After studying the material in this chapter, you should be able to

- Define health and wellness.
- Identify the six dimensions of health and illustrate the interplay among them.
- Describe how poverty, race, and gender contribute to health disparities in the U.S.
- Outline the national health objectives in the Healthy People 2020 Initiative.
- List guidelines for evaluating websites that provide health information.
- Describe the stages in the Transtheoretical Model of Change and apply it to a health behavior you want to change.
Corinna always thought of health as something you worry about when you get older. Then her twin brother developed a health problem she’d never heard of: prediabetes (discussed in Chapter 15), which increased his risk of diabetes and heart disease. At a health fair on campus, she learned that her blood pressure was higher than normal. “Maybe I’m not too young to start thinking about my health,” she concluded. Neither are you—

Your Invitation to a Healthy Future

whether you’re a traditional-age college student or older, like an ever-increasing number of undergraduates.

An Invitation to Health asks you to go beyond thinking about your health to taking charge and making healthy choices for yourself and your future. This book is both about and for you: It includes material on your mind and your body, your spirit and your social ties, your needs and your wants, your past and your potential. It will help you explore options, discover possibilities, and find new ways to make your life worthwhile. If you don’t make the most of what you are, you risk never discovering what you might become.

You have more control over your life and well-being than anything or anyone else does. Through the decisions you make and the habits you develop, you can influence how well—and perhaps how long—you will live.

Being healthy, as you’ll learn in this chapter, means more than not being sick or in pain. Health is a personal choice that you make every day when you decide on everything from what to eat to whether to exercise to how to handle stress. Sometimes making the best choices demands making healthy changes in your life. This chapter will show you how.

This chapter also extends an invitation to live more fully, more happily, and more healthfully. It is an offer that you literally cannot afford to refuse. Your future depends on it.

Health and Wellness

By simplest definition, health means being sound in body, mind, and spirit. The World Health Organization defines health as a state of complete well-being, including physical, psychological, spiritual, social, intellectual, and environmental dimensions.
Health Organization defines health as “not merely the absence of disease or infirmity,” but “a state of complete physical, mental, and social well-being.” Health is the process of discovering, using, and protecting all the resources within our bodies, minds, spirits, families, communities, and environment.

Health has many dimensions: physical, psychological, spiritual, social, intellectual, and environmental. Some add an “emotional” and a “cultural” dimension. This book integrates these aspects into a holistic approach that looks at health and the individual as a whole, rather than part by part.

Your own definition of health may include different elements, but chances are you and your classmates agree that it includes at least some of the following:

- A positive, optimistic outlook.
- A sense of control over stress and worries; time to relax.
- Energy and vitality; freedom from pain or serious illness.
- Supportive friends and family and a nurturing intimate relationship with someone you love.
- A personally satisfying job or intellectual endeavor.
- A clean, healthful environment.

Wellness can be defined as purposeful, enjoyable living or, more specifically, a deliberate lifestyle choice characterized by personal responsibility and optimal enhancement of physical, mental, and spiritual health. In the broadest sense, wellness is:

- A decision you make to move toward optimal health.
- A way of life you design to achieve your highest potential.
- A process of developing awareness that health and happiness are possible in the present.
- The integration of body, mind, and spirit.
- The belief that everything you do, think, and feel has an impact on your state of health and the health of the world.

Health-related quality of life and well-being is a term that health-care providers and officials use to assess the impact of health status on an individual’s quality of life. This multidimensional concept encompasses domains related to physical, mental, emotional, and social functioning. As scientists have shown again and again in recent decades, psychological factors play a major role in enhancing physical well-being and preventing illness, but they also can trigger, worsen, or prolong physical symptoms. Similarly, almost every medical illness affects people psychologically as well as physically.

The Dimensions of Health

Scientists are discovering that various dimensions and the interplay among them can affect us at a molecular level. For instance, a lack of education—an indicator of poor intellectual health—has long been linked with poor physical health and relatively early death. However, other factors—such as having meaningful relationships with others (part of social health) and a sense of meaning and purpose in life (an indicator of spiritual health)—can overcome the disadvantages associated with poverty or minimal schooling.

By learning more about the six dimensions of health, you gain insight into the complex interplay of factors that determine your level of wellness.

Physical Health

Webster’s 1913 dictionary defined health as “the state of being hale, sound, or whole, in body, mind, or soul, especially the state of being free from physical disease or pain.” According to a contemporary medical dictionary, health is “an optimal state of physical, mental, and social well-being, not merely the absence of disease or infirmity.”

Health is not a static state, but a process that depends on the decisions we make and the behaviors we practice every day. To assure optimal physical health, we must feed our
bodies nutritiously, exercise them regularly, avoid harmful behaviors and substances, watch for early signs of sickness, and protect ourselves from accidents.

**Psychological Health**

Like physical well-being, psychological health, discussed in the following chapters, is more than the absence of problems or illness. Psychological health refers to both our emotional and mental states—that is, to our feelings and our thoughts. It involves awareness and acceptance of a wide range of feelings in oneself and others, as well as the ability to express emotions, to function independently, and to cope with the challenges of daily stressors.

**Spiritual Health**

Spiritually healthy individuals identify their own basic purpose in life; learn how to experience love, joy, peace, and fulfillment; and help themselves and others achieve their full potential. As they devote themselves to others’ needs more than their own, their spiritual development produces a sense of greater meaning in their lives. (See Chapter 2 for an in-depth discussion of spiritual and emotional well-being.)

**Social Health**

Social health refers to the ability to interact effectively with other people and the social environment, to develop satisfying interpersonal relationships, and to fulfill social roles. It involves participating in and contributing to your community, living in harmony with fellow human beings, developing positive interdependent relationships, and practicing healthy sexual behaviors. (See Chapter 5, “Your Social Health.”)

Health educators are placing greater emphasis on social health in its broadest sense as they expand the traditional individualistic concept of health to include the complex interrelationships between one person’s health and the health of the community and environment. This change in perspective has given rise to a new emphasis on health promotion, which educators define as “any planned combination of educational,

**Environmental Health**

You live in a physical and social setting that can affect every aspect of your health. Environmental health refers to the impact your world has on your well-being. It means protecting yourself from dangers in the air, water, and soil, and in products you use—and working to preserve the environment itself. (Chapter 19 offers a thorough discussion of environmental health.)

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**A Report Card on the Health of Americans**

The United States spends more than any other nation on health care: a whopping $2.26 trillion total, or $7,400 per person per year. However, Americans rank twenty-third in life expectancy for men and twenty-fifth for women. Life expectancy has increased more slowly in the United States than in many other countries around the world. (See Chapter 10 for further discussion of the factors affecting health.)

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**Wellness** A deliberate lifestyle choice characterized by personal responsibility and optimal enhancement of physical, mental, and spiritual health.

**Health Promotion** Any planned combination of educational, political, regulatory, and organizational supports for actions and conditions of living conducive to the health of individuals, groups, or communities.
States than in other developed countries such as Japan, Australia, Sweden, and Switzerland. The primary reasons, according to researchers, are smoking, particularly by women, and obesity.\(^5\)

Yet Americans are living longer. According to the latest statistics from the Centers for Disease Control (CDC), life expectancy at birth is now 77.9 years, up from 75.4 years in 1990. This represents an increase of 3.5 years for men and 1.6 years for women. The gender gap in longevity has narrowed to 4.9 years, with female life expectancy at 80.6 years and male at 75.7 years. The racial longevity gap also has shrunk, from a difference of 7 years between whites and blacks in 1990 to 4.3 years.

Americans could be living both longer and healthier lives. A healthy lifestyle, recent research has confirmed, can cut the death rate for nonsmokers by about half.\(^5\) However, only a minority of Americans at every age have adapted healthy behaviors. Here are the latest findings on our health and habits from the Centers for Disease Control and Prevention (CDC):\(^5\)

- **Fitness.** Americans have become more active but fewer than 20 percent of men and women exercise regularly.
- **Weight.** The percentage of obese Americans has risen from 30 percent in 2000 to 34 percent. Two-thirds of the population are either overweight or obese.
- **Overall health.** Ten percent of Americans overall describe their health as fair or poor. This percentage increases to 18 percent of those age 65.
- **Medical conditions.** Almost a third (33 percent) of Americans over age 20 have hypertension; 15 percent have high cholesterol; 12 percent have diabetes. About 18 percent of Americans over age 65 have had cancer.
- **Health care.** Almost a quarter (23 percent) of men and women between ages 18 and 44 did not see a health-care professional in the previous year. A similar percentage (22 percent) in this age group reported at least one emergency room visit. About four in ten Americans (38 percent) between ages 18 and 44 took at least one prescription medication.
- **Mortality.** The number of Americans who die every year—the national mortality rate—has fallen to an all-time low. Death rates declined for 10 of the leading 15 causes of death, including heart disease, cancer, stroke, accidents, Alzheimer’s disease, homicide, influenza, and pneumonia.

**Healthy People 2020**

Every decade since 1980, the U.S. Department of Health and Human Services (HHS) has published a comprehensive set of national public health objectives as part of the Healthy People Initiative. The department’s vision is to create a society in which all people can live long, healthy lives. Its mission includes identifying nationwide health improvement priorities, increasing public awareness of health issues, and providing measurable objectives and goals.\(^6\)
Drawing on the lessons learned and needs identified in Healthy People 2010, HHS has set the following overarching goals for Healthy People 2020:

- Eliminate preventable disease, disability, injury, and premature death.
- Achieve health equity, eliminate disparities, and improve the health of all groups.
- Create social and physical environments that promote good health for all.
- Promote healthy development and healthy behaviors across every stage of life.7

Here are examples of specific new recommendations that have been added to the national health agenda for 2020:

- **Nutrition and Weight Status**: prevent inappropriate weight gain in youth and adults.
- **Tobacco Use**: increase recent smoking-cessation success by adult smokers.
- **Sexually Transmitted Disease**: increase the proportion of adolescents who abstain from sexual intercourse or use condoms if sexually active.
- **Substance Abuse**: reduce misuse of prescription drugs.
- **Heart Disease and Stroke**: increase overall cardiovascular health in the U.S. population.
- **Injury and Violence Prevention**: reduce sports and recreation injuries.

If you were setting personal health objectives for yourself to obtain by 2020, what would they be? What would be your goals for your family, community, and the entire nation?

**Health Disparities**

**The Toll of Poverty** The primary reason for the health problems faced by minorities in the United States is poverty. Without adequate insurance or the ability to pay, many cannot afford the tests and treatments that could prevent illness or overcome it at the earliest possible stages. According to public health experts, low income may account for one-third of the racial differences in death rates for middle-aged African American adults.

In some cases, both genetic and environmental factors may play a role. Take, for example, the high rates of diabetes among the Pima Indians. Until 50 years ago, these American Indians were not notably obese or prone to diabetes. After World War II, the tribe started trading handmade baskets for lard and flour. Their lifestyle became more sedentary and their diet higher in fats. In addition, researchers have discovered that many Pima Indians have an inherent resistance to insulin that increases their susceptibility to diabetes. The combination of a hereditary predisposition and environmental factors may explain why the Pimas now have epidemic levels of diabetes.

Despite great improvements in the overall health of the nation, Americans who are members of racial and ethnic groups—including black or African Americans, American Indians, Alaska Natives, Asian Americans, Hispanics, Latinos, and Pacific Islanders—are more likely than whites to suffer poor health and die prematurely. The longevity gap between white and black women is 4 years; for white and black men it is 6 years.8 Many factors, including genetic variations, environmental influences, and specific health behaviors, contribute to these disparities.

Quality of health care has been slowly improving for all Americans, but a recent government analysis found that poor people receive worse care than high-income people for about 80 percent of
measures such as health screenings and immunizations. Hispanics receive worse care than whites for about 60 percent of these measures; blacks, American Indians, and Alaska Natives, for 40 percent; and Asians, for 20 percent.9

Why Race Matters We live in the most diverse nation on Earth, one that is becoming increasingly diverse. For society, this variety can be both enriching and divisive. Tolerance and acceptance of others have always been part of the American creed. By working together, Americans have created a country that remains, to those outside our borders, a symbol of opportunity.

This racial diversity also means varying susceptibility to disease. However, in defining race as a risk factor for certain health conditions, classifications such as “black” or “Hispanic” may be overly broad. Among Hispanics, for instance, Puerto Ricans suffer disproportionately from asthma, HIV/AIDS, and high infant mortality, while Mexican Americans have higher rates for diabetes. If, like many Americans, you come from a racially mixed background, your health profile may be complex.

Black Americans lose substantially more years of potential life to homicide (nine times as many), stroke (three times as many), and diabetes (three times as many) as whites. Hispanics suffer more fatal injuries, chronic liver disease, and cirrhosis of the liver. Compared with whites, blacks have more new AIDS cases. American Indian and Alaska Native women are less likely to receive prenatal care, and Asian American women have significantly lower rates of mammography.

Caucasians are prone to osteoporosis (progressive weakening of bone tissue); cystic fibrosis; skin cancer; and phenylketonuria (PKU), a metabolic disorder that can lead to mental retardation.

Native Americans, including those indigenous to Alaska, are more likely to die young than the population as a whole, primarily as a result of accidental injuries, cirrhosis of the liver, homicide, pneumonia, and the complications of diabetes. The suicide rate among American Indians and Alaska Natives is 50 percent higher than the national rate. The rates of co-occurring mental illness and substance abuse (especially alcohol) are also higher among Native American youth and adults.

If you do face greater health threats because of your race or ethnicity, it is up to you to educate yourself, take responsibility for the risks within your control, and become a savvy, assertive consumer of health-care services. The federal Office of Minority Health (www.cdc.gov/omb), which provides general information and the latest research and recommendations, is a good place to start.

Cancer Screening and Management Overall, black Americans are more likely to develop cancer than persons of any other racial or ethnic group. Black women have higher rates of colon, pancreatic, and stomach cancer. Black men have higher rates of prostate, colon, and stomach cancer.

African Americans have the highest death rates for lung cancer of any racial or ethnic group in the United States. Medical scientists have debated whether the reason might be that treatments are less effective in blacks or whether many are not diagnosed early enough nor treated rigorously enough.

African American women are more than twice as likely to die of cervical cancer than are white women and are more likely to die of breast cancer than are women of any other racial or ethnic group. Native Hawaiian women have the highest rates of breast cancer. Women from many racial minorities, including those of Filipino, Pakistani, Mexican, and Puerto Rican descent, are more likely to be diagnosed with late-stage breast cancer than white women.

Cardiovascular Disease Heart disease and stroke are the leading causes of death for all racial and ethnic groups in the United States, but rates of death from heart disease and from stroke are higher among African American adults than among white adults. African Americans also have higher rates of high blood pressure (hypertension), develop this problem earlier in life, suffer more severe hypertension, and have higher rates of stroke.

Diabetes American Indians and Alaska Natives, African Americans, and Hispanics are twice as likely to be diagnosed with diabetes compared with non-Hispanic whites. American Indians have the highest rate of diabetes in the world.
If You Are at Risk

Certain health risks may be genetic, but behavior influences their impact. Here are specific steps you can take to protect your health:

- Ask if you are at risk for any medical conditions or disorders based on your family history or racial or ethnic background.
- Find out if there are tests that could determine your risks. Discuss the advantages and disadvantages of such testing.
- If you or a family member require treatment for a chronic illness, ask your doctor whether any medications have proved particularly effective for your racial or ethnic background.
- If you are African American, you are significantly more likely to develop high blood pressure, diabetes, and kidney disease. Being overweight or obese adds to the danger. The information in Chapters 6, 7, and 8 can help you lower your risk by keeping in shape, making healthy food choices, and managing your weight.
- Hispanics and Latinos have disproportionately high rates of respiratory problems, such as asthma, chronic obstructive lung disease, and tuberculosis. To protect your lungs, stop smoking and avoid secondary smoke. Learn as much as you can about the factors that can trigger or worsen lung diseases.

Infant Mortality  African American, American Indian, and Puerto Rican infants have higher death rates than white infants.

Mental Health  American Indians and Alaska Natives suffer disproportionately from depression and substance abuse. Minorities have less access to mental health services and are less likely to receive needed high-quality mental health services.

Infectious Disease  Asian Americans and Pacific Islanders have much higher rates of hepatitis B. Black teenagers and young adults become infected with hepatitis B three to four times more often than those who are white. Black people also have a higher incidence of hepatitis C infection than white people. Almost 80 percent of reported cases affect racial and ethnic minorities.

HIV and Sexually Transmitted Infections

Although African Americans and Hispanics represent only about a quarter of the U.S. population, they account for about two-thirds of adult AIDS cases and more than 80 percent of pediatric AIDS cases. The rate of syphilis infection for African Americans is nearly 30 times the rate for whites.

Why Sex and Gender Matter  Medical scientists define sex as a classification, generally as male or female, according to the reproductive organs and functions that derive from the chromosomal complement. Gender refers to a person’s self-representation as male or female or how that person is responded to by social institutions on the basis of the individual’s gender presentation. Rooted in biology, gender is shaped by environment and experience.

The experience of being male or female in a particular culture and society can and does have an effect on physical and psychological well-being. In fact, sex and gender may have a greater impact than any other variable on how our bodies function, how long we live, and the symptoms, course, and treatment of the diseases that strike us. (See Figure 1.1.)

As you will see throughout this text, gender affects many aspects of health. Although many assume that men are the stronger sex, they die at a faster rate than women. About 115 males are conceived for every 100 females, but males die more often before birth. Boys are more likely to be born prematurely, to suffer birth-related injuries, and to die before their first birthdays than girls.

Men’s overall mortality rate is 41 percent higher than women’s. They have higher rates of cancer, heart disease, stroke, lung disease, kidney disease, liver disease, and HIV/AIDS. They are four times more likely to take their own lives or to be murdered than women. By age 65, there are only 77 men for every 100 women. At age 85 women outnumber men by 2.6 to 1. More than half of all women older than age 65 are...
widows. Among centenarians, there are four females for every male.

Among the reasons that may contribute to the health and longevity gap between the sexes are:

- **Biological factors**, such as the fact that women have two X chromosomes and men only one, different levels of sex hormones (particularly testosterone and estrogen), and metabolic variations.
- **Social factors**, including work stress, hostility levels, and social networks and supports.
- **Behavioral factors**, such as risky behavior, aggression, violence, smoking, and substance abuse.
- **Health habits**, including regular screenings, preventive care, and minimizing of symptoms.

Sexual orientation also can affect health. Lesbian, gay, bisexual, and transgender (LGBT) individuals are more likely to encounter health disparities linked to social stigma, discrimination, and denial of their human and civil rights. Such discrimination has been implicated as a cause of high rates of psychiatric disorders, substance abuse, and suicide. The Healthy People 2020 initiative has made improvements in LGBT health one of its new goals.  

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### A Report Card on the Health of College Students

As one of an estimated 18 million college students in the United States, you are part of a remarkably diverse group. Today’s undergraduates come from every age group and social, racial, ethnic, economic, political, and religious background. You may have served in the military, started a family, or immigrated from another country. You might be enrolled in a two-year college, a four-year university, or a technical school. Your classrooms might be in a busy city or a small town—or exist solely as a virtual campus. Although most undergraduates are “traditional” age—between 18 and 24 years old—more and more of you are over age 25.

The health of college students is as varied as their demographic makeup. In the American College Health Association National College Health Assessment, based on surveys of more than 30,000 students, 91.7 percent (92.8 percent of men and 91.1 percent of women) rated their
Health as good, very good, or excellent. The most common health problems students experienced in the previous 12 months were allergies (20 percent) and sinus infection (18 percent). The most common impediments to academic performance were stress (27 percent), sleep difficulties (20 percent), and cold/flu/sore throat (18 percent). Eighty percent said they had felt exhausted (not from physical activity) within the last 12 months.

The health habits of college students also vary. Sixteen percent reported smoking at least once in the last month; 65 percent drank alcohol at least once. About half said they had used a condom (mostly or always) during vaginal intercourse in the last 30 days. More than three in four reported at least some moderate exercise in the prior week.

Many students simply don’t get enough sleep or keep irregular schedules that throw their sleep patterns off. Only 12 percent report getting enough sleep to feel rested in the morning six or more days a week; 9 percent report never feeling rested in the morning. More than nine in ten students say they feel tired, dragged out, or sleepy at least one morning a week. About four in ten describe daytime sleepiness as “more than a little problem,” “a big problem,” or “a very big problem.”

Students also become more sedentary in college, as they log more hours in classes and in front of computers. Fewer than half of college students meet recommended levels for moderate or vigorous aerobic exercise. The combination of a high-fat diet and a sedentary lifestyle in college can set the stage for the development of health problems that include obesity, diabetes, metabolic syndrome, heart disease, and certain cancers.

The Perils of Young Adulthood

Your personal health depends on many factors, including your age, gender, race, and ethnic background. If you’re in your late teens or early twenties, you are in a potentially risky transition phase.

Nine in ten Americans between ages 18 and 24 believe they’re living healthy lifestyles, according to a recent poll by the American Stroke Association. However, most eat too much fast food, drink too many alcoholic and sugar-sweetened beverages, and engage in other behaviors that could put them at risk of cardiovascular disease, including stroke. (See “How Do You Compare?”)

Most of the 18–24-year-olds surveyed said they want to live long (to age 98) and maintain quality health throughout their life. However, one-third don’t believe engaging in healthy behaviors now could affect their risk of stroke in the future. Eight in ten people between ages 25 and 44 also believe they are living healthy lifestyles, but they are more likely to engage in healthy behaviors than the younger cohort.
According to a longitudinal study that followed 10,000 young Americans from adolescence into adulthood, health risks increase significantly as they come of age. Young men and women of every race and ethnic group are more likely to eat fast food, not exercise, be obese, and smoke cigarettes. Many do not get regular physical or dental examinations and do not receive health care when they need it. (See Health on a Budget.) Drug abuse and sexually transmitted infections (STIs) are widespread in this age group.

Certain serious health threats—substance abuse, sexually transmitted infections, homicide, and motor vehicle crashes—peak in young adulthood. As they leave their teens, young adults are less likely to seek preventive care or regular treatment for chronic conditions. Young men, especially black and Hispanic males, have less than one-fourth the rate of preventive care visits as young women. On average they see doctors less than once every nine years and even less often if they lack health insurance.

No single race or ethnic group leads or falters in health across all the health indicators studied. White Americans, who have the best health in adolescence, experience the greatest decline in early adulthood. American Indians face higher health risks both as teens and adults. Individuals in minority groups are most likely to need care but to be unable to pay for it.

In the past, young adults were the least likely to have health insurance and represented one in five uninsured Americans. With passage of the Affordable Care Act, adult children can remain on their parents’ health insurance policies until age 26, even if they no longer live at home and are not students. Young adults who obtain their own policies must be offered the same benefits available to others.16
Preventing Health Problems

College students often think they are too young to worry about serious health conditions. Yet many chronic problems begin early in life. Two percent of college-age women already have osteoporosis, a bone-weakening disease; another 15 percent have osteopenia, low bone densities that put them at risk of osteoporosis. Many college students have several risk factors for heart disease, including high blood pressure and high cholesterol. Others increase their risk by eating a high-fat diet and not exercising regularly. The time to change is now.

No medical treatment, however successful or sophisticated, can compare with the power of prevention. Two out of every three deaths and one in three hospitalizations in the United States could be prevented by changes in six main risk factors: tobacco use, alcohol abuse, accidents, high blood pressure, obesity, and gaps in screening and primary health care. Prevention remains the best weapon against cancer and heart disease.

Prevention can take many forms. Primary, or before-the-fact, prevention efforts might seek to reduce stressors and increase support to prevent problems in healthy people. Consumer education, for instance, provides guidance about how to change our lifestyles to prevent problems and enhance well-being. Other preventive programs identify people at risk and empower them with information and support so they can avoid potential problems. Prevention efforts may target an entire community and try to educate all of its members about the dangers of alcohol abuse or environmental hazards, or they may zero in on a particular group (for instance, seminars on safer sex practices offered to teens) or an individual (such as one-on-one counseling about substance abuse).

Protecting Yourself

There is a great deal of overlap between prevention and protection. Some people might think of immunizations (discussed in Chapter 16) as a way of preventing illness; others see them as a form of protection against dangerous diseases. In many ways, protection picks up where prevention leaves off. You can prevent STIs or unwanted pregnancy by abstaining from sex. But if you decide to engage in sexual activities, you can protect yourself with condoms and spermicides (discussed in Chapter 10). Similarly, you can prevent many automobile accidents by not driving when road conditions are hazardous. But if you do have to drive, you can protect yourself by wearing a seat belt and using defensive driving techniques (discussed in Chapter 18). (See Health in Action.)

The very concept of protection implies some degree of risk—immediate and direct (for instance, the risk of intentional injury from an assailant or unintentional harm from a fire) or

Invest in Your Future

As the economy has declined, visits to doctors have dropped, and millions of people are not taking prescribed medications. However, trying to save money in the short term by doing without needed health care can cost you a great deal—financially and physically—in the long term. Here are some ways to keep medical costs down without sacrificing your good health:

• Stay healthy. Use this book to learn the basics of a healthy lifestyle, then live accordingly. By eating nutritiously, exercising, getting enough sleep, not smoking, and getting regular immunizations you’ll reduce your risk of conditions that require expensive treatments.

• Build a good relationship with a primary care physician. Although your choices may be limited, try to schedule appointments with the same doctor. A physician who knows you, your history, and your concerns can give the best advice on staying healthy.

• Don’t go to a specialist without consulting your primary care provider, who can help you avoid overtesting and duplicate treatments.

• If you need a prescription, ask if a generic form is available. Brand names cost more, and most insurers charge higher co-payments for them.

• Take medications as prescribed. Skipping doses or cutting pills in two may seem an easy way to save money, but you may end up spending more for additional care because the treatment won’t be as effective.

• Don’t go to an emergency department unless absolutely necessary. Call your doctor for advice, or go to the student health service. Emergency departments are overburdened with caring for the very ill and injured, and their services are expensive.

prevention Information and support offered to help healthy people identify their health risks, reduce stressors, prevent potential medical problems, and enhance their well-being.

protection Measures that an individual can take when participating in risky behavior to prevent injury or unwanted risks.
long-term and indirect (such as the risk of heart disease and cancer as a result of smoking). To know how best to protect yourself, you have to be able to realistically assess risks.

Understanding Risky Behaviors

Risky behaviors are not new or unusual on campus, but today’s students face different—and potentially deadlier—risks than undergraduates did a generation or two ago. The problem is not that students who engage in risky behavior do not know the danger or feel invulnerable. Young people, according to recent research, actually overestimate the risk of some outcomes. However, they also overestimate the benefit of immediate pleasure when, for instance, engaging in unsafe sex, and underestimate the negative consequences, such as a sexually transmitted infection.

College-age men are more likely than women to engage in risky behaviors—to use drugs and alcohol, to have unprotected sex, and to drive dangerously. Men also are more likely to be hospitalized for injuries and to commit suicide. Three-fourths of the deaths in the 15- to 24-year age range are men.

Drinking has long been part of college life and, despite the efforts across U.S. college campuses to curb alcohol abuse, two out of five students engage in binge drinking—consumption of five or more drinks at a single session for men, four for women. Heavy drinking increases the likelihood of other risky behaviors, such as smoking cigarettes, using drugs, or having multiple sexual partners. (See “Don’t Go There” in Labs for IPC.) New trends, such as drinking caffeinated alcoholic beverages (discussed in Chapter 13), smoking tobacco from a hookah or water pipe (see Chapter 14), and using the dangerous stimulants called “bath salts” (see Chapter 12), present new risks.

Student Health Norms

Psychologists use the term norm, or social norm, to refer to a behavior or attitude that a particular group expects, values, and enforces. Norms influence a wide variety of human activities, including health habits. However, perceptions of social norms are often inaccurate. Only anonymous responses to a scientifically designed questionnaire can reveal what individuals really do—the actual social norms—as compared to what they may say they do to gain social approval.

Undergraduates are particularly likely to misjudge what their peers are—and aren’t—doing. In recent years colleges have found that publicizing research data on behaviors such as drinking, smoking, and drug use helps students get a more accurate sense of the real health norms on campus.

The gap between students’ misperceptions and accurate health norms can be enormous. For example, undergraduates in the ACHA-NCHA survey estimated that only 9 percent of students had never smoked cigarettes. In fact, 66 percent never had. Students guessed that only 4 percent of their peers never drank alcohol. In reality, 21 percent never did.17 Providing accurate information on drinking norms on campus has proven effective in changing students’ perceptions and in reducing alcohol consumption by both men and women.

The “How Do You Compare?” feature in every chapter allows you to test the accuracy of your perceptions of students’ health behaviors.

Making Quality Health-Care Decisions

Although you may not realize it, you make crucial decisions that affect your health every day. You choose what you eat, whether you exercise, if you smoke or drink, when to fasten your seat belt. You determine when to see a doctor, what kind of doctor, and with what sense of urgency. You decide what to tell the physician and whether to follow his or her advice, take a prescribed medication as directed, or seek further help or a second opinion. The entire process of maintaining or restoring health depends on your decisions. It cannot start or continue without them. The following sections can help you make better choices about your health and health care.
Your Strategies for Prevention

How to Boost Health Understanding

Always ask these three questions of your doctor, nurse, or pharmacist:

- What is my main problem?
- What do I need to do?
- Why is it important for me to do this?
- If you don’t understand, say, “This is new to me. Can you explain it one more time?”
- If you don’t know the meaning of a medical term, don’t hesitate to ask what it means. Health professionals sometimes forget they’re using technical terms, such as “myocardial infarction” for heart attack.
- Write down a list of your health concerns, and bring it with you whenever you seek health care.

See “Health Assurance” in Labs for IPC and Your Personal Wellness Guide for more advice on taking charge of your health care.

Improving Your Health Literacy

According to federal estimates, about one-third of the population in the United States has limited ability to understand health information and to use that information to make good decisions about health and medical care. Because of poor health literacy, more than 90 million Americans may not understand how to take medication, monitor cholesterol levels or blood sugar, manage a chronic disease, find health providers and services, or fill out necessary forms. According to research studies, people with limited health literacy are more likely to report poor health, to skip important preventive measures such as regular Pap smears, to have chronic conditions such as diabetes or asthma, and to have higher rates of preventable hospitalizations. In patients with life-threatening conditions such as heart failure, low health literacy has been associated with higher mortality rates.

Regardless of their literacy skills, college students often do not seek out information on health concerns. In one study that tracked college students’ communications for a two-week period, they sought health-related advice and information in a little more than one-fourth of their communications about health. When they did seek help, they were most likely to turn to family and friends. About half of students also turn to health educators for information, and most rank them and health center medical staff as believable. Although students regularly get information from flyers, pamphlets, magazines, and television, they are less likely to consider these as authoritative, believable sources. (See Health in the Headlines: Patient Education.)

Finding Good Advice Online

Three in four Internet users are “e-health” consumers who seek information or support, communicate with health-care providers, or buy medical products online. “They use the Internet as an adjunct to physicians, who remain their primary source of health advice,” says Mark Bard, president of Manhattan Research, a health-care marketing firm. About three in four college students have used the Internet to get health information, but many are skeptical of what they find.

If you go to websites for medical information, here are some guidelines for evaluating them:

- Check the creator. Websites are produced by health agencies, health support groups, school health programs, health-product advertisers, health educators, and health-education organizations. Read site headers and footers carefully to distinguish biased commercial advertisements from unbiased sites created by scientists and health agencies.
- If you are looking for the most recent research, check the date the page was created and last updated as well as the links. Several nonworking links signal that the site isn’t carefully maintained or updated.
- Check the references. As with other health-education materials, web documents should provide the reader with references.

Patient Education

Knowledge and understanding are critical to making good decisions about your health, and health-care professionals are placing more emphasis on educating consumers about their health. To find out more, go to Global Health Watch and click on “Health and Wellness.” Scan down to “Consumer Health” and click on “Patient Education.” Scan the headlines that appear on the right of your screen, and select an article that reports on the importance of health literacy or the impact of informed decision making by patients. Write a brief summary in your online journal.
Unreferenced suggestions may be scientifically unsound and possibly unsafe.

- **Consider the author.** Is he or she recognized in the field of health education or otherwise qualified to publish a health-information web document? Does the author list his or her occupation, experience, and education?

- **Look for possible bias.** Websites may be attempting to provide health information to consumers, but they also may be attempting to sell a product. Many sites are merely disguised advertisements. (See Table 1.1 for some doctor-endorsed websites.)

### Getting Medical Facts Straight

Cure! Breakthrough! Medical miracle! These words make headlines. Remember that although medical breakthroughs and cures do occur, most scientific progress is made one small step at a time. Rather than putting your faith in the most recent report or the hottest trend, try to gather as much background information and as many opinions as you can. (See Consumer Alert, p. 19.)

When reading a newspaper or magazine story or listening to a radio or television report about a medical advance, look for answers to the following questions:

- **Who are the scientists involved?** Are they recognized, legitimate health professionals? What are their credentials? Are they affiliated with respected medical or scientific institutions? Be wary of individuals whose degrees or affiliations are from institutions you’ve never heard of, and be sure that the person’s educational background is in a discipline related to the area of research reported.

- **Where did the scientists report their findings?** The best research is published in peer-reviewed professional journals, such as *The New England Journal of Medicine*. Research developments also may be reported at meetings of professional societies.

- **Is the information based on personal observations?** Does the report include testimonials from cured patients or satisfied customers? If the answer to either question is yes, be wary.

- **Does the article, report, or advertisement include words like amazing, secret, or quick?** Does it claim to be something the public has never seen or been offered before? Such sensationalized

### Table 1.1 Doctor Recommended Websites

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<tbody>
<tr>
<td>MedlinePlus contains links to information on hundreds of health conditions and issues. The site also includes a medical dictionary, an encyclopedia with pictures and diagrams, and links to physician directories.</td>
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<tr>
<th>FDA Center for Drug Evaluation and Research</th>
<th><a href="http://www.fda.gov">www.fda.gov</a></th>
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<tbody>
<tr>
<td>Click on Drugs@FDA for information on approved prescription drugs and some over-the-counter medications.</td>
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<th>WebMD</th>
<th><a href="http://www.webmd.com">www.webmd.com</a></th>
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<tr>
<td>WebMD is full of information to help you manage your health. The site’s quizzes and calculators are a fun way to test your medical knowledge. Get diet tips, find information on drugs and herbs, and check out special sections on men’s and women’s health.</td>
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<tr>
<th>Mayo Clinic</th>
<th><a href="http://mayoclinic.com">http://mayoclinic.com</a></th>
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<tr>
<td>The renowned Mayo Clinic offers a one-stop health resource website. Use the site’s Health Decision Guides to make decisions about prevention and treatment. Learn more about complementary and alternative medicine, sports medicine, and senior health in the Healthy Living Centers.</td>
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<tr>
<th>Centers for Disease Control and Prevention</th>
<th><a href="http://www.cdc.gov">www.cdc.gov</a></th>
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<tbody>
<tr>
<td>Stay up to date on the latest public health news and get the CDC’s recommendations on travelers’ health, vaccines and immunizations, and protecting your health in case of a disaster.</td>
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<th>Medscape</th>
<th><a href="http://www.medscape.com">www.medscape.com</a></th>
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<tbody>
<tr>
<td>Medscape delivers news and research specifically tailored to your medical interests. The site requires (free) registration.</td>
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language is often a tip-off to a dubious treatment.

- **Is someone trying to sell you something?** Manufacturers who cite studies to sell a product have been known to embellish the truth.
- **Does the information defy all common sense?** Be skeptical. If something sounds too good to be true, it probably is.

### Evidence-Based Medicine

Large randomized controlled trials and large prospective studies provide the best evidence, or scientific proof, that a particular treatment is effective. **Evidence-based medicine** is a way of improving and evaluating patient care by combining the best research evidence with the patient’s personal values.

Reviewing all available medical studies pertaining to an individual patient or group of patients helps doctors to diagnose illnesses more precisely, to choose the best tests, and to select the best treatments or methods of disease prevention. By using evidence-based medical techniques for large groups of patients with the same illness, doctors can develop **practice guidelines** for evaluating and treating particular illnesses.

### Outcomes Research

Evidence-based medicine pays particular attention to **outcomes**—that is, the impact that a specific medication or treatment has on a patient’s condition, overall health, and quality of life.

Outcomes research is designed to answer questions such as: Is treatment better or worse than no treatment? Is one treatment better than another? If a treatment is effective, is it just as good as a lot? Does quality of life change because of treatment? Are the benefits of treatment worth the cost or the risks to the patient?

Studies of outcomes look at how patients fared with or without a specific treatment, the costs involved, and the impact of undergoing or not undergoing treatment in terms of the patients’ quality of life. Outcomes research can help determine which of several therapies or approaches provides the best results at the most reasonable costs.

When you are diagnosed with a health problem, ask your doctor if your treatment is based on the latest evidence and clinical guidelines. The National Guideline Clearinghouse provides a comprehensive database of evidence-based clinical practice guidelines for many common health problems, available at www.guideline.gov.

### Making Healthy Changes

In terms of human health, the 1800s were the century of hygiene, with life-saving advances in sanitation and clean drinking water. The 1900s were the century of medicine, with breakthroughs in diagnosing and treating major illnesses. The 2000s, medical experts predict, will be the century of behavioral change, when individuals take charge of their health by breaking unhealthy habits and creating new, healthier ones.

The stakes for modifying student behavior are high. Four in ten students are binge drinkers; one in four smokes. Among those who are sexually active, almost three in four say they’ve engaged in unprotected sex. Only about a third of undergraduates exercise regularly. Their nutrition is notoriously poor. Weights—and weight problems—are rising on campus. By graduation, one in four students has at least one major risk factor for diabetes, metabolic syndrome, or heart disease. Yet even students who recognize the risks and want to change their behavior often have no idea how to begin.

If you would like to improve your health behavior, you have to realize that change isn’t easy. Between 40 and 80 percent of those who try to kick bad health habits lapse back into their unhealthy ways within six weeks.

Yet even simple behavioral changes could have a significant impact. A study that tracked about 20,000 adults in the United Kingdom found that those who adopted just four healthy habits lived an average of 14 years longer than the others. These life-extending behaviors are:

- Not smoking.
- Eating lots of fruits and vegetables.
Figure 1.2  Factors That Shape Positive Behavior

- Exercising regularly.
- Drinking alcohol in moderation.²⁰

Participants got a point for each of these healthy habits, and those who scored four points were four times less likely to die than those who scored zero.

Fortunately, our understanding of change has itself changed. Thanks to decades of research, we now know what sets the stage for change, the way change progresses, and the keys to lasting change. We also know that personal change is neither mysterious nor magical but a methodical science that anyone can master. (See “Part I: The New Science of Personal Change” in IPC for a comprehensive review.)²¹

Understanding Health Behavior

Three types of influences shape behavior: predisposing, enabling, and reinforcing factors (Figure 1.2).

Predisposing Factors  Predisposing factors include knowledge, attitudes, beliefs, values, and perceptions. Unfortunately, knowledge isn’t enough to cause most people to change their behavior; for example, people fully aware of the grim consequences of smoking often continue to puff away. Nor is attitude—one’s likes and dislikes—sufficient; an individual may dislike the smell and taste of cigarettes but continue to smoke regardless.

Beliefs are more powerful than knowledge and attitudes, and researchers report that people are most likely to change health behavior if they hold three beliefs:

- Susceptibility. They acknowledge that they are at risk for the negative consequences of their behavior.
- Severity. They believe that they may pay a very high price if they don’t make a change.
- Benefits. They believe that the proposed change will be advantageous to their health.

There can be a gap between stated and actual beliefs, however. Young adults may say they recognize the very real dangers of casual, careless sex in this day and age. Yet, rather than act in accordance with these statements, they may impulsively engage in unprotected sex with individuals whose health status and histories they do not know. The reason: Like young people everywhere and in every time, they feel invulnerable, that nothing bad can or will happen to them, that if there were a real danger, they would somehow know it. Often it’s not until something happens—a former lover may admit to having a sexually transmitted infection—that their behaviors become consistent with their stated beliefs.

Enabling Factors  Enabling factors include skills, resources, accessible facilities, and physical and mental capacities. Before you initiate a change, assess the means available to reach your goal. No matter how motivated you are, you’ll become frustrated if you keep encountering obstacles. That’s why breaking a task or goal down into step-by-step strategies is so important in behavioral change.

Reinforcing Factors  Reinforcing factors may be praise from family and friends, rewards from teachers or parents, or encouragement and recognition for meeting a goal. Although these help a great deal in the short run, lasting change depends not on external rewards but on an internal commitment and sense of achievement. To make a difference, reinforcement must come from within.
CONSUMER ALERT

Too Good to Be True?

Almost every week you’re likely to see a commercial or an ad for a new health product that promises better sleep, more energy, clearer skin, firmer muscles, lower weight, brighter moods, longer life—or all of these combined. As the Consumer Alerts throughout this book point out, you can’t believe every promise you read or hear. Keep these general guidelines in mind the next time you come across a health claim.

Facts to Know
• Do your own research. Check with your doctor or with the student health center. Go to the library or do some online research to gather as much information as you can.
• Check credentials. Anyone can claim to be a scientist or a health expert. Find out if advocates of any type of therapy have legitimate degrees from recognized institutions and are fully licensed in their fields.

Steps to Take
• Look for objective evaluations. If you’re watching an infomercial for a treatment or technique, you can be sure that the enthusiastic endorsements have been skillfully scripted and rehearsed. Even ads that claim to be presenting the science behind a new breakthrough are really sales pitches in disguise.
• Consider the sources. Research findings from carefully controlled scientific studies are reviewed by leading experts in the field and published in scholarly journals. Just because someone has conducted a study doesn’t mean it was a valid scientific investigation.
• If it sounds too good to be true, it probably is. If a magic pill could really trim off excess pounds or banish wrinkles, the world would be filled with thin people with unlined skin. Look around and you’ll realize that’s not the case.
A decision to change a health behavior should stem from a permanent, personal goal, not from a desire to please or impress someone else. If you lose weight for the homecoming dance, you’re almost sure to regain pounds afterward. But if you shed extra pounds because you want to feel better about yourself or get into shape, you’re far more likely to keep off the weight.

How and Why People Change

Change can simply happen. You get older. You put on or lose weight. You have an accident. Intentional change is different: A person consciously, deliberately sets out either to change a negative behavior, such as chronic procrastination, or to initiate a healthy behavior, such as daily exercise. For decades psychologists have studied how people intentionally change and have developed various models that reveal the anatomy of change.

In the moral model, you take responsibility for a problem (such as smoking) and its solution; success depends on adequate motivation, while failure is seen as a sign of character weakness. In the enlightenment model, you submit to strict discipline to correct a problem; this is the approach used in Alcoholics Anonymous. The behavioral model involves rewarding yourself when you make positive changes. The medical model sees the behavior as caused by forces beyond your control (a genetic predisposition to being overweight, for example) and employs an expert to provide advice or treatment. For many people, the most effective approach is the compensatory model, which doesn’t assign blame but puts responsibility on individuals to acquire whatever skills or power they need to overcome their problems.

The Health Belief Model

Psychologists developed the health belief model (HBM) about 50 years ago to explain and predict health behaviors by focusing on the attitudes and beliefs of individuals. (Remember that your attitudes and beliefs are predisposing influences on your capacity for change.)

According to this model, people will take a health-related action (e.g., use condoms) if they:

- **Feel that they can avoid a negative consequence**, such as a sexually transmitted infection (STI).
- **Expect a positive outcome** if they take the recommended advice—for instance, that condoms will protect them from STIs.
- **Believe that they can successfully take action**—for example, use condoms comfortably and confidently.

Readiness to act on health beliefs, in this model, depends on how vulnerable individuals feel, how severe they perceive the danger to be, the benefits they expect to gain, and the barriers they think they will encounter. Another key factor is self-efficacy, their confidence in their ability to take action.

Over the years the health belief model has been used to help people change unhealthy behaviors, such as smoking, overeating, and inactivity, or to encourage them to take positive health actions, such as using condoms and getting needed vaccinations and medical checkups.

Self-Determination Theory

This approach, developed several decades ago by psychologists Edward Deci and Richard Ryan, focuses on whether an individual lacks motivation, is externally motivated, or is intrinsically motivated. Someone who is “amotivated” does not value an activity, such as exercise, or does not believe it will lead to a desired outcome, such as more energy or lower weight. Individuals who are externally motivated may engage in an activity like exercise to gain a reward or avoid a negative consequence (such as a loved one’s nagging). Some people are motivated by a desired outcome; for instance, they might exercise for the sake of better health or longer life. Behavior becomes self-determined when someone engages in it for its own sake, such as exercising because it’s fun.

Numerous studies have evaluated self-determination as it relates to health behavior. In research on exercise, individuals with greater self-determined motivation are less likely to stop exercising and have stronger intentions to continue exercise, higher physical self-worth, and lower social anxiety related to their physique.
Motivational Interviewing

Health professionals, counselors, and coaches use motivational interviewing, developed by psychologists William Miller and Stephen Rollnick, to inspire individuals, regardless of their enthusiasm for change, to move toward improvements that could make their lives better. Building a collaborative partnership, the therapist does not persuade directly but uses empathy and respect for the patient’s perspective to evoke recognition of the desirability of change.

The Transtheoretical Model

Psychologist James Prochaska and his colleagues, by tracking what they considered to be universal stages in the successful recovery of drug addicts and alcoholics, developed a way of thinking about change that cuts across psychological theories. Their transtheoretical model focuses on universal aspects of an individual’s decision-making process rather than on social or biological influences on behavior.

The transtheoretical model has become the foundation of programs for smoking cessation, exercise, healthy food choices, alcohol cessation, weight control, condom use, drug use cessation, mammography screening, and stress management. Recent studies have demonstrated its usefulness in helping adolescents quit smoking and in increasing fruit and vegetable intake.

The following sections describe these key components of the transtheoretical model:

- Stages of change.
- Processes of change—cognitive and behavioral activities that facilitate change.
- Self-efficacy—the confidence people have in their ability to cope with challenge.

**The Stages of Change** According to the transtheoretical model of change, individuals progress through a sequence of stages as they make a change (Figure 1.3). No one stage is more important than another, and people often move back and forth between them. Most “spiral” from stage to stage, slipping from maintenance to contemplation or from action to precontemplation before moving forward again.

People usually cycle and recycle through the stages several times. Smokers, for instance, report making three or four serious efforts to quit before they succeed.

The six stages of change are:

1. **Precontemplation.** You are at this stage if you, as yet, have no intention of making a change. You are vaguely uncomfortable, but this is where your grasp of what is going on ends. If you feel healthy and are busy with your classes and activities, for instance, you may never think about exercise. Then you notice that it’s harder to zip your jeans or that you get winded walking up stairs. Still you don’t quite register the need to do anything about it.

   During precontemplation, change remains hypothetical, distant, and vague. Yet you may speak of something bugging you and wish that things were somehow different.

2. **Contemplation.** In this stage you begin to get it. You acknowledge that something is amiss and begin to consider what it is and whether you can do anything about it. You still prefer not to have to change, but you start to realize that you can’t avoid reality. Maybe none of your jeans fit anymore, or you feel sluggish and listless. As you begin to weigh the trade-offs of standing pat versus acting, you may alternate between wanting to take action and resisting it.

   The way you talk to yourself expresses your feeling that change is necessary but
These change processes can help you progress through the stages of change. Each may be most useful at particular stages.

3. **Preparation.** At some point you stop waffling, make a clear decision, and feel a burst of energy. This decision heralds the preparation stage. You gather information, make phone calls, do research online, and look into exercise classes at the gym. You begin to think and act with change specifically in mind even if you hold something back. If you eavesdrop on what you’re saying to yourself, you would hear statements such as, “I am going to do this,” and you set a date, such as “I will begin on New Year’s Day.” Yet you may not share your plans with others, despite all the internal progress you’ve made.

4. **Action.** This is the stage of actively modifying your behavior according to your plan. Your resolve is strong, and you know you’re on your way to a better you. You no longer keep your plan under wraps—not that you could. Change produces signs that are visible to others. You may be getting up 15 minutes earlier to make time for a healthy breakfast or to walk to class rather than taking the shuttle. In a relatively short time you acquire a sense of comfort and ease with the change in your life.

5. **Maintenance.** Maintenance is about locking in and consolidating gains. This stabilizing stage, which follows the flurry of specific steps taken in the action stage, is absolutely necessary to retain what you’ve worked for and to make change permanent. In this stage, you strengthen, enhance, and extend the changes you’ve initiated. You bring the rest of what you do into line with the change to support it. By securing the progress you’ve made, even if you hit a plateau or slip backward, you can regain your footing and keep moving forward.

6. **Termination.** At this stage, your “change” has become status quo. While it may take two to five years, the behavior has become so deeply ingrained that you can’t imagine abandoning it. More than eight in ten college seniors who exercised regularly remain as active, or even more active, after graduation.

As research on college students has shown, attitudes and feelings are related to stages of
change. Smokers who believe that continuing to smoke would have only a minor or no impact on their health remain in the precontemplation stage; those with respiratory symptoms move on to contemplation and preparation.

The Processes of Change Anything you do to modify your thinking, feeling, or behavior can be called a change process. The nine included in the transtheoretical model are shown in Figure 1.3 in their corresponding stages.

- **Consciousness-raising.** The most widely used change process involves increasing knowledge about yourself or the nature of your problem. As you learn more, you gain understanding and feedback about your behavior.
  
  **Example:** Reading Chapter 6 on making healthy food choices.

- **Social liberation.** This process takes advantage of alternatives in the external environment that can help you begin or continue your efforts to change.
  
  **Example:** Spending as much time as possible in nonsmoking areas.

- **Emotional arousal.** This process, also known as dramatic relief, works on a deeper level than consciousness-raising and is equally important in the early stages of change. Emotional arousal means experiencing and expressing feelings about a problem behavior and its potential solutions.
  
  **Example:** Resolving never to drink and drive after the death of a friend in a car accident.

- **Self-reevaluation.** This process requires a thoughtful reappraisal of your problem, including an assessment of the person you might be once you have changed the behavior.
  
  **Example:** Recognizing that you have a gambling problem and imagining yourself as a non gambler.

- **Commitment.** This process acknowledges—first privately and then publicly—that you are responsible for your behavior and the only one who can change it.
  
  **Example:** Joining a self-help or support group.

- **Rewards.** This process reinforces positive behavioral changes with self-praise or small gifts.
  
  **Example:** Getting a massage after a month of consistent exercise.

- **Countering.** Countering, or counterconditioning, substitutes healthy behaviors for unhealthy ones.
  
  **Example:** Chewing gum rather than smoking.

- **Environmental control.** This action-oriented process restructures your environment so you are less likely to engage in a problem behavior.
  
  **Example:** Getting rid of your stash of sweets.

- **Helping relationships.** This process recruits individuals—family, friends, therapist, coach—to provide support, caring, understanding, and acceptance.
  
  **Example:** Finding an exercise buddy.

Researchers are zeroing in on the optimal stages to address certain behaviors. A study of college students, for instance, indicated that precontemplation might be the best time to address alcohol consumption, healthy eating, and managing depression (by means of Prochaska’s recommended processes of consciousness-raising, dramatic relief, and environmental reevaluation). The contemplation stage might be a better time to address smoking by helping students...
minimize what they see as the drawbacks of quitting (such as awkwardness around friends who smoke).

**Self-Efficacy and Locus of Control**

Do you see yourself as master of your fate, asserting control over your destiny? Or do so many things happen in your life that you just hang on and hope for the best? The answers to these questions reveal two important characteristics that affect your health: your sense of **self-efficacy** (the belief in your ability to change and to reach a goal) and your **locus of control** (the sense of being in control of your life).

Your confidence in your ability to cope with challenge can determine whether you can and will succeed in making a change. In his research on self-efficacy, psychologist Albert Bandura of Stanford University found that the individuals most likely to reach a goal are those who believe that they can. The stronger their faith in themselves, the more energy and persistence they put into making a change. The opposite is also true, especially for health behaviors. Among people who begin an exercise program, those with lower self-efficacy are more likely to drop out.

If you believe that your actions will make a difference in your health, your locus of control is internal. If you believe that external forces or factors play a greater role, your locus of control is external. Hundreds of studies have compared people who have these different perceptions of control. “Internals,” who believe that their actions largely determine what happens to them, act more independently, enjoy better health, and are more optimistic about their future. “Externals,” who perceive that chance or outside forces determine their fate, find it harder to cope with stress and feel increasingly helpless over time. When it comes to weight, for instance, they see themselves as destined to be fat.

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**Making Healthy Changes**

Ultimately you have more control over your health than anyone else. Use this course as an opportunity to zero in on at least one less-than-healthful behavior and improve it. Here are some suggestions for small steps that can have a big payoff. Check those that you commit to making today, this week, this month, or this term. Indicate “t,” “w,” “m,” or term, and repeat this self-evaluation throughout the course.

- **Use seat belts.** In the last decade, seat belts have saved more than 40,000 lives and prevented millions of injuries.
- **Eat an extra fruit or vegetable every day.** Adding more fruit and vegetables to your diet can improve your digestion and lower your risk of several cancers.
- **Get enough sleep.** A good night’s rest provides the energy you need to make it through the following day.
- **Take regular stress breaks.** A few quiet minutes spent stretching, looking out the window, or simply letting yourself unwind are good for body and soul.
- **Lose a pound.** If you’re overweight, you may not think a pound will make a difference, but it’s a step in the right direction.

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**If you’re a woman, examine your breasts regularly.**
Get in the habit of performing a breast self-examination every month after your period (when breasts are least swollen or tender).

**If you’re a man, examine your testicles regularly.**
These simple self-exams can spot the signs of cancer early, when it is most likely to be cured.

**Get physical.** Just a little exercise will do some good. A regular workout schedule will be good for your heart, lungs, muscles, bones—even your mood.

**Drink more water.** Eight glasses a day are what you need to replenish lost fluids, prevent constipation, and keep your digestive system working efficiently.

**Do a good deed.** Caring for others is a wonderful way to care for your own soul and connect with others.
Are You in Control of Your Health?

To test whether you are the master of your fate, asserting control over your destiny or just hanging on, hoping for the best, take the test below. Depending on which statement you agree with, check either a or b for each of the following.

1. (a) Many of the unhappy things in people’s lives are partly due to bad luck. ___
   (b) People’s misfortunes result from mistakes they make. ___

2. (a) One of the major reasons why we have wars is that people don’t take enough interest in politics. ___
   (b) There will always be wars, no matter how hard people try to prevent them. ___

3. (a) In the long run, people get the respect they deserve in this world. ___
   (b) Unfortunately, an individual’s worth often passes unrecognized no matter how hard he tries. ___

4. (a) The idea that teachers are unfair to students is nonsense. ___
   (b) Most students don’t realize the extent to which their grades are influenced by accidental happenings. ___

5. (a) Without the right breaks, one cannot be an effective leader. ___
   (b) Capable people who fail to become leaders have not taken advantage of their opportunities. ___

6. (a) No matter how hard you try, some people just don’t like you. ___
   (b) People who can’t get others to like them don’t understand how to get along with others. ___

7. (a) I have often found that what is going to happen will happen. ___
   (b) Trusting to fate has never turned out as well for me as making a decision to take a definite course of action. ___

8. (a) In the case of the well-prepared student, there is rarely, if ever, such a thing as an unfair test. ___
   (b) Many times exam questions tend to be so unrelated to course work that studying is really useless. ___

9. (a) Becoming a success is a matter of hard work; luck has little or nothing to do with it. ___
   (b) Getting a good job depends mainly on being in the right place at the right time. ___

10. (a) The average citizen can have influence in government decisions. ___
    (b) This world is run by the few people in power, and there is not much the little guy can do about it. ___

11. (a) When I make plans, I am almost certain that I can make them work. ___
    (b) It is not always wise to plan too far ahead because many things turn out to be a matter of luck anyway. ___

12. (a) In my case, getting what I want has little or nothing to do with luck. ___
    (b) Many times we might just as well decide what to do by flipping a coin. ___

13. (a) What happens to me is my own doing. ___
    (b) Sometimes I feel that I don’t have enough control over the direction my life is taking. ___

Scoring: Give yourself one point for each of the following answers:
1a, 2b, 3b, 4b, 5a, 6a, 7a, 8b, 9b, 10b, 11b, 12b, 13b
You do not get any points for other choices.

Add up the totals. Scores can range from 0 to 13. A high score indicates an external locus of control, the belief that forces outside yourself control your destiny. A low score indicates an internal locus of control, a belief in your ability to take charge of your life.


If you turned out to be external on this self-assessment quiz, don’t accept your current score as a given for life. If you want to shift your perspective, you can. People are not internal or external in every situation. At home you may go along with your parents’ or roommates’ preferences and let them call the shots. In class you might feel confident and participate without hesitation.

Take inventory of the situations in which you feel most and least in control. Are you bold on the basketball court but hesitant on a date? Do you feel confident that you can resolve a dispute with your friends but throw up your hands when a landlord refuses to refund your security deposit? Look for ways to exert more influence in situations in which you once yielded to external influences. See what a difference you can make.
Take Charge of Your Future

You—your resources, your common sense, your choices, your feelings of self-efficacy and self-worth—determine how long and how well you live. Nothing and no one else has a greater impact on your health than you. Knowledge about health and health care is indeed power, but information alone isn’t enough. Action is the key. The habits you form now, the decisions you make while in college, will affect you for decades to come.

Get Real

1. Are you taking good care of yourself?
   Your body belongs to you. The most sophisticated health-care delivery system or the newest breakthrough cannot do as much good for you as you can. Modern medicine’s finest hours generally come when the body is in crisis. Only you can prevent such crises. To evaluate how you are doing, answer the following questions:
   - Do you know your Body Mass Index (BMI)?
   - Have you had your blood pressure checked in the last year?
   - Have you had a lipoprotein profile—tests of your lipids, or blood fats—done in the last two years? Do you know your LDL level (the bad form of cholesterol)? Do you know your HDL (the good form of cholesterol)?
   - Have you had your blood glucose checked? (This is a test for prediabetes and diabetes.)
   - If you’re a woman, do you examine your breasts every month?
   - If you’re a man, do you examine your testicles?
   - Do you check your entire body for changes in moles and other early signs of skin cancer at least once a year?
   - How often do you see a doctor for a medical checkup?
   - How often do you go to the dentist?
   - How often do you have your vision checked?
   - Are your immunizations current? Have you been vaccinated against meningitis? hepatitis B? human papillomavirus (HPV)? influenza?
   - Do you get an annual flu shot?
   - Do you know if your family history puts you at risk for any serious health problem or condition?
   - Do you always wear a seat belt when you’re in a car?
   - Do you wear a helmet when you ride a bicycle or motorcycle?
   - Do you commit “self-malpractice” by engaging in any of the following?
     - cigarette smoking
     - excess drinking
     - abuse of prescription drugs
     - use of illegal drugs
     - careless driving or failure to wear a seat belt
     - carelessness in sexual relationships

2. Assess yourself. Based on your answers, rate your well-being on a scale from 1 (barely breathing) to 10 (potential Olympian). Then rate your conscientiousness in taking care of your health on a scale of 1 (whatever happens happens) to 10 (ever vigilant).

Get Ready

1. Request information. To ensure quality medical care throughout your life, you will need information on your health history and your family history. If you do not have such information with you, your parents or partner may be able to provide it. However, you may need to contact your doctors’ offices. Ask if your records are in an electronic format that you can access yourself, or if you need to request that they make copies for you. Also, ask for help in determining which parts of your record will be useful. You may need to fill out a form to authorize the release of information. Most facilities charge for copies of medical records. Allow time for this transfer.

2. Contact family members. In order to prepare a complete family history, you may need to interview your parents, uncles and aunts, grandparents, cousins, and so on. Let them know in advance of your project and your interests. Build time for these interviews in your schedule.

3. Schedule medical appointments. If you are due for a routine checkup, need an immunization or allergy shot, or want your doctor’s advice on a non-urgent health problem, schedule an appointment toward the end of the term. You may have to call several weeks or even months in advance.

Get Going

1. Create your personal health record. The best way to be sure that you have immediate access to medical information when you need it is to keep your own version of a medical “chart.” We suggest that you create both a computer file as well as an actual file for hard copies of lab results, notes, and other information.

Here is what your personal health record should contain.
   - Your name, birth date, blood type, and emergency contact.
   - Date of last physical.
   - Dates and results of tests and screenings.
   - Major illnesses and surgeries, with dates.
   - A list of your medicines, dosages, and how long you’ve taken them.
   - Any allergies.
   - Any chronic diseases.
2. **Assemble your family health history.** Family history is the single greatest risk factor for disease. Collect information about your grandparents, parents, aunts and uncles, nieces and nephews, siblings, and children. You can interview your relatives online, on the phone, or in person. Questions to ask include the following:

- What major diseases has the family experienced? Examples are hypertension, heart disease, stroke, cancer, depression, diabetes, Alzheimer’s disease, obesity, blindness, and deafness. At what age were these diseases or conditions diagnosed? Was treatment successful?
- Have family members had a tendency toward other conditions, such as allergies, asthma, migraines, or frequent colds?
- Is there any family history of infertility, miscarriages, stillbirths, birth defects, or infant deaths?
- What is the family’s dominant racial and ethnic background? Some diseases are more common among members of certain races and ethnicities.

For more guidance on creating a family history, check the CDC’s family history website at http://www.cdc.gov/genomics/public/famhist.htm.

3. **Create your health history summary.** Based on the first two exercises, put together a summary that includes the following:

- Major injuries/conditions/illnesses and the dates when they occurred or were diagnosed.
- Allergies, specifying the type (food, medicine, etc.) and reaction.
- Any hospitalizations, the reasons for them, and the dates.
- Immunizations and dates, including tetanus, hepatitis B, meningitis, human papillomavirus (for women), and influenza.
- Any medicines/supplements that you take.
- Family members with serious health conditions.
- All the health-care providers you see, including nontraditional ones.

4. **Inform yourself.** Select a personally relevant topic, such as high blood pressure or diabetes, based on your personal or family medical history, and research it. The best place to turn is the Internet—if you know how to evaluate what you find. Start with these top health websites:

- www.medlineplus.gov
- www.cdc.gov
- www.fda.gov
- www.mayoclinic.com
- www.webmd.com
- www.medscape.com

With other sites, always look for the sponsor (is it commercial or a university or federal agency?), the authors’ credentials, references, currency, and possible biases.

**Lock It In**

1. **Check your health every week.** Record any new health problems, such as a headache, rash, or backache. Make note of the date, describe the symptoms, and record what treatments you use and when you get better. Review your observations before your next doctor’s visit, and call attention to any troubling pattern or recurring symptoms.

2. **Keep up with health news,** particularly any conditions that affect you or your family. The government website www.medlineplus.gov includes news stories as well as background information on a host of health topics.
Making This Chapter Work for You

Review Questions

1. The development of health behaviors is influenced by all of the following except
   a. reinforcing factors, which involve external recognition for achieving a goal.
   b. preexisting health factors, which take into account the individual’s current position on the wellness continuum.
   c. predisposing factors, which include knowledge, attitudes, and beliefs.
   d. enabling factors, which are related to an individual’s skills and capabilities for making behavioral changes.

2. A group of students is discussing the differences between the sexes. Whose statement is incorrect?
   a. Matt: “Men breathe faster but have a slower heart rate—and have a larger brain.”
   b. Elena: “But women have more neurons in certain brain regions.”
   c. Kristin: “And women are less likely to get arthritis.”
   d. Rick: “Got me there—Men are more likely to have heart attacks and to get cancer.”

3. Which of the following statements about health information on the Internet is true?
   a. Chat rooms are the most reliable source of accurate medical information.
   b. Physicians who have websites must adhere to a strict set of standards set by the American Medical Association.
   c. Government-sponsored sites such as that of the Centers for Disease Control and Prevention are excellent sources of accurate health-care information.
   d. The Internet is a safe and cost-effective source of prescription drugs.

4. The term for a behavior or attitude that a particular group expects is
   a. social health.
   b. self-efficacy.
   c. social norm.
   d. reinforcement.

5. Which of the following is not a question you must ask your doctor to understand your health condition and what to do about it?
   a. What is my main problem?
   b. Why do I have this problem?
   c. What do I need to do?
   d. Why is it important for me to do this?

6. According to the stages of change in the transtheoretical model of change, which statement is incorrect?
   a. In the maintenance stage, individuals have avoided relapse for six months.
   b. In the contemplation stage, individuals are considering changing a problem behavior in the next six months.
   c. In the action stage, individuals are actually modifying their behavior according to their plan.
   d. In the preparation stage, individuals intend to change a problem behavior in the next six months.

7. Relapses are common (you’re human, aren’t you?), but don’t let them keep you from your goal. Which of these strategies might help you recover from a relapse?
   a. Have a hot fudge sundae.
   b. Decide to think about it after finals.
   c. Analyze what went wrong and why.
   d. Put yourself back into contemplation stage.

8. Which of the following statements about the dimensions of health is true?
   a. Spirituality provides solace and comfort for those who are severely ill, but it has no health benefits.
   b. The people who reflect the highest levels of social health are usually among the most popular individuals in a group and are often thought of as the life of the party.
   c. Intellectual health refers to one’s academic abilities.
   d. Optimal physical health requires a nutritious diet, regular exercise, avoidance of harmful behaviors and substances, and self-protection from accidents.

9. Change processes—cognitive and behavioral activities that facilitate change—include all of these except
   a. consciousness-raising.
   b. health awareness.
   c. countering.
   d. helping relationships.

10. If you want to change unhealthy behavior, which of the following strategies is least likely to promote success?
    a. Believe that you can make the change.
    b. Reward yourself regularly.
    c. Remind yourself about all your faults.
    d. Accept that you are in control of your health.

Answers to these questions can be found on page 672.
Critical Thinking

1. Where are you on the wellness–illness continuum? What variables might affect your place on the scale? What do you consider your optimum state of health to be?

2. Talk to classmates from different racial or ethnic backgrounds than yours about their culture’s health attitudes. Ask them what is considered healthy behavior in their cultures. For example, is having a good appetite a sign of health? What kinds of self-care practices did their parents and grandparents use to treat colds, fevers, rashes, and other health problems? What are their attitudes about the health-care system?

3. Jocelyn has been experiencing a great deal of fatigue and frequent headaches for the past couple of months. She doesn’t have health insurance and doesn’t want to spend money on a doctor visit. So she did some research on the Internet about ways to relieve her symptoms and was considering taking a couple of herbal supplements that were touted as potential treatments. If she asked you for your advice, what would you tell her? Do you think that self-care is appropriate in this situation?

Media Menu

Visit www.cengagebrain.com to access course materials and companion resources for this text that will:

- Help you evaluate your knowledge of the material.
- Allow you to prepare for exams with interactive quizzing.
- Use the CengageNOW product to develop a Personalized Learning Plan targeting resources that address areas you should study.

- Coach you through identifying target goals for behavioral change and creating and monitoring your personal change plan throughout the semester using the Behavior Change Planner available in the CengageNOW resource.

Key Terms

The terms listed are used on the page indicated. Definitions of the terms are in the Glossary at the end of the book.

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evidence-based medicine 17
health 4
health belief model (HBM) 20
health literacy 15
health promotion 5
locus of control 24
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wellness 4
Making This Chapter Work for You

Answers to Review Questions

Chapter 1
1. b; 2. c; 3. c; 4. c; 5. b; 6. b; 7. c; 8. d; 9. c; 10. c
References

Chapter 1
7. Ibid.
8. “Health, United States, 2010.”
10. “Healthy People 2020.”
12. Ibid.
13. Ibid.
15. Ibid.

This page contains references for this chapter only.