Rising tuition, difficult roommates, dating anxiety, grades, money, worries about what to do with your life—they all add up to STRESS. In today’s 24/7 world, stress can lead us to feel overwhelmed. But it can also cause us to push ourselves to improve, bring excitement into an otherwise humdrum life, and leave us exhilarated. While we work, play, socialize, and sleep, stress affects us in myriad ways, many of which we may not even notice.

According to a recent American Psychological Association poll, a majority of American adults reported experiencing moderate to high levels of stress in the past month.⁹ Although the exact toll stress exerts on us during a lifetime of overload is unknown, we do know that stress is a significant health hazard. It can rob the body of needed nutrients, damage the cardiovascular system, raise blood pressure, increase the risk of cancer and diabetes, and dampen immune defenses. It can also drain our emotional reserves; contribute to depression, anxiety, fatigue, and irritability; and punctuate our social interactions with hostility and anger.

Is too much stress inevitable? Fortunately, the answer is no. To tame stress, we can learn to anticipate and recognize personal stressors—and develop skills to reduce or manage those we cannot avoid or control. First, we must understand what stress is and what effects it has on the body.
What Is Stress?

■ Define stress-related key terms.

Most current definitions state that stress is the mental and physical response and adaptation by our bodies to the real or perceived changes and challenges in our lives. A stressor is any real or perceived physical, social, or psychological event or stimulus that causes our bodies to react or respond. Several factors influence one’s response to stressors, including the characteristics of the stressor (Can you control it? Is it predictable? Does it occur often?); biological factors (e.g., your age or gender); and past experiences (e.g., things that have happened to you, their consequences, and how you responded). Stress can be associated with most daily activities. Stressors may be tangible, such as a failing grade on a test, or intangible, such as the angst associated with meeting your significant other’s parents for the first time. Importantly, stress is in the eye of the beholder: Each person’s unique combination of heredity, life experiences, personality, and ability to cope influences how the person perceives an event and what meaning he or she attaches to it. What “stresses out” one person may not even bother the next person.

And stress isn’t necessarily bad for you. Although events that cause prolonged negative stress, such as a natural disaster, can undermine your health, positive, yet stressful, events can have positive effects on your growth and well-being. Generally, positive stress is called eustress. Eustress presents the opportunity for personal growth and satisfaction and can actually improve health. It can energize you, motivate you, and raise you up when you are down. Events such as getting married, having a child, getting a promotion at work, or winning a major competition can give rise to the pleasurable rush associated with eustress. In general, people perform at their best and live their lives to the fullest when they experience a moderate level of stress—just enough to keep them challenged and motivated—and deal with that stress in a productive manner. Just as too much stress can be detrimental to your health, too little stress leaves you stagnant and unfulfilled.

In contrast, distress, or negative stress, is caused by events that result in debilitative tension and strain, such as financial problems, the death of a loved one, academic difficulties, and the breakup of a relationship. There are two kinds of distress: acute and chronic. Acute stress is typically intense, flares quickly, and disappears...
Isn’t some stress healthy?

A moderate level of stress—especially eustress arising from new experiences—can actually help you live life to the fullest. Too much stress can affect your health for the worst, such as what is experienced by survivors of a natural disaster, but so can too little stress; we need change and challenge to keep us fulfilled and growing.

quickly. If you view a TV program in which a knife-wielding murderer lurks in a bedroom closet and watches a sleeping victim, your stress response might zoom into overdrive for a short time, only to be relieved when the CSI team swoops in and intervenes. Although chronic stress may not feel as intense, it can linger indefinitely and wreak silent havoc on your body’s systems. Losing your mother after her long battle with breast cancer can cause prolonged stress responses in your body. For months after her death, you may struggle to balance the need to process emotions such as anger, grief, loneliness, and guilt, while focusing to stay caught up in classes and with your life.3

On any given day, we all experience both eustress and distress, each triggered by a wide range of both obvious and not-so-obvious sources. Several studies in recent years have examined sources of stress among various populations in the United States and globally. One of the most comprehensive is conducted annually by the American Psychological Association; the 2010 survey found that concerns over money, work, family, and health were major sources of stress among American adults.4 College students, in particular, face stressors that come from internal sources, as well as external pressures to succeed in a competitive environment that is often geographically far removed from the support of family and lifelong friends.

Awareness of the sources of the stress in your life can do much to help you develop a plan to avoid, prevent, and control the things that cause you stress.

check yourself

■ How do distress and eustress differ?
■ Do you have more trouble managing acute stress or chronic stress? Why?
Your Body’s Response to Stress

**learning outcomes**

- Explain the purpose of the general adaptation syndrome.
- Explain the phases of the general adaptation syndrome.
- Explain the physiological changes that occur during each phase of the general adaptation syndrome.

Since the beginning of human life on Earth, when the need to respond quickly to danger was a matter of life or death, the body’s physiological responses have evolved to protect humans from harm. Back then, a person who didn’t respond by fighting or fleeing was all too likely to be eaten by a saber-toothed tiger or killed by a marauding enemy clan. Today, although such life-or-death encounters are thankfully far more rare, at least for those of us in industrialized countries, each of us nonetheless faces metaphorical tigers every day. Whether it’s the city bus that sent a mud puddle flying across your new outfit, an e-mail from an angry boss, or an insidious insult from a supposed friend, ordinary “attacks” provoke these same, very real, physiological responses—which our bodies must then process, contain, or repress. Continually having to “stuff” our reactions rather than letting our physiological responses run their course can harm our health over time.

**The General Adaptation Syndrome**

When stress levels are low, the body is often in a state of **homeostasis**. All body systems are operating smoothly to maintain equilibrium. Stressors trigger a “crisis-mode” physiological response, after which the body attempts to return to homeostasis by means of an **adaptive response**. First characterized by Hans Selye in 1936, the internal fight to restore homeostasis in the face of a stressor is known as the **general adaptation syndrome**, or GAS (Figure 3.1).

The GAS has three distinct phases: alarm, resistance, and exhaustion. It’s important to note that regardless of whether positive or negative events cause your eustress or distress, similar physiological changes will occur in your body.

**Alarm Phase** Suppose you are walking to your residence hall after a night class on a dimly lit campus. As you pass a particularly dark area, you hear someone cough behind you, and you sense someone approaching rapidly. You walk faster, only to hear the quickened footsteps of the other person. Your senses become increasingly alert, your breathing quickens, your heart races, and you begin to perspire. In desperation you stop, rip off your backpack, and prepare to fling it at your attacker to defend yourself. You turn around quickly and let out a blood-curdling yell. To your surprise, the only person you see is a classmate: She has been trying to stay close to you out of her own anxiety about walking alone in the dark. She screams and backs off the sidewalk into the bushes, and you both stare at each other in startled embarrassment. You have just experienced the alarm phase of the GAS. Also known as the **fight-or-flight response**, this physiological reaction is one of our most basic, innate survival instincts.

How does this work, exactly? When the mind perceives a real or imaginary stressor, the cerebral cortex, the region of the brain that interprets the nature of an event, triggers an **autonomic nervous system (ANS)** response that prepares the body for action. The ANS is the portion of the central nervous system that regulates body functions that we do not normally consciously control, such as heart and glandular functions and breathing.
The ANS has two branches: sympathetic and parasympathetic. The **sympathetic nervous system** energizes the body for fight or flight by signaling the release of several stress hormones. The **parasympathetic nervous system** slows all the systems stimulated by the stress response; in effect, it counteracts the actions of the sympathetic branch.

The responses of the sympathetic nervous system to stress involve a series of biochemical exchanges between different parts of the body. The **hypothalamus**, a structure in the brain, functions as the control center of the sympathetic nervous system and determines the overall reaction to stressors. When the hypothalamus perceives that extra energy is needed to fight a stressor, it stimulates the adrenal glands, which are located near the top of the kidneys, to release the hormone **epinephrine**, also called **adrenaline**. Epinephrine causes more blood to be pumped with each beat of the heart, dilates the airways in the lungs to increase oxygen intake, increases the breathing rate, stimulates the liver to release more glucose (which fuels muscular exertion), and dilates the pupils to improve visual sensitivity (see Figure 3.2). The body is then poised to act immediately.

In addition to the fight-or-flight response, the alarm phase can also trigger a longer-term reaction to stress. The hypothalamus uses chemical messages to trigger the pituitary gland within the brain to release a powerful hormone, **adrenocorticotropic hormone (ACTH)**. ACTH signals the adrenal glands to release **cortisol**, a hormone that makes stored nutrients more readily available to meet energy demands. Finally, other parts of the brain and body release endorphins, which relieve pain that a stressor may cause.

**Resistance Phase** In the resistance phase of the GAS, the body tries to return to homeostasis by resisting the alarm responses. However, because some perceived stressor still exists, the body does not achieve complete calm or rest. Instead, the body stays activated or aroused at a level that causes a higher metabolic rate in some organ tissues. For example, if a loved one develops an aggressive form of cancer, you may be wild with grief or anxiety after hearing the diagnosis, and all of your systems may respond in the alarm phase. As you get used to the diagnosis, you calm down somewhat, but your body does not return completely to rest. The organs and systems of resistance are working overtime.

**Exhaustion Phase** A prolonged effort to adapt to the stress response leads to **allostatic load**, or exhaustive wear and tear on the body. In the exhaustion phase of the GAS, the physical and emotional energy used to fight a stressor have been depleted. As the body adjusts to chronic unresolved stress, the adrenal glands continue to release cortisol, which remains in the bloodstream for longer periods of time as a result of slower metabolic responsiveness. Over time, cortisol can reduce **immunocompetence**, or the ability of the immune system to respond to attack. Blood pressure can remain dangerously elevated, you may catch colds more easily, or your body’s ability to control blood glucose levels can be affected.

---

**check yourself**

- How does the general adaptation syndrome help us understand our reaction to stressors?
- What are the phases of the general adaptation syndrome?
- How does the body react during each phase of the general adaptation syndrome?
Effects of Stress on Your Life

Learning Outcomes

- Specify negative health outcomes associated with chronic stress.
- Describe the impact of stress on intellectual and psychological functioning.

Stress is often described as a “disease of prolonged arousal” that leads to a cascade of negative health effects whose likelihood increases with ongoing stress. Nearly all body systems become potential targets, and the long-term effects may be devastating. Some warning symptoms of prolonged stress are shown in Figure 3.3.

Physical Effects of Stress

Studies show that 40 percent of deaths and 70 percent of diseases in the United States are related, in whole or in part, to stress. Ailments related to chronic stress include heart disease, diabetes, cancer, headaches, ulcers, low back pain, depression, and the common cold. Increases in rates of suicide, homicide, and domestic violence across the United States are additional symptoms of a nation under stress.

Stress and Cardiovascular Disease

Perhaps the most documented health consequence of unresolved stress is cardiovascular disease (CVD).

Why do I always get sick during finals week?

Prolonged stress can compromise your immune system, leaving you vulnerable to infection. If you spend exam week in a state of high stress—sleeping too little, studying too hard, and worrying a lot—chances are you’ll reduce your body’s ability to fight off any cold or flu bugs you may encounter.

Research has demonstrated the impact of chronic stress on heart rate, blood pressure, heart attack, and stroke. The INTERHEART Study, which followed almost 30,000 participants in 52 countries, identified stress as one of the key modifiable risk factors for heart attack.

Historically, the increased risk of CVD from chronic stress has been linked to arterial plaque buildup due to elevated cholesterol, hardening of the arteries, alterations in heart rhythm, increased and fluctuating blood pressures, and difficulties in cardiovascular responsiveness. Research has also shown direct links between CVD and external stressors.

Stress and Weight Gain

You’re not imagining it—you are more likely to gain weight when stressed. Higher stress levels may increase cortisol levels in the bloodstream, contributing to hunger and activating fat-storing enzymes; studies also support the theory that cortisol plays a role in increased belly fat and eating behaviors.

Stress and Hair Loss

The most common stress-induced hair loss is telogen effluvium. Often seen in individuals who have suffered a death in the family, had a difficult pregnancy, or experienced severe weight loss, this condition pushes colonies of hair into a resting phase in which much more hair falls out than grows. A similar condition, alopecia areata, occurs when stress triggers white blood cells to attack and destroy hair follicles.

Stress and Diabetes

Controlling stress is critical for preventing development of type 2 diabetes, as well as for successful diabetes management. People under severe stress often don’t get enough sleep, don’t eat well, and may drink or take other drugs. These behaviors can alter blood sugar levels and promote development of diabetes.

Stress and Digestive Problems

The causes of digestive disorders are often unknown; most likely, an underlying illness, pathogen, injury, or inflammation is exacerbated by stress, triggering nausea, vomiting, stomach cramps, or diarrhea.
Effects of Stress on Your Life

Stress and Impaired Immunity

A growing area of investigation known as psychoneuroimmunology (PNI) analyzes the relationship between stress and immune function. Research suggests that increased stress over time can affect cellular immune response. Acute stressors can impair immunity for as much as 6 months; prolonged stressors such as loss of a spouse, caregiving, and unemployment also have been shown to impair immune response over time.

Stress and Libido

Stress can throw a wrench into your sex life at any age. In both men and women, sexual drive, or libido, can be influenced by psychological and physiological factors, including time pressures, concerns over appearance, anxiety over performance, exhaustion from work, lack of sleep, and the multiple demands of classes and social life. In men, high stress can lead to declines in testosterone production, affecting their ability to get or maintain an erection. In women, stress can disrupt reproductive hormones, affecting mood, anxiety, sleep, and libido. And in both men and women, virtually any extreme or prolonged stress, or from illness to intense grief, can trigger a decline in desire.

Check Yourself

- What are four possible effects of stress on your physical and psychological health?
- Give an example of an instance in which psychological stress had a physical effect on you.

Figure 3.3 Common Physical Symptoms of Stress

You may not even notice how stressed you are until your body starts sending you signals. Do you frequently experience any of these physical symptoms of stress?

- Tension headaches, migraine, dizziness
- Oily skin, skin blemishes, rashes, blushing
- Dry mouth, jaw pain, grinding teeth
- Backache, neck stiffness, muscle cramps, fatigue
- Tightness in chest, hyperventilation, heart pounding, palpitations
- Stomachache, acid stomach, burping, nausea, indigestion, stomach "butterflies"
- Diarrhea, gassiness, constipation, increased urge to urinate
- Cold hands, sweaty hands and feet, hand tremor

28% of college students reported that stress negatively affected their individual academic performance.

Intellectual and Psychological Effects of Stress

In a recent national survey of college students, 50 percent of respondents had felt overwhelmed by all they had to do within the past 2 weeks. Thirty-nine percent felt they had been under more than average stress in the past 12 months, with 8.7 percent reporting tremendous stress during that period. Not surprisingly, these same students rated stress as their number one impediment to academic performance, followed by lack of sleep. Stress can play a huge role in whether a student stays in school, gets good grades, and succeeds on a career path. It can also wreak havoc on a person’s ability to concentrate, remember, and understand and retain complex information.

Stress, Memory, and Concentration

Animal studies provide compelling indicators of how glucocorticoids—stress hormones released from the adrenal cortex—affect memory. In humans, acute stress has been shown to impair short-term memory, particularly verbal memory. Prolonged exposure to cortisol (a key stress hormone) has been linked to shrinking of the hippocampus, the brain’s major memory center. In chronically stressed rats, decision-making regions of the brain shriveled, while brain sectors responsible for habitual behaviors not reliant on memory increased.

Stress is an enormous contributor to mental disability and emotional dysfunction in industrialized nations. Studies have linked rates of mental disorders, particularly depression and anxiety, to environmental stressors, including divorce, marital conflict, and economic hardship. Stressful life events and inadequate social support contribute to mental disorders among people aged 15 to 24 more than among other age groups. Researchers suggest that individuals moving from adolescence into adulthood face increased stressors of all kinds.

The high incidence of suicide among college students is assumed to indicate high personal and societal stress in the lives of young people, as is the increasing rate of anxiety disorders.
3.4 Stress and Headaches

learning outcomes

- Describe common types of headaches.
- Explain possible connections between stress and headaches.

Millions of people see their doctors for headaches each year; millions more put up with the pain or take pain relievers to blunt the symptoms. The good news: most headaches are not a sign of serious diseases or underlying conditions. The vast majority are either tension-type headaches or migraines.

Nearly 80 percent of adults (slightly more women than men) have this type of headache at some time in their lives. Symptoms may include dull pain; a sensation of tightness; tender scalp, neck, and shoulder muscles; and occasionally loss of appetite.

Typically, chemical and neuronal imbalances in the brain and/or muscular tension result in pain in the head or neck. Frequency and severity of symptoms varies, with occurrences categorized as episodic (less than once a month; triggered by stress, anxiety, fatigue, or anger), frequent (1 to 15 days per month), and chronic (more than 15 days per month; often associated with depression or other emotional problems). Possible triggers include red wine, lack of sleep, fasting, menstruation, and food preservatives.

Such headaches are most often helped by reducing triggers. If stress is a trigger, try a range of relaxation techniques, such as those described later in the module “Relaxation Techniques for Stress Management.” Exercise can relieve some tension headaches, as can over-the-counter pain relievers. Frequent headaches that are unresponsive to over-the-counter medications are probably chronic tension headaches; these warrant a doctor visit to assess underlying causes.

Nearly 30 million Americans suffer from migraines, headaches whose severe, debilitating symptoms include moderate to severe pain on one or both sides of the head, throbbing pain, pain that worsens with or interferes with activity, nausea, and sensitivity to light and sound.

Migraines appear to run in families: If both your parents have migraines, you have a 75 percent chance of experiencing them; one parent, a 50 percent chance. Three times as many women as men suffer from migraines.

Whereas all headaches can be painful, migraines can be disabling. Symptoms vary greatly by change to migraines individual, and attacks can last anywhere from 4 to 72 hours. In about 25 percent of cases, migraines are preceded by a warning sign called an aura—most often flickering vision, blind spots, tingling in the arms or legs, or a sensation of odor or taste.

Prescription drugs such as pain relievers or sumatriptans often help migraine sufferers. See your doctor or the National Headache Foundation (www.headaches.org) for more information.

What triggers a migraine headache?

Patients report that migraines can be triggered by emotional stress, too much or not enough sleep, fasting, caffeine, alcohol, hormonal changes, altitude, weather, chocolate or other foods, and a litany of other causes. There is tremendous variability, and what triggers a migraine in one person may relieve it in another.

check yourself

- What are three common types of headaches?
- How could effective stress management contribute to headache reduction?
Stress and Sleep Problems

Learning Outcomes

- Describe the importance of sleep to good health.
- List strategies for ensuring restful sleep.

In a recent survey, 10.4 percent of students reported that in the past week they did not get enough sleep to feel rested on even a single day.34

Sleep is much more important than most people realize. Sleep conserves body energy and restores you physically and mentally. Colds, flu, and many other ailments are more common when your immune system is depressed by lack of sleep. High blood pressure is more common in people who get fewer than 7 hours of sleep a night, and poor or reduced sleep increases the risk of heart disease and stroke.35 Sleep also contributes to healthy metabolism, which helps you maintain a healthy body weight.

Restricting sleep can cause attention lapses, slow or poor memory, reduced cognitive ability, and a tendency for thinking to get "stuck in a rut."36 Your ability not only to remember facts but also to integrate those facts, make meaningful generalizations about them, and consolidate what you’ve learned requires adequate sleep.37 Sleep also has a restorative effect on motor function, affecting one’s ability to perform tasks such as driving a car.38 Researchers contend that a night without sleep impairs motor skills and reaction time as much as driving drunk.39

Certain brain regions, including the cerebral cortex (your “master mind”), achieve some form of essential rest only during sleep. You’re also more likely to feel stressed out, worried, or sad when you’re sleep deprived. Stress and sleep problems can reinforce or exacerbate each other.40

Seven to 8 hours is considered “average” sleep time, and the vast majority of people need this much.41 Individual variations do occur according to age (kids need more), gender (women need more), and other factors. In addition, when trying to figure out your sleep needs, you have to consider your body’s physiological need plus your sleep debt—the total hours of missed sleep you’re carrying. The good news is that you can catch up, if you do it sensibly over time. Ways to ensure a good night’s sleep include:

- **Let there be light.** Stay in sync with your circadian rhythm by spending time in the daylight.
- **Stay active.** Get plenty of regular activity. But note that strenuous exercise within several hours of bedtime makes it harder to fall asleep.
- **Sleep tight.** Comfortable pillows, bedding, and mattress can help you sleep more soundly.
- **Create a sleep “cave.”** As bedtime approaches, keep your bedroom quiet, cool, and dark. Turn off electronic devices and block light with shades or curtains.
- **Condition yourself into better sleep.** Go to bed and get up at the same time each day.
- **Allow at least 3 hours between dinner and bedtime.** If you’re hungry before bed, have a light snack.
- **Don’t toss and turn.** If you’re not asleep after 20 minutes, read or listen to gentle music. Once you feel sleepy, go back to bed.
- **Don’t nap in the late afternoon or evening,** and don’t nap for longer than 30 minutes.
- **Don’t read, study, watch TV, use your laptop, talk on the phone, eat, or smoke in bed.** In fact, don’t smoke at all; it disturbs sleep. Emotionally intense phone conversations can also make it hard to calm yourself enough to sleep.
- **Don’t use caffeine or alcohol before bedtime.** It takes your body about 6 hours to clear just half of a caffeinated drink from your system.42 Alcohol interferes with your natural sleep stages and can cause you to awaken in the middle of the night.
- **Don’t drink large amounts of liquid before bed,** to prevent having to get up in the night to use the bathroom.
- **Don’t take sleeping pills,** unless prescribed by your health care provider. Over-the-counter sleep aids can interfere with progression through the stages of sleep.

Check yourself

- Why is it important for your health to sleep well?
- What are three common reasons for poor sleep, and how can you overcome them?
Psychosocial Causes of Stress

Learning Outcomes

- Discuss and classify psychosocial sources of stress.

Psychosocial stressors refer to the factors in our daily routines and in our social and physical environments that cause us to experience stress. Which of these are most common in your life?

Adjustment to Change Any time change occurs in your normal routine, whether good or bad, you experience some level of stress. The more changes you experience and the more adjustments you must make, the greater the chances are that stress will have an impact on your health. The enormous changes associated with starting college, while exciting, can also be among the most stressful you will face in your life. Moving away from home, trying to fit in and make new friends from diverse backgrounds, adjusting to a new schedule, learning to live with strangers in housing that is often lacking in the comforts of home: All of these things can cause sleeplessness and anxiety and keep your body in a continual fight-or-flight mode.

Hassles Some psychologists have proposed that little stressors, frustrations, and petty annoyances, known collectively as hassles, can be just as stressful as major life changes.43 Listening to classmates who talk too much during lecture, having to hear someone airing dirty laundry on a loud cell phone call, not finding parking on campus, and a host of other small but bothersome situations can trigger frustration, anger, and fight-or-flight responses.44

Technostress Technostress is stress created by a dependence on technology and the constant state of connection, which can include a perceived obligation to always respond or be ever present. Much good comes from technology. For some folks, however, technomania can become obsessive. Although technology can allow us to work on the go and communicate in new ways, there are some clear downsides to all of that “virtual” interaction—the dangers of distracted driving, repetitive stress injuries, and even what authors Michell Weil and Larry Rosen call technosis, a syndrome in which people become so immersed in technology that they risk losing their own identities.45

To reduce technostress, set limits on your technology use, and make sure that you devote sufficient time to face-to-face interactions with people you care about, cultivating and nurturing your relationships. You don’t always need to answer your phone or respond to a text or e-mail immediately. Leave your devices at home or turn them off when you are out with others or on vacation. Tune in to your surroundings, your loved ones and friends, your job, and your classes.

The Toll of Relationships Relationships can trigger enormous fight-or-flight reactions—whether we’re talking about the exhilaration of new love or the pain of a breakup, the result is often lack of focus, lack of sleep, and an inability to focus on anything but the love interest. And although we may think first of love relationships, even relationships with friends, family members, and coworkers can be the sources of overwhelming struggles, just as they can be sources of strength and support. These relationships can make us strive to be the best that we can be and give us hope for the future, or they can diminish our self-esteem and leave us reeling from a destructive interaction.

Academic and Financial Pressure Putting a group of top high school graduates into a college or university and encouraging them

Figure 3.4 What Stresses Us?
Respondents indicated the events and issues that cause stress for them.
to compete for grades, athletic positions, and job offers can lead to immense pressure.

Financial pressures are also increasing, on nearly everyone. Over the past few years, the annual Stress in America survey has indicated that American adults are increasingly experiencing money, work, and housing concerns as major sources of stress in their lives (Figure 3.4). Students aren't immune, either. Challenging classes can be tough enough, but many students also work at least part time to pay the bills. Even in times of economic prosperity, students often have a hard time meeting all of their costs and obligations on limited budgets; a tough economic downturn like today’s can increase those daily stresses.

**Frustrations and Conflicts** Disparity between our goals (what we hope to obtain in life) and our behaviors (actions that may or may not lead to these goals) can trigger frustration. Conflicts occur when we are forced to decide among competing motives, impulses, desires, and behaviors, or to face demands incompatible with our own values and sense of importance. College students away from their families and familiar communities for the first time may face conflicts among parental values, their own beliefs, and the beliefs of those different from themselves.

**Overload** We've all experienced times when the combined demands of work, responsibilities, and relationships seem to be pulling us under—and our physical, mental, and emotional reserves are insufficient to deal with it all. Students suffering from overload may experience depression, sleeplessness, mood swings, frustration, and anxiety. Unrelenting overload can lead to a state of physical and mental exhaustion known as burnout.

**Stressful Environments** For many students, the environment around them can cause significant stress. Unscrupulous landlords have been known to exploit struggling students by leasing them substandard, even unhealthy, apartments. Conflict with difficult roommates can also cause major environmental stress. Although rare, natural disasters such as flooding, earthquakes, hurricanes, blizzards, and tornadoes can disrupt students’ ability to conduct their daily lives. Often equally damaging are environmental background distressors—including noise, air, and water pollution; allergy-aggravating pollen and dust; and second-hand smoke—that trigger a constant resistance phase.

**Bias and Discrimination** Diversity of students, faculty members, and staff enriches everyone’s educational experience. It also challenges us to examine our attitudes and biases. Those perceived as dissimilar due to race, ethnicity, religious affiliation, age, sexual orientation—or differences in viewpoint, appearance, behavior, or background—may become victims of subtle and not-so-subtle bigotry, insensitivity, harassment, or hostility, or may simply be ignored.

Evidence of the health effects of excessive stress in minority groups abounds. For example, African Americans suffer higher rates of hypertension, CVD, and most cancers than do whites. Although poverty and socioeconomic status have been blamed for much of the spike in hypertension rates for African Americans and other marginalized groups, this chronic, physically debilitating stress may reflect real and perceived effects of harassment in society even more than it reflects actual poverty.50

International students experience unique adjustment issues related to language barriers, cultural barriers, and a lack of social support, among other challenges. Academic stress may pose a particular problem for the more than 690,000 international students who have left family and friends in their native countries to study in the United States. Yet many international students refrain from seeking emotional support from others because of cultural norms, feelings of shame, or the belief that seeking support is a sign of weakness. This, coupled with language barriers, cultural conflicts, and other stressors, can lead international students to suffer significantly more stress-related illnesses than their American counterparts.

---

**check yourself**

- What are five sources of psychosocial stress?
- Which psychosocial sources of stress do you encounter most frequently?
Internal Causes of Stress

■ Discuss and classify internal causes of stress.

Although stress can come from the environment and other external sources, it can result from internal factors as well. Internal stressors such as negative appraisal, low self-esteem, and low self-efficacy can cause unsettling thoughts or feelings, and can ultimately affect your health.\(^{52}\) It is important to address and manage these internal stressors.

**Appraisal and Stress** Throughout life, we encounter many different demands and potential stressors—some biological, some psychological, and others sociological. In any case, it is our **appraisal** of these demands, rather than the demands themselves, that results in our experiencing stress. Appraisal is defined as the interpretation and evaluation of information provided to the brain by the senses. Appraisal is not a conscious activity, but rather a natural process that the brain constantly performs. As new information becomes available, appraisal helps us recognize stressors, evaluate them on the basis of past experiences and emotions, and decide how to cope with them. When you perceive that your coping resources are sufficient to meet life’s demands, you experience little or no stress. By contrast, when you perceive that life’s demands exceed your coping resources, you are likely to feel strain and distress.

**Self-Esteem and Self-Efficacy** Self-esteem refers to how you feel about yourself. Self-esteem varies; it can and does continually change.\(^{53}\) When you feel good about yourself, you are less likely to respond to or interpret an event as stressful. Conversely, if you place little or no value on yourself and believe you have inadequate coping skills, you become susceptible to stress and strain.\(^{54}\) Of particular concern, research with high school and college students has found that low self-esteem and stressful life events significantly predict **suicidal ideation**, a desire to die and thoughts about suicide. On a more positive note, research has also indicated that it is possible to increase an individual’s ability to cope with stress by increasing self-esteem.\(^{55}\)

Self-efficacy is another important factor in the ability to cope with life’s challenges. Self-efficacy refers to belief or confidence in one’s skills and performance abilities.\(^{56}\) Self-efficacy is considered one of the most important personality traits that influences psychological and physiological stress responses and has been found to predict a number of health behaviors in college students.\(^{57}\)

Developing self-efficacy is also vital to coping with and overcoming academic pressures and worries. For example, by learning to handle anxiety around testing situations, you improve your chances of performing well; the more you feel yourself capable of handling testing situations, the greater will be your sense of academic self-efficacy.

**Type A and Type B Personalities** It should come as no surprise to you that personality can have an impact on whether you are happy and socially well adjusted or sad and socially isolated. However, your personality may affect more than just your social interactions: It may be a critical factor in your stress level, as well as in your risk for CVD, cancer, and other chronic and infectious diseases.

In 1974, physicians Meyer Friedman and Ray Rosenman published a book indicating that Type A individuals had a greatly increased risk of heart disease.\(^{58}\) Type A personalities are defined as hard-driving, competitive, time-driven perfectionists. In contrast, Type B personalities are described as being relaxed, noncompetitive, and more tolerant of others.

Today, most researchers recognize that none of us will be wholly Type A or Type B all of the time. We might exhibit either type as we respond to the various challenges of our daily lives. In addition, recent research indicates that not all Type A people experience negative health consequences; in fact, some hard-driving
individuals seem to thrive on their supercharged lifestyles. Only those Type A individuals who exhibit a “toxic core”—who have disproportionate amounts of anger; are distrustful of others; and have a cynical, glass-half-empty approach to life, in total, a set of characteristics referred to as hostility—are at increased risk for heart disease.59

Type C and Type D Personalities  In addition to CVD risks, personality types have been linked to increased risk for a variety of illnesses ranging from asthma to cancer. Type C personality is one such type. Typically, Type C people are stoic and tend to deny feelings. They have a tendency to conform to the wishes of others (or to be “pleasers”), a lack of assertiveness, and an inclination toward feelings of helplessness or hopelessness. Possibly as a result of these characteristics, research indicates they are more susceptible to illnesses such as asthma, multiple sclerosis, autoimmune disorders, and cancer.60 These are the “nice” guys and gals who really do finish last when it comes to their health.

A more recently identified personality type is Type D (distressed), characterized by a tendency toward excessive negative worry, irritability, gloom, and social inhibition. Several recent studies have shown that Type D people may be up to eight times more likely to die of a heart attack or sudden cardiac death.61

Psychological Hardiness According to psychologist Susanne Kobasa, psychological hardness may negate self-imposed stress associated with Type A behavior. Psychologically hardy people are characterized by control, commitment, and willingness to embrace challenge.62 People with a sense of control are able to accept responsibility for their behaviors and change those that they discover to be debilitating. People with a sense of commitment have good self-esteem and understand their purpose in life. Those who embrace challenge see change as a stimulating opportunity for personal growth. The concept of hardiness has been studied extensively, and many researchers believe it is the foundation of an individual’s ability to cope with stress and remain healthy.63

Patterns of Thinking People fall into patterns and ways of thinking that can cause stress and increase their levels of anxiety. The fact is, your thought patterns can be your own worst enemy. If you can become aware of the internal messages you are giving yourself, you can recognize them and work to change them. Some strategies for doing this include:

■ Reframe a distressing event from a positive perspective. Reframing is a stress-management technique that helps you change your perspective on a situation to a more positive vantage point. For example, if you feel perpetually frustrated that you can’t be the best in every class, reframe the issue to highlight your strengths.

■ Break the worry habit. If you are preoccupied with “what if’s” and worst case scenarios, doubts and fears can sap your strength and send your stress levels soaring. The following suggestions can help slow the worry drain:
  ■ If you must worry, create a “worry period”—a 20 minute time period each day when you can journal or talk about it. After that, move on.

Skills for Behavior Change

OVERCOMING TEST-TAKING ANXIETY

Here’s an example of how to increase self-efficacy in a familiar situation—an academic exam. Try these helpful hints when approaching your next exam, and you might just reduce your stress levels as well as improve your grade.

Before the Exam

■ Manage your study time. Start studying a week before your test to reduce anxiety. Do a limited review the night before, get a good night’s sleep, and arrive for the exam early.

■ Build your test-taking self-esteem. On an index card, write down three reasons you will pass the exam. Keep the card with you and review it whenever you study. When you get the test, write your three reasons on the test or on a piece of scrap paper.

■ Eat a balanced meal before the exam. Avoid sugar and rich or heavy foods, as well as foods that might upset your stomach. You want to feel your best.

■ If you feel that you are a slow reader and need more time, get a good night’s sleep, and arrive for the exam early.

During the Test

■ Manage your time during the test. Decide how much time you need to take the test, review your answers, and go back over questions you might be stuck on. Hold to this schedule.

■ Slow down and pay attention. When you open your test book, always write “RTFQ” (Read the Full Question) at the top. Make sure you understand the question before answering.

■ Stay on track. If you begin to get anxious, reread your three reasons for success.

check yourself

■ What are five causes of internal stress?

■ Which internal causes of stress do you experience most frequently?
**Stress Management Techniques: Mental and Physical Approaches**

**learning outcomes**
- Examine mental and physical approaches to stress management.

Being on your own in college may pose challenges, but it also lets you take control of and responsibility for your life and take steps to reduce negative stressors. **Coping** is the act of managing events or conditions to lessen the physical or psychological effects of excess stress. One of the most effective ways to combat stressors is to build coping strategies and skills, known collectively as stress-management techniques.

**Practicing Mental Work to Reduce Stress**
Your perceptions often contribute to your stress, so assessing your “self-talk,” beliefs, and actions are good first steps. Here’s how:

- Make a list of things you’re worried about.
- Examine the causes of your problems and worries. Perceptions are often part of the problem; try assessing your “self-talk,” beliefs, and actions.
- Consider the size of each problem. What are the consequences of doing nothing? Of taking action?

One way to anticipate and prepare for specific stressors is a technique known as **stress inoculation**. Suppose speaking in front of a class scares you. To prevent freezing up during a presentation, practice in front of friends or a video camera. Dealing with such specific fears helps you develop resistance; larger fears then seem less overwhelming.

Negative self-talk can take the form of **pessimism**, or focusing on the negative; **perfectionism**, or expecting superhuman standards; **should-ing**, or reprimanding yourself for things you should have done; **blaming** yourself or others for circumstances and events; and **dichotomous thinking**, in which everything is seen as either entirely good or bad. To combat negative self-talk, become aware of an irrational or overreactive thought, interrupt it by saying “stop” (under your breath or out loud), then replace it with positive thoughts—a process called **cognitive restructuring**.

**Taking Physical Action**
Physical activities can complement your mental and emotional strategies of stress management:

- **Exercise regularly.** The human stress response is intended to end in physical activity; exercise “burns off” stress hormones by directing them toward their intended metabolic function and can combat stress by raising levels of endorphins—mood-elevating, painkilling hormones—in the bloodstream.
- **Get enough sleep.** Adequate sleep allows you to cope with multiple stressors more effectively, and be more productive.
- **Learn to relax.** You can use simple relaxation techniques at any time. As your body relaxes, your heart rate slows and your blood pressure and metabolic rate decrease.
- **Eat healthfully.** A balanced, healthy diet will help provide the stamina you need to get through problems while stress-proofing you in ways not yet fully understood. Undereating, overeating, and eating the wrong foods can create distress in the body. In particular, avoid **sympathomimetics**, foods that produce (or mimic) stresslike responses, such as caffeine.

**check yourself**

- What are four effective mental or physical approaches to managing stress?
Stress Management Techniques: Managing Emotional Responses

learning outcomes

- Explain how management of emotional responses contributes to stress management.

We often get upset not by realities, but by our faulty perceptions. Stress management requires examining your emotional responses to interactions with others—and remembering that you are responsible for the emotion and the resulting behaviors. Learning to identify emotions based on irrational beliefs, or expressed and interpreted in an over-the-top manner, can help you stop such emotions or express them in healthy and appropriate ways.

Learn to Laugh, Be Joyful, and Cry Smiling, laughing, and even crying can elevate mood, relieve stress, and improve relationships. In the moment, laughter and joy raise endorphin levels, increase blood oxygen, decrease stress, relieve pain, and enhance productivity; additional evidence for long-term effects on immune function and protection against disease is only starting to be understood.67

Fight the Anger Urge Anger usually results when we feel we have lost control of a situation or are frustrated by events we can do little about. Major sources of anger include (1) perceived threats to self or others we care about; (2) reactions to injustice; (3) fear; (4) faulty emotional reasoning or misinterpretation of normal events; (5) low frustration tolerance, often fueled by stress, drugs, or lack of sleep; (6) unreasonable expectations for ourselves and others; and (7) people rating, or applying derogatory ratings to others.

To deal with anger, you can express, suppress, or calm it. Surprisingly, expressing anger is probably the healthiest option, if you do so assertively rather than aggressively. Several strategies can help redirect aggression into assertion:68

- Recognize anger patterns and learn to de-escalate them. Note what angers you. What thoughts or feelings led up to your boiling point? Try changing your self-talk, or interrupting anger patterns by counting to 10 or taking deep breaths.
- Verbally de-escalate. When couples fight, using words that suggest thoughtfulness—think, because, reason, why—can reduce conflict, demonstrating consideration for one’s partner and the issues at hand.69
- Plan ahead. Explore ways to minimize your exposure to anger triggers such as traffic jams.
- Develop a support system. Find a few close friends you can confide in or vent your frustration to. Allow them to listen and provide perspective. Don’t wear down supporters with continual rants.
- Develop realistic expectations. Anger is often the result of unmet expectations, frustrations, resentments, and impatience. Are your expectations of yourself and others realistic?
- Turn complaints into requests. Try reworking a problem into a request. Instead of screaming because your neighbors’ music woke you up at 2 AM, talk with them. Try to reach an agreement.
- Leave past anger in the past. Learn to resolve issues that have caused pain, frustration, or stress. If necessary, seek professional counsel.

Invest in Loved Ones Too often, we don’t make time for the people most important to us: friends and family. Cultivate and nurture relationships built on trust, mutual acceptance and understanding, honesty, and caring. Treating others empathically provides them with a measure of emotional security and reduces their anxiety.

Cultivate Your Spiritual Side Spiritual health and spiritual practice can link you to a community and offer perspective on the things that truly matter.

check yourself

- How can emotions affect your stress levels?
Chapter 3

Stress Management Techniques: Managing Your Time

learning outcomes

- Describe strategies for effective time management.

Ever put off writing a paper until the night before it was due? If you’re like up to 95 percent of all college students, you procrastinate, or voluntarily delay doing some task despite expecting to be worse off for it. Procrastination can result in academic difficulties, financial problems, relationship problems, and stress-related ailments. For some, procrastination may stem from fear of failure or a wish to avoid being put on the spot; distraction sends others in pursuit of fun. Afterwards, stress levels increase, sleep goes by the wayside, caffeine intake increases, and emotions flare.

According to psychologist Shane Owens and his colleagues at Hofstra University, one key to beating procrastination is setting clear “implementation intentions.” You could specify that you will work on your paper from 6 to 7 PM each night for a week. A plan of action, with interim deadlines and associated rewards, can motivate you along the way.

Try logging your activities for a week—everything from going to class to doing laundry to texting friends—and note the time you spend doing each. Once you’ve kept track for several days, you can then assess your results and make changes accordingly. Use these time-management tips to help you:

- **Do one thing at a time.** Don’t try to watch television, wash clothes, and write your term paper all at once.
- **Clear your desk.** Toss unnecessary papers; file those you’ll need later. Read your mail, recycle what you don’t need, and file the rest for later action.
- **Prioritize tasks.** Make a daily “to do” list and stick to it. List things you must do today, things you must do but not immediately, and “nice to dos” that you can take on if you finish the others or if they include fun.

- **Find a clean, comfortable place to work, and avoid interruptions.** For a project that requires concentration, schedule uninterrupted time. Close your door and turn off your phone—or go to a quiet room in the library or student union.
- **Reward yourself.** Did you finish a task? Do something nice for yourself. Breaks give you time to recharge.
- **Work when you’re at your best.** If you’re a morning person, study in the morning. Take breaks when you start to slow down.
- **Break overwhelming tasks into small pieces, and allocate time to each.** If you’re floundering on a task, move on and come back to it when you’re refreshed.
- **Remember that time is precious.** Try to value each day in the moment.

Skills for Behavior Change

**LEARN TO SAY NO AND MEAN IT!**

Is your calendar so full you barely have time to breathe? Do you have difficulty saying no? A bulging calendar can be a misplaced badge of honor. Ditch the idea that you’re indispensable or superhuman, and avoid overcommitment.

- **Be sympathetic but firm.** Explain that you can’t take on one more project right now. If they pressure you, say it was nice talking, but you have to run.
- **Don’t say you want to think about it.** This only leads to more forceful requests later. Say “not this time,” and reiterate that you can’t take on any more obligations now.
- **Don’t give in to guilt.** Stick to your guns. You don’t owe anyone your time.
- **Avoid spontaneous “yes” responses to new projects.** Make a rule that you will take at least a day to think about committing your time. Then, if you still think it’s a good idea, choose something to take off your plate in exchange.
- **Schedule time for yourself first.** Stop and prioritize. Keep two or three “must dos” on your list each day. Cross off “I don’t have to, but I said yes” events; admit you overcommitted and bow out. Add one or two “I really want to” items.
- **Remember that there are 24 hours in every day and you need at least 8 for sleep.** Consider how each list item will help you grow personally or professionally, or will contribute to society. Choose wisely.

**check yourself**

- What are some time management strategies that could help reduce your stress levels?
3.11 Stress Management Techniques: Managing Your Finances

learning outcomes

- Describe strategies for effective time management.

Higher education can impose a huge financial burden on parents, students, and communities. In recent studies, nearly two-thirds of students indicated that the “current economic situation significantly affected my college choice.” Fifty-three percent of incoming students used loans to help pay for college, and 73 percent used grants and scholarships—both significant increases over past years, with more students than ever using multiple strategies to make ends meet. The economic downturn of the past few years is likely pushing already financially stressed students closer to the breaking point.

Several factors are converging to increase today’s students’ financial woes. First, a recession has caused many parents to lose their jobs. Faced with dwindling resources at home, many students are being forced to look for part-time or even full-time work. These students may encounter increasing competition for even the lowest-paying jobs as displaced workers take these jobs to stay afloat financially. Already known to carry a disproportionate level of credit card debt, students are resorting to using plastic to pay for essentials, leading to more debt and higher stress.

Consider Downshifting

Today’s lifestyles are hectic and pressure packed, and stress often comes from trying to keep up. Many people, questioning whether “having it all” is worth it, are taking a step back and simplifying their lives. This trend has been labeled downshifting, or voluntary simplicity. Moving from a large urban area to a smaller town or leaving a high-stress job for one that makes you happy are examples of downshifting.

Downshifting involves a fundamental alteration in values and honest introspection about what is important in life. It means cutting down on shopping habits, buying only what you need to get by, and living within modest means. When you contemplate any form of downshift or perhaps even start your career this way, it’s important to move slowly and consider the following:

- **Plan for health care costs.** Make sure that you budget for health insurance and basic preventive health services if you’re not covered under your parents’ plan. Understand your coverage, and keep on top of shifting health care policy and skyrocketing rates. This should be a top priority.
- **Determine your ultimate goal.** What is most important to you, and what will you need to reach that goal? What can you do without?
- **Make both short- and long-term plans for simplifying your life.** Set up your plans in doable steps, and work slowly toward each step.
- **Complete a financial inventory.** How much money will you need to do the things you want to do? Will you live alone or share costs with roommates? Do you need a car, or can you rely on public transportation? Pay off your debt, and get used to paying with cash. If you don’t have the cash, don’t buy.
- **Select the right career.** Look for work that you enjoy and that isn’t necessarily driven by salary. Can you be happy taking a lower-paying job if it is less stressful or gives you satisfaction?
- **Consider options for saving money.** Downshifting doesn’t mean renouncing money; it means choosing not to let money dictate your life. Saving is still important. If you’re just getting started, you need to prepare for emergencies and for future plans.
- **Resist credit card offers.** Racking up debt in school can affect your finances for years to come.

check yourself

- Which of these strategies can be used to improve your current financial situation?
Relaxation Techniques for Stress Management

- Discuss relaxation techniques that can reduce stress.

Relaxation techniques to reduce stress have been practiced for centuries, and there is a wide array of practices from which to choose. Common techniques include yoga, qigong, tai chi, deep breathing, meditation, visualization, progressive muscle relaxation, massage therapy, biofeedback, and hypnosis.

**Yoga**  Yoga is an ancient practice that combines meditation, stretching, and breathing exercises designed to relax, refresh, and rejuvenate. It began about 5,000 years ago in India and has been evolving ever since. In the United States today, some 20 million adults practice many versions of yoga.

- **Classical yoga** is the ancestor of nearly all modern forms of yoga. Breathing, poses, and verbal mantras are often part of classical yoga. Of the many branches of classical yoga, **Hatha yoga** is the most well known because it is the most body focused. This style of yoga involves the practice of breath control and asanas—held postures and choreographed movements that enhance strength and flexibility.

- **Qigong**  Qigong (pronounced “chee-kong”) is one of the fastest-growing and most widely accepted forms of mind-body health exercises. Some of the country’s largest health care organizations, such as Kaiser Permanente, include this relaxation technique in their systems, particularly for people suffering from chronic pain or stress. Qigong is an ancient Chinese practice that involves becoming aware of and learning to control qi (or chi, pronounced “chee”), or vital energy in your body. According to Chinese medicine, a complex system of internal pathways called meridians carry qi throughout your body. If your qi becomes stagnant or blocked, you’ll feel sluggish or powerless. Qigong incorporates a series of flowing movements, breath techniques, mental visualization exercises, and vocalizations of healing sounds designed to restore balance and integrate and refresh the mind and body.

- **Tai Chi**  Tai chi (pronounced “ty-chee”) is sometimes described as “meditation in motion.” Originally developed in China as a form of self-defense, this graceful form of exercise has existed for about 2,000 years.

---

1. Assume a natural, comfortable position either sitting up straight with your head, neck, and shoulders relaxed, or lying on your back with your knees bent and your head supported. Close your eyes and loosen binding clothes.

2. In order to feel your abdomen moving as you breathe, place one hand on your upper chest and the other just below your rib cage.

3. Breathe in slowly and deeply through your nose. Feel your stomach expanding into your hand. The hand on your chest should move as little as possible.

4. Exhale slowly through your mouth. Feel the fall of your stomach away from your hand. Again, the hand on your chest should move as little as possible.

5. Concentrate on the act of breathing. Shut out external noise. Focus on inhaling and exhaling, the route the air is following, and the rise and fall of your stomach.

---

**Figure 3.5 Diaphragmatic Breathing**

This exercise will help you learn to breathe deeply as a way to relieve stress. Practice this for 5 to 10 minutes several times a day, and soon diaphragmatic breathing will become natural for you.
Tai chi is noncompetitive and self-paced. To do tai chi, you perform a defined series of postures or movements in a slow, graceful manner. Each movement or posture flows into the next without pause. Tai chi has been widely practiced in China for centuries and is becoming increasingly popular around the world, both as a basic exercise program and as a complement to other health care methods. Health benefits include stress reduction, improved balance, and increased flexibility.

**Diaphragmatic or Deep Breathing** Typically, we breathe using only the upper chest and thoracic region rather than involving the abdominal region. Simply stated, diaphragmatic breathing is deep breathing that maximally fills the lungs by involving the movement of the diaphragm and lower abdomen. This technique is commonly used in yoga exercises and in other meditative practices. Try the diaphragmatic breathing exercise in Figure 3.5 right now and see if you feel more relaxed!

**Meditation** There are many different forms of meditation. Most involve sitting quietly for 15 minutes or longer, focusing on a particular word or symbol or observing one’s thoughts, and controlling breathing. Practiced by Eastern religions for centuries, meditation is seen as an important form of introspection and personal renewal. In stress management, it can calm the body and quiet the mind, creating a sense of peace.

**Visualization** Often it is our own thoughts and imagination that provoke distress by conjuring up worst-case scenarios. Our imagination, however, can also be tapped to reduce stress. In visualization, you create mental scenes using your imagination. The choice of mental images is unlimited, but natural settings such as ocean beaches and mountain lakes are often used, because they call to mind places people often go to escape the stresses of home, school, or work. Recalling specific physical senses of sight, sound, smell, taste, and touch can replace stressful stimuli with peaceful or pleasant thoughts.

**Progressive Muscle Relaxation** Progressive muscle relaxation involves systematically contracting and relaxing different muscle groups in your body. The standard pattern is to begin with the feet and work your way up your body, contracting and releasing as you go (Figure 3.6). The process is designed to teach awareness of the different feelings of muscle tension and muscle release. With practice, you can quickly identify tension in your body when you are facing stressful situations, then consciously release that tension to calm yourself.

**Massage Therapy** If you have ever had someone massage your stiff neck or aching feet, you know that massage is an excellent way to relax. Techniques vary from deep-tissue massage to gentler acupressure.

**Biofeedback** Biofeedback involves monitoring your physical responses to stress via a machine. A typical biofeedback machine records perspiration, heart rate, respiration rate, blood pressure, surface body temperature, muscle tension, and other stress responses. You use various relaxation techniques while hooked up to the machine, and then, through trial and error and feedback signals from the machine, you learn to lower your stress responses. Eventually, you develop the ability to recognize and lower stress responses without the help of the machine.

**Hypnosis** Hypnosis requires a person to focus on one thought, object, or voice, thereby freeing the right hemisphere of the brain to become more active. The person then becomes unusually responsive to suggestion. Whether self-induced or induced by someone else, hypnosis can reduce certain types of stress.

**check yourself**

- What are three potential benefits to learning a variety of relaxation techniques?
- Which relaxation technique is the most effective for you? Why?
Assess yourself

What’s Your Stress Level?

An interactive version of this assessment is available online. Download it from the Live It section of www.pearsonhighered.com/donatelle.

The Student Stress Scale

The Student Stress Scale represents an adaptation of Holmes and Rahe’s Social Readjustment Rating Scale (SRRS). The SRRS has been modified for college students and provides a rough indication of stress levels and health consequences. In the scale, each event is given a score that represents the amount of readjustment a person must make as a result of the life change. To determine your stress score, check each event that you have experienced in the past 12 months, and then add up the number of points corresponding to each event.

<table>
<thead>
<tr>
<th>Event</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Death of a close family member</td>
<td>100</td>
</tr>
<tr>
<td>2. Death of a close friend</td>
<td>73</td>
</tr>
<tr>
<td>3. Divorce between parents</td>
<td>65</td>
</tr>
<tr>
<td>4. Jail term</td>
<td>63</td>
</tr>
<tr>
<td>5. Major personal injury or illness</td>
<td>63</td>
</tr>
<tr>
<td>6. Marriage</td>
<td>58</td>
</tr>
<tr>
<td>7. Firing from a job</td>
<td>50</td>
</tr>
<tr>
<td>8. Failure of an important course</td>
<td>47</td>
</tr>
<tr>
<td>9. Change in health of a family member</td>
<td>45</td>
</tr>
<tr>
<td>10. Pregnancy</td>
<td>45</td>
</tr>
<tr>
<td>11. Sex problems</td>
<td>44</td>
</tr>
<tr>
<td>12. Serious argument with close friend</td>
<td>40</td>
</tr>
<tr>
<td>13. Change in financial status</td>
<td>39</td>
</tr>
<tr>
<td>14. Change of major</td>
<td>39</td>
</tr>
<tr>
<td>15. Trouble with parents</td>
<td>39</td>
</tr>
<tr>
<td>16. New girlfriend or boyfriend</td>
<td>37</td>
</tr>
<tr>
<td>17. Increase in workload at school</td>
<td>37</td>
</tr>
<tr>
<td>18. Outstanding personal achievement</td>
<td>36</td>
</tr>
<tr>
<td>19. First quarter/semester in school</td>
<td>36</td>
</tr>
<tr>
<td>20. Change in living conditions</td>
<td>31</td>
</tr>
<tr>
<td>21. Serious argument with an instructor</td>
<td>30</td>
</tr>
<tr>
<td>22. Lower grades than expected</td>
<td>29</td>
</tr>
<tr>
<td>23. Change in sleeping habits</td>
<td>29</td>
</tr>
<tr>
<td>24. Change in social activities</td>
<td>29</td>
</tr>
<tr>
<td>25. Change in eating habits</td>
<td>28</td>
</tr>
<tr>
<td>26. Chronic car trouble</td>
<td>26</td>
</tr>
<tr>
<td>27. Change in number of family gatherings</td>
<td>26</td>
</tr>
<tr>
<td>28. Too many missed classes</td>
<td>25</td>
</tr>
<tr>
<td>29. Change of college</td>
<td>24</td>
</tr>
<tr>
<td>30. Dropping of more than one class</td>
<td>23</td>
</tr>
<tr>
<td>31. Minor traffic violations</td>
<td>20</td>
</tr>
</tbody>
</table>

Total: __________

**SCORING PART 1:**

If your score is 300 or higher, you may be at high risk for developing a stress-related illness. If your score is between 150 and 300, you have approximately a 50-50 chance of experiencing a serious health problem within the next 2 years. If your score is below 150, you have a 1 in 3 chance of experiencing a serious health change in the next few years.


How Do You Respond to Stress?

Read the following scenarios and choose the response that you would most likely have to these stressful events.

1. You’ve been waiting 20 minutes for a table in a crowded restaurant, and the hostess seats a group that arrived after you.
   a. You yell, “Hey! I was here first!” in an irritated voice.
   b. You say “Excuse me” in a polite voice and inform the other group or the hostess that you were there first.
   c. You walk out of the restaurant in disgust. Obviously the hostess was willfully ignoring you.

2. You come home to find the kitchen looking like a disaster area and your spouse/roommate lounging in front of the TV.
   a. You pick a fight about how your spouse/roommate never does anything and always expects you to clean up after him or her.
   b. You sit down next to your spouse/roommate and ask if he or she would take a 5-minute break from the TV show to help you clean.
   c. You don’t say anything but instead tense up and angrily start cleaning the kitchen, making as much noise as possible.
3. You have to present a paper in front of your class, and you are anxious about doing a good job.
   a. You get flustered during the presentation and snap at your fellow classmates when they ask questions about your topic.
   b. You ask a friend to help you practice the presentation ahead of time so you can feel confident going to class.
   c. You lose sleep worrying about the presentation, and afterward you spend the rest of the day reliving all the mistakes you made.

4. Your partner is seen out with another person and appears to be acting quite close to the person.
   a. You immediately assume your partner is cheating on you. Infuriated, you launch into a stream of accusations the next time you are together.
   b. The next time you see your partner, you calmly mention your concerns and describe your feelings, giving him or her a chance to explain the situation.
   c. You decide your partner no longer cares about you and spend the evening reproaching yourself for being so unlovable.

5. You aren’t able to study as much as you’d like for an exam and, when you get it back, you find that you did horribly.
   a. You angrily bad-mouth your professor to your friends and anyone else who will listen.
   b. You make an appointment to talk with the professor and determine what you can do to improve on the next exam.
   c. You decide you’re just crummy at the subject and don’t even bother studying at all the next time.

ANALYZING PART 2
If you chose mostly “a” responses, you are probably a hot reactor who responds to mildly stressful situations with a fight-or-flight adrenaline rush. Before you honk or make obscene gestures at the guy who cuts you off in traffic, remember that the only thing you’ll hasten by reacting is a decline in health. Look at ways to change your perceptions and cope more effectively.

If you chose mostly “b” responses, you are probably a cool reactor who tends to roll with the punches when a situation becomes stressful. This usually indicates a good level of coping; overall, you will suffer fewer health consequences when stressed. The key here is that you really are not stressed, and you really are calm and unworried about the situation—not just behaving as though you were.

If you chose mostly “c” responses, you have intense reactions to stress that you are prone to directing inward. This can negatively affect your health just as much as being explosive. To change your approach to stress, work on ways of building your senses of self-efficacy and self-esteem. Changing the way you think about yourself and others can help you approach stress in a more balanced and productive way.

Your Plan for Change

The Assess Yourself activity gave you the chance to look at your stress responses and identify particular situations in your life that cause stress. Now that you are aware of these patterns, you can change behaviors that lead to increased stress.

**Today, you can:**
- Practice one new stress-management technique. For example, you could spend 10 minutes doing a deep-breathing exercise or find a good spot on campus to meditate.
- Buy a journal and write down stressful events or symptoms of stress that you experience. Try to focus on intense emotional experiences and explore how they affect you.

**Within the next 2 weeks, you can:**
- Attend a class or workshop in yoga, tai chi, qigong, meditation, or some other stress-relieving activity. Look for beginner classes offered on campus or in your community.
- Make a list of the papers, projects, and tests that you have over the coming semester and create a schedule for them. Break projects and term papers into small, manageable tasks, and try to be realistic about how much time you’ll need to get these tasks done.

**By the end of the semester, you can:**
- Keep track of the money you spend and where it goes. Establish a budget and follow it for at least a month.
- Find some form of exercise you can do regularly. You may consider joining a gym or just arranging regular “walk dates” or pickup basketball games with your friends. Try to exercise at least 30 minutes every day.
Summary

- Stress is an inevitable part of our lives. Eustress refers to stress associated with positive events; distress refers to negative events.
- The alarm, resistance, and exhaustion phases of the general adaptation syndrome (GAS) involve physiological responses to both real and imagined stressors. Prolonged arousal may be detrimental to health.
- Undue stress for extended periods of time can compromise the immune system. Stress has been linked to cardiovascular disease (CVD), weight gain, hair loss, diabetes, digestive problems, increased susceptibility to infectious diseases, and diminished libido. Psychoneuroimmunology is the science that analyzes the relationship between the mind's reaction to stress and immune function.
- Stress can affect intellectual and psychological health and contribute to depression and anxiety.
- Psychosocial factors contributing to stress include change, hassles, relationships, pressure, conflict, overload, and environmental stressors. Persons subjected to discrimination or bias may face unusually high levels of stress. Some sources of stress are internal and related to appraisal, self-esteem, self-efficacy, personality, and psychological hardiness.
- College can be stressful. Recognizing the signs of stress is the first step toward better health. To manage stress, find coping skills that work for you—probably some combination of managing emotional responses, taking mental or physical action, downshifting, time management, managing finances, and relaxation techniques.

Pop Quiz

1. Even though Andre experienced stress when he graduated from college and moved to a new city, he viewed these changes as an opportunity for growth. What is Andre's stress called?
   a. Strain
   b. Distress
   c. Eustress
   d. Adaptive response

2. The branch of the autonomic nervous system that is responsible for energizing the body for either fight or flight and for triggering many other stress responses is the
   a. central nervous system.
   b. parasympathetic nervous system.
   c. sympathetic nervous system.
   d. endocrine system.

3. During what phase of the general adaptation syndrome has the physical and psychological energy used to fight the stressor been depleted?
   a. Alarm phase
   b. Resistance phase
   c. Exhaustion phase
   d. Adaptation phase

4. A state of physical and mental exhaustion caused by excessive stress is called
   a. conflict
   b. overload
   c. hassles
   d. burnout

5. Losing your keys is an example of what psychosocial source of stress?
   a. Pressure
   b. Inconsistent behaviors
   c. Hassles
   d. Conflict

6. After 5 years of 70-hour workweeks, Tom decided to leave his high-paying, high-stress law firm and lead a simpler lifestyle. What is this trend called?
   a. Adaptation
   b. Conflict resolution
   c. Burnout reduction
   d. Downshifting

7. Which of the following test-taking techniques is not recommended to reduce test-taking stress?
   a. Plan ahead and study over a period of time for the test.
   b. Eat a balanced meal before the exam.
   c. Do all your studying the night before the exam so it is fresh in your mind.
   d. Remind yourself of three reasons you will pass the exam.

8. Which of the following is not an example of a time-management technique?
   a. Doing one thing at a time
   b. Rewarding yourself for finishing a task
   c. Practicing procrastination in completing homework assignments
   d. Breaking tasks into smaller pieces

9. Which of the following is an example of a chronic stressor?
   a. Giving a talk in public
   b. Meeting a deadline for a big project
   c. Dealing with a permanent disability
   d. Preparing for a job interview

10. In which stage of the general adaptation syndrome does the fight-or-flight response occur?
    a. Exhaustion stage
    b. Alarm stage
    c. Resistance stage
    d. Response stage

Web Links

1. American College Health Association. This site provides information and data from the National College Health Assessment survey. www.acha.org
3. Higher Education Research Institute. This organization provides annual surveys of first-year and senior college students that cover academic, financial, and health-related issues. www.heri.ucla.edu
4. National Institute of Mental Health. This site from the National Institutes of Health is a resource for information on all aspects of mental health, including the effects of stress. www.nimh.nih.gov
Glossary

acute stress  The short-term physiological response to an immediate perceived threat.

adaptive response  Form of adjustment in which the body attempts to restore homeostasis.

allostatic load  Wear and tear on the body caused by prolonged or excessive stress responses.

appraisal  The interpretation and evaluation of information provided to the brain by the senses.

autonomic nervous system (ANS)  The portion of the central nervous system regulating body functions that a person does not normally consciously control.

background distracters  Environmental stressors of which people are often unaware.

biofeedback  A technique using a machine to self-monitor physical responses to stress.

chronic stress  An ongoing state of physiological arousal in response to ongoing or numerous perceived threats.

cognitive restructuring  The modification of thoughts, ideas, and beliefs that contribute to stress.

coping  Managing events or conditions to lessen the physical or psychological effects of stress.

cortisol  Hormone released by the adrenal glands that makes stored nutrients more readily available to meet energy demands.

distress  Stress that can have a detrimental effect on health; negative stress.

epinephrine  Also called adrenalin, a hormone that stimulates body systems in response to stress.

eustress  Stress that presents opportunities for personal growth; positive stress.

fight-or-flight response  Physiological arousal in which the body prepares to combat or escape a real or perceived threat.

general adaptation syndrome (GAS)  The pattern followed in the physiological response to stress, consisting of the alarm, resistance, and exhaustion phases.

homeostasis  A balanced physiological state in which all the body’s systems function smoothly.

hostility  The cognitive, affective, and behavioral tendencies toward anger and cynicism.

hypnosis  A trance-like state that allows people to become unusually responsive to suggestion.

hypothalamus  A structure in the brain that controls the sympathetic nervous system and directs the stress response.

immunocompetence  The ability of the immune system to respond to attack.

meditation  A relaxation technique that involves deep breathing and concentration.

migraine  A condition characterized by localized headaches that possibly result from alternating dilatation and constriction of blood vessels.

overload  A condition in which a person feels overly pressured by demands.

parasympathetic nervous system  Branch of the autonomic nervous system responsible for slowing stimuli stimulated by the stress response.

procrastinate  To intentionally put off doing something.

psychological hardness  A personality trait characterized by control, commitment, and the embrace of challenge.

sleep debt  The difference between the number of hours of sleep an individual needed in a given time period and the number of hours he or she actually slept.

stress inoculation  Stress-management technique in which a person consciously tries to prepare ahead of time for potential stressors.

stress  A series of physiological responses and adaptations in response to a real or imagined threat to one’s well-being.

stressor  A physical, social, or psychological event or condition that upsets homeostasis and produces a stress response.

suicidal ideation  A desire to die and thoughts about suicide.

sympathetic nervous system  Branch of the autonomic nervous system responsible for stress arousal.

sympathomimetics  Food substances that can produce stresslike physiological responses.

visualization  The creation of mental images to promote relaxation.

References


Health Assessment II (ACHA–NCHA II): Reference Group Data Report Fall 2010 (Baltimore: American College Health Association, 2010), Available at www.achana.org/reports_ACHA-NCHAIIV.html.


72. Ibid.