, which forms a basis for offering affection and concern and bolstering the stressed person's self-confidence. Second, *appraisal* support is interactive. The listener feeds back information and probing questions to the stressed person as an aid in sorting out, understanding, and planning to deal with the sources of the stress. *Informational* support emerges from appraisal support. Here the stressed person responds to what he or she has learned and evaluates the manner in which he or she is dealing with stressors. Finally, *instrumental* support represents active, positive support in the form of direct help such as money or living quarters. Yet there is evidence that some friends, despite the best intentions, may be more of a strain than a help in a crisis (Rook, 1990).

Some sources of social support can be especially helpful. Studies of male blue-collar workers have reported that social support from wives and supervisors counteracted the health consequences of stress more effectively than did support from coworkers, friends, or relatives.

More About...

Gender Differences and Stress

Who has higher stress levels—men or women? Women in the United States are more likely than men to live in poverty, to experience discrimination, and to be sexually or physically abused. Also, some psychologists argue that the traditional roles of women as primary caretakers and wives place them in positions in which anxiety and depression are more likely. For example, mothers are often made to feel responsible for events that they have little control over, such as the illness of a child or accidents in the home. Taking a job outside the home often reduces psychological stress for women. Studies show that as more and more women take jobs outside the home, the stress and anxiety experienced by the different genders is becoming equalized (Kessler & McRae, 1981).

SECTION 2 Assessment

1. **Review the Vocabulary** How does social support reduce stress?

General Adaptation Syndrome

2. **Visualize the Main Idea** Use a graphic organizer similar to the one above to describe the stages of the general adaptation syndrome.

3. **Recall Information** What is the fight-or-flight response? Why is it necessary for animals? For humans?

4. **Think Critically** Would you feel more stressed about a scheduled exam or a pop quiz? Why?

5. **Application Activity** Measure a friend's heart rate. Then have the person think of a terrifying situation. Did the heart rate increase? Choose another person and measure his or her heart rate. Have the person think of a peaceful, calming situation. Did the heart rate decrease? Summarize your findings.

Coping With Stress

Reader's Guide

■ Main Idea
People deal with stress by employing defensive and active coping strategies.

■ Vocabulary
- cognitive appraisal
- denial
- intellectualization
- progressive relaxation
- meditation
- biofeedback

■ Objectives
- Explain defensive strategies of coping with stress.
- Describe active strategies of coping with stress.

EXPLORING PSYCHOLOGY

How Do You View Life?

There were two women who had rose gardens. One would awaken every morning, look out into the garden and groan: "Oh, there are so many weeds in my garden. It is going to take me forever to get rid of them!"

The other woman calmly put on her gardening gloves and hummed to herself as she methodically removed the weeds surrounding her roses.

"Oh, my beautiful roses," she said. "How lovely you look and smell!"

—from *Natural Stress-Busters for the Whole Family* by Lynn Allison, 1993

Stress, like those weeds in the women's rose gardens, can spring up and choke you—if you let it. Stress can smother your enjoyment of life and make you miserable. If you focus on the positive, however—the delightful blooming roses—the weeds need not be a source of stress but instead may be merely obstacles to overcome. Coping with stress is an attempt to gain control over a part of one's life. It is an attempt to master, control, reduce, and tolerate the stressors in one's life. People cope with stress in many ways. There is not just one way that is best for all people in all situations. People also have individualized coping styles. People know what works best for them. They have come to rely on what has worked in the past. What is your way of handling difficult situations?

Coping strategies may not always be healthy ways to adapt. Sometimes when we are under stress, we act in ways that are not in our best interests. There are methods that people use that hurt or harm others. These are known as maladaptive ways of coping.

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PSYCHOLOGICAL COPING STRATEGIES

Our interpretation or evaluation of an event—a process psychologists call **cognitive appraisal**—helps determine its stress impact. For example, suppose you have a huge exam scheduled for next week. The way you appraise—or evaluate—the situation will determine the level of stress you feel. If you appraise the situation as a challenge that you can meet, you have positive feelings and your stress level is reduced. If you think of the situation as a threat, however, your negative feelings will increase your stress level. Drugs can affect cognitive appraisal. For example, drinking may help convince a man who has been fired that his troubles are not serious or that he will enjoy unemployment or that getting drunk is the best solution for the time being.

cognitive appraisal: the interpretation of an event that helps determine its stress impact

Defensive Coping Strategies

We can also try to influence our cognitive appraisals by means of defensive coping strategies, and stress reactions are more likely to occur when these strategies fail. Common defense mechanisms are **denial,** in which a person decides that the event is not really a stressor, and **intellectualization,** in which the person watches and analyzes the situation from an emotionally detached standpoint.

denial: a coping mechanism in which a person decides that the event is not really a stressor

intellectualization: a coping mechanism in which the person analyzes a situation from an emotionally detached viewpoint

Figure 15.11	Types of Coping Strategies

The two major ways that people deal with stress are by either focusing on it and trying to reduce it or ignoring the stress completely. *Which of the strategies listed here involve an active attempt to reduce stress?*

Coping strategy	Example
Active coping	I take additional action to try to get rid of the problem.
Planning	I come up with a strategy about what to do.
Suppression of competing activities	I put aside other activities to concentrate on this.
Restraint coping	I force myself to wait for the right time to do something.
Seeking social support	I talk to someone about how I feel.
Positive reinterpretation and growth	I look for the good in what is happening.
Acceptance	I learn to live with it.
Turning to religion	I seek God's help.
Venting of emotions	I get upset and let my emotions out.
Denial	I refuse to believe that it has happened.
Behavioral disengagement	I give up the attempt to get what I want.
Mental disengagement	I turn to work or other substitute activities to take my mind off things.
Alcohol-drug disengagement	I drink alcohol or take drugs to think about it less.
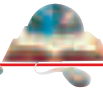
Both denial and intellectualization can prevent physical reactions to stress. In one study (Lazarus et al., 1965), three groups of participants viewed a film that showed gruesome accidents at a sawmill. One group was told that the injuries were not real but were staged by the actors (denial). A second group was advised that they were seeing an educational film about the importance of safety measures (intellectualization). The third group was told nothing. The levels of physical reaction were lower in the first two groups than in the third. Thus, if a person does not evaluate an event or situation as stressful, a stress reaction will not occur. Yet that is really failing to deal with what could be a legitimate stressor (Holahan & Moos, 1985).

Active Coping Strategies

By appraising a situation as a challenge and not a threat, we can adopt an active coping strategy for dealing with stress (see Figure 15.11). Active coping strategies involve changing our environment or modifying a situation to remove stressors or reduce the level of stress.

Hardiness   Some people acquire personality traits that are, in effect, active coping strategies. *Hardiness* refers to the personality traits of control, commitment, and challenge that help us reduce the stress we feel. *Control* involves feeling that we have the ability to affect the outcome of the situation. *Commitment* refers to establishing and pursuing our goals, while *challenge* means that we actively confront and solve problems instead of feeling threatened and powerless because of them. For instance, you may demonstrate hardiness if, when confronted with the assignment of giving a speech in public, you approach the assignment as a positive experience (challenge), believe that you can prepare and give a good speech (control), and prepare for and practice your speech (commitment).

Controlling Stressful Situations   There are several ways in which we can control our exposure to stressful events and thereby reduce levels of stress. As noted earlier, escape or withdrawal, when possible, can be an effective coping strategy. A young woman who is not enjoying herself at a party, for example, can leave. When avoiding an event is not practical, controlling its timing may be helpful; you can try to space out stress-producing events. A couple who is planning to have a baby in the summer, for instance, may postpone looking for a new house.

Problem Solving   Sometimes neither avoiding nor spacing events is possible. A high school senior may face a deadline for a college application and an important exam on the same day. In cases like this, problem solving or confronting the matter head-on can be the best way to cope. Regarding frustrations or conflicts as problems to be solved means the situation becomes a positive challenge rather than a negative setback. Problem solving involves a rational analysis of the situation that will lead to an appropriate decision. The student in our example may map out the remaining days and allocate specific times to work on the application and other times to study for the test. He may also decide that he can gain

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more time for these activities by skipping band practice or postponing a date. Problem solving is a very healthy strategy that tends to sharpen insights and attention to detail and develop flexibility.

Explanatory Style   Martin Seligman (1991) describes two very different styles of thinking. The *optimist* typically puts the best face on any set of events. Following a loss, an optimistic quarterback will suggest, "What's done is done. Start thinking about next week!" The *pessimist* always sees the dark side. After becoming ill and missing the senior prom, the pessimist will say, "This always happens to me! I never get to . . ." Seligman studied baseball players, grouping them as optimists or pessimists from their quotes in the sports pages. He found that the pessimists were much more likely to die at a younger age.

Figure 15.12	Irrational Assumptions That Can Cause Stress
Irrational Assumptions	**Constructive Alternative**
1. Everyone must approve of what I do.	I should concentrate on my own self-respect.
2. I must do everything to perfection.	I am imperfect; I have limitations, and that's okay.
3. Things must be the way I want them to be.	There are some situations that I cannot control. It's better to concentrate on matters that I can control.
4. Unhappiness is inevitable.	Unhappiness is the result of how I look at things.
5. I need someone stronger than I am to rely on.	I must rely on myself and act independently when necessary.
6. The world should be fair and just.	Although I can try to be fair and just in my behavior, sometimes the world is not fair.
7. I should worry about dangerous and fearsome things.	I realize that I can face what I consider fearful and try to render it nondangerous.
8. There's always a perfect solution out there that I should find.	Life is filled with probability and chance. I can enjoy life even though sometimes no perfect solution to a problem exists.
9. I should not question authorities or social beliefs.	It's better to evaluate situations and beliefs for myself.
10. It's better to avoid difficult and stressful situations.	There is no "easy way out"; I need to face my problems and work on solutions.

Source: Ellis, 1986.

Some people hold self-defeating, irrational beliefs that cause stress and prevent them from adequately adjusting to life's challenges. *How might recognizing your irrational assumptions help you better cope with stress?*

progressive relaxation: lying down comfortably and tensing and releasing the tension in each major muscle group in turn

meditation: a focusing of attention with the goal of clearing one's mind and producing an "inner peace"

biofeedback: the process of learning to control bodily states by monitoring the states to be controlled

Relaxation   Many techniques of relaxation have been developed especially to cope with stress. More than half a century ago, Dr. Edmond Jacobson devised a method called **progressive relaxation** to reduce muscle tension. This involves lying down comfortably and learning how to tense and then relax each major muscle group in turn. Jacobson later added exercises for mental relaxation in which a person conjures up images and then lets them go. This is known as **meditation** and is a relaxation technique that has been shown to counteract both physical and psychological responses to stress (see Chapter 7). Experienced meditators quickly reach an alpha-wave mental state related to that of Stage I sleep and are able to resume their activities feeling refreshed.
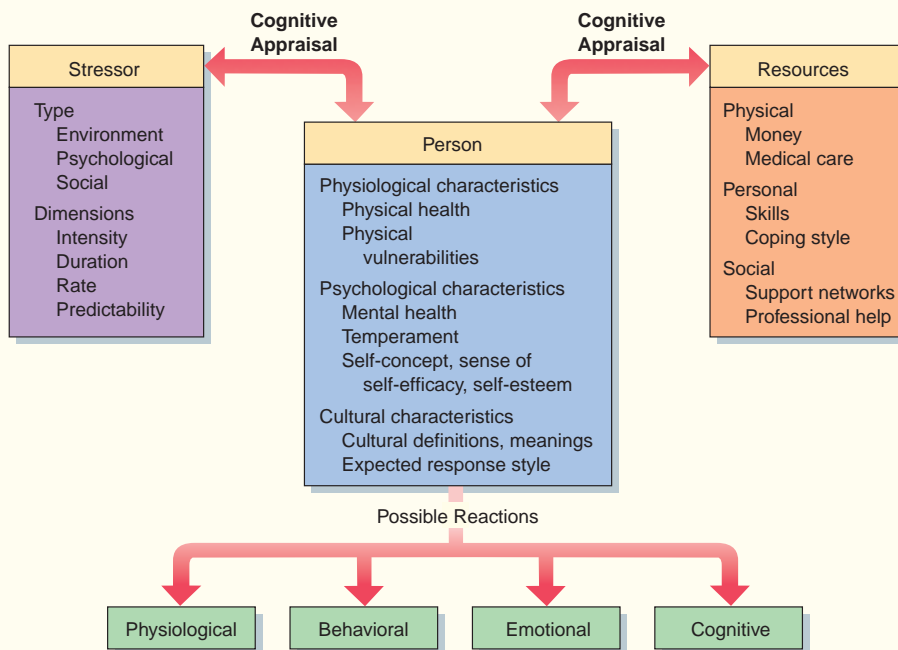
Biofeedback   As explained in Chapter 7, **biofeedback** is a technique for bringing specific body processes, such as blood pressure and muscle tension, under a person's conscious control. The participant is hooked up to an electronic device that measures the process he or she wants to regulate and plays that process back in the form of either sounds or visual patterns. This feedback enables many, although not all, people to learn to control various bodily responses. Biofeedback has been used most successfully to train tense people to relax.

Figure 15.13	Stress: A Summary Model

Your evaluation of a situation interacts with the stressor and what you perceive to be the available resources to determine how you react to the stressor. You respond to stress on several levels. *What are the levels of possible reactions to stress? Give an example for each level.*

Source: Zimbardo and Gerrig, 1999.

Humor   Stress management experts often advise clients to try to maintain a sense of humor during difficult situations. Laughing actually releases the tension of pent-up feelings and can help you keep a proper perspective of the situation. In fact, people often resort to humor in very stressful situations. For example, a person may break out in hysterical laughter during the trying times following the death of a loved one. This laughter helps the individual deal with the intense emotional pain of a loss.

Exercise   Physical exercise is another constructive way to reduce stress. It stimulates and provides

an outlet for physical arousal, and it may burn off stress hormones. Continuous rhythmic exercise—running or swimming, for example—is not only effective against stress but also ideal for respiratory and cardiovascular fitness. David Holmes and colleagues have performed experiments that indicate aerobic exercise reduces cardiovascular response and arousal following both stressful life events and immediate stress (Roth & Holmes, 1987; Holmes & Roth, 1988).

Support Groups and Professional Help   We have discussed the positive role that social support plays in reducing stress. Groups that operate beyond ordinary personal networks, including Alcoholics Anonymous, Weight Watchers, and crisis prevention centers, can help people with specific stress-related problems. Professionals such as psychologists, doctors, social workers, and ministers can also be consulted.

Training   A new, unfamiliar, or dangerous situation can be stressful because we are unsure we can deal with it. Training to prepare for such a situation can ease the stress. For instance, a person who is nervous about going to a friend's country club because she does not play tennis might take a few tennis lessons. Exposure to moderate stressors in a relatively safe but challenging environment allows a person to gain experience and confidence in coping.

Improving Interpersonal Skills   Much of the stress we undergo results from interpersonal relations. Developing skills in dealing with others—family, friends, and coworkers—is thus one of the best ways to manage stress. There are several advantages to being able to interact well with others—increased self-confidence and self-esteem, less chance of loneliness or interpersonal conflict, and development of social support systems.

Reading Check
How can the use of humor reduce stress?

SECTION 3 Assessment

1. **Review the Vocabulary**   How does your cognitive appraisal of an event determine your stress level?

2. **Visualize the Main Idea**   Use a graphic organizer similar to the one below to list several active coping strategies for dealing with stress.

Active Coping Strategies

3. **Recall Information**   How do people use denial and intellectualization to cope with stress?

4. **Think Critically**   Why would writing about a stressful experience help you better cope with it?
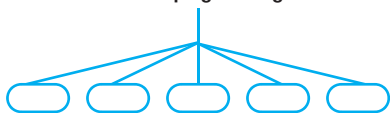
5. **Application Activity**   Think of a stressful situation that you have recently experienced. How did you cope with it? Describe and analyze your coping mechanism as a psychologist would in a brief report.

The Illusion of Stress

Period of Study: 1983, 1988

Introduction: In psychology, the term *illusions* is usually considered to be related to a psychosis, or a major psychological disorder in which a person's ability to think, respond emotionally, remember, communicate, or interpret reality is noticeably impaired. Although everyone experiences some perceptual illusions, those diagnosed with a schizophrenic-type disorder often experience bizarre illusions, hallucinations, or delusions. However, Shelley Taylor in 1983 and Taylor with Jonathon Brown in 1988 discovered that illusions might actually promote healthy living. These illusions are voluntary, unlike those associated with schizophrenia. Individuals use illusions to maintain optimistic, hopeful outlooks on situations that otherwise could cause an unhealthy amount of stress. Illusions such as these work for cancer sufferers, AIDS patients, individuals with physical injuries or mental disabilities, and people suffering from other serious illnesses.

Hypothesis: Taylor described illusions as beliefs that were based on "an overly optimistic view of the facts or that had no factual basis at all" (1983). Her hypothesis stated that women suffering from breast cancer who had illusions, by her definition, would cope better with stress from disfiguring surgeries, painful treatments, and the possibilities of death than would the same women who did not have these illusions. The women who would have illusions would benefit from placing themselves in hopeful situations. In addition to studying women with breast cancer, Taylor and Brown researched the illusion hypothesis further by expanding the population studied in 1988.

Method: Taylor conducted a two-year study on women diagnosed with breast cancer. Five years later, Taylor and Brown conducted their research. Both studies consisted of a control group who did not use optimistic illusions and an experimental group of those individuals who did. Once Taylor and Brown established the two groups, they assessed the emotions the participants displayed concerning their conditions, expectations for the future, how they maintained social relationships during their illnesses, and other measures focusing on self-esteem.

Results: Taylor and Brown found that the participants who used illusions to maintain an optimistic view were cheerful, had more friends, and were usually more persistent, creative, and productive than those without such positive illusions (Morris & Maisto, 2000). The positive outlooks these people hold create confidence and the motivation to pursue their interests. Thus, according to Taylor and Brown's findings, the use of illusions can reduce the occurrence of stress in situations that may otherwise be extremely stressful.

Extreme caution, though, should be taken when a person uses illusions. As mentioned earlier, illusions are often associated with psychological disorders. Not everyone can separate reality from fantasy. Some people who may use illusions by Taylor's definition could become fixed in their fantasies and lose the capability of returning to the real world. The use of illusions to reduce or eliminate stress not only requires a vivid imagination but also a strong mind.

Analyzing the Case Study

1. How is the use of illusions related to stress?

2. How did Taylor and Brown test their hypothesis?

3. Critical Thinking   When do you think the use of illusions crosses the line from healthy to unhealthy living?

Stress in Your Life

Reader's Guide

■ Main Idea

For many people, college and work involve adjustment and stress.

■ Vocabulary

- autonomy
- developmental friendship
- resynthesis
- career
- comparable worth

■ Objectives

- Identify some of the issues related to adjustment to college life.
- Describe issues related to starting a first job.

EXPLORING PSYCHOLOGY

Are You Ready for Independence?

I thought when I was a senior [in high school] that I was really independent. You know what I mean: I kept my own schedule, had a job and car, decided when I needed to do homework or not. But you and Dad were always there to back me up. If I didn't know how to do something, I could walk into the kitchen and ask you. Now I have to figure everything out by myself. *That's* independence.

–from *Almost Grown: Launching Your Child From High School to College* **by Patricia Pasick, 1998**

The quotation above is what a first-year college student at Tufts University told his mother during parents' weekend. Families do not stay together forever. Children grow up and leave home to set up new households and start their own families. This period of life signifies a major life change for both teens and parents. This life change involves dealing with stress.

Growing up involves gaining a sense of **autonomy**—the ability to take care of oneself—and independence. Each person learns to make decisions, develop a value system, be responsible, and to care for himself or herself. Growing up is a process that starts long before an individual leaves home to live as a self-sufficient adult. Yet ultimately, it means separating from the family, both physically and emotionally.

autonomy: ability to take care of oneself and make one's own decisions

CHOOSING COLLEGE

For millions of young Americans, college is one of the first big steps toward this separation. As college students individuals are freer than they ever have been or may ever be again. This can be a personally liberating

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and stimulating experience, but it also requires adjustment. The emotional upheaval many first-year college students feel has been called "college shock."

Peter Madison (1969) spent nearly 10 years collecting data on how several hundred students adjusted to college. Each student provided a detailed life history and kept a weekly journal. Madison had classmates write descriptions of some of the students, and he tested and retested some at various points in their college careers.

Madison found that many students approach college with high, and often unrealistic, aspirations. For example, Bridget wanted to be an astronomer. She liked the idea of being different, and she considered astronomy an elite and adventuresome field, but she did not know how many long, hard, unadventuresome hours she would have to spend studying mathematics to fulfill her dream. Keith planned to become a physician for what he described as humanitarian reasons. He had never thought about working in a hospital or watching people sicken and die, though.

These two students, like many others, based their goals on fantasy. They did not have the experience to make realistic choices or the maturity to evaluate their own motives and needs. Their experiences during the first semesters of college led them to change both their minds and their images of themselves.

Sources of Change

How does going to college stimulate change? First, college may challenge the identity a student has established in high school. A top high school student may go to a top college. Nearly everyone there is as bright and competitive as she is. Within a matter of weeks the student's identity as a star pupil has evaporated, and she may have to struggle to get average grades. Young people who excelled in sports, drama, or student politics may have similar experiences. The high school student-body president discovers two other high school presidents in his dormitory alone.

Second, whether students come from small towns or big cities, they are likely to encounter greater diversity in college than they ever have before— diversity in religious and ethnic backgrounds, family income levels, and attitudes. A student who develops a close relationship with another, then discovers that the person holds beliefs or engages in behavior he or she has always considered immoral, may be badly shaken. You are faced with a choice—abandon deeply held values or give up an important friendship. Madison (1969) calls close relationships between individuals who force each other to reexamine their basic assumptions **developmental friendships.** He found that developmental friendships in particular and student culture in general have more impact on college students than professors do.

developmental friendship: friends force one another to reexamine their basic assumptions and perhaps adopt new ideas and beliefs

However, if instructors and assigned books clarify thoughts that have been brewing in a student's mind, they can make all the difference. This was true of Keith. Keith did extremely well in the courses required for a pre-med student, but he found he enjoyed his literature and philosophy classes far more. He began reading avidly. He felt as if each of the authors had deliberately set out to put all his self-doubts into words. In time Keith

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realized that his interest in medicine was superficial. He had decided to become a doctor because it was a respected profession that would give him status, security, and a good income—and would guarantee his parents' love. The self-image Keith had brought to college was completely changed.

Coping With Change   Madison found that students cope with the stress of going to college in several different ways. Some focus more narrowly when their goals are threatened by internal or external change. They redouble their efforts to succeed in the field they have chosen and avoid people and situations that might bring their doubts to the surface. Troy, for example, stayed with a chemical-engineering program for three years, despite a growing interest in social science. By the time he realized that engineering was not the field for him, it was too late to change majors. He got the degree but left college with no idea where he was heading.

Others avoid confronting doubt by frittering away their time, going through the motions of attending college but detaching themselves emotionally. Some students manage to keep their options open until they have enough information and experience to make a choice. Madison calls this third method of coping **resynthesis.** For most students this involves a period of indecision, doubt, and anxiety. The student tries to combine the new and old, temporarily abandons the original goal, retreats, heads in another direction, retreats again, and finally reorganizes his or her feelings and efforts around an emerging identity.

| Figure 15.14 | Experiencing Diversity |

Going to college means orienting oneself to different faces, personalities, and living habits. *How can experiencing different personalities and issues at college help a person develop his or her own identity?*

resynthesis: combining old ideas with new ones and reorganizing feelings in order to renew one's identity

WORKING

Graduating from college or high school involves thinking about and finding your first job and your career. But what is work? For one person work means loading 70,000 pounds on a five-axle truck, driving alone for several hours a day, perhaps for several days, with only a few stops for food and fuel, talk, relief, and sleep. While alone in the cab, tension is constant; it is hard to brake a truck suddenly while carrying thousands of pounds, so the driver must always think ahead. The work is wearing, yet the odd hours and independence are enjoyable.

For another person work means spending eight or nine hours a day at an advertising agency, dealing with clients and supervising commercial writers. This person earns good money, spends a great deal of time talking with people, and has plenty of opportunities to exercise his or her talents as a manager. All three are positive aspects of the job. Yet this person must also deal with deadlines and worry about whether millions of dollars' worth of ads will sell the products or not—and, subconsciously, whether it is worth the effort if they do.

Figure 15.15 | Adjusting to Work

Entering the world of work can cause excitement, but it may also lead to disappointment. *How might submitting a report at work be different from submitting a report in class for a grade?*
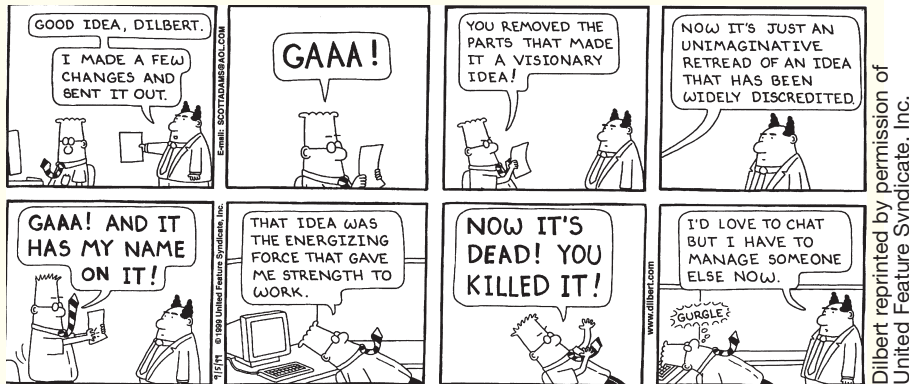
For a third person work means training severely handicapped children to use their muscles to grasp a spoon, to gesture in sign language, and perhaps to take a few steps. The job is often depressing and frustrating, but there are also moments of intense personal satisfaction when a child makes progress. The point is that each person's work experience is different and each person reacts differently to a job as a result of his or her own personality.

Work Satisfaction and Dissatisfaction

Industrial/organizational psychologists explore what factors contribute to job satisfaction. This research is important because low job satisfaction is associated with high rates of employee absenteeism and turnover, which leads to lower productivity. Job satisfaction is simply the attitude a worker has toward his or her job.

Some workers may seek high salaries, pleasant working conditions, and low-pressure jobs, while others may be concerned only with finding personal fulfillment at work. Most workers, however, have both economic and personal goals. One study (Quinn et al., 1971) identified five major sources of work satisfaction.

1. *Resources:* The worker feels that he or she has enough available resources—help, supplies, and equipment—to do the job well.
2. *Financial reward:* The job pays well, offers good fringe benefits, and is secure.
3. *Challenge:* The job is interesting and enables the worker to use his or her special talents and abilities.
4. *Relations with coworkers:* The worker is on good terms professionally and socially with colleagues.
5. *Comfort:* Working conditions and related factors—hours, travel to and from the job, work environment, and so on—are attractive.

Changing Careers

Some theorists predict that in the future, people will change their **career**—a vocation in which a person works at least a few years—several times in their lifetimes. People today live longer than ever before, and so they have a longer work life. It is not uncommon for a person to retire from one job at the age of 60 or 65, then embark on a new career as a real-estate

career: a vocation in which a person works at least a few years

agent, travel broker, writer, or consultant. Some employers have early-retirement programs that allow people at a relatively young age to leave jobs with partial pay. Alumni of these programs have been especially good candidates for subsequent careers. Many women also split their careers by stepping out of the job market to raise children, then reentering the working world for a second full career.

As we have seen, people want work that is psychologically as well as financially rewarding. If a person is unhappy at a job, changing careers may provide the answer. Job shopping, or trying out several careers, is most common among people who have recently entered the labor force and are still trying to get a feel for the work that suits them best. Across all ages, however, worker satisfaction is affected by the availability of other jobs. Research indicates that during periods when jobs are hard to find, workers tolerate more dissatisfaction with their present job (Carsten & Spector, 1987).

Does this mean you should forget about career training, since you probably will not stick with your first job? Not at all. You should acquire as many abilities and interests as you can—in and out of school. You should work to develop your interpersonal skills, and you should look at change as desirable and challenging. In these ways, more occupations will be open to you, and your chances of employment will be better.

Comparable Worth

Consider the following two cases. Tonya is employed as a day-care supervisor for a state government. To qualify for this job, she needed three years of experience as well as college credit. In her job, she is responsible for not only the care and well-being of the children but also the supervision of several subordinates. Trent, also a state worker, is in charge of a storeroom and is responsible for supplying goods to various departments in his building as well as supervising several subordinates. To qualify for his job, Trent needed four years of experience. In terms of actual job demands, Trent's and Tonya's jobs might seem to be quite comparable. However, Trent is paid more than Tonya, despite Tonya's job requiring college credit.

In theory, jobs of comparable training, skill, and importance should be compensated at the same rate—this is **comparable worth.** In practice, however, the market value of many jobs traditionally held by females is considerably lower than that of comparable jobs traditionally held by males. Moreover, men and women are not evenly distributed among the various occupations (see Figure 15.16). Men have tended toward higher-paid occupations, while women have tended (or been encouraged) toward lower-paid occupations. Overall, women face a considerable gap between their income and that received by men.

Many groups have been working to achieve equal pay for comparable work. The National Organization for Women has made the upgrading of traditionally female jobs one of its highest priorities. Labor unions have also

Did You Know?

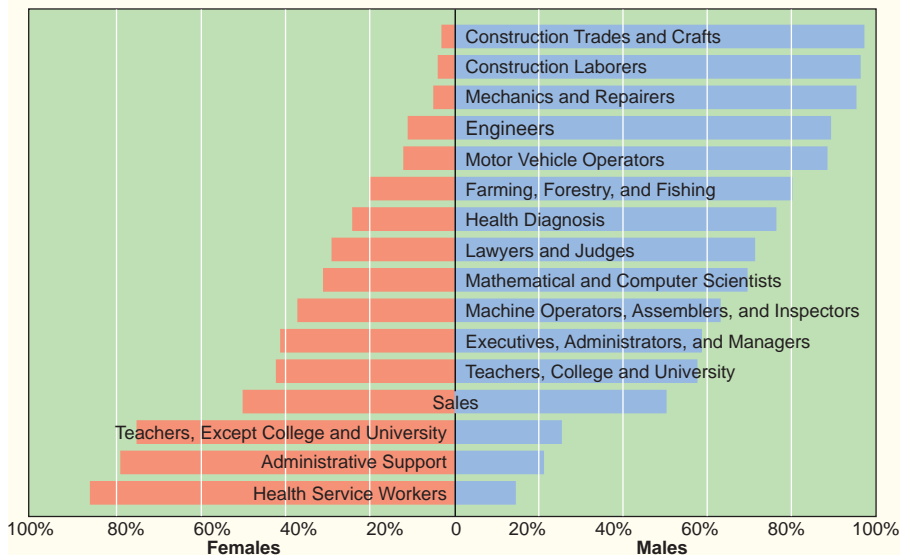**Enjoying Work** Most people enjoy their work more if it is complex rather than simple, varied rather than routine, and not closely supervised by someone else. Most workers enjoy making many choices throughout the workday.

Reading Check
What is comparable worth? Why is it important?

comparable worth: the concept that women and men should receive equal pay for jobs calling for comparable skill and responsibility

Figure 15.16　Distribution of Male and Female Jobs by Occupation

One of the reasons for differences in pay between the genders is that men and women are not evenly distributed among occupations. If men tend to cluster in higher-paid occupations and if women tend to cluster in lower-paid occupations the average pay of men and women will differ. *What are typical occupations for men? For women?*

Construction Trades and Crafts
Construction Laborers
Mechanics and Repairers
Engineers
Motor Vehicle Operators
Farming, Forestry, and Fishing
Health Diagnosis
Lawyers and Judges
Mathematical and Computer Scientists
Machine Operators, Assemblers, and Inspectors
Executives, Administrators, and Managers
Teachers, College and University
Sales
Teachers, Except College and University
Administrative Support
Health Service Workers

100%　80%　60%　40%　20%　0　20%　40%　60%　80%　100%
Females　　　　　　　　　　　　**Males**

Source: *The World Almanac and Book of Facts,* 2001.

been addressing the issue of pay equity. Congress passed two major laws to prevent discrimination and income discrepancies between men and women. The Equal Pay Act of 1963 prohibits wage and salary discrimination for jobs that require equivalent skills and responsibilities. The Civil Rights Act of 1964 prohibits discrimination in all areas of employment on the basis of gender, race, color, religion, and national origin. It may seem surprising that such laws are necessary. For economic reasons, though, many employers are unwilling to raise salaries, especially if they are able to find workers who will accept the low wages that they do offer. It is up to the workers, therefore, to demand the wages to which they are entitled.

SECTION 4 Assessment

1. **Review the Vocabulary**   Explain how going to college involves autonomy.

2. **Visualize the Main Idea**   Use a diagram similar to the one below to identify five sources of work satisfaction.

   Sources of Work Satisfaction

3. **Recall Information**   Why do developmental friendships have so much impact on a person?

4. **Think Critically**   How do you think job satisfaction and productivity are related? Does good worker performance occur as a result of high job satisfaction, or is high job satisfaction a result of good worker performance? Explain your answers.

5. **Application Activity**   Your future happiness in the world of work depends on factors like what you are doing, where you work, who you work with, and why you are working there. Use these factors to create a list of jobs or careers that might suit you. Explain your choices.

Summary and Vocabulary

Although all people experience stress at some point in their lives, how they react to it varies from individual to individual. People also use various techniques to cope with stress in their lives.

Section 1 Sources of Stress

Main Idea: Stress results from our perceptions of demands placed upon us and our evaluations of situations we encounter.

- Stress is a normal part of life that goes hand in hand with working toward any goal or facing any challenge.
- Making difficult decisions between two or more options results in conflicting motives and is a major source of stress.
- Major life changes are important sources of stress.

Section 2 Reactions to Stress

Main Idea: People react differently to life's stressors. These reactions may be beneficial or harmful.

- The body reacts to stress with the fight-or-flight response. This prepares the individual to either face potentially dangerous situations or escape them.
- The general adaptation syndrome identifies three stages in the body's stress reaction: alarm, resistance, and exhaustion.
- How people react to stress depends on their personality type, their perception of control over stressors, and the social support they receive.

Section 3 Coping With Stress

Main Idea: People deal with stress by employing defensive and active coping strategies.

- A person's interpretation and evaluation of an event helps determine its stress impact.
- Common defense mechanisms used to cope with stress are denial and intellectualization.
- Active coping strategies involve changing the environment or modifying a situation to remove stressors or reduce the level of stress.

Section 4 Stress in Your Life

Main Idea: For many people, college and work involve adjustment and stress.

- Attending college stimulates change in many students.
- Students find several ways of coping with the stress of going to college.
- Job satisfaction is simply the attitude a worker has toward his or her job.
- Overall, women face a considerable gap between their income and that received by men.

Chapter Vocabulary

stress (p. 413)
stressor (p. 414)
stress reaction (p. 414)
distress (p. 414)
eustress (p. 414)
conflict situation (p. 414)
anxiety (p. 422)
anger (p. 422)
fear (p. 422)
social support (p. 428)
cognitive appraisal (p. 431)
denial (p. 431)
intellectualization (p. 431)
progressive relaxation (p. 434)
meditation (p. 434)
biofeedback (p. 434)
autonomy (p. 437)
developmental friendship (p. 438)
resynthesis (p. 439)
career (p. 440)
comparable worth (p. 441)

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Assessment

CLICK HERE

PSYCHOLOGY *Online*
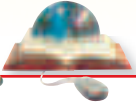
Self-Check Quiz
Visit the *Understanding Psychology* Web site at **psychology.glencoe.com** and click on **Chapter 15— Self-Check Quizzes** to prepare for the Chapter Test.

Reviewing Vocabulary

Choose the letter of the correct term or concept below to complete the sentence.

a. stressor
b. stress reaction
c. distress
d. eustress
e. anxiety
f. social support
g. cognitive appraisal
h. progressive relaxation
i. autonomy
j. comparable worth

1. _____ is a feeling of imminent but unclear threat.
2. People who are able to take care of themselves have gained a sense of _____.
3. Negative stress is called _____.
4. _____ is a technique used to reduce muscle tension.
5. A stress-producing event or situation is called the _____.
6. Information that leads an individual to believe that he or she is cared for, loved, and respected is called _____.
7. Positive stress is called _____.
8. The concept that jobs of comparable training, skill, and importance should be compensated at the same rate is called _____.
9. The body's observable response to a stress-producing event is called _____.
10. The process of interpreting and evaluating an event is called _____.

Recalling Facts

1. What is probably the most common conflict situation, and in what ways can this conflict be resolved?

2. Using a graphic organizer similar to the one below, identify and explain the four kinds of support that social groups offer for reducing stress.

Types of Support Offered by Social Groups

3. What are two relaxation techniques that can be used for coping with stress? How do they work?
4. List at least two of the new experiences and challenges that a student faces when entering college. How might these new experiences cause stress?
5. How can stress impact you physically? How does stress affect the immune system?

Critical Thinking

1. Analyzing Concepts As you have learned, some psychologists believe that stress is an event that produces worry. Others believe that stress is an individual's response to such an event. Still others believe stress is an individual's perception of the event. Which definition of stress do you agree with? Why?
2. Synthesizing Information Do you think all individuals are equally susceptible to stress-related illnesses? Are some people better able to cope with stress than others? What does this say about stress as a *cause* of illness? Explain.
3. Evaluating Information Two kinds of coping strategies are defensive coping strategies and active coping strategies. What is the difference between these coping strategies? Which of the two do you think is more effective in helping an individual cope with stress? Why do you think so?
4. Making Inferences Do you think increasing autonomy can create positive or negative feelings in a college student? Why do you think so?
5. Demonstrating Reasoned Judgment Which of the five major sources of job satisfaction do you think is the most essential? Why do you think so?

CONTENTS

Assessment

Psychology Projects

1. **Sources of Stress**   Work with a partner to create a skit that illustrates each of the four conflict situations: approach-approach, avoidance-avoidance, approach-avoidance, and double approach-avoidance. Present your skit to the class and have your classmates identify the conflict situation you are demonstrating.

2. **Reactions to Stress**   Find recent magazine articles about the latest research in the connection between stress and illness. Find out how stress contributes to the development of certain diseases. Report your findings in an oral report.

3. **Coping With Stress**   Find out about various support groups and professional help available in your community (for illnesses, causes, etc.). You might look through your local phone book, contact a local hospital, or contact your local government offices for information. Identify the groups and help available and explain how they can help an individual cope with stress. Present your findings in an informational pamphlet.

Technology Activity

The Internet provides many sites regarding jobs and careers. Find several of these sites. What kinds of information do they provide? Do any of these sites offer advice for dealing with stress in the workplace or during a job hunt? Create a report with your findings. Include the addresses of the sites you found in your report.
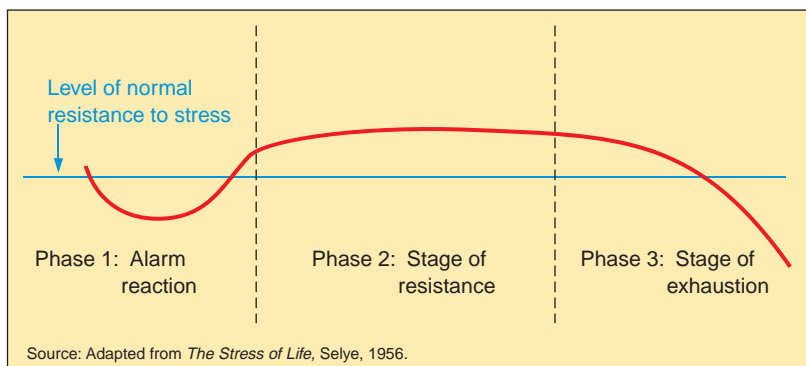
Psychology Journal

Reread the journal entry you made at the beginning of the chapter. Next, consider these questions: Do students seem more stressed prior to tests or exams? Can you discover any common elements among these sources of stress? What might be done to alleviate stress in school? Would stress be reduced or eliminated if there were no grades? What if there were no tests? What would school be like without stress? Should stress in school be eliminated? Write your answers to these questions in your journal.

Building Skills

Interpreting a Graph   Review the graph, then answer the questions that follow.

1. What are the three phases of the general adaptation syndrome?
2. In what phases might a person become most vulnerable to catching a cold? Why?
3. From the information contained in this graph, explain why people with stressful occupations might be prone to developing serious illnesses.

Phases of Selye's General Adaptation Syndrome

Level of normal resistance to stress

Phase 1: Alarm reaction

Phase 2: Stage of resistance

Phase 3: Stage of exhaustion

Source: Adapted from *The Stress of Life,* Selye, 1956.

Practice and **assess** key social studies skills with **Glencoe Skillbuilder Interactive Workbook CD-ROM, Level 2.**

See the Skills Handbook, page 628, for an explanation of interpreting graphs.

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