



## Diversity in Health

Minority Health Status  
in the United States



## Consumer Health

Consumer Protection



## Managing Your Health

Routine Health Care for  
Disease Prevention



## Across the Life Span

Health



## Chapter Overview

How the dimensions of health influence your well-being  
The major health concerns of our nation  
How your decisions affect your health  
How to analyze health-related information  
The differences between conventional and alternative  
treatment methods

## Student Workbook

Self-Assessment: Healthstyle Personal Health History  
Changing Health Habits: Model Activity for Better Health

## Do You Know?

How your lifestyle affects your health?  
How to make responsible health-related decisions?  
How to analyze health-related information?

# Health: The Foundation for Life

**W**hat is the status of health in the United States? According to a report issued by the Centers for Disease Control and Prevention (CDC) in Atlanta, many Americans have altered their lives to improve their health since 1985.<sup>1</sup> Between 1985 and 2000 more adults exercised regularly and ate the recommended amounts of fruits and vegetables. During this period, fewer adults smoked cigarettes and drank alcohol, and fewer people died as a result of alcohol-related motor vehicle accidents than before 1985. The number of deaths from AIDS, heart disease, cancer, and homicides dropped dramatically.

More recent findings about certain aspects of Americans' current health status, however, are less encouraging. During the first six months of 2007, about 30% of adults did not engage in physical activity during their leisure time.<sup>2</sup> Physically inactive people are more likely to be obese (have unhealthy amounts of body fat) than active people. More than one-third of American adults and 16% of American school-aged children are obese.<sup>3</sup> Excess body fat is associated with many serious diseases, including type 2 diabetes, high blood pressure, heart disease, and certain cancers.

Among young Americans, cigarette smoking and alcohol abuse are widespread practices that have negative effects on health. At the present time, cigarette smoking is the most preventable cause of disease and death in

*"Between 1985 and 2000, more adults exercised regularly . . ."*

**lifestyle** a way of living, including behaviors that promote or impair good health and longevity.

**risk factor** a characteristic that increases an individual's chances of developing a health problem.

**good health** the ability to function adequately and independently in a constantly changing environment.

the United States. About 20% of Americans who are 18 years of age and older smoke cigarettes.<sup>4</sup> Young adults between 18 and 24 years of age are more likely to be current smokers than are members of other age groups. According to a report issued by the National Institute on Alcohol Abuse and Alcoholism, the percentage of American college students who consume five or more alcoholic beverages on any occasion (binge drink) is increasing. Approximately 45% of college students engaged in this risky behavior on at least one occasion during the 30 days that preceded a national survey that was conducted in 2005.<sup>5</sup> Americans who are 18 to 25 years of age are more likely to binge drink than other Americans. About one in four college students indicated that their drinking behaviors contributed to serious academic problems, including missing classes, performing poorly on exams, and lowering their grade point averages.<sup>6</sup> Clearly, people living in the United States have more lifestyle changes to make if they are to live longer and healthier lives.

**Lifestyle** is a way of living. As a college student, your lifestyle includes a variety of behaviors that promote or impair good health and longevity. Although you may be unable to prevent severe birth defects or inherited disorders from affecting your health, you can modify many health risk factors, reducing the likelihood that you will develop serious medical problems. A risk factor is a characteristic that increases an individual's chances of developing a health problem. For example, physical inactivity, tobacco use, emotional stress, and a high-fat diet are **risk factors** for heart disease, hypertension, and certain types of cancers. You can dramatically lower your chances of developing these conditions by incorporating exercise into your daily schedule, choosing not to use tobacco products, practicing relaxation techniques, and eating a low-fat diet. Of course, the decision to adopt a healthier lifestyle is up to you.

To evaluate the impact of your lifestyle on your health, answer the questions in the “Healthstyle” assessment in the Student Workbook section of this textbook. You can use the results of this assessment to determine which health-related behaviors need to

be changed to reduce your risk of certain diseases.

Are you concerned about your health? What are you doing to protect it? What steps can you take to enhance your state of health so you can enjoy life more fully? Where can you find reliable information concerning health? The information and recommendations in this textbook can help you make choices that will improve your health.

## The Dimensions of Health

### What Is Health?

Most people can describe how it feels to be healthy or ill, but trying to define health is not an easy task. In 1948 the World Health Organization (WHO) constitution defined health as “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.”<sup>7</sup> This definition, however, is too limited. Consider the people in **Figure 1-1**. Although they are in wheelchairs, they are able to compete as athletes. If you judged their state of health using WHO's 1948 definition, you might conclude that they are unhealthy. Many physically disabled people are able to function adequately in society and do not consider themselves ill or infirm.

The Ottawa Charter for Health Promotion defined health as “a resource for everyday life . . . a positive concept emphasizing social and personal resources, as well as physical capabilities.”<sup>8</sup> According to this charter, health requires “peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity.” In addition to these conditions, most healthy adults want to function independently; enjoy eating, sexual, and physical activities; feel good about themselves; and be with family and friends.

Behavioral scientist Godfrey Hochbaum proposed a simple definition for health: “Health is what helps me be what I want to be . . . do what I want to do . . . [and] live the way I would like to live.”<sup>9</sup> Using Hochbaum's definition, you might conclude that the wheelchair-bound athletes in Figure 1-1 are as healthy as people who are capable of running.

### Health and Wellness

Health and wellness are related concepts. **Good health** enables one to function adequately and independently in a constantly changing environment; **wellness** is a sense that one is functioning at his or her best level. **Figure 1-2** illustrates the concept of

health as a continuum; there are degrees of health. The absence of functioning (premature death) is at one end of this continuum, and the highest level of functioning (optimal well-being) is at the other end. Many people accept responsibility for the quality of their health and well-being. These people are willing to take various steps to improve their health, achieving a higher degree of wellness in the process.

Most health educators agree that health and wellness are **holistic**; that is, they involve all aspects of the individual. Thus, the holistic concept of health encompasses not only the physical, psychological, and social aspects, but also the intellectual, spiritual, and environmental dimensions of a person. Each dimension is an integral part of a person's health, and any change in the quality of one component of health affects the others. For example, individuals who exercise with others to increase their level of physical health often report a sense of improved psychological and social health.

## The Components of Health

**Physical Health** Physical health refers to the overall condition of the organ systems, such as the cardiovascular system (heart and blood vessels), respiratory system (lungs), reproductive system, and nervous system. When certain organs do not function adequately, a person has various signs and symptoms of illness. **Signs** are the observable and measurable features of an illness, such as fever, rash, and abnormal behavior. **Symptoms** are the subjective complaints of an illness, such as reports of fatigue, headaches, and numbness. A healthy person's systems function prop-

**wellness** a sense that one is functioning at his or her best level.

**holistic** (hole-IS-tic) a characteristic involving all aspects of the person.

**signs** observable and measurable features of an illness.

erly; the individual feels well and is free of disease.

**Psychological Health** Psychological (mental) health involves the ability to deal effectively with the psychological challenges of life. Psychologically healthy people accept responsibility for their behavior, feel good about themselves and others, are comfortable with their emotions (feelings), and have positive, realistic outlooks on life. Although experiences such as losing a job or a family member cause stress or grief, psychologically healthy people are able to limit the extent to which crises affect their lives.

**Social Health** Social health is the sense of well-being that one achieves by forming emotionally supportive and intellectually stimulating relationships with family members, friends, and associates. Living in communities rather than in isolation, identifying with social groups, and belonging to organizations strengthen the social dimension of health. When social networks break down, health declines.

**Intellectual Health** Intellectual health is the ability to use problem-solving and other higher-order thinking skills to deal effectively with life's challenges. Healthy people analyze situations, determine alternative courses of action, and make decisions. After making decisions, intellectually healthy individuals



**Figure 1.1**

### **Wheelchair Athletes.**

Many physically disabled people do not consider themselves ill or infirm because they can function well in society. According to Hochbaum's definition of health, individuals with physical disabilities can be healthy and enjoy life.

## Figure 1.2

**Sample 1.3 col figure.** Ostiorpori volupta tecest, sus eari ut eum nus, sus ad quam, ut in consequo dus quae enis aut restotam quibea nonseri assit, consed quiat maiorum non



are able to judge the effectiveness of their choices and learn from their experiences. Effective intellectual skills enable people to feel in control of their lives.

**Spiritual Health** Spiritual health is the belief that one is a part of a larger scheme of life and that one's life has purpose. Identifying with a religion and having religious beliefs influence the spiritual health of many people. However, spirituality is not confined to those who belong to organized religious groups or have religious beliefs. People can develop spirituality without practicing a particular religion or believing in the power of a supreme being. Whatever the nature of their spirituality, many individuals achieve a sense of inner peace and harmony as well as emotional fulfillment by believing that their lives have a purpose. As in the other wellness dimensions, a breakdown in spiritual health can have a negative impact on one's

well-being.

**Environmental Health** Nothing affects the quality of wellness components as much as the state of the environment—the conditions where people live, work, and play. Environmental concerns that influence wellness include the provision of clean water and air, the management of wastes, and the control of distressing social problems such as crime and family violence. Humans cannot achieve a high degree of wellness if their environment is polluted or unsafe (**Figure 1-3**). Chapter 16 discusses environmental health concerns. **Figure 1-4** is a

model that illustrates how these six components of wellness are related and integrated into a holistic approach to understanding health. This model has the physical and psychological health components at the core of the larger environmental component. The social, intellectual, and spiritual components involve thought processes; therefore, they are found in the psychological health dimension. When the components of health integrate and function well, the individual has a sense of well-being.

## The Nation's Health

Many people fail to recognize that health involves more than just personal health—health is a national concern, too. Many of the crucial social, political, and economic issues facing this country are health-



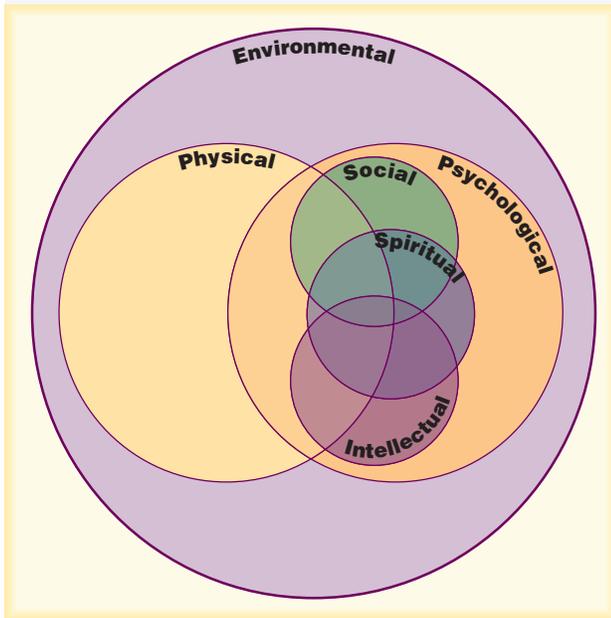
## Figure 1.3

### Environmental Health.

The state of the environment in which people live, work, and play affects the quality of their health. People cannot achieve a high degree of wellness if their environment is polluted or unsafe.

**Figure 1.4**

**The Components of Health.** The components of health are interrelated. According to this model, the social, intellectual, and spiritual components of health are in the larger spheres of physical and psychological health, which are in the largest sphere of environmental health.



related, such as domestic violence, terrorism, care of the aged, and access to health care and insurance.

According to the U.S. Department of Health and Human Services, total health care costs reached \$2.2 trillion in 2007 and were projected to reach \$2.5 trillion in 2009.<sup>10</sup> Americans generally rely on themselves and their employers, as well as private and public health insurance programs, to pay for their health care. Millions of Americans, however, do not have health insurance or they have inadequate insurance coverage. In 2007, about 15.3% of Americans were not covered by health insurance.<sup>11</sup> Lack of health insurance is a major barrier to obtaining routine preventive medical care and proper treatment. Because a major illness or hospitalization can quickly exhaust a person's financial resources, it is important to have adequate health insurance to cover such expenses.

## Tracking the Nation's Health

The U.S. government, particularly the Public Health Service of the Department of Health and Human Services, monitors the nation's health in a variety of ways. One way is by recording cases of certain diseases and causes of death. **Table 1-1** shows the ten leading causes of death for all Americans in 2006. In the United States, heart disease is the leading cause of

**life expectancy** the average number of years that an individual can expect to live.

death, followed by cancer and strokes.

The major causes of death differ for members of various age groups. **Table 1-2** shows the leading causes of death in two age categories: 15 to 24 years and 25 to 34 years. In 2006, unintentional injuries (accidents), homicide, and suicide were the top three leading causes of death of people between 15 and 24 years of age. Note that unintentional injuries, suicide, and homicide were the top three leading causes of death of people between 25 and 34 years of age.

Over the past 100 years, Americans made great progress toward improving their health, well-being, and longevity. In 1900 the **life expectancy** of a newborn baby was less than 50 years. Life expectancy is the average number of years that an individual of a particular age can look forward to living. Compared to people who lived in the first half of the twentieth century, many Americans can now expect to live lon-

**Table 1.1**

### The Ten Major Causes of Death in the United States

Rank	Cause	Percentage of Deaths
1	Heart disease	26.0
2	Cancer	23.1
3	Stroke	5.7
4	Chronic Lung Disease	5.1
5	Accidents/unintentional injuries	5.0
6	Diabetes mellitus	3.0
7	Alzheimer's disease	3.0
8	Pneumonia/influenza	2.2
9	Kidney Disease	1.9
10	Septicemia (blood infection)	1.4
—	Other causes	23.6

Source: National Center for Health Statistics, National Vital Statistics System. <http://webappa.cdc.gov/cgi-bin/broker.exe>

**Table 1.2****Causes of Death: All Races, Selected Age Groups of Americans (2006)**

<b>Ages 15–24</b>	
<b>Rank</b>	<b>Cause</b>
1	Unintentional injuries
2	Homicide
3	Suicide
4	Cancer
5	Heart Disease
<b>Ages 25–44</b>	
<b>Rank</b>	<b>Cause</b>
1	Unintentional injuries
2	Homicide
3	Suicide
4	Cancer
5	Heart Disease

Source: National Center for Health Statistics, National Vital Statistics System. <http://webappa.cdc.gov/cgi-bin/broker.exe>

ger and healthier lives. In 2006 the life expectancy of a newborn American was 77.7 years.<sup>12</sup> This progress occurred largely because various government agencies provided greater access to health care, conducted health education and research programs, and regulated the safety of the environment. For example, childhood vaccination programs have removed the threat of polio and controlled other infectious diseases such as measles, diphtheria, rubella, and tetanus. Food fortification programs have nearly eliminated nutritional deficiency diseases such as goiter, rickets, and pellagra. Efforts to educate the public concerning the hazards of tobacco use and drinking and driving have reduced the prevalence of smoking among adults and made motor vehicle travel safer.

Although the life expectancy of Americans has increased, many people die prematurely, that is, before they reach 75 years of age. According to health experts at the Centers for Disease Control and Prevention in Atlanta, actual causes of death are the underlying reasons that are not reported on death cer-

tificates. In 2000, for example, about 18% of all deaths were the result of tobacco use, including secondhand exposure to tobacco smoke; poor diet and lack of physical activity accounted for about 15% of deaths.<sup>13</sup> Leading-causes-of-death tables such as Table 1-1, however, integrate those deaths within the number of deaths resulting primarily from heart disease, cancer, and stroke. Health experts predict that the combination of poor diet and physical inactivity will soon replace tobacco use as the leading actual cause of death in the United States. In many instances, actual causes of death are associated with lifestyle choices, such as tobacco use or physical inactivity. By changing these and other health-related behaviors, people may avoid dying prematurely.

Federal, state, and local governments can help individuals develop healthy lifestyles by providing educational and professional services. How does the federal government monitor the health of its citizens? What is being done to improve the nation's health?

## Health Promotion: *Healthy People 2000* and *Healthy People 2010*

Health promotion is the practice of helping people become healthier by encouraging them to change their lifestyles. In the late 1980s, a team of concerned health experts, health educators, and U.S. government officials analyzed the results of recent studies, reports, and recommendations that summarized the health status of Americans. In 1991 these experts published their findings in a report called *Healthy People 2000*.<sup>14</sup>

*Healthy People 2000* had three general goals: increase the healthy life span of Americans, improve the health status of American minorities, and extend the accessibility of preventive health services to all Americans. The overall goal was for Americans to achieve the health objectives by the year 2000; as more *Healthy People 2000* objectives were met, the overall health status of Americans would improve.

Staff of various federal, state, and local agencies developed and implemented health educational efforts that supported *Healthy People 2000* goals. Additionally, they monitored Americans' progress in meeting these health objectives. The U.S. Public Health Service published progress reports to show national trends in achieving the goals. The information concerning the state of Americans' health that was given in the beginning of this chapter is from the final *Healthy People 2000* progress report. Several

chapters of this textbook also highlight findings from this report.

By 1997 members of the original Healthy People 2000 team focused their attention on preparing a national health promotion and disease prevention plan that would be relevant for the year 2010. Today, differences in death and illness rates between the nation's rich and poor, men and women, as well as among its diverse ethnic and racial groups, are major public health concerns. For example, American men generally do not live as long as American women, and they are more likely to die from each of the ten leading causes of death. Additionally, more African Americans die of cancers and diseases of the heart and blood vessels than members of other ethnic and racial groups. The reasons for these differences are unclear, but lifestyle choices, environmental conditions, and socioeconomic situations are major contributing factors. The Surgeon General of the United States' Healthy People 2010 strategy was to increase the years and quality of healthy life by eliminating the differences in health among population groups.

To monitor the population's progress in meeting the targeted goals of the 467 objectives of Healthy People 2010, health experts condensed the objectives into a smaller group of health concerns, the ten Leading Health Indicators, and identified 21 key objectives for the indicators (see Appendix A). The Leading Health Indicators, which include physical activity and substance abuse, were selected because of their importance to personal and community health as well as their relevance to individual health-related behaviors, environmental health problems, and health system issues. Developing health promotion strategies that focus on the indicators, such as programs to encourage seat belt use, childhood immunizations, and smoking cessation, can increase the quality and years of life as well as eliminate health disparities among Americans. Healthy People 2020 is expected to be released by the end of 2010.

## Minority Health Status

For hundreds of years, immigrants from around the world have been changing the face of the United States as they settle in this country. Each new group of immigrants brings different cultural traditions and various ethnic identities with them (**Figure 1-5**). Culture consists of the unique social characteristics of a population, such as its customs, rituals, and health beliefs and practices, which are passed down from generation to generation. An ethnic group is one that shares a common national, religious, racial, or

ancestral identity. According to the U.S. Department of Health and Human Services, the major American racial/ethnic subpopulations are Caucasians (whites), African Americans (blacks), Latinos (Hispanics), Native Americans (American Indians), and Asian/Pacific Islanders. The same terms, however, are not used by all agencies. Throughout this textbook, terms such as Caucasian may be used in one context and whites in another; we reflect the language of the agency or researcher when reporting statistics or results of research studies.

Today in the United States, the majority of Americans have European ancestry, particularly Northern European. The National Center for Health Statistics refers to this population as "white, non-Hispanic." About 33% of the U.S. population identifies itself as a member of an ethnic or racial minority, such as African American, Hispanic, or Asian American.<sup>21</sup>

Throughout this textbook, the Diversity in Health essays feature topics that concern a variety of populations in the United States as well as around the world. The Diversity in Health essay in this chapter, "Minority Health Status in the United States," discusses differences in the overall health of certain minority groups in the United States.

**Figure 1.5**

**An American Family.** Culture consists of the unique social characteristics of a population, such as its customs, rituals, and health practices. Immigrants who settle in the United States contribute much to the racial, ethnic, and cultural diversity of the population.





# Diversity in Health

## Minority Health Status in the United States

Did you know that African Americans are more likely to die of cancer than whites? Were you aware that Native American males are more likely to be murdered than American males with Asian/Pacific Islander ancestry? Did you know that Hispanics are more likely to die in accidents than as the result of strokes? The differences in death and illness rates for various population subgroups reflect numerous factors, such as socioeconomic status and access to health insurance and medical care. By investigating reasons for these differences, medical researchers have learned a great deal about the health of American minorities. A major goal of the U.S. Department of Health and Human Services is improving the health of all Americans through research, education, and better access to health care.

### Hispanic or Latino People

Hispanic, or Latino, people have immigrated to the United States or have ancestors from countries in which Spanish is the primary language, especially Mexico, Puerto Rico, Central and South America, and Cuba. In 2007, Hispanics made up the largest minority group in the United States.<sup>15</sup>

In 2005, the leading causes of death for Hispanics were heart disease, cancer, and accidental injuries.<sup>16</sup> Compared to white non-Hispanics, Hispanics were more likely to die from accidents, diabetes, and chronic liver disease. Although Latinos were less likely to commit suicide or die from kidney and Alzheimer's disease than non-Hispanic whites, their homicide rate was considerably higher than that of non-Hispanic whites.<sup>12</sup>

Poverty, lack of health insurance, and poor education are barriers to good health for many Hispanics. About one of five members of this minority lives in poverty.<sup>11</sup> Health disorders associated with poverty, such as tuberculosis and malnutrition, are more common in certain Spanish-speaking subgroups. In 2007, almost one-third of Hispanic Americans did not have health insurance.<sup>17</sup> Hispanic persons, especially those of Mexican ancestry, are more likely to be uninsured than non-Hispanic whites. Regardless of one's ethnic/racial background, not having health insurance is a major obstacle to obtaining good health care in the United States.

### African or Black Americans

In the United States, African Americans are the second largest minority group. Despite recent improvements, the health status of black Americans is generally poorer

than that of other minorities. The life expectancies of whites and blacks reflect their health status. In 2006, the life expectancy of African American females was 76.5 years; the life expectancy of white American females was 80.6 years. At the same time, the life expectancy for African American males was 69.7 years, and that of white males was 75.7 years.<sup>12</sup>

The major causes of death of black Americans are similar to those of non-Hispanic whites. Although black Americans are less likely to die from chronic lung diseases, Alzheimer's disease, and suicide, death rates for 9 of the 15 leading causes of death are higher than for whites. Black Americans are more likely to die of homicide, hypertension, kidney disease, stroke, diabetes, heart disease, and blood infections than white Americans.<sup>12</sup> Black women are more likely to die of breast, cervical, and stomach cancers than white women, and black men are more likely to die of prostate cancer than white men.<sup>18</sup>

Childbearing is riskier for an African American woman; in 2004, she was about three times more likely to die during pregnancy or childbirth than a white woman.<sup>16</sup> Additionally, black infants are more likely to die during the first month of life than other babies. The infant death rate among black infants is more than twice that of white babies.

In 2005, African Americans were 1.5 times as likely as non-Hispanic white Americans to have hypertension (chronic high blood pressure).<sup>18</sup> The reason for this high prevalence is unclear, but scientists think diet, genetics, stress, and smoking play roles. Overweight increases the risk of hypertension. Black women are more likely to have excess body fat than other Americans. In the period from 2001 to 2004, nearly 80% of non-Hispanic black women were too fat.<sup>16</sup>

### Asian and Pacific Islanders

As one of the fastest-growing minority groups, Asian Americans and Pacific Islanders (APIs) are a diverse group of people who immigrated to the United States from China, Japan, Vietnam, Korea, India, the Philippines, and other Pacific Islands. Compared with other groups of Americans, Asian American women have the highest life expectancy.<sup>19</sup> Asian American women, however, are more likely to die from stomach cancer than white women. Additionally, people who immigrated recently from Asia and the Pacific Islands are more likely to suffer from hepatitis, a serious liver disease, and tuberculosis than people who have lived in the United States for longer periods of time.

## Understanding Health-Related Behavior

Regardless of their cultural and ethnic background, not all Americans share the same level of concern for their health. How many times have you heard a smoker say, “I can stop smoking whenever I want to; now is just not a good time” or “You’ve got to die of something; it might as well be lung cancer.” You may know people who eat too many fatty foods, do not exercise regularly, and smoke cigarettes. You may know other people who follow a low-fat diet, walk at a brisk pace for 45 minutes nearly every day, and avoid drugs such as alcohol and tobacco. Why do some people adopt more positive health-related behaviors than others?

### Changing Health-Related Behavior

“I wish I had the willpower to stop smoking.” “I just can’t seem to find the motivation to exercise more often.” Do these statements sound familiar? Is having a lot of willpower the key to becoming healthier?

Health educators often refer to willpower as **motivation**, the force or drive that leads people to take action. Past experiences, perceived needs, and personal values influence one’s motivation. For example, a person who has tried unsuccessfully to stop smoking several times and claims to enjoy smoking may have little motivation to make another attempt to quit.

**Efficacy** enhances motivation. Efficacy is the belief that one is capable of changing behavior. Various barriers such as poor education or lack of support from family members can interfere with someone’s motivation to change behaviors.

Having knowledge about risky behaviors and the seriousness of a health-related condition does not necessarily motivate individuals to take appropriate actions. For example, most people know that seat belts reduce the possibility of a serious injury in an automobile accident and that most states require them to wear seat belts in a car. Nevertheless, individuals often make a variety of excuses to explain why they fail to buckle up. Additionally, many students enrolled in personal health classes can correctly identify behaviors that promote optimal health, yet they do not practice what they know. Acquiring knowledge about health is important, but becoming motivated to adopt a healthier lifestyle is essential if individuals are to make long-term changes that can

**motivation** the force or drive that leads people to take action.

**efficacy** (EF-fih-ka-see) regarding health education, the belief that one is capable of changing his or her

benefit their health.

Taking an active role in achieving and maintaining good health depends on certain personal factors: degree of vulnerability, level of motivation (*willpower*), sense of control, and perceived value of the behavior. People are motivated to take action if they feel that a sufficient threat to their health exists and that the consequences of changing the behavior are worthwhile.

Assume, for example, that diabetes affects several members of your family. You have heard that diabetes may be inherited; therefore, you are aware that you have a good chance of developing this condition (*vulnerability*). You know that family members who have diabetes suffer from kidney damage, blindness, and premature heart disease. Since you want to avoid these consequences, you are motivated to change certain behaviors (*motivation*). Additionally, you believe that your actions influence the quality of your health (*sense of control*). Concerned, you decide to learn more about diabetes and determine what actions can reduce your risk of developing the disease. You now have a reason to take action because you believe it is important (*value*) to prevent this disease, even if it means making lifestyle changes now while you are still healthy.

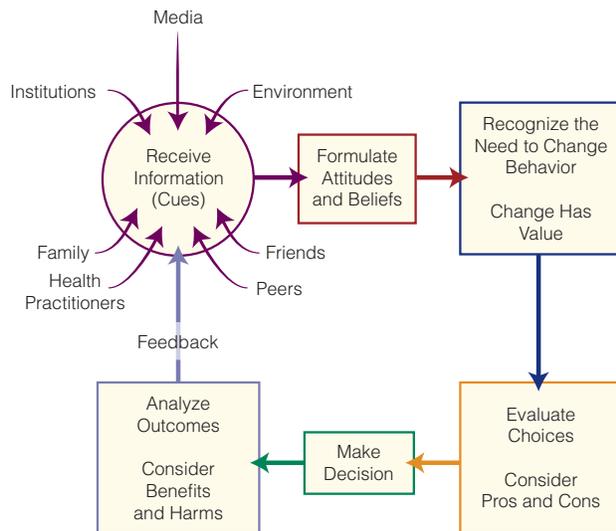
### Making Positive Health-Related Decisions

#### How I Quit Smoking

*About a month ago I was a smoker—about 10 cigarettes a day during the week and up to a pack a day on weekends. After thinking about quitting for about a year, it happened. Without even giving it any consideration, I was able to not buy a pack for 2 days. On day 3, I realized my success and told myself I would never buy a pack again. I miss it, especially after a drink or a meal, but I’m glad I’ve gone this far. There have been times when I’ve really wanted one, but that’s when you realize how powerful of a drug it is. At least that’s how I talk myself out of having one. Before, I never thought of myself as being addicted—too harsh of a word—but I was just like all of the other smokers out there. It’s a filthy habit—I’m glad I stopped.*

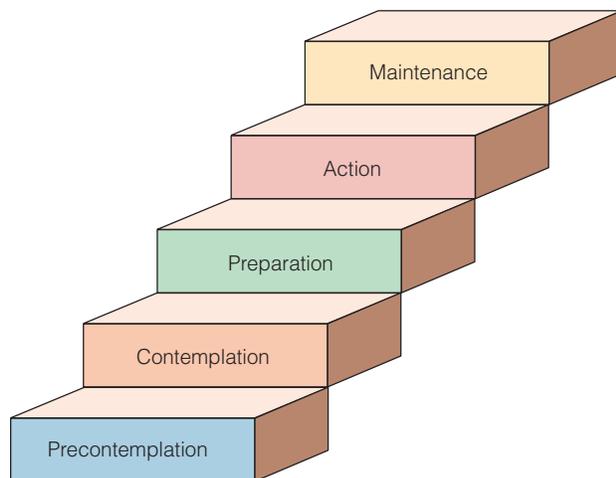
**Figure 1.6**

**Decision-Making Model.** Decision making can be a complex process. Information, personal attitudes, and personal experiences influence your decision-making process. To change health-related behaviors, you must recognize the need to change, that the change



**Figure 1.7**

**Stages of Behavior Change.** According to many health education experts, the process of changing behaviors involves these five stages.



Although this college student smoked less than a pack of cigarettes a day, he took about a year to quit smoking. He made the final decision to stop smoking while listening to other students' habit-breaking experiences in his health class. Some people take less time to make health-related decisions than others,

and some people have less difficulty making lifestyle changes than others. **Figure 1-6** illustrates the complex process of decision making.

**Stages of Behavioral Change** According to many health education experts, the process of changing behaviors involves the five stages shown in **Figure 1-7**.<sup>22</sup> We will use the example of smoking to illustrate this process. The first stage is precontemplation. In this stage, smokers show no interest in quitting tobacco use, do not see a need to quit, and may avoid discussing their smoking behavior with others. Smokers move into the contemplation stage when they realize or admit tobacco use is unhealthy, and they intend to quit smoking in the next 6 months. In the preparation stage of change, smokers may have made unsuccessful attempts to quit smoking, yet they express the desire to stop within the next month. Smokers in the action stage of change take steps to quit smoking, such as “going cold turkey” or using a nicotine patch. They succeed in quitting for up to 6 months. Finally, smokers in the maintenance stage develop practices to avoid relapsing into using tobacco. Former smokers, for example, might socialize with nonsmokers or use exercise as a substitute for smoking. According to health education researchers, 40% of people who engage in risky behaviors such as smoking, being physically inactive, and eating high-fat diets are in the precontemplation stage, 40% are in the contemplation stage, and the remaining 20% are preparing to change the unhealthy behaviors.<sup>23</sup>

When people relapse, they return to an earlier stage of change and usually feel like failures as a result of their inability to maintain the new behaviors. In the case of smokers, they may even return to the precontemplation stage in which they stop thinking about quitting. However, the majority of people who relapse eventually decide to stop smoking again, and they tend to try a different method of quitting. People who seriously want to quit smoking, for example, typically make three to four efforts to stop before they actually succeed.<sup>22</sup>

When changing a behavior, people use various strategies to increase their chances of success, including stimulus control, counterconditioning, rewards, and social support. Stimulus control involves altering cues to modify responses (behaviors). Cues can be sensory triggers, such as seeing a billboard advertisement for cigarettes or smelling someone else's cigarette smoke. Cues can also be emotional states or thoughts. For example, a person may smoke to relieve stress or because he or she associates smoking with celebrities or sophisticated people. As a result,

# Managing Your Health

## Routine Health Care for Disease Prevention

The following recommendations concerning routine screening and immunizations apply to adults who have low risks of disease. People who have higher risks may need more frequent testing and to begin testing at an earlier age. Consult your personal physician for advice about routine health care.



Medical Test/ Preventive Measure	Recommended Frequency*
Blood pressure	At least every 2 years.
Height/weight	Periodic.
Cholesterol	At least every 5 years for men aged 35 and older; regularly for women aged 45 and older; younger people who smoke, have diabetes, or have a family history of heart disease should be screened beginning at age 20.
Glucose (diabetes screening)	Routine for people with high blood pressure or cholesterol.
Prostate (PSA) and digital rectal exam	Annually after 50 years of age (men); at-risk men should be tested earlier
Testicular examination (cancer)	Men with average risk can perform monthly self-exam.
Skin examination (cancer)	Every 3 years for people between 20 and 39 years of age; annual screening after age 40.
Breast examination (cancer)	American Cancer Society recommends annual screening mammography and clinical breast exams for healthy women aged 40 years and older; women between 20 and 39 years of age should undergo clinical breast exam every 3 years. Breast self-exam is an option for women.
Pap test (cervical cancer)	Begin screening within 3 years of first sexual intercourse or by 21st birthday; yearly Pap test, or every 2 years if liquid form of the test is used.

Medical Test/ Preventive Measure	Recommended Frequency*
Colon/rectal examination (cancer)	Have test at age 50; physician can decide which test is appropriate.
Sexually transmitted infections	Sexually active people who are 25 years of age or younger should be tested annually for chlamydial infection; physician and patient can decide which other tests are appropriate, such as for HIV infection.
Depression screening	Patients who have felt sad, hopeless, or no interest in usual activities for at least 2 weeks should be screened.
<b>Immunizations</b>	
Rubella	All women of childbearing age should be screened for rubella susceptibility at their first health care checkup; nonpregnant women who have not been exposed to rubella should be offered rubella vaccination.
Influenza (flu)	Annually for those who wish to be vaccinated.
Tetanus-diphtheria	Every 10 years
Hepatitis B and other infectious diseases	Consult personal physician.
*Recommendations vary somewhat among medical organizations.	
Sources: Agency for Healthcare Research and Quality, The Guide to Clinical and Preventive Services, 2008. <a href="http://www.ahrq.gov/clinic/pocketgdo8/pocketgdo8.pdf">http://www.ahrq.gov/clinic/pocketgdo8/pocketgdo8.pdf</a> ; Centers for Disease Control and Prevention, <a href="http://hivtest.org/faq.cfm#stdtest">http://hivtest.org/faq.cfm#stdtest</a> ; American College of Preventive Medicine, <a href="http://www.acpm.org">http://www.acpm.org</a> ; American Cancer Society, <a href="http://www.cancer.org">http://www.cancer.org</a> . Accessed February 12, 2009.	

this person is likely to light up a cigarette when tense or in certain social situations.

If you are a smoker who wants to quit, you may need to identify and eliminate the various cues that signal this unhealthy behavior. You may realize, for example, that seeing ashtrays and lighters are your smoking cues. Throwing out or giving away your ashtrays and lighters are ways of avoiding these cues. If feeling tense triggers your desire to smoke, then learning and practicing relaxation techniques whenever you feel stressed out may help you resist the urge to buy a pack of cigarettes.

Counterconditioning involves replacing unhealthy behaviors with less destructive or healthier ones. When you desire a cigarette, you may be able to eliminate the craving by exercising, taking a warm bath, or calling someone who supports your efforts to quit. Chewing sugarless gum, eating raw vegetables or fruit, or drinking a glass of water whenever you feel the urge to smoke may also reduce the craving.

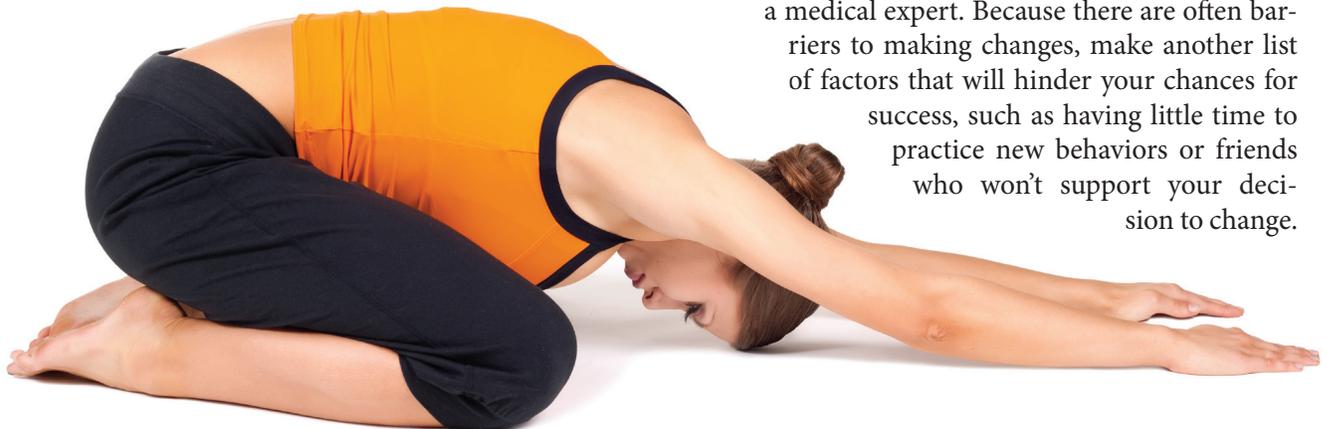
Rewards are incentives for positive behaviors. Some former smokers keep a jar in which they save the money that would have been used to buy cigarettes. At the end of a week or two, they spend that money on something fun such as a movie, DVD, or another type of reward to help maintain the new behavior. Other former tobacco users are rewarded by the return of their sense of taste or the praise they receive from nonsmokers for adopting a smoke-free lifestyle.

Obtaining social support by enlisting the help of others is very important for changing a negative behavior and maintaining a positive one. If you are a smoker in the contemplation stage of change and most of your friends are smokers in the precontemplation stage, they are not likely to support your efforts to quit. Therefore, you may have to associate with nonsmokers or people in later stages of change to provide the help, encouragement, and positive re-

inforcement you need to quit tobacco use.

**A Decision-Making Model** In the Student Workbook section of this textbook, you will find a Changing Health Habits feature for each chapter. This feature uses a systematic model for the decision-making process that can help you improve your health and well-being. The first part of the process involves identifying a problem behavior that you want to change, a goal that you'd like to reach, or a question that you'd like to answer. For example, you might want to quit smoking, lose 20 pounds, or determine whether you are ready to end an abusive relationship. Because the process of altering a behavior can have its unpleasant aspects, particularly if you have to overcome side effects or cravings, it is important to determine your level of commitment. To determine if you are ready to change a behavior or situation, it is helpful to make a list of the benefits, or pros, as well as the harms, or cons, of changing. After you make the list, think about each pro and con's value or importance to you. Assign a point value from 1 to 5 to each pro and con; a rating of 5 points would be the highest value. Then find the sums of each list. If the sum of the cons list is greater than that of the pros list, you are probably in the precontemplation stage and not ready to make the change. On the other hand, if the sum of your pros is higher, you are likely in the contemplation stage and ready to make the change.

The second part of the process used in the decision-making model describes steps you can take to implement the change and evaluate your progress. After you decide to make a change, set a target date to begin the new behavior, reach the goal, or modify the situation. Mark that date on a calendar that is in an obvious place for you to notice, such as by your computer monitor or on your refrigerator or mirror. Then make a list of factors that will increase the chances that you will be successful in making the change, such as enlisting the help of friends or obtaining advice from a medical expert. Because there are often barriers to making changes, make another list of factors that will hinder your chances for success, such as having little time to practice new behaviors or friends who won't support your decision to change.



The third major step in the process involves preparing an action plan that provides specific steps you will take to change your behavior or situation. You should be able to identify more than one way to reach your goal. To quit smoking, for example, you might quit “cold turkey,” gradually reduce the number of cigarettes smoked over a 4-week period, or use a medically approved nicotine-containing product. At this point, you need to learn about the pros and cons of each method and consider the factors that can help or hinder your effort to change. How are you going to handle cravings or social situations that promote the behavior you’re trying to change? Now you are ready to make the change by implementing your action plan. Keep a daily record of your progress, including strategies that are helpful and your feelings about the process. When you reach the goal date, analyze your success in attaining the goal. How well did your plan work? What can you learn from the experience?

To enjoy a long, healthy, and productive life, it is important for you to make numerous health-related decisions every day. If you act impulsively and base these decisions simply on cues, attitudes, and emotions, you may make poor choices. However, you are likely to make responsible choices if you follow a systematic method of decision making such as the one we have described. Changing habits often requires learning new information and practicing new skills. To practice making responsible health-related choices, complete the decision-making activities in the Student Workbook section of this text.

**The Goal of Prevention** A primary component of health promotion is preventing diseases, infections, injuries, birth defects, and other health problems. Preventing a health problem is a far better and less costly option than trying to treat it. In addition to adopting healthy lifestyle practices, you can take responsibility for preventing serious health problems by having routine physical examinations. The Managing Your Health box provides recommendations for the frequency of routine screening procedures such as blood pressure, cholesterol, and body weight and height measurements; mammograms; pelvic, skin, and prostate exams; and Pap smears. Note that some examinations, such as testicular and breast self-exams, are easy enough to be done in the privacy of your home. Many college students think they are healthy and do not see the need for routine physical evaluations. Having regular medical checkups, however, enables you and your physician to monitor your physical and psychological health status. Furthermore, your physician may be able to identify a

problem before it results in serious damage to your health and well-being.

## Can Good Health Be Prescribed?

No one has a crystal ball that predicts future health, nor can anyone guarantee good health. Numerous factors contribute to one’s chances of enjoying a long and productive lifetime of good health. Several of these factors are the result of lifestyle choices that people can make, while they are still young, to prevent or delay disease. You may know someone or have heard about individuals who avoided exercise, smoked a pack of cigarettes, and consumed a six-pack of beer each day, yet lived to a ripe old age. Such behavior defies nearly every reasonable prescription for good health. Perhaps these people inherited the hardiness to withstand the effects of their risky lifestyles. You might wonder if these people enjoyed good health throughout their lives, or if they spent their last years in poor health. Would their lives have been even longer if they had followed more health-conscious behaviors?

Health experts generally base their recommendations for healthier lifestyles on scientific information collected from numerous studies that involved large numbers of people and not on reports of individual cases. This textbook presents findings from current research for you to use in your own health decision-making process.



### Healthy Living Practices

- To change your health-related behaviors, you must determine that you need to change and that you value the change.
- Use a decision-making plan as a tool to help you make responsible decisions.

## Analyzing Health Information

“Take natural antioxidants to live longer.” “Drink red wine to prevent heart attacks.” “Improve your memory with ginkgo biloba.” Every day Americans are

barraged with a confusing array of health-related information in newspapers; magazines; and television and radio talk shows, commercials, and infomercials. In addition to the media, family members, friends, teachers, health care professionals, and the Internet supply information about health and health-related products. Are these sources reliable? Not necessarily. There are no laws that prevent anyone from making statements or writing books about health, even if their information is false. The First Amendment to the U.S. Constitution protects freedom of speech and freedom of the press. This protection extends to talk-show guests, authors, and salespeople in health food stores who might provide health misinformation.

Companies and individuals make considerable amounts of money by selling untested remedies, worthless cures, toxic herbal preparations, unnecessary nutrient supplements, and books filled with misinformation. Health frauds include the promotion or sale of substances or devices that are touted as being effective to diagnose, prevent, cure, or treat diseases or other conditions but that lack scientific evidence of their safety and effectiveness. Despite the regulatory activities of the Food and Drug Administration (FDA) and the Federal Trade Commission (FTC), the sale of fraudulent products and services and the circulation of misleading or false health information continue to be concerns of medical experts and public health officials.

Keep in mind that if the claim sounds too good to be true, it probably is not true. Some other telltale signs that information about a health-related product or service is questionable include

- Claims that a secret formula or ingredient gives the product its beneficial effects on health
- Promotional techniques that rely heavily on Internet or mail-order outlets, radio ads, televised home shopping channels, or infomercials
- Claims that the product or service is the result of a miraculous scientific discovery
- Claims that the product or service provides “quick,” “painless,” “effortless,” or “guaranteed” cure or other desirable result
- Details of the product’s or service’s benefits are given, but no mention of its risks
- Testimonials and personal experiences are cited as supporting evidence
- Few scientific references to indicate that the product has been tested for safety and effectiveness

- Discrediting of scientific studies or conventional medical practices

## Assessing Information on the Internet

The Internet can be a valuable source of health-related information. Many Web sites, however, are sources of inaccurate and potentially harmful information, because anyone with a computer and the appropriate software can produce and post a Web page. Moreover, there is no organization that regulates the quality or edits the content of health information on the Internet. Therefore, you need to analyze the reliability of health information from Web sites as critically and carefully as you analyze health information from other sources. One way is to use the model for analyzing health-related information that is discussed on page 17. Additionally, determine answers to the following questions.

- **What is the source of the information?** The Web site should identify its sponsors. Web sites sponsored by individuals, such as blogs or chat rooms, often give advice that is based on personal experiences, biases, or opinions instead of medical expertise and scientific evidence.
- **Is the source a commercial site (“.com”)?** Commercial sites may or may not contain misinformation and are likely to be biased toward their product, treatment, or service. Be wary of sites that promote or sell health-related products or services.
- **Is the site sponsored by a nationally known health or medical organization?** Organizations such as the American Medical Association, American Dietetic Association, and American Heart Association use health experts to write and review their Web sites’ information, which is generally reliable and up to date.
- **Is the site staffed by health or medical experts who are affiliated with well-known medical research institutions or major universities?** These sites usually provide accurate and timely health information.
- **Does the site include up-to-date references from well-known medical or scientific journals?**
- **Is the information at the Web site current?** Health information is constantly changing; the site should indicate when the information was posted and updated.

At [healthyliving.jbpub.com](http://healthyliving.jbpub.com), we provide Web sites that are pertinent to the content of each chapter. The U.S. government maintains Web sites for health-related information, including the sites of the Centers for Disease Control and Prevention ([www.cdc.gov](http://www.cdc.gov)), Food and Drug Administration ([www.fda.gov](http://www.fda.gov)), and National Institutes of Health ([www.nih.gov](http://www.nih.gov)). Additionally, the Department of Health and Human Services maintains [www.healthfinder.gov](http://www.healthfinder.gov), a general health information Web site that provides links to reliable sources such as government agencies (Web sites denoted by “.gov”), information clearinghouses, nonprofit organizations (“.org”), and universities (“.edu”).

Reliable health Web sites generally follow standards and codes established by nonprofit organizations such as the Health on the Net Foundation and TRUSTe. Eventually, the Internet industry may adopt standards for publishing health information on Web sites. Until then, consumers should be careful when choosing Internet sources for health information. When researching a health topic, seek information from more than one Internet source, and consult a medical professional before following advice from the Web.



## Healthy Living Practices

- Use the model for analyzing health-related information to evaluate information from the media and other sources.
- To obtain reliable answers for your health-related questions, consult experts at clinics or hospitals, state and local health departments, universities and colleges, federal health agencies, and nationally recognized health associations and foundations.

## Becoming a Wary Consumer of Health Information

Maybe you've read an article or ad about the health benefits of an herbal supplement that you might buy. How do you know if the information in the article or advertisement is true? Will the supplement do what the author or manufacturer claims? Or will you merely be wasting your money?

As shown in Figure 1-6, information is a crucial element of decision making. Although health infor-

mation from some sources is based on scientific evidence and can be extremely useful, that from other sources may be unreliable. Relying on flawed information can waste time and money and can even be dangerous. To be a wary consumer of health information, you need to learn how to analyze it.

**Analysis Model** Analyzing something simply means breaking it down into its component parts for study. Analyzing information is easier to do if you follow a particular model of analysis. A model is a plan or pattern that can be used as a guide. The following model is a series of questions that will help you evaluate health information and determine if it is reliable, regardless of its source.

- 1. Which statements are verifiable facts, and which are unverified statements or value claims?** In the context of this model, verifiable facts are conclusions drawn from scientific research or statements supported with other types of credible evidence. Unverified statements are conclusions that have no such support. Value claims are statements suggesting that something is useful, or effective, or has other worthwhile characteristics. Unverified statements and value claims may or may not be true.

Look for disclaimers in advertisements, such as “This statement has not been evaluated by the FDA,” “This product is not intended to diagnose, treat, cure, or prevent disease,” or “Results are not typical.” In written ads, disclaimers usually appear in small print near the end of the ad. Disclaimers generally indicate that the value claims in the ad are not based on well-designed scientific studies.

- 2. What are the credentials of the person who wrote the article or advertisement? Does the author have appropriate background and education in the topic area? If it is difficult to tell if the author has specific health expertise, what can you do to check his or her credentials?** Although advertisements usually do not indicate who wrote the ad, people with appropriate credentials may have supplied the information. Articles usually state the name and credentials of the author. In some cases, however, the author's credentials may be fraudulent. Anyone can call himself or herself a “nutritionist,” “doctor,” or “health expert.” Therefore, a Ph.D. or the title “Certified . . .” after someone's name is no guarantee that this person has had extensive training in a health or science field from an accredited educational institution. Individuals can buy certain doctor-



# Consumer Health

## Consumer Protection

The U.S. government has some laws and agencies to protect consumers against health fraud. As a result of the Federal Food, Drug, and Cosmetics Act passed in 1938, manufacturers may not place false or misleading claims on the labels of food, medicinal, or cosmetic products. Later legislation protects consumers by requiring that manufacturers of medications and medical devices prove the safety and effectiveness of their products before they can be marketed.

The federal agencies that enforce consumer protection laws include the Food and Drug Administration (FDA) and the Federal Trade Commission (FTC). The FDA protects consumers by regulating the information that manufacturers can place on food or drug product labels. In addition, FDA personnel alert consumers about fraudulent health practices and can seize untested or unsafe medical devices and drugs. The manufacturers of such products can be punished (usually fined) for

their illegal practices. The FTC regulates claims made in advertisements for products and services. Both agencies only regulate products and services involved in interstate commerce. The FDA's Web site is [www.fda.gov](http://www.fda.gov), and the FTC's Web site is [www.ftc.gov](http://www.ftc.gov).

Besides government agencies, various voluntary organizations such as the American Council on Science and Health and the American Association for Retired Persons (AARP) provide consumers with reliable health information. The National Council Against Health Fraud investigates and evaluates health claims, supports laws that protect consumers against quackery, and provides educational materials to help people combat deceptive health practices.

To avoid being victims of health frauds, people must take the initiative and be very critical when judging the reliability of health-related information. If you suspect fraudulent activity, you can file a complaint with the local office of the FDA or your state's attorney general. You can also file a lawsuit if you have been injured as a result of following the advice or using the services or products of unscrupulous practitioners and manufacturers.

ate degrees through the mail from unaccredited colleges called “diploma mills.” If the information is extremely important to your health, you can check the author's credentials by contacting the institution to which he or she claims to be affiliated. To determine if a college or university is accredited, contact the U.S. Department of Education ([www.ed.gov](http://www.ed.gov)).

- 3. What might be the motives and biases of the author?** Motive is the incentive, purpose, or reason why someone writes an article or advertisement. Ads are always written to motivate the consumer to buy the product. Even if a person with bona fide health credentials supplies information for an advertisement, that person may have also developed the product and may profit from its sale. Therefore, this researcher may be biased.

A bias is the tendency to have a particular point of view. A researcher may be biased toward a particular outcome of his or her work. In analyzing health-related information, it is important to try to determine the biases of the people writing the information so that you can take their inclinations into account as you draw conclusions

from the information.

- 4. What is the main point of the ad or article?** Which information is relevant to the issue, main point, or product? Which information is irrelevant? The main point may be to provide practical information, but in many instances, it may be to encourage you to buy a product or service. Look for red-flag terms, expressions that indicate the possibility of misinformation, such as “patented formula,” “all-natural,” “chemical-free,” “scientifically proven,” “guaranteed to work,” or “everyone is using.” Look for anecdotes and testimonials. Anecdotes are personal reports. A young woman, for example, may state that she feels more “vitalized” after drinking a certain brand of herbal tea. Testimonials are claims individuals make concerning the value of a product. Advertisers often rely on celebrities such as sports figures to provide testimonials. The celebrities usually receive money or other types of compensation from promoters of the products; therefore, they are not likely to provide negative feedback. Anecdotes may be interesting and testimonials may be persuasive, but these sources of information are not scientific. Ignore terms and information that

**placebo** a sham treatment that has no known physical effects; an inactive substance.

are not pertinent or to the point; they will only confuse your analysis.

- 5. Is the source reliable? Does it have a reputation for publishing misinformation? Does the article or ad present the pros and cons of the topic discussed or the benefits and risks of the advertised product?** Professional organizations or educational institutions generally publish scientific or medical journals that have articles written and reviewed by health care professionals. Articles that appear in scientific journals have been peer reviewed, meaning their content was critiqued by experts in that field before it was accepted for publication. If peer reviewers think a study was poorly designed or provides questionable conclusions, the article describing the study is likely to be rejected by the journal's editor. Although peer-reviewed scientific journals are usually credible sources of information, their articles often include jargon, graphs, charts, and statistical information that can be challenging for many people to understand.

Some health magazines and journals look like bona fide sources of health information, but they are actually designed to sell products or services. Be wary of publications that have articles about the benefits of health care products and include advertisements for these products. Furthermore, be skeptical of articles or ads that do not present the risks along with the benefits of using a health product or service. For example, a reliable article about taking bee pollen supplements should present scientific evidence from peer-reviewed journals to support as well as refute health claims. Moreover, reliable sources of information often caution people about the hazards of using treatments, and they may include recommendations to seek the advice of medical experts.

- 6. Does the ad or article attack the credibility of conventional scientists or medical authorities?** In some instances, writers of advertisements or articles try to confuse readers by implying that the Western scientific establishment is unreliable. For example, the ad may state, "unknown to Western medicine" or "used for centuries in China" to suggest that U.S. scientists lag behind others in finding cures or treatments. Statements that attack the reliability of conventional medical practitioners are usually indications that the information in the ad or article is unreliable.

Finding reliable sources of health-related infor-

mation can be challenging. Be wary of references to magazines or journals to which your local medical school library does not subscribe. Reference librarians at medical school libraries can help you determine whether such journals are credible sources of health information. If you need additional help to determine the validity of information that concerns health, pose your questions to people trained in specific health-related fields. If you have a question about a psychological condition, for example, contact a mental health professional at a local hospital.

The Analyzing Health-Related Information features in this textbook provide examples of ads, articles, and Web sites to help you determine the value of health-related information. To sharpen your critical thinking skills, analyze the information in these features using the six points of the analysis model. Additionally, the Consumer Health features in this and other chapters provide tips to help you become a better consumer of health information.

## Conventional Versus Complementary and Alternative Medicine

Conventional medicine (scientific medicine) relies on modern scientific principles, modern technologies, and scientifically proved methods to prevent, diagnose, and treat health conditions. The notion that certain agents of infection such as bacteria and viruses cause many health disorders is accepted by conventional medical practitioners. To practice in their professions, *conventional health care practitioners*, such as physicians, nurses, and dentists, must meet established national and/or state standards concerning their education and pass licensing examinations. To maintain their professional certification or licensing, certain types of conventional health care practitioners must update their medical backgrounds regularly by participating in continuing education programs. Most Americans use the services of conventional medical practitioners.

Before adopting a method of treatment, conventional medical practitioners want to know if it is safe and effective. To determine the safety and effectiveness of a treatment, medical researchers usually

conduct studies on animals before testing humans in clinical studies. A clinical study should contain at least 30 subjects, preferably hundreds or thousands, if possible. The greater the number of participants in the study, the more likely the findings did not occur by chance and are the result of the treatment.

In designing clinical studies, researchers take a group of volunteers with similar characteristics and randomly divide them into two groups: a treatment group and a control group. Subjects in the treatment group receive the experimental treatment; members of the control group are given a placebo. A **placebo**, often referred to as a “sugar pill,” is a sham treatment that has no known physical effects. Since a person’s positive expectations can result in positive findings, placebos help rule out the effects of such wishful thinking.

Researchers give subjects placebos to compare their responses to responses of subjects who receive the actual treatment. In double-blind studies, subjects and researchers are unaware of the identity of those taking placebos. Placebos can temporarily relieve subjective complaints, such as pain, lack of energy, and poor mood. Thus, subjects who are given placebos often report feeling better even though the placebo has no known physical effects. Scientists refer to these reports as the placebo effect. The placebo effect may be responsible for many claims of beneficial results from using complementary and alternative medical therapies.

Complementary and alternative medicine (CAM) is an unconventional and diverse system of preventing, diagnosing, and treating diseases that emphasizes spirituality, self-healing, and harmonious interaction with the environment.<sup>24</sup> A treatment is complementary when it is used along with conventional medical care. A young man with liver cancer, for example, may use yoga and meditation to accompany the conventional medical treatments prescribed by his physician. An alternative therapy replaces conventional medical therapy.<sup>25</sup> If the patient with liver cancer stops his prescribed treatments and substitutes fasting and coffee enemas in hopes of a cure, he is relying on alternative forms of medical care.

CAM can be classified as follows:

- *Alternative medical systems*, such as Ayurveda, traditional Chinese medicine, homeopathy, and naturopathy
- *Manipulative therapies*, such as spinal manipulation, osteopathy, reflexology, rolfing, and therapeutic massage

## Figure 1.8

**Acupuncture** Some physicians combine acupuncture with conventional forms of medical care. Acupuncture may stimulate the body to release natural pain-relieving compounds.



- *Mind–body interventions*, such as meditation, biofeedback, prayer, and creative arts healing (music therapy, for example)
- *Biologically based treatments*, such as aromatherapy, special foods (yogurt, for example), herbal teas, and large doses of vitamins
- *Energy therapies*, such as acupuncture, acupressure, and use of magnets

Certain CAM therapies have positive effects on the body and mind. For example, acupuncture (**Figure 1-8**) can relieve nausea and vomiting associated with early pregnancy and certain cancer treatments.<sup>26</sup> Although difficult to test scientifically, aromatherapy and therapeutic massage can be soothing and relaxing. **Table 1-3** provides information about popular CAM practices, including homeopathy and reflexology.

Promoters of certain CAM practices claim diseases can be prevented or cured by “cleansing” tissues, “eliminating toxins” from the body, and “balancing chi.” To support claims of their method’s effectiveness, promoters often use anecdotal reports and testimonials. Nevertheless, well-designed clinical studies to determine the effectiveness of most CAM therapies have not been conducted.

## Herbs as Medicines

An increasing number of Americans ingest pills or teas made from herbs and other plants because they think these products are natural and harmless ways

**Table 1.3****Common Alternative Medical Practices**

Type	Claims and Principles of Practice	Results of Scientific Research
Acupuncture	Used to treat a variety of common ailments. Based on an ancient Chinese medical practice in which thin needles are inserted into the skin or underlying muscles at specific places and stimulated to regulate the flow of “chi,” the life force.	Testing acupuncture scientifically is difficult. It may relieve nausea and vomiting associated with “morning sickness” and cancer chemotherapy. Acupuncture may stimulate the body to release natural pain-relieving compounds.
Ayurvedic medicine	According to ancient Hindu religious beliefs, one achieves good health by meditating; eating grains, ghee (a form of butter), milk, fruits, and vegetables; and using herbs. Lack of balance between “energies” causes health problems. Fasting and enemas are used to treat severe ailments.	Meditation relieves stress; fruits, vegetables, and dairy products are nutritious foods; and some herbs have medicinal value. Ghee, however, can be fattening, and fasting can be dangerous for unhealthy people. Enemas are unnecessary for good health and should be used only under a physician’s instructions.
Chiropractic medicine	According to some chiropractors, misaligned spinal bones cause disease. Spinal manipulation prevents or cures disease by correcting the spine. Other practitioners use spinal manipulation, but accept the germ theory of disease.	Can be effective in treating certain types of back pain, but some spinal conditions require medications and surgery that only a physician can provide. There is no scientific evidence that any disease can be treated by spinal adjustment. <sup>27</sup>
Homeopathy	Use of extremely dilute solutions of natural substances to treat specific illness symptoms.	Studies do not indicate that homeopathy is effective.
Naturopathy or natural medicine	Practice based on natural healing. Practitioners believe diseases occur as the body rids itself of wastes and toxins. Treatments include fasting, enemas, acupuncture, and “natural” drugs.	Lack of standardized medical training for practitioners called “naturopaths.”
Therapeutic massage, reflexology, or zone therapy	Specific areas of the body correspond to certain organs. To alleviate pain or treat certain diseases, practitioners massage or press on the area that is related to the affected tissues.	Testing “touch” therapies scientifically is difficult. The practice may stimulate the body to release pain-relieving compounds. In general, scientific evidence does not indicate that pressing on body parts is an effective method of diagnosing or treating ailments.

to cure various disorders or achieve optimal health and well-being. The U.S. government classifies herbal products as dietary supplements, which are not regulated like medications by the U.S. Food and Drug Administration (FDA). As a result, the FDA does not require dietary supplement manufacturers to register their products and submit clinical evidence indicating that the products have been tested for safety and effectiveness prior to being marketed. In 2007, the FDA established a new rule that required manufacturers of dietary supplements to test the purity, strength,

and composition of their products before marketing them to consumers. As a result, dietary supplements sold in the United States should be accurately labeled, contain the ingredients listed on the label, and provide standard amounts of the substances.

When the FDA determines that an ingredient contained in dietary supplements is dangerous, the agency can ban its use. Furthermore, the FDA can remove a dietary supplement from the market if its label states claims about the product’s health benefits that are not supported by scientific evidence. The FDA

permits herbal supplement manufacturers to include certain structure/function claims on the product's label. For example, the claims "maintains a healthy circulatory system" and "improves urine flow" describe how supplements can affect body functions. Unless given prior approval by the FDA, herbal supplement manufacturers cannot indicate on the label that a supplement can prevent, diagnose, treat, improve, or cure diseases.

Results of clinical studies indicate that specific herbs can provide measurable physical benefits such as reducing inflammation, improving urine flow, and increasing alertness. Other herbs can improve psychological health. St. John's wort, for example, can relieve symptoms of mild to moderate depression and appears to be relatively safe when not combined with prescription medications.<sup>28</sup>

Not every herbal product has measurable beneficial effects on health. Ginseng is one of the leading-selling dietary supplements in the United States; people use the herb for a variety of purposes, including as a sedative, antidepressant, and aphrodisiac. The results of well-designed clinical studies, however, do not indicate that ginseng has any beneficial uses.<sup>28</sup> Furthermore, a "natural" therapy is not necessarily a safe one. Many plants, including comfrey, chaparral, pennyroyal, kava, and germander, contain chemicals that can be harmful and even deadly when consumed. Aristolochic acid, a naturally occurring chemical in Chinese herbs such as birthwort and snakeroot, is known to cause cancer and kidney failure.<sup>29</sup> Ingesting kava, an herb that is promoted for relieving anxiety, can result in serious liver damage.<sup>30</sup> In 2004, the FDA banned the sale of dietary supplements that contained ephedra, a naturally occurring stimulant drug that is often called ma huang. Early in 2005, a court ruled that the FDA could not enforce the ban against certain ephedra-containing products. Consuming ephedra can result in stroke, heart attack, and death.<sup>31</sup> In 2003, a weight loss supplement that contained the toxic herb contributed to the sudden death of Steve Bechler, a 23-year-old professional pitcher for the Baltimore Orioles baseball team.

Consumers need to be aware that medicinal herbs may interact with prescription medications or other herbs, producing serious side effects. Additionally, these products may be contaminated with pesticides or highly toxic metals. Many dietary supplements are expensive and useless in promoting good health. **Table 1-4** includes information about the safety and effectiveness of some popular herbal supplements. Chapters 9 and 11 also provide information about

dietary supplements. For reliable information about herbs and other dietary supplements, check the following government Web sites:

[www.cfsan.fda.gov/~dms/ds-savvy.html](http://www.cfsan.fda.gov/~dms/ds-savvy.html)

[www.cfsan.fda.gov/~dms/hclaims.html](http://www.cfsan.fda.gov/~dms/hclaims.html)

[www.ods.od.nih.gov](http://www.ods.od.nih.gov)

Some herbal supplement manufacturers claim their products have been clinically tested and shown to provide health benefits. The reliability of these claims may be questionable, however, since they are often based on results obtained from animal research or few, poorly controlled human studies. Given the lack of scientific evidence that most medicinal herbs are safe and effective, the amount of money consumers pay for these products is astonishing. In 1998, for example, Americans spent almost \$19 billion on dietary supplements, which include herbal products such as ginkgo biloba and ginseng.<sup>33</sup>

## CAM Therapies in Perspective

National surveys provide estimates of the extent to which Americans use unconventional medical therapies. According to the National Health Interview Survey, 38% of adults used forms of CAM in 2007.<sup>34</sup> Other commonly used CAM treatments were natural products, deep breathing exercises, meditation, and chiropractic care. In most cases, CAM was used to treat back, neck, and joint problems; colds; anxiety; and depression.

The natural or exotic nature of many alternative therapies such as herbal pills and teas, coffee enemas, shark cartilage, and reflexology may appeal to people who distrust modern technology or have lost faith in conventional medical care. Others use alternative therapies to prevent or treat ailments because they want to take more control over their health. Conventional medical practitioners are concerned when persons with serious conditions forgo or delay conventional treatments and rely instead on questionable alternative therapies. These could be life-threatening decisions. Many forms of cancer, for example, respond well to conventional treatments, particularly if the disease is in an early stage. Many adults who use alternative medical therapies choose them to complement rather than replace conventional treatments.

Regardless of treatment, people suffering from acute conditions such as low back pain, common colds, and gastrointestinal disturbances generally recover with time. Individuals with chronic health

**Table 1.4****Popular Herbal Supplements**

Supplement	Common Claims	Research Findings	
		Uses	Risks
St. John's wort	Relieves depression	May reduce mild to moderate depression symptoms; no value for major depression	Can interfere with birth control pills and other prescribed medicines, increase sensitivity to sunlight, and cause stomach upset
Saw palmetto	Improves urine flow	May reduce symptoms of prostate enlargement that are not caused by cancer	May interfere with PSA test to detect prostate cancer
Feverfew	Relieves headaches, fever, arthritis pain	Contains a chemical that may prevent migraines or reduce their severity	May cause dangerous interactions with aspirin or Coumadin (a prescribed drug)
Echinacea	Prevents colds and influenza	Does not prevent colds or reduce their severity	May cause allergic response and be a liver toxin
Ginkgo biloba	Enhances memory and sense of well-being; prevents dementia	No scientific evidence to support claims <sup>32</sup>	May interfere with normal blood clotting, cause intestinal upset, and increase blood pressure
Ginseng	Enhances sexual, mental, and exercise performance; increases energy; relieves stress and depression	Has no mood-enhancing effects. Asian ginsengs may improve immune system functioning and reduce fatigue. Lack of scientific findings to support benefits in humans.	Can cause "jitters," insomnia, hypertension, and diarrhea and can be addictive; can be contaminated with pesticides and the toxic mineral lead
Yohimbe	Enhances muscle development and sexual performance	Dilates blood vessels but has no beneficial effects on muscle growth or sex drive of humans	Can produce abnormal behavior, high blood pressure, and heart attacks
Guarana	Boosts energy and enhances weight loss	Acts as a stimulant drug	May cause nausea, anxiety, and irregular heartbeat
Kava	Relieves anxiety and induces sleep	Acts as a depressant drug	May cause serious liver damage; do not use when driving

problems such as osteoarthritis and multiple sclerosis often report remissions, times when their conditions improve. If people use alternative therapies when they are recovering or their illnesses are in remission, they are likely to think the nonconventional treatment cured or helped them. Additionally, people who combine alternative therapies with conventional medical care may attribute any improvement in their health only to the alternative treatments.

Conventional medical practitioners are likely to be skeptical of CAM techniques if they have not been shown scientifically in large-scale clinical studies to be safe or more helpful than placebos. The National Center for Complementary and Alternative Medicine within the National Institutes of Health funds research to determine the safety and effectiveness of alternative medical practices. Until supportive data are available from these and other controlled studies,

# Analyzing Health-Related Information



For centuries, doctors in the Orient have known about the wonders of herbal medicines—nature’s botanical cures for human ailments.



Finally, American scientists are recognizing the healthful benefits of these herbs.

**A PANACEA PILL A DAY KEEPS THE EXPENSIVE DOCTORS AWAY!**

\* These statements have not been evaluated by the FDA.

**SwayCon Pharmaceuticals** has developed a capsule that contains everything you need to reduce suffering, enhance health, and regain youthful vigor.

A team of medical experts from three major medical schools in the United States have clinical proof that the ingredients of Panacea are effective! Panacea contains a chemical-free mixture of natural enzymes and exotic herbs that

- relieve up to 80% more arthritis pain than aspirin;
- lower blood pressure by up to 20%;
- lower cholesterol by up to 45%;
- reduce lung cancer risk by as much as 50%, even in smokers;
- and reduce the risk of heart attack by 75%.\*

**Other remarkable findings**

Taking Panacea for a few months can improve intelligence. R.P., a college student at a large East Coast university, reports, “At the beginning of the fall semester, I started taking three capsules of Panacea a day. My G.P.A. went from a 1.8 to a 3.4! Panacea has helped me get all As!”

Reports are coming into our offices that Panacea acts as a sexual stimulant, increasing potency. S.D., a computer programmer in St. Louis, writes, “Thanks for saving my marriage. Before taking Panacea, my husband complained about my lack of interest in sex. One of my friends told me that Panacea can help. Just a few days after taking the capsules, our marriage turned into a perpetual honeymoon.”

**Panacea is only available in fine health food stores. Order a three-month supply now, while supplies last**

This suggests that American scientists do not understand that medicines can be derived from plant sources, when, in fact, American researchers often rely on plants as sources of chemicals that have medicinal uses. No scientific evidence is cited to show that the herbs in Panacea have the touted properties. These two sentences, then, contain only value claims; thus, the information may be unreliable.

This statement has value claims that are not supported with scientific evidence.  
No treatment contains everything each person needs to improve his or her health.

“Clinical proof” is a red flag. The medical experts and medical schools where their research has been conducted are not identified. Objective testing could show the product is neither safe nor effective. The ad should cite the specific effects of the product, including negative ones.

“Chemical-free” is a red flag; all matter, including herbs and other plants, is comprised of chemicals. Furthermore, scientific studies should be cited to provide evidence for these value claims.

A testimonial from an individual is not scientific evidence. This student’s G.P.A. may have risen for a variety of reasons. Studies conducted to show that a treatment is useful should contain at least 30 subjects.

“Potency” is a vague and undefined red-flag term. Again, this testimonial is a value claim that is unsupported by scientific evidence.

This is irrelevant information. Where the product is sold has nothing to do with its quality or characteristics. The authors of the ad are simply trying to make their product look superior to other similar products.

This statement gives the impression that consumers have no time to investigate the product thoroughly. It is intended to make consumers think that the product will sell out if they wait, and they will miss out on a good thing. Again, this information is irrelevant.

No scientific evidence is cited that a daily Panacea pill prevents serious illness. Additionally, this statement attacks conventional medical practitioners by implying that they are interested only in making money, which suggests that physicians can’t be trusted.

Disclaimer

**Conclusion:** This ad is merely a collection of value claims that are not supported by scientific research. The ad further attempts to encourage the reader to purchase the product by suggesting that it is better (and less expensive) than conventional therapies. It claims to relieve a wide range of health conditions. The red-flag phrases and testimonials, lack of scientific evidence, and failure to caution consumers about potential hazards of the product all suggest the ad is an unreliable source of health-related information.

consumers should be wary of CAM practices.

Before using alternative therapies, discuss your options with your physician and consider taking the following steps to protect yourself:

- Contact a variety of reliable sources of information to determine the risks and benefits of the treatment. For example, ask persons who have used the treatment to describe its effectiveness and side effects. Conduct a review of medical literature, and recognize that popular sources of information such as health magazines and the Internet are often unreliable. Be suspicious of sources that promote miracle cures or provide information about the benefits of alternative treatments without describing their harmful aspects. Instead, look for articles in medical journals or news magazines that have information concerning the usefulness of conventional as well as alternative medical approaches to care.
- Ask persons who are administering the treatment to provide proof of their medical training. Investigate the validity of their educational credentials. People who promote certain alternative medical practices often have little or no medical and scientific training.
- Determine the cost of treatment and whether your health insurance covers the particular alternative therapy. If it does not, find out why. You may find that your health insurer considers the treatment risky or ineffective.
- Ask your primary care physician for his or her opinion of the treatment.
- If you decide to use an alternative therapy, do not use it along with conventional therapy or abandon conventional treatment for any medical problem without consulting your physician.
- Investigate the possibility that the alternative medicine or herbal supplement can interact with conventional medications that you take and produce serious side effects. Additionally, investigate the possibility that taking combinations of herbal supplements can be harmful.
- If you are pregnant or breastfeeding, do not use herbal supplements or alternative therapies without consulting your physician.
- Do not give herbal supplements or alternative therapies to children.



## Healthy Living Practices

- ❑ Before using an herbal supplement or alternative therapy, obtain reliable information concerning the pros and cons of the treatment and discuss your options with your physician.

## Choosing Conventional Medical Practitioners

Scientific research, technological advancements, and a systematic approach to medical education make the conventional health care system in the United States among the best in the world. Conventional medicine, however, has its limitations; not every condition can be prevented, managed, or cured.

Americans generally consider conventional medical care practitioners, such as physicians, dentists, nurses, and dietitians, to be experts in their fields. How do you choose the best medical professionals? A good way is to ask family and friends for their recommendations. If you are enrolled in certain health insurance plans, you generally must select from approved lists of providers. After you obtain some names of physicians or other conventional practitioners, check your health insurance plan's list of health care providers to determine whether the recommended individuals are listed. Additionally, it is a good idea to select general medical care practitioners, particularly physicians, whose offices are located within a reasonable distance from your home.

To help ensure high-quality conventional health care, consumers should choose physicians who have certain personal and professional characteristics, including appropriate training and excellent medical credentials (**Table 1-5**). For example, a physician who is board certified or board eligible in a specialty, such as internal medicine, is well trained in that particular field of practice. In addition to considering a prospective physician's qualifications, you should evaluate his or her personality and office conditions. Make an appointment to meet with the physician and prepare a list of questions to ask him or her. For example, what are the office hours? Which health insurance plans are accepted? Where did the practitioner receive his or her medical training? With which hospitals does the physician have affiliations? When you are in the practitioner's waiting room, observe its cleanliness and the staff's attitude and friendliness. When you

**Table 1.5**

### Characteristics of Good Personal Physicians

A good personal physician:

- Is intelligent and well qualified in his or her field of practice
- Spends adequate time with patients and listens to patients' concerns
- Is willing to modify treatment to meet patients' concerns and values
- Is caring and sympathetic
- Enlists patients' active participation in health-related decisions
- Is willing to admit when his or her medical knowledge is lacking
- Recognizes the limitations of his or her expertise and is willing to refer patients to other medical professionals when necessary
- Provides thorough physical examinations and orders appropriate testing, such as blood tests or x rays
- Is available for telephone consultations when necessary
- Is available to handle emergencies or has a competent backup physician to take care of such situations
- Does not delay in seeing patients with urgent care needs
- Is on staff at one or more nearby accredited hospitals
- Keeps up to date by attending professional educational meetings or reading medical journals
- Has a well-managed, well-equipped office with friendly, courteous staff

interview the physician, observe his or her body language and judge the person's verbal responses to your questions. After the interview, evaluate the physician's level of comfort with you, his or her answers to your questions, and office conditions. Was the physician friendly and interested in you and your health history? Did he or she provide satisfactory answers to your questions? Was the office clean and staff courteous? If you answered "yes" to these questions, you are likely to enjoy a good relationship with this physician and receive good medical care.

Ideally, people should be able to form a trusting relationship with their conventional medical practitioners, including physicians. To develop these relationships, patients need to acknowledge that they are largely responsible for their health status. For example, patients should adopt healthy lifestyles, obtain regular checkups, and seek medical attention for

ailments that do not improve within a few days or have serious signs or symptoms. Moreover, patients should follow their health care practitioners' advice and communicate with them should concerns about their medical care arise.

Health care practitioners can foster positive relationships with patients by spending adequate time with them, listening to their concerns carefully, and showing an interest in knowing more about them, not just their physical signs and symptoms. Additionally, it is important for practitioners to be caring, sensitive, and understanding; to modify treatment to meet the patient's concerns and values; and to enlist the patient's active participation in health-related decisions.



## Across THE LIFE SPAN

### HEALTH

Although the focus of this text is adult health, the Across the Life Span feature in each chapter briefly describes health concerns that are specific to other stages of life, such as infancy, childhood, adolescence, and the elderly years. **Table 1-6** indicates the approximate age groupings for these life stages. Why should college students learn about health conditions that can affect very young or very old members of the population? This information is relevant because

**Table 1.6**

### Life Stages

Stage	Approximate Age
Prenatal period	Conception to birth
Infancy	Birth to 1 year
Childhood	1 to 12 years
Adolescence	13 to 20 years
Adulthood	21 to 65 years
Older adult	Older than 65 years

Source: Based on Smith, R. E. (1993). Psychology. Minneapolis/St. Paul: West Publishing Company, p. 120.

many college students have younger siblings, some students have children, and those who are not parents may have children in the future. Additionally, many college students are middle-aged or have elderly parents and grandparents. The following information highlights some major life-cycle health concerns of Americans.

In the United States in 2006, about 7 babies in 1,000 died during the first year after birth. Most of these deaths were due to birth defects, low birth weights, and breathing difficulties that arose from prematurity, being born too early (**Figure 1-9**). Public health efforts aimed at educating and providing medical care for pregnant women can reduce the number of infant deaths.

Unintentional injuries (accidents) are the major health threat to children between 1 and 14 years of age. Most deaths from unintentional injuries are preventable, such as deaths due to motor vehicle crashes, drownings, and house fires. Appendix B, “Injury Prevention and Emergency Care,” provides information concerning safety.

Adolescence is a time when youngsters establish behaviors that may last a lifetime and when experimentation with risky behaviors usually begins. In 2007, 10.5% of high school students reported driving a car or other vehicle after consuming alcohol; about 36% had been in a physical fight; and 18% had carried a weapon on at least one day during the 30 days preceding the survey.<sup>35</sup> Thirteen percent of these students reported being too fat. Unintentional injuries, homicide, and suicide are major causes of death for people aged 15 to 24. In 2006, motor vehicle accidents accounted for over two-thirds of all deaths for Americans in this age group.<sup>12</sup>

Although teenage birth rates had been declining since 1991, the rate rose sharply in 2006 and 2007.<sup>36</sup> Unplanned pregnancies and sexually transmitted infections (STIs) continue to be major health problems

**Figure 1.9**

**Premature Newborns.** Infants born prematurely have a greater risk of serious health problems than healthy full-term infants.



for adolescents. About 750,000 American girls 15 to 19 years of age become pregnant each year.<sup>37</sup> People between 15 and 24 years of age contract about 50% of all new cases of sexually transmitted infections in the United States.<sup>38</sup> AIDS is primarily a sexually transmitted infection; sexually active adolescents are at risk of becoming infected with HIV, the virus that causes AIDS.

In 2007, people 65 years of age and older made up 13% of the U.S. population; this percentage is expected to increase rapidly over the next 40 years.<sup>39</sup> Americans are living longer, but a growing number of people over 70 years of age report difficulty performing daily activities such as bathing and dressing. Furthermore, the number of deaths attributed to falls and motor vehicle crashes is increasing among members of this age group. Chapter 15 discusses the health-related concerns of elderly Americans.

# CHAPTER REVIEW

## Summary

Lifestyle includes behaviors that promote or deter good health and longevity. Wellness is an optimal degree of health. The holistic approach to health integrates physical, psychological, social, intellectual, spiritual, and environmental dimensions. Contemporary definitions of health reflect not only how one functions, but also what one can achieve, given his or her circumstances.

Heart disease and cancer are the major killers of Americans. Lifestyle choices contribute to the development of these and many other life-threatening diseases. Healthy People 2000 established key objectives for improving the overall health of Americans by the year 2000. A revised set of goals (Healthy People 2020) is expected in 2010. The distribution of health problems differs among the various ethnic and racial groups in the United States.

Experiences, knowledge, needs, and values affect one's motivation to change health-related behaviors. People are motivated to take action if they feel that a sufficient threat to their health exists and that the results of changing their behavior will be worthwhile.

Although no one can guarantee good health,

many factors contribute to one's chances of enjoying a long and productive lifetime of good health. Several of these factors are the result of lifestyle choices that people can make, while they are still young, to prevent or delay disease. Responsible health-related lifestyle choices involve a systematic approach to decision making.

People can become more careful consumers of health-related information, products, and services by learning to recognize misinformation. To obtain reliable health-related information, check with experts in federal, state, and local agencies and organizations.

Conventional medicine relies on modern scientific principles, modern technologies, and scientifically proved methods to prevent, diagnose, and treat health conditions. Complementary and alternative medicine (CAM) is an unconventional and diverse system of preventing, diagnosing, and treating diseases that emphasizes spirituality, self-healing, and harmonious interaction with the environment. Conventional medical practitioners are likely to be skeptical of CAM techniques that have not been shown scientifically to be safe and effective. Until support-

## Applying What You Have Learned



1. Develop a plan to improve your health. **Application**
2. Analyze a health-related advertisement or article to determine the validity of its information. **Analysis**
3. Identify sources of health information that you have used in the past year. Explain why you think each source is reliable or unreliable. **Synthesis**
4. Think of a health-related decision that you made

recently. For example, did you decide to turn down an offer to use a mind-altering drug, wear a helmet while riding a motorcycle, lose a few pounds, or use an herbal product to treat a condition? When you made this decision, did you use the decision-making process described in this chapter or did you act impulsively? Explain why you would or would not make the same decision today. **Evaluation**

### Key

#### Application

using information in a new situation.

#### Analysis

breaking down information into component parts.

#### Synthesis

putting together information from different sources.

#### Evaluation

making informed decisions.

## Reflecting on Your Health



A reflective journal is a personal record of your thoughts and expressions of your feelings. The purposes of keeping this journal are to stimulate your thinking about what you have learned about health and to help you understand how your thoughts and feelings about your health might have changed over the semester. Thinking about new information can help you determine its usefulness, which can influence your attitudes and behaviors.

The Reflecting on Your Health questions at the end of each chapter are designed to guide your thinking. If you want to write about something else that is related to the contents of the chapter, feel free to do so, but make sure to identify the topic in your opening sentence. Write your journal entries in the first person, using “I” statements to express your thoughts, as though you were talking to a close friend. Don’t worry about your spelling, punctuation, or grammar—just let your thoughts flow.

Some instructors make journal writing an optional activity; others require that you respond to all of

the questions, and they grade journals. Still other instructors simply check to see if students are doing the assignment. Refer to the course syllabus or ask your instructor about his or her grading practices and other instructions concerning the journal.

### Journal Questions

1. What does the term *health* mean to you?
2. What do you think of the idea that people should strive to achieve optimal health?
3. What impact does spiritual health have on your sense of well-being? If spiritual health is important to you, describe the role it plays in your life.
4. Do you agree with the idea presented in the chapter that social health influences your physical health? Why or why not?
5. What factors influence your health-related behaviors?
6. Under what circumstances would you consider using alternative therapies?

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