

personality traits are often related to psychological well-being.¹¹

Adaptability—the ability to adapt to a social situation and the assertiveness as well as power or interpersonal

Compliance—the ability to conform, be likable, and be friendly compliance and love

Willingness to experience—the willingness to demonstrate independence (also referred to as inquiring

Emotional stability—the ability to maintain emotional

Dependability—the qualities of being dependable, demonstrating self-control, discipline, and a need to

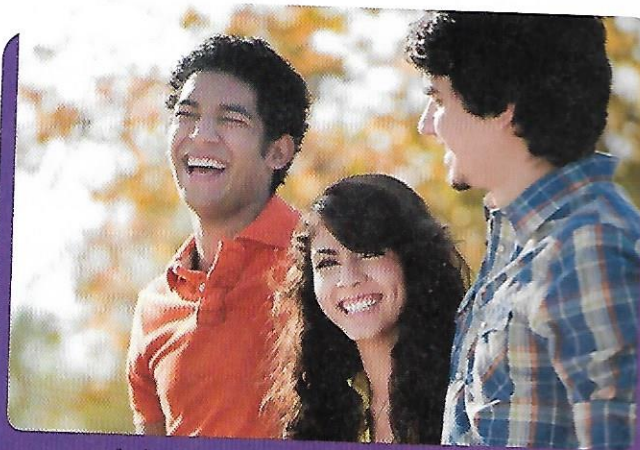
Resilience—the ability to adapt to change and stressful health and flexible ways

Adaptability and Maturity

Our temperaments are largely determined by genetics, but we learn to control the volatile emotions of youth and our feelings in more acceptable ways. The college years are a critical transition period as young adults move out of their families and establish themselves as independent adults. This transition is easier for those who have successfully completed earlier developmental tasks such as solving problems, making and evaluating choices, defining and adhering to personal values, and maintaining both casual and intimate relationships. The college years can also be another transition into adulthood and further independence, ensuring an adjustment period and creating a smoother transition. Scheduling and accessing alumni resources for new campus resources for new students can be helpful with adjusting to autonomy after graduation. Those who have not fulfilled earlier tasks may find their lives filled with recurrent crises left over from childhood. For example, if they did not learn to trust others in childhood, they may have difficulty establishing relationships as adults.

Emotional Regulation

emotions help us stay healthy? Can we help us stay



Is laughter really the best medicine?

Research is inconclusive regarding whether laughing actually improves your health, but we've all experienced the sense of well-being that a good laugh can bring. Regardless of whether it actually increases blood flow, boosts immune response, lowers blood sugar levels, or facilitates better sleep, there is no doubting that sharing laughter and fun with others can strengthen social ties and bring joy to your everyday life.

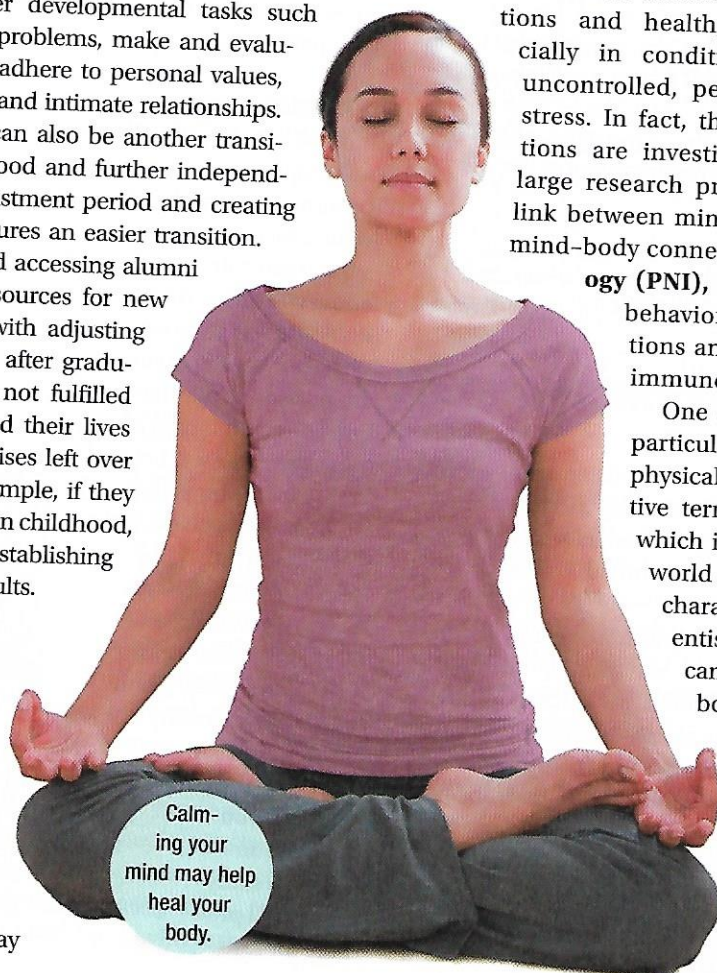
well? Researchers are exploring the interaction between emotions and health, especially in conditions of uncontrolled, persistent

stress. In fact, the NCCAM and other organizations are investing more and more dollars in large research projects designed to explore the link between mind and body. At the core of the mind-body connection is **psychoneuroimmunology (PNI)**, the study of the interactions of behavioral, neural, and endocrine functions and the functioning of the body's immune system.

One area of study that appears to be particularly promising in enhancing physical health is *happiness*—a collective term for several positive states in which individuals actively embrace the world around them.¹³ In examining the characteristics of happy people, scientists have found that this emotion can have a profound impact on the body. Happiness, or related mental states such as hopefulness, optimism, and contentment, appears to reduce the risk or limit the severity of cardiovascular disease, pulmonary disease, diabetes, hypertension, colds, and other infections. Laughter can promote

psychoneuroimmunology (PNI)

The study of the interactions of behavioral, neural, and endocrine functions and the functioning of the body's immune system.



Calm-
ing your
mind may help
heal your
body.



Using Positive Psychology to Enhance Your Happiness

Implement the following strategies to enhance happiness and employ a more positive outlook:

- ▶ **Check yourself.** Throughout the day, stop and evaluate what you're thinking. If you find that your thoughts are mainly negative, try to find a way to put a positive spin on them.
- ▶ **Use your sense of humor.** Give yourself permission to smile or laugh, especially during difficult times. Seek humor in everyday happenings. When you can laugh at life, you feel less stressed.
- ▶ **Follow a healthy lifestyle.** Exercise at least three times a week to positively affect mood and reduce stress. Follow a healthy diet to fuel your mind and body. And learn to manage stress.
- ▶ **Surround yourself with positive people.** Make sure those in your life are positive, supportive people you can depend on to give helpful advice and feedback. Negative people, those who believe they have no power over their lives, may increase your stress level and may make you doubt your ability to manage stress in healthy ways.
- ▶ **Practice positive self-talk.** Start by following one simple rule: Don't say anything to yourself that you wouldn't say to anyone else. Be gentle and encouraging with yourself. If a negative thought enters your mind, evaluate it rationally and respond with affirmations of what is good about yourself.

Source: Abridged from MayoClinic.com, "Positive Thinking: Reduce Stress by Eliminating Negative Self-talk," 2011, www.mayoclinic.com/health/positive-thinking/SR00009/NSECTIONGROUP=2.

increases in heart and respiration rates and can reduce levels of stress hormones in much the same way as light exercise can. For this reason, it has been promoted as a possible risk reducer for people with hypertension and other forms of cardiovascular disease.¹⁴

Subjective well-being is that uplifting feeling of inner peace or an overall "feel-good" state, which includes happiness. Subjective well-being is defined

subjective well-being An uplifting feeling of inner peace.

by three central components: satisfaction with present life, relative presence of positive emotions, and relative absence of negative emotions.¹⁵ You do not have to be happy all the time to achieve overall subjective well-being. Everyone experiences disappointments, unhappiness, and times when life seems unfair. However, people with a high level of subjective well-being are typically resilient, are able to look on

the positive side and get back on track fairly quickly, and are less likely to fall into despair over setbacks.

Scientists suggest that some people may be biologically predisposed to happiness. One study of 2,574 Americans showed that variants of a gene actually influenced how satisfied or dissatisfied people were with their lives and their overall levels of happiness. This marks an advance toward explaining why some people seem naturally happier than others. However, researchers are careful to point out that happiness is only partly influenced by genetics.¹⁶ Other psychologists suggest that we can develop happiness by practicing positive psychological actions.¹⁷ The **Skills for Behavior Change** box provides some suggestions for things you can do to incorporate positive psychology principles into your own life.

Strategies to Enhance Psychological Health

As we have seen, psychological health involves four dimensions. Attaining self-fulfillment is a lifelong, conscious process that involves enhancing each of these components. Strategies include building self-efficacy and self-esteem, understanding and controlling emotions, maintaining support networks, and learning to solve problems and make decisions. In addition to the advice in this chapter, see Chapter 3 for tips on managing stress and other tools for enhancing your psychological health.

- **Develop a support system.** One of the best ways to promote self-esteem is through a support system of peers and others who share your values. Members of your support system can help you feel good about yourself and force you to take an honest look at your actions and choices. Keeping in contact with old friends and family members can provide a foundation of unconditional love that will help you through life's transitions.

- **Complete required tasks.**

A good way to boost your sense of self-efficacy is to learn new skills and develop a history of success. Most college campuses provide study groups and learning centers that can help you manage time, develop study skills, and prepare for tests.

Spend-ing time in the fresh air with your best friend is a simple thing you can do to facilitate better psychological health.



Expectations. If you grades, a steady stream of dates, and the pressure of setting yourself to assess your current direction in which to go. Set small, incremental goals that you can actually meet.

For you. Taking time to enjoy life is another way to boost your self-esteem and psychological health. View life as something to look forward to and find time to have fun. Anticipate the fun things that you have to do each day.

Physical health. Regular exercise is a key to well-being. More and more studies show the role of exercise and good nutrition in improved mental health.

Problems and seek help when necessary. Don't be afraid to seek help from friends, family, or professionals. It's a positive factor in boosting self-esteem. Sometimes life's problems alone; at other times, you need

the sleep.

sleep

is a key

to mental and

physical health.

Our bodies

need to conserve

energy.

Active

lifestyles

need to

be part of many

of our

lifestyles.

During

our waking

hours.

(For more information,

see Focus On: Improving Your

Sleep on page 98.)



"Why Should I Care?"

Mental health problems can affect people of any age and have a huge impact on the kind of life you lead—including your success in academics, career, and relationships, as well as your general ability to function and enjoy life. Also, mental health concerns are so prevalent among college students that it is possible your roommate or a friend could have a problem and may need your help and support.

cal relatives with a mental illness; malnutrition or exposure to viruses while in the womb; stressful life situations, such as financial problems, a loved one's death, or a divorce; chronic medical conditions, such as cancer; combat; taking psychoactive drugs during adolescence; childhood abuse or neglect; and lack of friendships or healthy relationships.¹⁹ As

with physical disease, mental illnesses can range from mild to severe and can exact a heavy toll on quality of life, both for people with the illnesses and those who come in contact with them.

Mental disorders are common in the United States and worldwide. The basis for diagnosing mental disorders in the United

States is the *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision (*DSM-IV-TR*). An estimated 26.2 percent of Americans aged 18 and older—about 1 in 4 adults—suffer from a diagnosable mental disorder in a given year, and

nearly half of them have more than one mental illness at the same time.²⁰

This translates to 57.7 million people. Out of these, about 6 percent, or 1 in 17, suffer from a serious mental illness requiring close monitoring, residential care in many instances, and

medication. Mental disorders are the leading cause of disability in the United States and Canada for people aged 15 to 44.²¹

Mental Health Threats to College Students

Mental health problems are common among college students and they appear to be increasing in number and severity.²² The most recent National College Health Assessment survey found that approximately 1 in 3 undergraduates reported "feeling so depressed it was difficult to function" at least once in the past year. Just over 6 percent of students reported "seriously considering attempting suicide" in the past year.²³ In another study based on a sample of over 3,000 students, approximately 41 percent of students met the criteria for moderate to severe depression.²⁴ Although these data may appear alarming, it is important to note that increases in help-seeking behavior rather than actual increases in overall prevalence of disorders may be contributing to these trends.

mental illnesses Disorders that disrupt thinking, feeling, moods, and behaviors, and that impair daily functioning.

Psychological Deteriorates

umstances overwhelm us to such a degree help to get back on track to healthful living. relationships, anxiety, loneliness, financial other traumatic events can derail our coping nical imbalances, drug interactions, trauma, rptions, and other physical problems also to mental health problems.

esses are disorders that disrupt thinking, feel- d behaviors, and cause varying degrees of oning in daily living. They are believed to be riety of biochemical, genetic, and environ- Risk factors for developing or triggering nclude the following: having other biologi-

Stress and Diabetes Controlling stress levels is critical for preventing development of type 2 diabetes, as well as for successful short- and long-term diabetes management.¹⁹ People under lots of stress often don't get enough sleep, don't eat well, and may drink or take other drugs to help them get through a stressful time. All of these behaviors can alter blood sugar levels and promote development of diabetes. Stress hormones may affect blood glucose levels directly. (For full information on diabetes and lifestyle variables that may contribute to it, see **Focus On: Minimizing Your Risk for Diabetes.**)

Stress and Digestive Problems Digestive disorders are physical conditions whose causes are often unknown. It is widely assumed that an underlying illness, pathogen, injury, or inflammation is already present when stress triggers nausea, vomiting, stomach cramps and related gut pain, or diarrhea. Although stress doesn't directly cause these symptoms, it is clearly related and may actually make your risk of having symptoms even worse.²⁰ For example, people with depression or anxiety are more susceptible to irritable bowel syndrome, probably because stress stimulates colon spasms via the nervous system. Some relaxation techniques, such as progressive muscle relaxation, meditation, and guided imagery (discussed later in this chapter) may be helpful in coping with stressors that make your digestive problems worse. These techniques promote relaxation by reducing the activity of the sympathetic nervous system, leading to decreases in heart rate, blood pressure, and other stress responses. Some earlier research also has indicated that relaxation may reduce gastrointestinal reactivity and decrease risks of gastrointestinal flare-ups.²¹ More research is necessary to examine why this may be the case in some individuals and not in others.

Stress and Impaired Immunity A growing area of scientific investigation known as *psychoneuroimmunology* (PNI) analyzes the intricate relationship between the mind's response to stress and the immune system's ability to function effectively. (See more on PNI in **Chapter 2.**) Several recent reviews of research linking stress to

adverse health consequences suggest that too much stress over a long period can negatively affect various aspects of the cellular immune response, increasing risks for upper respiratory infections and certain chronic conditions, increasing adverse birth outcomes and fetal development, and exacerbating problems for children and adults suffering from post-traumatic stress.²² How long do you have to be stressed to suffer from impaired immunity? A look at the research yields evidence of impaired immunity from the initial stress to as long as 6 months later following acute stressors such as arguments, public speaking, and academic examinations.²³ More prolonged stressors, such as socioeconomic disparities and prolonged economic uncertainty, devastating life events such as the loss of a spouse, exposure to a natural disaster, war, caregiving, or living with a chronic disease or handicap, also have been shown to impair the natural immune response among various populations over time.²⁴

Stress and Libido Although we might think that a lack of interest in sex occurs only in older people and that young people enjoy constant, regular sex, too much stress can throw a big wrench in your sex life at any age and stage of life.

Intellectual Effects of Stress

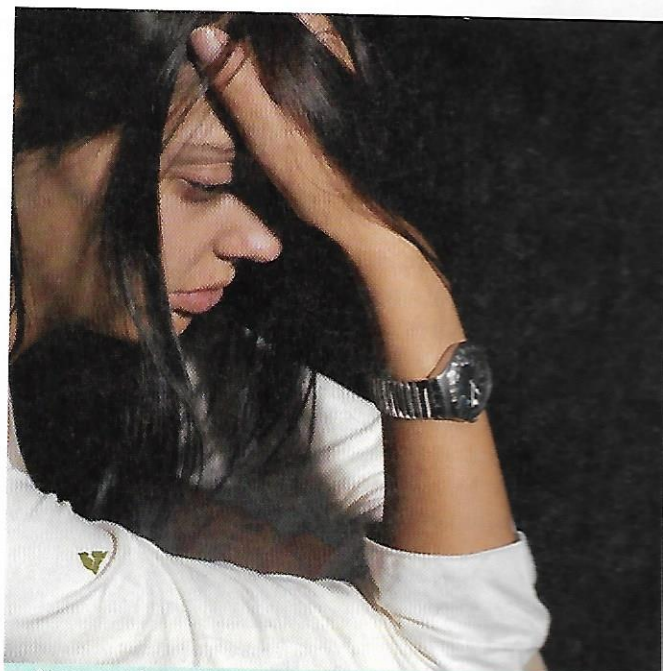
In a recent national survey of college students, more than half of the respondents said that they had felt overwhelmed by all that they had to do within the past 2 weeks, with a similar number reporting they felt exhausted. Nearly 43 percent of students said they had experienced a larger than average amount of stress during the past year. Not surprisingly, these same students rated stress as their number one impediment to academic performance, followed by lack of sleep.²⁵ Stress can play a huge role in whether students

Prolonged stress can compromise the immune system, leaving you vulnerable to infection. If you spend exam week in a state of high stress, sleeping too little and worrying a lot, chances are you will reduce your body's ability to fight off cold and flu viruses.

Did you Know?

In the most recent National College Health Assessment, over 25 percent of college students reported that stress negatively impacted their grade on an exam or course, or caused them to drop a course.

Source: Data are from American College Health Association, *American College Health Association–National College Health Assessment II (ACHA–NCHA II): Reference Group Data Report Spring 2011* (Baltimore: American College Health Association, 2012).



Stress and depression have complicated interconnections based on emotional, physiological, and biochemical processes. Prolonged stress can trigger depression in susceptible people, and prior periods of depression can leave individuals more susceptible to stress.

stay in school, get good grades, and succeed on their career path. It can also wreak havoc on students' ability to concentrate, remember key information for exams, and understand and retain complex information.

Stress, Memory, and Concentration Although the exact reasons stress can affect grades are complex, the mystery of how and why stress affects memory and concentration in humans is slowly unraveling. Animal studies have provided compelling indicators of how chronic exposure to glucocorticoids—stress hormones released from the adrenal cortex—are believed to affect cognitive functioning and overall mental health. In humans, acute stress has been shown to impair short-term memory, particularly verbal memory.²⁶ Exciting new studies have linked prolonged exposure to cortisol (a key stress hormone) to actual shrinking of the hippocampus, the brain's major memory center. In rats that were chronically stressed, the decision-making regions of the brain actually shriveled, whereas brain sectors responsible for habitual behaviors that didn't rely on memory increased.²⁷

"Why Should I Care?"

Exposure to academic stress is associated with increased upper respiratory tract infections among students. Take time to de-stress, and you might avoid a bad cold.



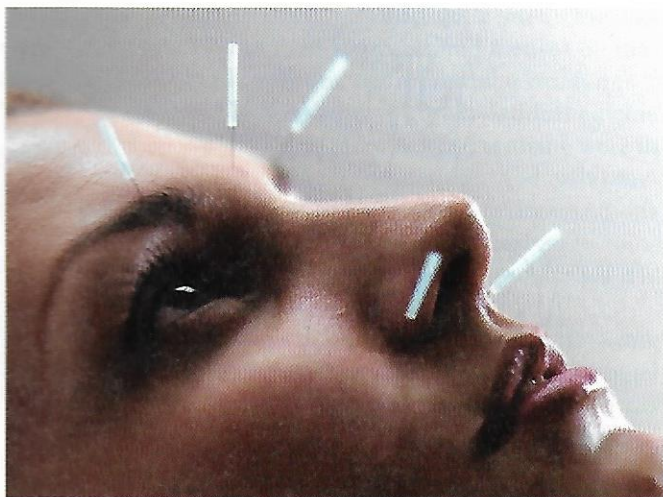
nations. Studies have shown that the rates of mental disorders, particularly depression and anxiety, are associated with various environmental stressors from childhood through adulthood, including abuse, marital and relationship conflict, poverty, and other stressful life events.²⁸ In particular, stressful life events and inadequate sources of social support can contribute to mental disorders among people aged 15 to 24 more than among other age groups. Researchers suggest that as individuals move from adolescence into adulthood, they face increased stressors of all kinds, particularly those related to work, finances, school, lack of social support, loneliness, and problems in relationships, which may challenge their mental health.²⁹

What Causes Stress?

On any given day, we all experience eustress and distress, usually from a wide range of 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, the economy, family responsibilities, and relationships were major sources of stress among American adults (Figure 3.4, see page 78).³⁰ Those who were obese or perceived themselves to have health issues reported the most stress. College students, in particular, face stressors that come from internal sources, as well as external pressures to succeed in a competitive

Psychological Effects of Stress

Stress may be one of the single greatest contributors to mental disability and emotional dysfunction in industrialized



In acupuncture, long, thin needles are inserted into specific points along the body. This is thought to increase the flow of life-force energy, providing many physical and mental benefits.

program to obtain a master of traditional Oriental medicine (MTOM) degree.

Acupressure is based on the same knowledge of energy flow as acupuncture. Instead of needles, pressure is applied to points critical to balancing *yin* and *yang*, the two complementary principles that influence overall harmony (health) of the body. Practitioners must have the same basic training and understanding of energy pathways as do acupuncturists.

Mind–Body Medicine

Mind–body medicine employs a variety of techniques designed to enhance the mind's capacity to affect bodily functions and symptoms. Many therapies fall under this category, but some, such as biofeedback and cognitive-behavioral techniques, have been so well investigated that they are no longer considered alternative. At present, meditation, yoga, tai chi, certain uses of hypnosis, dance, music and art therapies, and prayer are still categorized as CAM. (See **Chapter 9** for more on yoga and tai chi and **Chapters 2 and 3** and **Focus On: Cultivating Your Spiritual Health** for more on the mind–body connection.)

As discussed in Chapter 3, *psychoneuroimmunology* (PNI) is a relatively new field of study. The PNI Research Society defines

acupressure Branch of traditional Chinese medicine related to acupuncture. Uses application of pressure to selected body points to balance energy.

mind–body medicine Techniques designed to enhance the mind's ability to affect bodily functions and symptoms.

nutraceuticals Term often used interchangeably with *functional foods*; refers to the combined nutritional and pharmaceutical benefit derived through use of foods or food supplements.

it as the “study of interrelationships among behavioral, neural, endocrine, and immune processes.”²⁰ Many researchers have postulated that excessive stress and maladaptive coping can lead to immune system dysfunction and increase the risk of disease. Scientists are exploring ways in which relaxation, biofeedback, meditation, yoga, tai chi, and activities that involve either conscious or unconscious mind “quieting” may counteract negative

stressors. For example, a recent review study of PNI found that psychological support—including relaxation therapies—can improve wound healing,²¹ whereas inflammatory molecules such as C-reactive protein, which is a risk factor for heart disease, were found to be reduced in older adults after 16 weeks of tai chi.²² Studies have also shown promising positive effects of mind–body techniques that encourage relaxation and other stress-reduction strategies for people with cancer.²³

Dietary Products

Dietary products, including specially formulated foods and dietary supplements, are perhaps the most controversial domain of CAM therapies because of the sheer number of options available and the many claims that are made about their effects. Many of these claims have not been thoroughly investigated, and many of the products are not currently regulated.

Functional Foods Changes to the diet are often part of CAM therapies, and such changes commonly involve increased intake of certain *functional foods*—foods said to improve some specific aspect of physical or mental functioning beyond the contribution of their specific nutrients. Both whole foods, such as broccoli and nuts, and modified foods, such as an energy bar said to enhance memory, are classified as functional foods.²⁴ Food producers sometimes referred to their functional foods as **nutraceuticals** to emphasize their combined nutritional and pharmaceutical benefits. For example, the label on a bar of dark chocolate may state that modest consumption helps to reduce the risk of heart disease. The claim is backed up by research: Plant compounds called flavonoids found in chocolate improve several risk factors for heart disease.²⁵ The FDA regulates claims made on food labels; however, the FDA does not test functional foods prior to their coming to market and can only remove a product from the market if it is found to be unsafe.

In recent years, the most commonly advertised functional foods have been those containing *antioxidants*. Antioxidants are chemicals that combat free radicals and oxidative damage in cells. They include vitamins C and E, the mineral selenium, and a variety of phytochemicals, naturally occurring compounds present in many whole and processed plant foods, from fruits and vegetables to coffee and tea.

Other common functional foods and their purported benefits include the following:

- **Plant stanols/sterols.** Can lower “bad” (low-density lipoprotein [LDL]) cholesterol.
- **Oat fiber.** Can lower LDL cholesterol; serves as a natural soother of nerves; stabilizes blood sugar levels.
- **Sunflower seeds and oil.** Can lower risk of heart disease; may prevent angina.
- **Soy protein.** May lower heart disease risk by reducing LDL cholesterol and triglycerides.
- **Garlic.** Lowers cholesterol and reduces clotting tendency of blood; lowers blood pressure; may serve as form of antibiotic.