Coping with Stress

LEARNING OUTCOMES
Once you have studied this chapter, you will be able to:

- Describe a variety of personal resources that people can use to cope with stress,
- Explain how several external factors influence people’s coping with stress, and
- Identify several stress management strategies and how researchers can assess their effectiveness.

As soon as he graduated from high school, Kristofer Goldsmith fulfilled his childhood dream of serving his country by enlisting in the army. He completed basic training in 2005 and was deployed to Iraq, where he was assigned to document Iraqi-on-Iraqi violence during the U.S. occupation of Sadr City. “I was a 19-year-old kid taking pictures of mutilated men, women, and boys and little girls,” he recalled. “Those are the type of images that never really go away” (Gajilan, 2008).

After less than a year in Iraq, Goldsmith returned to the United States to serve out his military contract, but he found himself a changed man. He began drinking heavily, sleeping too little or too much, and displaying an uncontrollable and violent temper. Despite a promotion to sergeant and receiving the Army Commendation Medal for his service in Iraq, Kris counted the days until he could return to civilian life. “I just wanted to get out of the army,” Kris said, “and I figured all my problems would go away once I got out of the service.”

His breaking point came when, the very week he was supposed to get out of the army, he and his unit received “stop-loss” orders that automatically extended their service past their commitments as volunteers. The orders scheduled an immediate redeployment to Iraq. Before this could take place, however, Kris began experiencing heart attack-like symptoms.

After extensive testing, the doctors at the army hospital said Kris most likely had suffered a panic attack, and they ordered him to report to the behavioral health clinic on the base. There he was told he had an “adjustment disorder with...
disturbance of emotions and conduct.” He saw a psychiatrist, who further diagnosed chronic severe depression, prescribed group therapy and an antidepressant, and then cleared Kris for duty.

Feeling helpless and out of options, Kris Goldsmith tried to kill himself the night before he was supposed to return to Iraq. “… So I took a black Sharpie magic marker and I wrote across my arms ‘Stop-loss killed me. End stop-loss now.’ I took my half-bottle of Percocet and … a liter-and-a-half bottle of vodka and downed the Percocet and I chased it with the vodka and drank until I couldn’t drink anymore.”

Remarkably, Goldsmith survived his attempted suicide. He was discharged from the army, moved in with his parents, and became eligible for disability assistance of $700 per month after his diagnosis was changed to post-traumatic stress disorder (PTSD).

Why was Kris Goldsmith’s response to military service so life-disrupting and nearly fatal? As you saw in Chapter 4, experiencing a stressful situation or event does not inevitably lead to an adverse physiological and psychological response. In fact, how people cope with stressful events is at least as important as the stressors themselves in determining health or illness.

In this chapter, we will take a biopsychosocial approach in considering the factors that affect how people deal with stress. Those factors include biological influences, such as inherited personality traits and our physiological reactivity level; psychological and social influences, such as coping strategies, outlook on life, and perception of control; and external psychosocial factors, including socioeconomic status and social support. We will also evaluate practical strategies for managing stress. Through our journey into the biology and psychology of responding to stress, we will see ample evidence supporting the connection between mind and body. At every turn, biological, psychological, and social forces interact in our ability to cope with stress.

**PERSONAL FACTORS AFFECTING THE ABILITY TO COPE**

We all know that certain life stresses (such as final exams) tend to give us headaches, queasy stomachs, and other ailments, whereas exhilarating or uplifting experiences (such as a ski weekend or a new intimate relationship) make us feel on top of the world. In this section, we explore several personal biopsychosocial factors that affect how well we cope with potential stressors and, by extension, how this affects our health. Keep in mind that no one factor, by itself, determines your well-being. Health is always a result of biopsychosocial factors interacting in various ways.
Coping Style

Coping refers to the cognitive, behavioral, and emotional ways that people deal with situations that are appraised as stressful (Taylor & Stanton, 2007). Coping is not a one-time reaction, but rather a dynamic process—a series of responses involving our interactions with the environment. For example, after breaking up with a romantic partner you may experience physical and emotional reactions such as overall sadness, inability to sleep or eat, and even nausea. It is not just the initial incident but also continuing interactions with the environment, such as hearing sympathetic comments from friends, or visiting a place that holds poignant memories, that affect your responses. Together, these responses form our style of coping with stress.

Not all coping strategies are equally effective. Some provide temporary relief but tend to be maladaptive over time. For example, although psychological defenses like Kris's belief that his problems would go away when he left military service may allow us to distance ourselves from a stressful situation, they do not eliminate the source of stress. Similarly, alcohol or other drugs temporarily push the stress into the background but can make matters worse in the long run.

The many ways in which people cope with threatening events have been categorized in several ways. One useful distinction is between approach coping—taking action and confronting a source of stress—and avoidance coping, also called disengagement, which is aimed at ignoring or escaping from it. Disengagement can be cognitive in nature (denying distress, wishful thinking, fantasizing), or behavioral (excessive sleeping, taking drugs, shopping, playing video games). Although disengagement is sometimes effective in dealing with short-term events, such as the mild distress associated with a dentist appointment, it is less likely to work for chronic sources of stress, such as job stress or financial problems. Research demonstrates that approach coping is generally more effective in the long run (Taylor & Stanton, 2007).

One type of approach coping, problem-focused coping, calls for dealing directly with the stressful situation, either by reducing its demands or by increasing our capacity to deal with the stressor. For instance, a student who tackles a seemingly overwhelming course load by breaking her assignments into a series of smaller, manageable tasks is using problem-focused coping, as is someone recovering from an alcohol problem who joins a support group to share experiences.

When we employ emotion-focused coping, we attempt to regulate our emotional reaction to a stressful event rather than the stressor itself. We tend to rely on emotion-focused coping when we believe that little or nothing can be done to alter a stressful situation or when we believe that our coping resources or skills are insufficient to meet the demands of the stressful situation. Examples of emotion-focused coping include keeping yourself busy to take your mind off a stressful event, disclosing your emotions by talking with a friend, or journaling in a gratitude diary.

Note that emotion-focused coping can be either approach-oriented or avoidance-oriented. Emotional-approach coping (EAC) involves working through our emotional reactions to a stressful event, such as by using cognitive strategies to change the way that we appraise a stressor (see Chapter 4) (Stanton, 2010). In addition to reducing emotional distress, EAC often leads to better problem-focused coping (Carver & Connor-Smith, 2010).
Sometimes people overreact in an approach-based attempt to control their emotional reactions to a stressor. **Rumination** refers to thinking repetitively about an upsetting situation and how it relates to past and future problems. This may spiral out of control into an emotional cascade, a vicious cycle in which intense rumination makes the person more upset, which in turn causes more rumination (Moberly & Watkins, 2008). The end result is a self-amplifying feedback loop of rumination and negative emotion that ultimately may lead to self-destructive behaviors such as binging and purging, self-injury, self-medicating with alcohol or drugs, or impulsive shopping (Selby, Franklin, Carson-Wong, & Rizvi, 2013). According to the emotional cascade model, these self-damaging behaviors, which to the outside observer would only seem to make a bad situation worse, are used to distract from rumination through intense physical sensations (Selby, Anestis, Bender, & Joiner, 2009).

People sometimes use an avoidance mechanism to control their emotional reactions by repressing them. **Repressive coping** is an avoidance coping style in which the person inhibits or avoids information and emotional responses. Is repression healthy? Accumulating evidence suggests not. Emotional repression activates the sympathetic nervous system, functioning much like a stressor in elevating blood pressure and triggering the fight-or-flight response (Butler and others, 2003; Myers, 2010). Inhibited emotional expression contributes to greater cortisol reactivity in people with cardiovascular disease, increasing the incidence of adverse cardiac events and cardiac-related death (Whitehead, Perkins-Porras, Strike, Magid, & Steptoe, 2007). It has also been shown that heart rate variability—the time between two subsequent heartbeats, which depends on sympathetic and parasympathetic activity (see Chapter 4)—differs between repressors and nonrepressors in a way that is associated with cardiac problems.

Repressive coping has also been associated with the development of cancer, asthma, and diabetes (Myers and others, 2008). Although the empirical evidence for a “cancer personality” is mixed, differences in immunological markers do suggest that repressors are more cancer-prone than nonrepressors. The same is true for asthma and diabetes, which are both linked to several immune markers. Repressors have a higher number of white blood cells called eosinophiles, which become active in allergic diseases and infections. Research on diabetes shows that repressors have an increased level of both insulin and glucose—biomarkers that can signal an emerging resistance to insulin and the development of Type 2 diabetes (Mund & Mitte, 2012).

Although coping research studies generally have linked problem-focused strategies with better health outcomes than emotion-focused strategies, it is increasingly clear that this conclusion is too simple. For one thing, which coping strategy is likely to work best depends on the duration and perceived controllability of the stressor. With school- or work-related stressors, we are more likely to be successful if we apply problem-focused coping, whereas for some health-related problems, distancing oneself through emotion-focused coping may be beneficial. Of course, many health-related problems also benefit from the direct action of problem-focused coping, as when, for example, a dietary change or regular exercise regimen improves a person’s ability to manage her diabetes. As these examples demonstrate, we often use problem-focused and emotion-focused coping together, or at different times for different situations. Some researchers have suggested that people develop a type of coping intelligence from their previous experiences of success and failure in how they have attempted to manage life stress (Libin, 2017). (See Your Health Assets: The Brief COPE to get a feeling for how a health psychologist might investigate your own coping style.)
Your Health Assets

The Brief COPE

This questionnaire has been used by researchers to assess the various ways people cope with stressful events. Think about a threatening event in your own life, such as a health issue, financial difficulties, or even an upcoming exam, and rate how you have been dealing with things according to the following scale:

1 = I haven't been doing this at all. 2 = I've been doing this a little bit. 3 = I've been doing this a medium amount. 4 = I've been doing this a lot.

1. Self-distraction
I've been turning to work or other activities to take my mind off things.
I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.

2. Active Coping
I've been concentrating my efforts on doing something about the situation I'm in.
I've been taking action to try to make the situation better.

3. Denial
I've been saying to myself, “This isn’t real.”
I've been refusing to believe that it has happened.

4. Substance Use
I've been using alcohol or other drugs to make myself feel better.
I've been using alcohol or other drugs to help me get through it.

5. Emotional Support
I've been getting emotional support from others.
I've been getting comfort and understanding from someone.

6. Instrumental Support
I've been getting help and advice from other people.
I've been trying to get advice or help from other people about what to do.

7. Behavioral Disengagement
I've been giving up trying to deal with it.
I've been giving up the attempt to cope.

8. Venting
I've been saying things to let my unpleasant feelings escape.
I've been expressing my negative feelings.

9. Positive Reframing
I've been trying to see it in a different light, to make it seem more positive.
I've been looking for something good in what is happening.

10. Self-Blame
I've been criticizing myself.
I've been blaming myself for things that happened.

11. Planning
I've been trying to come up with a strategy about what to do.
I've been thinking hard about what steps to take.

12. Humor
I've been making jokes about it.
I've been making fun of the situation.

13. Acceptance
I've been accepting the reality of the fact that it has happened.
I've been learning to live with it.

14. Religion
I've been trying to find comfort in my religion or spiritual beliefs.
I've been praying or meditating.

Information from: Carver, C. S. (1997). You want to measure coping but your protocol’s too long: Consider the Brief COPE. *International Journal of Behavioral Medicine, 4*, 92-100. Table 1, p. 96.
Dispositional Affect

Similar to mood, but more stable, dispositional affect is our general approach to life—the tendency to respond to situations in a predictable way. People with high positive affectivity (PA) tend to be happy, cheerful, optimistic, and energetic, whereas people who score high on measures of negative affectivity (NA), or neuroticism, are tense, anxious, insecure, jealous, hostile, and less emotionally stable. Positive affect and negative affect are relatively independent dimensions that seem to differ in etiology, with PA influenced more by our situational experiences and NA more by heredity (Zheng, Plomin, & von Stumm, 2016). Table 5.1 presents the Positive and Negative Affect Schedule (PANAS), a widely used 20-item test that measures PA and NA (Watson, Clark, & Tellegen, 1988).

Negative affectivity is linked to poorer health, including chronic disorders such as arthritis, diabetes, hypertension, and coronary artery disease (e.g., Pressman, Gallagher, & Lopez, 2013). This may be due in part to the fact that people with NA tend to have a

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<tr>
<th>TABLE 5.1 PANAS Questionnaire</th>
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<td>This scale consists of a number of words that describe different feelings and emotions. Read each item and then list the number from the scale below next to each word. Indicate to what extent you feel this way right now, that is, at the present moment; OR indicate the extent to which you have felt this way over the past week (circle the instructions you followed when taking this measure).</td>
</tr>
<tr>
<td>1. Interested</td>
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<td>2. Distressed</td>
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<td>7. Scared</td>
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<td>10. Proud</td>
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Scoring Instructions:
Positive Affect Score: Add the scores on items 1, 3, 5, 9, 10, 12, 14, 16, 17, and 19. Scores can range from 10 to 50, with higher scores representing higher levels of positive affect.

Negative Affect Score: Add the scores on items 2, 4, 6, 7, 8, 11, 13, 15, 18, and 20. Scores can range from 10 to 50, with lower scores representing lower levels of negative affect.

higher allostatic load than people characterized by greater positivity, as indicated by elevated heart rate (Daly, Delaney, Doran, Harmon, & Maclachlan, 2010), inflammation (Roy and others, 2010), and cortisol (Polk, Coen, Doyle, Skoner, & Kirschbaum, 2005).

In contrast, PA seems to predict better physical and mental health, lower risk of disease, and reduced mortality in patients with renal failure and HIV-infection (Cohen & Pressman, 2006; Wiest, Schüz, Webster, & Wurm, 2011; Chida & Steptoe, 2008). PA is associated with lower chronic levels of stress hormones such as cortisol (Low, Matthews, and Hall, 2013) and a stronger immune response to environmental challenges such as exposure to the flu virus (Steptoe, de Oliveria, Demakakos, & Zaninotto, 2014).

Interestingly, just how bad NA is for health depends on culture. In individualistic cultures such as the United States, negative emotions tend to be viewed as the individual’s responsibility and as harmful. In collectivist cultures such as Japan, negative emotions tend to be viewed as rooted in relationships and as natural. In one large cross-cultural study of the relationship between NA and health, negative affect more strongly predicted poor physical and mental health in the United States than in Japan (Curhan and others, 2014).

Although research on dispositional affect suggests that some people are genetically driven to feel more or less negative than others, it is important to remember that heritability does not mean immutability (see Chapter 2). Individual differences in the average level of positive emotions are strongly influenced by environmental factors, such as family, friends, school, work, and community. Further, each of us can make a conscious effort to notice and nurture the positive emotions we experience. Health psychologists can use what we know about emotions and coping to promote positive affect and, in turn, improved health among their clients. In addition to its association with biological indicators of well-being, PA also fosters the development of other personal resources that have a beneficial effect on coping. These resources include physical activity and other healthy lifestyle behaviors (Sin, Moskowitz, & Whooley, 2015), as well as other psychosocial resources (Taylor & Broffman, 2011) such as optimism, psychological control, and social support. We’ll discuss each of these in turn.

**Optimism**

People with an optimistic nature cope more effectively with stress and tend to lead healthier, longer lives than their more pessimistic counterparts (Segerstrom, 2006). Among college students, optimists—those who agree with statements such as “In uncertain times, I usually expect the best” and “I always look on the bright side of things”—report less fatigue and fewer aches, pains, and minor illnesses (Carver & Scheier, 2002).

Why is optimism beneficial to health? One meta-analytic study that investigated the relationship between optimism and physical health reported beneficial effects for a variety of health outcomes and the cardiovascular, endocrine, and immune system indicators that often predict them (Rasmussen, Scheier, & Greenhouse, 2009). Optimism and positive emotions in general are associated with reduced levels of stress hormones such as cortisol, lower blood pressure, and reduced levels of biological markers of inflammation such as C-reactive protein (Steptoe, O’Donnell, & Badrick, 2008). By shortening the duration of negative emotional arousal, positive emotions such as optimism may stave off stress-related elevations in hypertension, inflammation, immunosuppression, and other disease-promoting processes (Jobin, Wrosch, & Scheier, 2014; Roy and others, 2010). One study found that people who consistently experienced positive emotions as children,
and again as adults, were half as likely as their peers to display high levels of allostatic load, a measure of cumulative wear and tear on the body (Figure 5.1; see Chapter 4) (Ryff, Singer, Wing, & Love, 2001).

Optimists and pessimists not only have different physical reactions to stress; they also differ in how they cope with stress. Optimists are more likely than pessimists to try to alter stressful situations with direct problem-focused action against a stressor, including seeking treatment when illness strikes (Segerstrom, 2006). In contrast, pessimists are more likely to disengage or to ruminate (Carver & Connor-Smith, 2010).

Pessimism can be changed into learned optimism, a set of consciously cultivated habits that entail viewing life’s setbacks and misfortunes as external (due to forces or influences outside of oneself), temporary, and specific (limited in scope) (Seligman & Csikszentmihalyi, 2000). Martin Seligman, founder of the positive psychology movement, recommends learning the “ABCs” of optimism, which stand for Adversity, Beliefs, and Consequences. Let’s consider how the ABCs might help Kris Goldsmith, whom we met in our opening vignette, to develop a more optimistic outlook.

- **Adversity**: Kris can learn to interpret difficulties in terms that are **external** (“It was the military’s policies, not me, that caused my troubles.”), **temporary** (“This will be a difficult year, but I will get through this.”), and **specific** (“My career and family plans are still on hold, but I know that other parts of my life have been positive and will continue to go well.”).
- **Beliefs**: Practicing such optimistic explanations mindfully will lead Kris to get into the habit of holding healthier, more upbeat beliefs.
- **Consequences**: Healthier, more optimistic beliefs will prompt more positive health consequences for Kris.

Martin Bolt (2004, p. 176) explains that when we are faced with adversity, “Learning to counter argue, to offer alternative causes for the disappointment, to recognize that you are overreacting, and even to show that the belief is factually incorrect undermine the pessimistic explanation and enable you to cope with setbacks more effectively.”

### Psychological Control

Healthy children gradually develop a sense of control over their surroundings. Albert Bandura and other researchers have called this belief in our ability to deal with potentially stressful situations self-efficacy (Bandura, 1997). **Psychological control** is the belief that we make our own decisions and determine what we do and what others do to us.

When faced with repeated, uncontrollable stress, people sometimes learn that they cannot affect what happens to them. Low perceived control may be one reason racial and ethnic minorities are high-risk groups when it comes to health. Particularly in Western cultures—where men are socialized under norms emphasizing achievement and competence—discrimination, economic marginalization, and an absence of employment opportunities can have a devastating impact on self-efficacy and on the way that men

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**FIGURE 5.1 Optimism and Immune Function** Two months after beginning law school, optimistic law students showed a 13% increase in the blood level (estimated total number) of CD4 cells in the bloodstream, compared with a 3% drop in the number of cells in the bloodstream of pessimists. Similarly, natural killer (NK) cell cytotoxicity, a measure of cell activity level, rose by 42% in the optimists, but by only 9% in pessimists.


**psychological control** The belief that we make our own decisions and determine what we do and what others do to us.
appraise and respond to potentially stressful situations. When African American college students in one study overheard European American classmates negatively evaluating African American performance on a task, those who attributed their poor evaluation to racism and discrimination displayed the strongest stress reactions (King, 2005).

How does the perception of psychological control influence health? One way is by buffering our physiological response to stressful situations. One meta-analysis of 200 separate research studies reported that laboratory stressors that are perceived as uncontrollable, such as performing under impossible time pressure, led to the greatest, and most prolonged, activation of the hypothalamic-pituitary-adrenocortical axis (see Chapter 4), as measured by cortisol levels (Dickerson & Kemeny, 2004). Other research studies have shown that the perception of psychological control in stressful situations improves immune system functioning (Paquet, Dube, Gauvin, Kestens, & Daniel, 2010), fosters greater physical activity (Infurna, Gerstorf, Ram, Schupp, & Wagner, 2011), and contributes to better overall health (Infurna & Gerstorf, 2014). Small wonder, then, that a sense of control has been linked to a lower risk of mortality, primarily due to lower levels of risk factors for cardiovascular disease (Paquet and others, 2010).

Have you ever been so angry with a rude driver that you felt like exploding, yet you didn’t? Or perhaps you’ve been at a religious service when you found something hysterically funny, but you needed to stifle your laughter? In such situations, we strive to control which emotions are merely experienced and which are actually expressed. Regulatory control, which refers to our capacity to modulate thoughts, emotions, and behaviors, is a part of everyday life.

Controlling your responses and emotions has broad implications for your health (de Ridder, Bertha, & de Wit, 2006). Self-regulation is associated with success in dieting, quitting smoking, and maintaining good interpersonal relationships. In addition, children who have good self-control are calmer, more resistant to frustration, better able to delay gratification (an important factor later in resisting substance abuse), and less aggressive.

Individual differences in regulatory control are also related to how people cope with stressful events and experiences. People with good self-control are less likely to resort to maladaptive coping responses such as angry venting of emotions or avoidant coping (Aronoff, Stollak, & Woike, 1994). Similarly, children and adults with good self-control are likely to use constructive, problem-focused coping responses and are unlikely to use avoidant or aggressive coping responses in stressful situations (see Figure 5.2; Fabes & Eisenberg, 1997; Mann & Ward, 2007).

Think back to our opening story: What happened to Kris Goldsmith’s feelings of psychological control when his service contract was extended? What impact did this have on his ability to cope with the stress of his service in Iraq?

Resilience

Resilience is “the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress” (APA, 2018). In its online brochure “The Road to Resilience,” the American Psychological Association explains:

A combination of factors contributes to resilience. Many studies show that the primary factor in resilience is having caring and supportive relationships within and outside the family. Relationships that create love and trust, provide role models and offer encouragement and reassurance help bolster a person’s resilience.
FIGURE 5.2 Vagal Tone and Coping with Stress  
(a) Students with a high vagal tone were less likely than students with a lower vagal tone to experience high levels of negative emotional arousal in response to everyday hassles and stress. (b) Students with a high vagal tone were also more likely to rely on constructive coping measures.


Several additional factors are associated with resilience, including:

- The capacity to make realistic plans and take steps to carry them out.
- A positive view of yourself and confidence in your strengths and abilities.
- Skills in communication and problem solving.
- The capacity to manage strong feelings and impulses. (American Psychological Association, 2018)

Research on resilience has identified contributing factors that can be divided into two groups. One group relates to individual traits, the other to positive life experiences and social support. Resilient children have well-developed social, academic, or creative skills; easy temperaments; high self-esteem; self-discipline; and strong feelings of psychological control (Dunkel Schetter & Dolbier, 2011; American Psychological Association, 2018). These elements of social-emotional competence foster healthy relationships with others who help such children adjust to adverse conditions.

Studies of resilient children point to the importance of at least one consistently supportive person in the life of a child at risk. This person can be an aunt or uncle, older sister or brother, grandparent, family friend, or teacher. This supportive person, often a caring parent, is a model of resilience who plays a significant role in convincing at-risk children that they can and will beat the odds.

Although early studies of resilience implied that there was something remarkable about these children, recent research suggests that resilience is a more common phenomenon that arises from the ordinary resources of children, their relationships, and positive community experiences. Echoing the theme of the positive psychology movement (see Chapter 1), resilience research now focuses on understanding how these adaptive processes develop, how they operate under adverse conditions, and how they can be protected or restored. Using data from the Fragile Families and Child Wellbeing Study, which is following nearly 5,000 low-income children who were born between 1998 and 2000 in large U.S. cities, Columbia University researchers have identified several
parental resilience characteristics as being particularly important in inhibiting externalizing and internalizing behaviors in children. These included parental supervision, parental attendance at important events, and parental fair treatment (Wilson-Simmons, Jiang, & Aratani, 2017).

Until recently, research studies of resilience focused mostly on children. Today, however, researchers increasingly focus on resilience in their investigations of the well-being of adults. In medicine, for instance, biological resilience refers to various protective factors (genetic, demographic, social-cultural, psychological, gender-linked, and environmental) that contribute to positive outcomes in the elderly (Alfieri, Costanzo, & Borgogni, 2011). Resilience is associated with many specific characteristics among adults, including forgiveness (Broyles, 2005), sense of coherence and purpose in life (Nygren and others, 2005), and self-efficacy (Caltabiano & Caltabiano, 2006). Based on decades of research focused on military veterans, psychiatrists Steven Southwick and Dennis Charney (2018) have developed the following list of attributes and habits associated with resilience: optimistic outlook; facing one’s fears; moral compass and ethics; religion and spirituality; social support; role models; physical fitness; cognitive fitness through lifelong learning; cognitive and emotional flexibility; and seeking meaning, purpose, and growth in one’s life. Resilience is characterized by lower incidence of depression, anxiety, and perceived stress (Wagnild, 2008). As more studies reveal the positive relationships between resilience and aging well, health psychologists are increasingly interested in recognizing and strengthening the ability to bounce back following challenge and adversity among the growing elderly segment of the population (Prince-Embury & Saklofske, 2013).

**EXTERNAL FACTORS AFFECTING THE ABILITY TO COPE**

So far, we have focused on a person’s internal resources for dealing with stress. These resources—coping style, dispositional affect, optimism, psychological control, and resilience—certainly play important roles in our response to stress. Yet external factors are also important, especially family, friends, education, employment, time, and money. People who have more resources available typically cope with stressful events more successfully than those who are lacking in such resources.

**Socioeconomic Status**

One of the most influential factors with respect to health is socioeconomic status (SES), which you will recall from Chapter 1 is a measure of a person’s economic and social position relative to others. People who are low in SES have increased risk for chronic disease, disability, and premature mortality (Stowe and others, 2010). It is important to note,
though, that access to health care does not completely explain the relationship between SES and health. The association between lower SES and poor health is found even in countries that have universal health care (Cohen, Doyle, & Baum, 2006).

Health disparities increase with each step down the SES ladder (Adler & Rehkopf, 2008). Older adults who never completed high school and those with an annual household income less than $15,000 have more than twice as many unhealthy days as do women and men with a college degree and an annual household income of $50,000 or more (Figure 5.3). This is cause for concern given the fact that U.S. children who are African American, American Indian, or Hispanic children are disproportionately likely to be growing up in a low-SES family. One longitudinal study found that children with highly reactive emotional styles who grew up in low-SES environments had higher levels of chronic inflammation as adults than did similar children raised in higher-SES environments (Appleton and others, 2012). Chronic inflammation is associated with the risk of a number of age-related diseases, including hypertension, heart disease, and diabetes (Singh & Newman, 2011). Another study found that SES also predicts whether supportive personal relationships confer health benefits. Among women who were either awaiting further evaluation from an abnormal mammogram or newly diagnosed with breast cancer, those with higher SES had a stronger cellular immune response than women with lower SES (Fagundes and others, 2012).

Low levels of education and income and high levels of distress tend to be associated with a maladaptive coping style (Roohafza and others, 2009; Poetz, Eyles, Elliott, Wilson, & Keller-Olaman, 2007). These circumstances may cause people to develop a feeling of hopelessness and to believe that they have little or no psychological control over events in their lives. So, with repeated exposure to stress and no way to break the cycle, their only recourse is to try to control their emotional responses to stress—because they’ve learned that they can’t control the situation itself. This is important because people who believe that they can determine their own behavior and influence the environment to bring about desired outcomes cope more effectively with stressful events (Wrosch, Schulz, Miller, Lupien, & Dunne, 2007). A strong perception of control has also been associated with a healthier lifestyle, a stronger immune response to allergens (Chen, Fisher, Bacharier, & Strunk, 2003), and a lower overall risk of death (Surtees, Wainwright, Luben, Khas, & Dy, 2006). No wonder, then, that psychological control may be especially important for people who are vulnerable to

**FIGURE 5.3 Unhealthy Days by Socioeconomic Status and Sex**  Older adults who never completed high school and those with an annual household income less than $15,000 (Low SES) have more than twice as many unhealthy days—defined according to a composite measure of physical, mental, social well-being—compared to women and men with a college degree and an annual household income of $50,000 or more (High SES).

health problems, including children, the elderly, and those who are already being treated for medical conditions (Wrosch and others, 2007).

Socioeconomic status is also a powerful predictor of both health and health behaviors. One study of health behaviors and outcomes in Pitt County, North Carolina, reported that SES was inversely related, among both African American women and men, to alcohol consumption, cigarette smoking, and risk of hypertension (James and others, 2006). The same study found that low-SES African Americans perceived weaker levels of emotional support when under stress than did their higher-SES counterparts. Compared with those of high SES in both childhood and adulthood, low-SES men were also seven times more likely to suffer from hypertension as adults.

Interestingly, socioeconomic indicators at the level of individual neighborhoods predict the health of residents in relationship to smoking and other harmful health behaviors, even after individual differences in SES, lifestyle behaviors, and other risk factors are taken into consideration (Kendzor and others, 2009; Paul, Boutain, Manhart, & Hitti, 2008). Pamela Feldman and Andrew Steptoe (2004) believe that neighborhood SES is linked to health because it strongly influences the social and psychological experiences of residents living in a particular neighborhood. The researchers compared 19 low-SES neighborhoods and 18 high-SES neighborhoods in London on four measures: social cohesion (trust and solidarity with neighbors), social control (confidence that neighbors would take action to maintain the well-being of the neighborhood), neighborhood problems (community-wide stressors such as litter and traffic noise), and neighborhood vigilance (a measure of feelings of threat and vulnerability in the neighborhood). Londoners living in lower-SES neighborhoods perceived greater neighborhood strain (weaker social cohesion, more neighborhood problems, and greater vigilance) than people living in more affluent neighborhoods, which in turn was associated with poorer individual health, poorer social relationships, and lower levels of perceived control among residents. In other studies, community violence has been linked to increased stress symptoms, depression, and anxiety among inner-city African American adolescents and to the use of negative coping strategies, such as avoidance and aggression (Dempsey, 2002).

Social Support

Another important external factor in how we cope with threatening events is the degree of social support that we receive. Social ties and relationships with other people powerfully influence us, in both positive and negative ways. In stressful situations, people who perceive a high level of social support may experience less stress and may cope more effectively.

Evidence for the Effects of Social Support

Multiple studies over several decades have found positive associations between social support and various emotional and physical health benefits. Let’s examine some of this evidence.

Faster recovery and fewer medical complications  Social support has been associated with better adjustment to and/or faster recovery from surgery, rheumatoid arthritis, childhood leukemia, and stroke (Brembo, Kapstad, Van Dulmen, & Eide, 2017; Martin & Brantley, 2004). In addition, women with strong social ties have fewer complications
during childbirth (Collins, Dunkel-Schetter, Lobel, & Scrimshaw, 1993), and both women and men with high levels of social support are less likely to suffer heart attacks (Holahan, Holahan, Moos, & Brennan, 1997).

**Lower mortality rates** Having a number of close social relationships is associated with a lower risk of dying at any age. The classic example of this association comes from a survey of 7,000 adults in Alameda County, California (Berkman & Syme, 1994). The researchers found that having a large number of social contacts enabled women to live an average of 2.8 years longer and men an average of 2.3 years longer than those who don’t have such social contacts (Figure 5.4). These benefits to longevity remained even when health habits such as smoking, alcohol use, physical activity, obesity, and differences in SES and health status at the beginning of the study were taken into account. Similarly, a 15-year prospective study of mortality rates among Swedish men who were 50 years old at the start of the study revealed that social support was inversely related to mortality. Men with a large circle of friends whom they saw regularly were half as likely to develop heart disease or die compared with men who had little social contact or support. The impact of low levels of social support on mortality was comparable in magnitude to that of cigarette smoking (Rosengren, Wilhelmsen, & Orth-Gomer, 2004). Another study showed that cancer patients with the fewest contacts each day were 2.2 times more likely to die of cancer over a 17-year period than were those with greater social support (Spiegel, 1996).

**Less distress in the face of terminal illness** Patients who perceive a strong network of social support experience less depression and hopelessness when undergoing treatment for AIDS, diabetes, and a variety of other chronic illnesses than do patients lacking social support (Kiviruusu, Huurre, & Aro, 2007; Varni, Setoguchi, Rappaport, & Talbot, 1992).

**How Social Support Makes a Difference**

As the foregoing evidence indicates, the support of others can benefit our health, but how? According to the **buffering hypothesis**, social support mitigates stress indirectly by helping us cope more effectively (Cohen & McKay, 1984; Cohen & Wills, 1985). For instance,
people who perceive strong social support are less likely to ruminate. Rumination tends to lead to more negative interpretations of events, triggering recall of unpleasant memories, interfering with problem solving, and reducing the ruminator’s interest in participating in enjoyable activities (Lyubomirsky, Caldwell, & Nolen-Hoeksema, 1998; Spasojevic & Alloy, 2001). As another example, happily married people live longer, healthier lives than those who are unmarried (Kaplan & Kronick, 2006).

According to the direct effect hypothesis, social support enhances the body’s physical responses to challenging situations (Pilisuk, Boylan, & Acredolo, 1987). Support for the direct effect hypothesis comes from an investigation of the relationships among self-reported stress levels, the availability of social support, and circulating levels of prostate-specific antigen (PSA) in men being screened for prostate cancer (Stone, Mezzacappa, Donatone, & Gonder, 1999). Men with the highest levels of self-reported stress also had significantly higher levels of PSA—a biological marker of prostate malignancy—than their less-stressed counterparts. Although stress was positively associated with PSA levels, there was an inverse correlation between PSA levels and the participants’ perceived level of social support, as demonstrated by their scores on the six-item Satisfaction with Social Contacts (SSC) scale (see Figure 5.5). The SSC includes items such as “How has the number of people that you feel close to changed in the past six months?” and “How satisfied are you with the amount of social contact you have?”

The issue of how social support benefits health continues to be hotly debated. It may be that social support makes potentially stressful events more benign by diffusing or minimizing their initial impact. For example, having a supportive friend may make you less likely to interpret a low exam grade as evidence that your intelligence is low. Or perhaps the belief that other people care about you increases your self-esteem and gives you a more positive outlook on life. The result? Greater resistance to disease and a greater chance of adopting health-enhancing habits.

Who Receives Social Support?

Why are some people more likely than others to receive social support? The answer is predictable: People with better social skills—who relate well to others and who are caring and giving—create stronger social networks and thus receive more social support. Some evidence comes from a study of college freshmen who were categorized according to their social competence, social anxiety, and self-disclosure skills (Cohen, Sherrod, & Clark, 1986). Over the course of the study, the researchers discovered that students with greater social skills were the most likely to form strong social networks.

Other studies have found that angry or hostile people receive less social support than agreeable people do. They also report more negative life events and make people around them feel more stress (Hardy & Smith, 1988; Wager, Fieldman, & Hussey, 2003). Results such as these suggest an obvious intervention: To help people increase their social support, help them learn to be friendlier and less hostile.

It would seem, then, that the secret to a long, healthy life is to construct a large social network. But can a person be too socially connected? Can some social connections adversely affect our health?

**FIGURE 5.5 Stress, Social Support, and Prostate-Specific Antigen (PSA)** Level of PSA was positively associated with stress and inversely related to satisfaction with social contacts. Participants who perceived low levels of stress and high satisfaction with social contacts had significantly lower levels of PSA, a biological marker of prostate malignancy.

When Social Support Is Not Helpful

Sometimes social support does not reduce stress and benefit health. In fact, it may produce the opposite results. There are several reasons for this surprising fact. First, although support may be offered, a person may not perceive it as beneficial (Wilcox, Kasl, & Berkman, 1994). This may occur because the person does not want the assistance, thinks the assistance offered is inadequate, or is too distracted to notice that help has been offered. For example, in the first hours of coping with the loss of a loved one, a person may want only to be alone with his or her grief.

Second, the type of support offered may not be what is needed at the moment. According to the matching hypothesis, different stressful situations create different needs, and support that is responsive to these differences is most effective (Maisel & Gabel, 2009). For example, a single mother who is struggling to complete her college degree may feel stress during exam weeks. Although what she may need most is instrumental social support, such as assistance with child care or household chores, all that may be offered is emotional support, such as encouragement to study hard. Instrumental social support is especially valuable for controllable stressors, whereas emotional support is more helpful for uncontrollable stressors, such as a cataclysmic event or the loss of a loved one. The role of social support in promoting health, then, is quite specific. It is also subject to social and cultural norms concerning the types of support that are helpful (Abraido-Lanza, 2004).

Third, too much social support may actually increase a person's stress. Perhaps you know someone who is a member of too many organizations or is overwhelmed by intrusive social and family relationships. During periods of stress, this person may feel under siege in the face of all the advice and “support” that is offered. The critical factor appears to be having at least one close friend to confide in and share problems with. Having five, six, or even a dozen more may convey no more—and perhaps may give even less—benefit than having one or two.
MANAGING STRESS

Each of us has coping skills that we have acquired over the years. These include strategies that have worked in the past, techniques that we have read about, and behaviors that we have observed in other people. In most situations, these skills are probably adequate to keep us from experiencing undue stress. Sometimes, however, the demands of a situation may exceed our coping resources. Health psychologists have played a prominent role in developing interventions that help people cope with stress. Some of these techniques, such as biofeedback and meditation, are considered forms of complementary and alternative medicine (Barnes, Bloom, & Nahin, 2008), which is explored in Chapter 15. However, the growing evidence base for the effectiveness of relaxation training, cognitive-behavioral therapy, cognitive behavioral stress management, and emotional disclosure has led to the incorporation of a number of stress management techniques into conventional medicine.

**Stress management** describes a variety of psychological methods designed to reduce the impact of potentially stressful experiences. These techniques were originally introduced in clinical settings to help patients adapt to chronic illnesses and stressful medical procedures, but now they are used widely. For example, occupational groups (especially health care providers, emergency services personnel, students, and teachers) and people in disadvantaged personal circumstances (e.g., family caregivers, single parents, the unemployed, and victims of assault or abuse) all benefit from stress-management techniques.

So do students making the transition from high school to college. Consider how stressful the college experience can be. You might be living away from home for the first time, perhaps crammed into a crowded dorm room with people who have very different backgrounds, personalities, and habits. Your professors may seem gruff, and the coursework may be more challenging and accelerated than you expected. You’re forced to study more than ever, often under noisy circumstances and with inadequate sleep and campus food that doesn’t sit well in your stomach.

To help new students cope with these challenges, many colleges make stress-management programs available. A typical program involves three phases: education, acquiring skills, and practicing skills. In the first phase, participants learn what stress is, how it takes a toll on health, and that stress is more a process of their own cognitive appraisal than a characteristic of situations themselves.

Next, the participants are trained to monitor stress in their everyday lives using some of the techniques of ecological momentary assessment. For instance, they learn to observe their own behavior closely and to record when, and under what circumstances, they feel stress. Participants are also encouraged to keep track of their emotional, physical, and behavioral reactions to the stressors they’ve identified. By charting this information, students can learn to recognize, and then focus on, events and people that seem to be regular “triggers” of their stress. They also may begin to see an unhealthy pattern in their own behavioral responses to these circumstances, such as emotional eating, oversleeping, or using alcohol and other drugs.

The third phase of stress management involves learning new skills to either eliminate potential stressors or to reduce the experience of stress in healthy ways. There are many techniques and resources available to help people manage stress more effectively. We will consider relaxation training first.
Relaxation Therapies

Although relaxation techniques have been used since antiquity, modern use is usually traced to Edmond Jacobson (1938), whose progressive muscle relaxation technique forms the cornerstone for many modern relaxation procedures. In progressive relaxation, you first tense a particular muscle (such as the forehead) and hold that tension for about 10 seconds. Then you slowly release the tension, focusing on the soothing feeling as the tension drains away. In similar fashion you tense, then relax other major muscle groups, including the mouth, eyes, neck, arms, shoulders, thighs, stomach, calves, feet, and toes. After practicing the relaxation technique for several weeks, you will identify the particular spots in your body that tense up during moments of stress, such as the jaw or fists. As you become more aware of these reactions, you can learn to relax these muscles at will.

Relaxation Response

In another training technique, the relaxation response, participants assume the meditative state described below, in which metabolism slows and blood pressure lowers. Cardiologist Herbert Benson (1996) became intrigued with the possibility that relaxation might be an antidote to stress when he found that experienced meditators could lower their heart rate, blood lactate level (a byproduct of physical exercise that creates the “burn” of muscular exertion), blood pressure, and oxygen consumption. Benson identified four requirements for achieving the relaxation response:

- a quiet place in which distractions and external stimulation are minimized;
- a comfortable position, such as sitting in an easy chair;
- a mental device, such as focusing your attention on a single thought or word and repeating it over and over; and
- a passive, nonjudgmental attitude.

There is considerable evidence that relaxation training can help patients cope with a variety of stress-related problems, including hypertension, tension headaches, depression, lower back pain, adjustment to chemotherapy, and anxiety (Smith, 2005). Underlying the effectiveness of these techniques is their ability to reduce heart rate, muscle tension, and blood pressure, as well as self-reported tension and anxiety. Moreover, these techniques generally have been found to be more effective than placebos in reducing pain and alleviating stress. Relaxation training also has been shown to be an effective intervention following surgery, including by reducing hormonal stress responses (Phillips and others, 2011) and promoting faster healing (Broadbent and others, 2012).

Diaphragmatic Breathing and Visualization

When we’re stressed, our breathing is often short and rapid. Simply slowing it down by taking long, deep breaths can help induce relaxation. You can try this yourself. Inhale slowly, and then exhale slowly. Count slowly to five as you inhale, and then count slowly to five as you exhale. As you exhale, note how your body relaxes. The keys to deep breathing are to breathe with your diaphragm, or abdomen, rather than your chest, and to take at least as long to exhale each breath as you did to inhale. Imagine a spot just below your
navel. Breathe into that spot, expanding your abdomen as it fills with air. Let the air fill you from the abdomen up, then let it out, like deflating a balloon. Each long, slow exhalation should make you feel more relaxed.

**Diaphragmatic breathing relaxation (DBR)** has proven effective in reducing the perception and symptoms of anxiety (Chen, Huang, Chien, & Cheng, 2016). DBR has also been shown to improve lung functioning in patients with asthma, heart failure, and chronic obstructive pulmonary disease (Seo and others, 2016), and to reduce levels of pain following surgery (de Jong & Gamel, 2006). DBR offers many advantages over some of the conventional therapies for treating anxiety, including ease of learning, safety, and avoiding possible side effects and other hazards of the use of medication (Kim, Roth, & Wollburg, 2015). DBR seems to stimulate the parasympathetic nervous system, stabilizing heart rate and blood pressure, and the body’s autonomic stress response (Kim, Roth, & Wollburg, 2015).

In Eastern cultures, breathing techniques such as DBR are often involved in yoga, meditation, and qi gong (see Chapter 15). These techniques sometimes combine DBR with matching visualization (guided mental imagery), which is a form of focused relaxation used to create peaceful images in your mind—a “mental escape.” In guided imagery, the person is directed to recall or create a pleasant, relaxing image, focusing attention on sensory details such as sensations of color, sound, and touch. Visualization is powerful enough to reduce, or even to trigger, stress reactions in the laboratory. In one study, participants spent five minutes imagining scenes typical of their relationships with a romantic partner. Those who had earlier reported being in an unhappy relationship had significantly greater increases in salivary cortisol following the imagery (indicating higher stress) than those in happier relationships (Berry & Worthington, 2001).

To try visualization for yourself, find a comfortable place where you can close your eyes and begin breathing deeply, in a natural rhythm. Now visualize relaxation entering your body as you inhale and tension leaving your body as you exhale. As you breathe, visualize your breath coming into your nostrils, going into your lungs, and expanding your chest and abdomen. Then visualize your breath going out the same way. Continue breathing, but each time you inhale, imagine that you are breathing in more relaxation. Each time you exhale, imagine that you are getting rid of a little more tension.

Finally, breathing techniques and visualization can be combined with positive self-affirmations, or self-talk, as you relax. The goal is to identify negative self-talk and convert it into healthier, positive self-talk. Here are a few positive statements you can practice:

- I am healthy and strong.
- There is nothing that I cannot handle.
- I am safe.

### Mindfulness-Based Stress Reduction

Is there a link between effective coping and being more consciously present? **Mindfulness-based stress reduction (MBSR)** was developed at the Stress Reduction Clinic at the University of Massachusetts as an adjunct to medical treatment for people with a variety of chronic health problems. Jon Kabat-Zinn, who developed MBSR, has described mindfulness as “falling awake,” “coming to our senses,” and “knowing what you are doing as mindfulness-based stress reduction (MBSR) A form of therapy that focuses on using structured meditation to promote mindfulness—a moment-to-moment, nonjudgmental awareness.
you are actually doing it” (2005). A basic premise of mindfulness training is that in most aspects of life, people function on “automatic pilot”—a mode of behavior characterized by habit. Proponents of mindfulness training believe that stress can be reduced, and quality of life improved, by overriding “autopilot” mode and instead focusing on the present moment.

MBSR interventions have been used to decrease stress, depression, and anxiety in cancer patients (Zainal, Booth, & Huppert, 2013); to reduce distress and possibly slow disease progression in people living with HIV (Riley & Kalichman, 2015); and help patients suffering from low-back pain (Cramer, Haller, Lauche, & Dobos, 2012). Among cancer patients, MBSR interventions have also been associated with lower stress hormone levels and blood pressure (Hughes and others, 2013), and improved immunity (Carlson, Speca, Faris, & Patel, 2007). Some researchers have suggested that MBSR interventions are effective because they tend to reduce people’s tendency toward rumination over stressful experiences (Gu, Strauss, Bond, & Cavanagh, 2015).

Neuroimaging studies have begun to explore the neural mechanisms underlying MBSR with techniques such as functional magnetic resonance imaging (fMRI). Mindfulness training seems to increase activity in the prefrontal cortex of the brain, an area important in regulating activity in the amygdala and other parts of the limbic system related to anxiety and other negative emotions (Creswell, Way, Eisenberger, & Lieberman, 2007). One study found that college students who scored high in measures of dispositional mindfulness had lower resting neural activity in the amygdala (Way, Creswell, Eisenberger, & Lieberman, 2010).

Using fMRI, another study found increased tissue density in the brain’s hippocampus among participants who completed an eight-week MBSR course compared with a control group (Holzel and others, 2011). The hippocampus is believed to play a central role in mediating some of the benefits of mindfulness training due to its involvement in cognition and memory.
in regulating cortical arousal and emotion (Milad and others, 2007). Structural changes in the hippocampus therefore may reflect improved function in regulating emotional responses to potential stressors. In contrast to these increases in tissue density, decreased density of the hippocampus has been associated with several pathological conditions, including major depression (Sheline, 2000) and post-traumatic stress disorder (Kasai and others, 2008).

Mindfulness training may also improve immune functioning and reduce the risk of a number of chronic medical conditions (Hofmann, Sawyer, Witt, & Oh, 2010). One prospective study found that hypertension patients who received MBSR had a 30% lower cardiovascular death rate over the next two decades compared to members of other treatment groups (Schneider and others, 2005). Other studies have established the efficacy of mindfulness-based interventions in reducing symptoms of generalized anxiety disorder (Roemer, Orsillo, & Salter-Pedneault, 2008), depression (Teasdale and others, 2000), substance abuse (Bowen and others, 2006), eating disorders (Tapper and others, 2009), and chronic pain (Grossman, Niemann, Schmidt, & Walach, 2004). For an easy primer on how MBSR works, see Your Health Assets: Try Mindfulness-Based Stress Reduction for Yourself.

Cognitive-Behavioral Therapy

Cognitive-behavioral therapy is based on the view that our way of thinking about the environment, rather than the environment itself, determines our stress level. If thinking can be changed and skills acquired to make positive changes in behavior, stress can be reduced. There are a variety of clinical interventions that use cognitive strategies, including distraction, calming self-statements, and cognitive restructuring. In distraction procedures, people learn to direct their attention away from unpleasant or stressful events. Use of pleasant imagery (also called visualization), counting aloud, and focusing attention on relaxing stimuli (such as a favorite drawing, photograph, or song) are examples of distraction.

Your Health Assets

Try Mindfulness-Based Stress Reduction for Yourself

Mindfulness-based stress reduction (MBSR) has been shown to have many benefits, including increased attention, an improved immune response to disease, reduced stress hormones, and perhaps even a higher quality of life. Following are a few suggestions for how to try MBSR:

- Next time you are outside, take several deep breaths. What is the air like? Is it warm, or is it cold? How does the air feel on your body? Try to accept that feeling and not resist it.
- Eat your next meal in silence. Don’t do anything but focus on your food. Eat slowly, and savor each bite.
- One morning when you can, take time at the beginning of the day to sit alone and think. Focus on your breathing. Open the window a little way, gaze out, and listen to the sounds outdoors.
- At work or school, try to stop for a few moments each hour. During those moments, note how your body feels. Let yourself regroup, and allow your mind to settle before you return to your work or school task.
Individuals can also be taught to silently or softly make calming, relaxing, and reassuring self-talk statements that emphasize the temporary nature of a stressor ("Let it go, that rude driver won’t get to me."); are aimed at reducing autonomic arousal ("Stay calm now, breathe deeply, and count to 10"), or are directed at preserving a sense of psychological control ("I can handle this"). In our opening story, Kris Goldsmith’s therapist might have helped him to learn self-calming techniques and to maintain a sense of self-control.

Cognitive restructuring is a generic term that describes a variety of psychological interventions directed at replacing maladaptive, self-defeating thoughts with healthier adaptive thinking. These interventions aim to break the vicious cycle of negative thinking, which pessimistically distorts perceptions of everyday events and prevents adaptive coping behaviors (Belar & Deardorff, 1996) (Figure 5.6). Therapists teach clients to reinterpret their thoughts in a less negative way and to raise awareness of distorted and maladaptive thinking.

This reciprocal relationship between maladaptive thinking and unhealthy behaviors is well documented. For example, focusing on a negative experience at work can affect your mood and lead to a tension headache. Having a tension headache can sour your mood, which in turn can make your thoughts more pessimistic.

**Cognitive Behavioral Stress Management**

Cognitive behavioral stress management (CBSM) is a multimodal intervention that combines relaxation training, visualization, cognitive restructuring, reinforcement, and other techniques; it has helped people cope with a range of stressors. CBSM often begins by teaching people to confront stressful events with a variety of coping strategies that can be used before the events become overwhelming. In this way, individuals are able to “inoculate” themselves against the potentially harmful effects of stress (Antoni, Ironson, & Scheiderman, 2007). Many stress inoculation programs offer an array of techniques so that a client can choose the strategies that work best for him or her.

**Stress inoculation training** is a three-stage process that uses the same principle as medical vaccination, with the therapist using a weakened dose of a stressor in an attempt to build immunity against the full-blown stressor (Meichenbaum, 2007). The stages are as follows:

- **Stage 1:** Reconceptualization. Patients reconceptualize the source of their stress, changing its **appraised meaning** (Chapter 4). Imagine that you are agonizing over an upcoming dental procedure, such as a root canal. During the first stage of stress inoculation training, you would learn that your discomfort is at least partially the result of psychological factors, such as dwelling on how much the procedure is going to hurt. Once you are convinced that some of your pain is psychological in nature, you will be more likely to accept that cognitive behavior therapy can offer some relief.

- **Stage 2:** Skills acquisition. Next, you will be taught relaxation and controlled breathing skills. The logic is inescapable: Being relaxed is incompatible with being tense and physically aroused. Therefore, learning to relax at will is a valuable tool in managing pain. Other techniques that you might learn include the use of pleasant mental imagery, dissociation, or humor.
Stage 3: Follow-through. Now you will learn to use these coping skills in everyday life, beginning with how you might apply them to the imagined upcoming root canal. You will be encouraged to increase your physical activity and to take pain medication on a timed daily schedule, rather than waiting until you feel pain. Your family members may be taught ways of reinforcing your new healthier behaviors.

CBSM has proved to be effective in helping people cope with a variety of stress-related problems, including job stress (Kawaharada and others, 2009), hypertension (Amigo, Buceta, Becona, & Bueno, 1991), post-traumatic stress disorder (Ponniah & Hollon, 2009), depression associated with breast cancer (Antoni and others, 2009), prostate cancer (Penedo and others, 2004), and AIDS (Antoni and others, 2001). CBSM also has been shown to reduce HPA axis hormones (see Chapter 4) among men who are infected with symptomatic human immunodeficiency virus (HIV) (Antoni and others, 2001).

Emotional Disclosure

In the 1980s, psychologist James Pennebaker began a fascinating series of studies with college students, most of whom followed this simple protocol: Students were asked to write about an assigned topic for 15 minutes a day for four days. Half of the participants wrote about everyday, ordinary experiences—describing their dorm rooms, for instance. The other students were told to write about their deepest thoughts and feelings regarding a stressful or traumatic experience. Students in the emotional disclosure group took immediately to the task and wrote intimate, gripping stories, sometimes crying and displaying other strong emotional reactions. At the end of the study, most reported that the experience had helped them find new meaning in the traumatic experience. The most striking result, however, came six months later, at the end of the school year, when Pennebaker discovered that those who had written about stressful experiences had visited the university health center far less often than did the students who had written about everyday things (Pennebaker & Susman, 1988).

Over the decades, Pennebaker's finding has been repeated in dozens of settings with scores of people from different walks of life, ethnicities, and cultural backgrounds. The participants instructed to use expressive writing or, alternatively, to confide verbally to a confidante have included prison inmates, crime victims, chronic pain sufferers, Holocaust survivors, college students, bereaved widows and widowers, business executives, and laid-off workers. In almost every instance, emotional disclosure is related to some positive health benefit.

When people write or talk about traumatic events, their skin conductivity, heart rate, and systolic and diastolic blood pressure all decrease (Ernst, 2017). Over time, keeping a daily journal of thoughts and feelings has been associated with decreased absenteeism, fewer medical visits, and even improved immune functioning and wound healing (Ernst, 2017). In one recent study, 122 healthy participants...
were randomly assigned to write about traumatic events (expressive writing) or control topics (neutral writing) before or after receiving a small punch biopsy wound. After 10 days, those assigned to the expressive writing group showed significantly greater healing of their wounds than those in the neutral writing group (Robinson, Jarrett, Vedhara, & Broadbent, 2017). This study, and another that explored the benefits of expressive writing for reducing test anxiety, demonstrated that emotional disclosure is most beneficial when performed before the threatening event occurs (Shen, Yang, Zhang, and Zhang, 2018).

There are many reasons why emotional disclosure may help us cope with stress. Interestingly, people who have been diagnosed with alexithymia, or difficulty in identifying and expressing their own emotions, have been linked to increased cardiovascular mortality (Tolmunen, Lehto, Heliste, Kurl, & Kauhanen, 2010). Writing or talking about stressful experiences may help lower this risk. Confiding in others may allow us to gain helpful advice. It also may provide a source of reinforcement and social support, as well as eliminate the need to ruminate about and inhibit a stressful event, which may reduce the physiological activity linked to the event (Stanton, 2010). Finally, writing or talking about a stressful experience may encourage cognitive reappraisal as we gain a new perspective on the event or develop a plan to deal with a stressful situation (Lestideau & Lavallee, 2007). In support of this latter idea, Pennebaker has found that people who write the most coherent, persuasive, and well-organized stories tend to experience the greatest health benefits (Niederhoffer & Pennebaker, 2002). Similarly, women who had recently lost a close relative to breast cancer and who were asked to write daily about the death were most likely to demonstrate a bolstered immune response (increased natural killer cell cytotoxicity) when daily written disclosure enabled them to find positive meaning from the loss (Bower, Kemeny, Taylor, & Fahey, 2003). A meta-analysis of studies indicates that emotional disclosure may be more effective in helping people cope with physical rather than psychological challenges (Frisina, Borod, & Lepore, 2004).

Other Coping Tools and Techniques

Research has identified additional ways in which people can cope with stress. Here we will discuss gratitude, humor and pets, and spirituality and meaning.

Gratitude

Gratitude has been categorized in many different ways: as a temporary emotional state, a stable personality trait, a coping response, and an attitude. Most often, gratitude is defined as the recognition of a positive outcome from an external source, including a sense of wonder and thankfulness for benefits received (Nelson & Lyubomirsky, 2016). People who maintain a grateful outlook on life cope better with stress, perceive greater social support in their lives, sleep better, and have better physical and mental health (Emmons & Mishra, 2011).

Cultivating gratitude is also an effective way to develop positive affectivity. One way to begin cultivating gratitude is by catching yourself when you complain or grumble about a stressor and trying to think of three or four related things for which you are grateful. When you are feeling stressed at work, for example, try to shift your focus to a few things that you like about your job. Another effective technique is to begin keeping a gratitude journal in which you write down, two or three times a week, things for which you are grateful.
Journaling combines the benefits of emotional disclosure—as you explore your thoughts and feelings about the events in your life—with an active problem-focused strategy to develop a more positive mindset. In one study, people who kept gratitude journals exercised more regularly, reported fewer physical symptoms, and felt better about their lives, compared with those who recorded hassles or neutral life events (Emmons & McCullough, 2003).

**Humor and Pets**

Laughter and a sense of humor help many people cope with stress (Fritz, Russek, & Dillon, 2017). In addition to boosting mood, laughter reduces epinephrine and cortisol secretion, boosts the immune system, reduces the risk of coronary disease, lowers blood pressure, and generally promotes vascular health (Heo, Kim, Park, & Kil, 2016; Miles, Tait, Schure, & Hollis, 2016).

How can you bring more humor and laughter into your life? Here are some simple things to try.

- Practice smiling more and laughing more. Smiling, which is the beginning of laughter, is contagious. Laugh at yourself.
- Spend time with fun people, and when you hear laughter, move toward it. Sometimes humor is private, but in most cases people are happy to share a funny experience. Share a joke or funny story of your own.
- Try simulated laughter by laughing out loud even when nothing funny is happening. There are laugh yoga and laugh therapy groups that make this technique a focus.
- Create additional opportunities to laugh. Watch a funny film or video. Go with friends to a comedy club. Keep an amusing toy, picture, or poster in view at the location where you study or work.

In addition to human friends, pets are a source of fun and affection. Pet ownership can reduce loneliness, help lower blood pressure, decrease secretion of cortisol, and increase secretion of dopamine, oxytocin, and serotonin—three hormones associated with feelings of well-being. If your living arrangements make pet ownership impractical, try visiting any of the many Web sites that feature amusing animal videos.

**Spirituality and Meaning**

For many people, spirituality may promote well-being and health. People who are spiritually active tend to eat healthier, exercise more, smoke less frequently, and generally have healthier lifestyles. Because spirituality is often communal, those who participate in spiritual or religious groups often benefit from increased social support. Spiritual activity may also promote health by fostering more positive emotions, including optimism, feelings of acceptance, and a sense that life is meaningful.

People who receive a diagnosis of a serious illness such as cancer, or experience a traumatic environmental event, sometimes show improved psychological adjustment and better health outcomes by using meaning-focused coping (Updegraff, Silver, & Holman, 2008). In this process, people don’t try to change a situation or the distress associated with it, but rather search for its personal meaning by asking questions such as “Why did this happen?” and “How has this changed me?” (Haynes and others, 2017; Gan, Zheng, Wang, & Li, 2017).
Weigh In on Health

Respond to each question below based on what you learned in the chapter. (Tip: Use the items in “Summing Up” to take into account related biological, psychological, and social concerns.)

1. Your roommate, a pre-med student who is heavily invested in the medical model, doesn’t believe that personality traits, such as a person’s general approach to life and feelings of control over their decisions and choices, affect their health. What evidence can you offer to change her thinking on this issue?

2. How would you describe yourself in terms of coping style, psychological control and choice, social support, and any other factors discussed in this chapter? From what you have read, can you list a few ways in which you might improve your stress responses and possibly improve the way in which you cope with stressful situations?

Summing Up

Factors Affecting the Ability to Cope

1. Coping refers to the various ways—healthy or unhealthy—in which people attempt to prevent, eliminate, weaken, or simply tolerate stress.

2. Dispositional affect refers to a person’s tendency toward negative emotions and distress (negative affectivity) or positive emotions and subjective well-being (positive affectivity).

3. Coping can involve dealing directly with a stressor (approach coping), or distancing oneself from the distress associated with a threatening event (avoidance coping).

4. Problem-focused coping applies problem-solving skills to anticipate and prevent potential stressors or confront the source of stress. Emotion-focused coping refers to controlling one’s emotional response to a stressor, either by distancing oneself from it or by appraising it differently.

5. Emotional-approach coping (EAC), which involves working through our emotional reactions to a stressful event, is adaptive and healthy.

6. Rumination refers to thinking repetitively about an upsetting situation and how it relates to past and future problems associated with a stressor. This may spiral out of control and make the person more upset, which in turn causes more rumination.

7. How people cope with a stressor is influenced by a number of external resources: family, friends, education, employment, time, money, the presence of other stressors, etc. People with access to more resources typically cope more successfully because they have more options.

8. Socioeconomic status (SES) has a significant effect on coping and on health. People who are low in SES have increased risk for chronic disease, disability, and premature mortality.

9. People of higher SES are more likely than those of lower SES to use problem-focused coping strategies in dealing with stress. Low SES is often accompanied by a stressful lifestyle that limits a person’s coping options.

10. The perception of psychological control plays a crucial role in determining a person’s response to a stressful situation. The perception of control is a buffer against stress-related arousal and enhances immune activity.

11. People who perceive a high level of social support may cope with stress more effectively than people who feel alienated. Along with companionship, social ties can provide emotional support, instrumental support, and informational support.

12. People with better social skills—who relate well to others and who are caring and giving—create stronger social networks and thus receive more social support. Social support does not always reduce stress, however. It may be perceived as intrusive, or the type of support offered may not be what is needed.

Managing Stress

13. Relaxation techniques such as progressive muscle relaxation and the relaxation response (meditation) can help people cope with a variety of stress-related problems, including hypertension, headaches, chronic pain, and anxiety. Mindfulness-based stress reduction focuses on using
structured meditation to promote mindfulness, a moment-to-moment, nonjudgmental awareness.

14. Cognitive-behavioral therapy is based on the view that the appraised meaning of a potential stressor, rather than the situation itself, determines our stress level.

15. Cognitive behavioral stress management is a multimodal form of therapy that helps people to confront stressful events with coping strategies that can be put in place before stressors become overwhelming. Expressive writing and other techniques that promote emotional disclosure have a variety of health benefits.

Key Terms and Concepts to Remember

coping, p. 135
disengagement, p. 135
problem-focused coping, p. 135
emotion-focused coping, p. 135
emotional-approach coping (EAC), p. 135
rumination, p. 136
emotional cascade, p. 136
repressive coping, p. 136
dispositional affect, p. 138
psychological control, p. 140
regulatory control, p. 141
resilience, p. 141
buffering hypothesis, p. 146
direct effect hypothesis, p. 147
matching hypothesis, p. 148
stress management, p. 149
progressive muscle relaxation, p. 150
relaxation response, p. 150
mindfulness-based stress reduction (MBSR), p. 151
cognitive-behavioral therapy, p. 153
cognitive behavioral stress management (CBSM), p. 154
stress inoculation training, p. 154
appraised meaning, p. 154
expressive writing, p. 155
emotional disclosure, p. 156
meaning-focused coping, p. 157

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