



DIANNE HALES

An Invitation to Health

The Power of Now

EDITION

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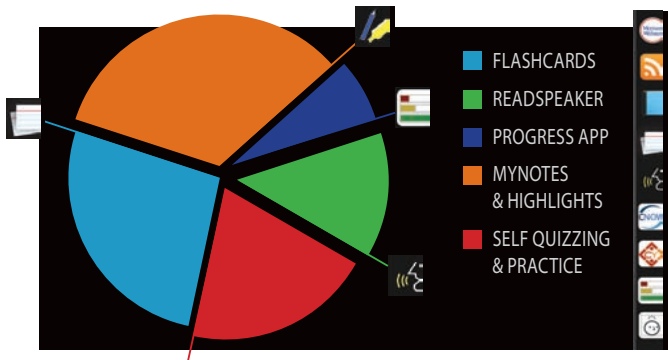
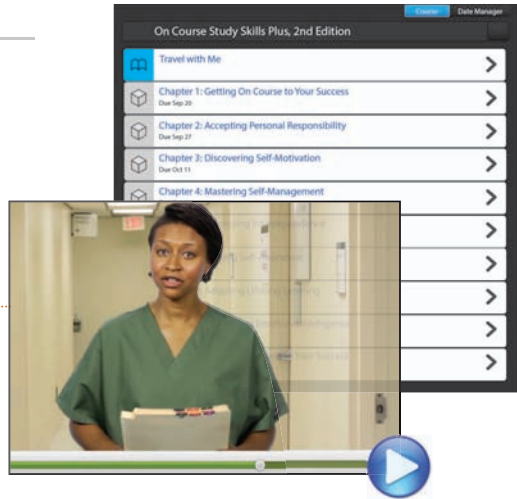
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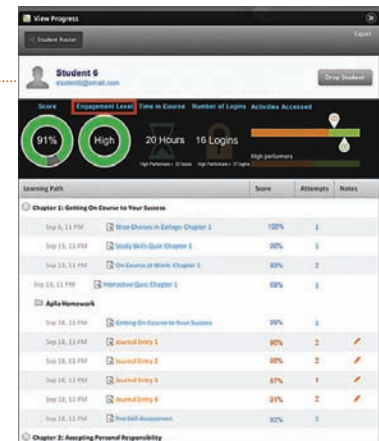
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An Invitation to Health

An Invitation to Health The Power of Now

Dianne Hales

17th Edition



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Preface

To the Student: Starting Now

College prepares you for the future. But when it comes to health, your future starts *now!*

Every day you make choices and take actions that may or may not have long-term consequences in the future. Yet they do have immediate effects on how you feel now. Here are some examples:

- You stay up late and get less than five hours' sleep. The next day you feel groggy, your reflexes are off, and you find it harder to concentrate.
- You scarf down a double cheeseburger with bacon, a supersized side of fries, and a milkshake. By the time you're done with your meal, harmful fats are coursing through your bloodstream.
- You chug a combo of Red Bull and vodka and keep partying for hours. Even before you finish your first drink, your heart is racing and your blood pressure rising. If you keep drinking, you'll reach dangerous levels of intoxication—probably without realizing how inebriated you are.
- Too tired to head to the gym, you binge-watch streaming videos for hours. Your metabolism slows; your unexercised muscles weaken.
- Just this once, you have sex without a condom. You wake up the next morning worrying about a sexually transmitted infection (STI) or a possible pregnancy.
- You don't have time to get to the student health center for a flu shot. Then your roommate comes down with the flu.
- You text while driving—and don't notice that the traffic light is changing.

There are countless other little things that can have very big consequences on your life today as well as through all the years to come. But they don't have to be negative. Consider these alternatives:

- Get a solid night's sleep after studying, and you'll remember more course material and probably score higher on a test.
- Eat a meal of a low-fat protein, vegetables, and grains, and you'll feel more energetic.
- Limit your alcohol intake, and you'll enjoy the evening and feel better the morning after.
- Go for a 10-minute walk or bike ride, and you'll feel less stressed and weary.
- Practice safe sex always, and you won't have to wonder if you've jeopardized your sexual health.
- Keep up with your vaccinations, and you lower your odds of serious sicknesses.
- Pay attention to the road when you drive, and you can avoid accidents.

In addition to their immediate effects, the impact of health behaviors continues for years and decades to come. Consider these facts:

- More than 40 percent of college students are already overweight or obese.
- One in four college students may have at least one risk factor for cardiovascular disease.

- Nine in ten college students report feeling stressed.
- One in three reports binge drinking at least once in the previous two weeks.

Such risky behaviors take a toll. According to an international study, young Americans are less likely to survive until age 55 than their peers in other developed nations. Those who do live to middle age and beyond are more likely to suffer serious chronic diseases and disabilities.

You do not have to be among them. *An Invitation to Health: The Power of Now* shows you how to start living a healthier, happier, fuller life now and in the years to come.

To the Instructor

You talk to your students about their future because it matters. But in the whirl of undergraduates' busy lives, today matters more. As recent research has documented, payoffs in the present are more powerful motivators for healthful behaviors than future rewards. Individuals exercise more, eat better, quit smoking, and make positive changes when immediate actions yield short-term as well as long-term benefits.

An Invitation to Health: The Power of Now incorporates this underlying philosophy throughout its chapters. As you can see in the Preface for students, we consistently point out the impact that everyday choices have on their health now and in the future. Each chapter highlights specific, practical steps that make a difference in how students feel and function. The "Health Now!" feature gives students step-by-step guidance on how to apply what they're learning in their daily lives. "The Power of Now!" checklist at each chapter's end reinforces key behavioral changes that can enhance and safeguard health.

I also am introducing a new interactive "check-in" feature that engages students as they read by posing questions that relate directly to their lives, experiences, and perspectives. After the definitions of wellness in Chapter 1, for instance, a "check-in" asks "What does wellness mean to you?" In the section on healthy habits, another "check-in" instructs students to rate their own health habits. As they learn about behavioral changes, this feature prompts them to identify a health-related change they want to make and their stage of readiness for change.

As an instructor, you can utilize the "check-in" features in different ways. For instance, you might suggest that students use them to test their comprehension of the material in the chapter. You might assign them to write a brief reflection on one or more "check-ins." Or you might draw on the "check-ins" to spark classroom discussion and increase student engagement.

This textbook is an invitation to you as an instructor. I invite you to share your passion for education and to enter into a partnership with the editorial team at Cengage Learning. We welcome your feedback and suggestions. Please let us hear from you at www.cengage.com/health.

I personally look forward to working with you toward our shared goal of preparing a new generation for a healthful future.

What's New in *An Invitation to Health: The Power of Now*

Some things don't change: as always, this *Invitation* presents up-to-date, concise, research-based coverage of all the dimensions of health. It also continues to define health in the broadest sense of the word—not as an entity in itself, but as an integrated process for discovering, using, and protecting all possible resources within the individual, family, community, and environment.

What is new is the theme that threads through every chapter: providing students with practical knowledge and tools they can apply immediately to improve their health and their lives. One of the keys to doing so is behavioral change, which has always been fundamental to *An Invitation to Health*. The one feature that has appeared in every edition—and that remains the most popular—is “Your Strategies for Change.”

Every chapter concludes with “The Power of Now!,” a checklist that students can use to assess their current status and work toward specific goals, whether by creating better relationships (Chapter 5), getting in better shape (Chapter 8), or taking charge of their alcohol intake (Chapter 13). Chapter 17, Consumer Health, contains updated information on the Affordable Care Act as well as ways to evaluate health information, prepare for a medical exam, get quality traditional and alternative health care, and navigate the health-care system.

Throughout this edition, the focus is on students, with real-life examples, the latest statistics on undergraduate behaviors and attitudes, and coverage of new campus health risks, including alcohol mixed with energy drinks (AmEDs), HPV, piercing and body art, electronic cigarettes and vaping, hookah (water pipe) smoking, the combination of binge drinking and disordered drinking, polysubstance abuse, “bath salts,” cyberbullying, and campus stalking.

An interactive feature, “On Campus Now,” showcases the latest research on student behavior, including their sleep habits (Chapter 2), stress levels (Chapter 4), weight (Chapter 7), and sexual experiences (Chapter 9). “Health Now!” presents practical, ready-to-use tips related to real-life issues such as recognizing substance abuse (Chapter 12), infection protection (Chapter 16), preventing accidents (Chapter 18), and going green (Chapter 19).

Other popular features that have been retained and updated include “Health on a Budget” and “Consumer Alert.” A “Self Survey” for each chapter can be found within MindTap. End-of-chapter resources include “Review Questions,” “Critical Thinking Questions,” and “Key Terms.” At the end of the book is a full Glossary as well as complete chapter references.

Because health is an ever-evolving field, this edition includes many new topics, including the latest reports on dietary guidelines for Americans, students' mental health, merging tobacco products, the impact of stress, campus hookups, same-sex marriage, self-injury, suicide prevention, vitamin supplements, exercise guidelines, STIs, gun violence, attention-deficit/hyperactivity disorder (ADHD), autism spectrum disorder, caffeinated alcoholic beverages, binge drinking, weight management, metabolic syndromes, myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS), and the latest recommendations for prevention and treatment of infectious illnesses.

All the chapters have been updated with the most current research, including many citations published in 2015, and incorporating the latest available statistics. The majority come from primary sources, including professional books; medical, health, and mental health journals; health education periodicals; scientific meetings; federal agencies, and consensus panels; publications from research laboratories and universities; and personal interviews with specialists in a number of fields. In addition, “What's Online” presents reliable Internet addresses where students can turn for additional information.

As I tell students, *An Invitation to Health: The Power of Now* can serve as an owner's manual to their bodies and minds. By using this book and taking your course, they can acquire a special type of power—the power to make good decisions, to assume responsibility, and to create and follow a healthy lifestyle. This textbook is our invitation to them to live what they learn and make the most of their health—now and in the future.

An Overview of Changes and Updates

Following is a chapter-by-chapter listing of some of the key topics that have been added, expanded, or revised for this edition.

Chapter 1: The Power of Now

College and health; occupational health; dimensions of health; student health norms; self-affirmation theory; health belief model (HBM)

Chapter 2: Your Psychological and Spiritual Well-Being

Positive psychology and positive psychiatry; most effective positive psychology interventions; positive effects of optimism, autonomy, and self-compassion; most effective gratitude interventions; tracking moods; sense of purpose; sleep times; sleep and sex; electronic devices and sleep onset; napping; snoring; Exploding Head Syndrome

Chapter 3: Caring for Your Mind

Mental health on campus; top concerns of undergraduates; students at risk; recognizing the characteristics of depression; ADHD; autism spectrum disorder; self-injury; suicide; psychiatric medications

Chapter 4: Personal Stress Management

Stress in America; occupational stress; discrimination and stress; stress and the heart; stress-management apps; self-compassion; burnout

Chapter 5: Your Social Health

Loneliness; companion pets; cyberstalking and cyberbullying; college students' cell phone use; the brain in love; trends in sexual relationships; hookup culture; same-sex marriage; long-term health consequences of divorce

Chapter 6: Personal Nutrition

Preliminary 2015 Dietary Guidelines for Americans; calorie balance; eating patterns in the United States and worldwide; student use of dietary supplements; food allergies; Mediterranean diet; nutrition labels; artificially sweetened drinks; sugar consumption; fruit and fruit juices; vitamin supplements

Chapter 7: Managing Your Weight

Weight on campus; body mass index (BMI); evaluating weight loss programs; CAM for obesity; emotional eating

Chapter 8: The Joy of Fitness

“Exercise Is Medicine,” countering dangers of sedentary living, how much exercise is enough, barefoot running, bariatric surgery, salt supplements

Chapter 9: Sexual Health

Changes in sexual behavior; casual sex on campus; sex among young adults; why students hook up; culture and sexual messages; homophobia; LGBT health disparities; female ejaculation; sexual dysfunction

Chapter 10: Reproductive Choices

Contraceptive information sources for young adults; impact of contraception on women's lives; statistical "snapshot" of current birth control in the United States; reproductive coercion on campus; student access to condoms; long-acting reversible contraceptives (LARCs); female condoms; abortion; pregnancy-related mortality rates

Chapter 11: Lowering Your Risk of Sexually Transmitted Infections

Risks factors for sexually transmitted infections (STIs); update on Human papillomavirus (HPV); meeting sex partners online; bacterial vaginosis (BV); syphilis

Chapter 12: Addictions

Drugs in America; students and drugs; substance-free reinforcement; polysubstance abuse; gambling disorders; caffeine-containing energy drinks (CCEDs); stimulants; marijuana's effects on health; medical marijuana; legalized marijuana; artificial reproductive technology

Chapter 13: Alcohol

Alcohol-free programs on campus; drinking in America; toll of alcohol; drinking on campus; how schools are sobering up; work hours and drinking; discrimination and drinking; alcohol-related cues; alcohol mixed with energy drinks (AmEDs); alcohol poisoning; cirrhosis; consequences of light drinking; trauma and abuse as risk factors for drinking; behavioral therapies; medicines for alcohol recovery

Chapter 14: Tobacco

Smoking in America; smoke- and tobacco-free policies on campus; tobacco bans; smoking and mortality; health consequences of smoking; emerging tobacco products; electronic cigarettes; vaping; hookahs; secondhand smoke; thirdhand smoke

Chapter 15: Major Diseases

Importance of "now" for health; global toll of obesity; American Heart Association's steps to safeguard health; evaluating metabolic risk; role of healthy diet and weight; diabetes; blood pressure; hypertension in the young; high cholesterol; psychological factors; impact of stress; benefit of antidepressants; women and heart disease; reducing heart disease risk; cancer in America; external causes of cancer; internal causes of cancer; cancer staging; risk factors for skin cancer; lowering the risk of breast cancer; treatments for breast cancer

Chapter 16: Infectious Illnesses

New tick-borne pathogen; new guidelines for treating allergic rhinitis; childhood and adult vaccinations; common cold treatments; drug-resistant superbugs; tests and treatments for hepatitis C; myalgic encephalomyelitis/chronic fatigue syndrome; Ebola outbreaks; bacterial *Clostridium difficile* (*C. difficile*) infections

Chapter 17: Consumer Health

Update on the Affordable Care Act (Obamacare), consumer-driven health care, personal health apps and monitors, privacy of personal health information, trends in plastic surgery, CAM use in America and on college campuses

Chapter 18: Personal Safety

Risk factors for unintentional injury in young adults; factors that impair driving; bicycle fatalities; cell phone use and driving; gun violence; mass shootings; mental illness and violent crime; sexual

coercion and violence; hate crimes; victimization based on sexual orientation; sexting; dating violence

Chapter 19: A Healthier Environment

Effects of global warming on health; pollution's health impact; indoor and outdoor air quality; electromagnetic fields; cell phone dangers; energy-efficient lightbulbs

Chapter 20: A Lifetime of Health

Health problems of seniors; impact of feeling younger than actual age; Mediterranean diet and longevity; quality of sleep and aging; disabilities in older Americans; age-related memory loss; Alzheimer's disease; advance health directives; quality of life in final years

Supplemental Resources

Health MindTap for An Invitation to Health: The Power of Now! (Instant Access Code: ISBN-13: 978-1-305-86621-8)

MindTap is a personalized teaching experience with relevant assignments that guide students to analyze, apply, and improve thinking, allowing you to measure skills and outcomes with ease.

- Personalized Teaching: Becomes yours with a Learning Path that is built with key student objectives. Control what students see and when they see it. Use it as-is or match to your syllabus exactly—hide, rearrange, add, and create your own content.
- Guide Students: A unique learning path of relevant readings, multimedia and activities that move students up the learning taxonomy from basic knowledge and comprehension to analysis and application.
- Promote Better Outcomes: Empower instructors and motivate students with analytics and reports that provide a snapshot of class progress, time in course, engagement, and completion rates.

Diet & Wellness Plus

Diet & Wellness Plus helps you gain a better understanding of how nutrition relates to your personal health goals. It enables you to track your diet and activity, generate reports, and analyze the nutritional value of the food you eat. It includes more than 55,000 foods in the database, custom food and recipe features, the latest Dietary References, as well as your goal and actual percentages of essential nutrients, vitamins, and minerals. It also helps you to identify a problem behavior and make a positive change. After you complete a Wellness Profile questionnaire, Diet & Wellness Plus rates the level of concern for eight different areas of wellness, helping you determine the areas where you are most at risk. It then helps you put together a plan for positive change by helping you select a goal to work toward, complete with a reward for all your hard work.

Diet & Wellness Plus is also available as an app that can be accessed from the app dock in MindTap and can be used throughout the course to track diet and activity, as well as behavior change.

Instructor Companion Site

This site offers everything you need for your course in one place! This collection of book-specific lecture and class tools is available online via www.cengage.com/login. Access and download PowerPoint presentations, images, the instructor's manual, videos, and more.

Cengage Learning Testing Powered by Cognero

Cengage Learning Testing Powered by Cognero is a flexible online system that allows you to:

- Author, edit, and manage test bank content from multiple Cengage Learning solutions
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Global Health Watch (Instant Access Code: ISBN-13: 978-1-111-37733-5; Printed Access Card: ISBN-13: 978-1-111-37731-1)

Updated with today's current headlines, Global Health Watch is a one-stop resource for classroom discussion and research projects. This resource center provides access to thousands of trusted health sources, including academic journals, magazines, newspapers, videos, podcasts, and more. It is updated daily to offer the most current news about topics related to your health course.

Careers in Health, Physical Education, and Sport, 2nd edition (ISBN-13: 978-0-495-38839-5)

This unique booklet takes students through the complicated process of choosing the type of career they want to pursue; explains how to prepare for the transition into the working world; and provides insight into different types of career paths, education requirements, and reasonable salary expectations. A designated chapter discusses some of the legal issues that surround the workplace, including discrimination and harassment. This supplement is complete with personal development activities designed to encourage students to focus on and develop better insight into their futures.

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About the Author

Dianne Hales is one of the most widely published and honored freelance journalists in the country. She is the author of 15 trade books, including *Mona Lisa: A Life Discovered*; *La Bella Lingua*; *Just Like a Woman*; *Think Thin, Be Thin*; and *Caring for the Mind*, with translations into Chinese, Japanese, Italian, French, Spanish, Portuguese, German, Dutch, Swedish, Danish and Korean.

Hales has received the highest honor the government of Italy can bestow on a foreigner, an honorary knighthood, with the title *Cavaliere dell' Ordine della Stella della Solidarietà Italiana* (Knight of the Order of the Star of Italian Solidarity) in recognition of her book *La Bella Lingua: My Love Affair with Italian, the World's Most Enchanting Language*, as "an invaluable tool for promoting the Italian language."

Hales is a former contributing editor for *Parade*, *Ladies' Home Journal*, *Working Mother*, and *American Health* and has written more than 1,000 articles for publications including *Family Circle*, *Glamour*, *Good Housekeeping*, *Health*, *The New York Times*, *Reader's Digest*, *The Washington Post*, *Woman's Day*, and *The World Book Encyclopedia*.

Hales has received writing awards from the American Psychiatric Association and the American Psychological Association, an EMMA (Exceptional Media Merit Award) for health reporting from the National Women's Political Caucus and Radcliffe College, three EDI (Equality, Dignity, Independence) awards for print journalism from the National Easter Seal Society, the National Mature Media Award, and awards from the Arthritis Foundation, California Psychiatric Society, CHADD (Children and Adults with Attention Deficit/Hyperactivity Disorder), Council for the Advancement of Scientific Education, and New York City Public Library.



Julia Hales

An Invitation to Health



WHAT DO YOU THINK?

- What does “health” mean to you?
- How healthy are today’s college students?
- Do race and gender affect health?
- Can people successfully change their health behaviors?

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1

The Power of Now

Keisha always thought of health as something you worry about when you get older. Then her twin brother developed a health problem she'd never heard of: prediabetes (discussed in Chapter 15), which increased his risk of diabetes and heart disease. At a health fair on campus, she found out that her blood pressure was higher than normal. She also learned that young adults with high blood pressure could be at greater risk of heart problems in the future.¹

"Maybe I'm not too young to start thinking about my health," Keisha concluded. Neither are you, whether you're a traditional-age college

student or, like an ever-increasing number of undergraduates, years older. <

After reading this chapter, you should be able to:

- 1.1 Define health and wellness and outline the dimensions of health.
- 1.2 Assess the current health status of Americans, including health goals and health disparities.
- 1.3 Compare the health trends of students with those of Americans in general.
- 1.4 Explain the influences on behavior that support or impede healthy change.
- 1.5 Identify the stages of change.



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Health is the process of discovering, using, and protecting all the resources within our bodies, minds, spirits, families, communities, and environment.

An Invitation to Health is both *about* and *for* you; it asks you to go beyond thinking about your health to taking charge and making healthy choices for yourself and your future. This book includes material on your mind and your body, your spirit and your social ties, your needs and your wants, your past and your potential. It will help you explore options, discover possibilities, and find new ways to make your life worthwhile.

What you learn from this book and in this course depends on you. You have more control over your life and well-being than anything or anyone else does. Through the decisions you make and the habits you develop, you can influence how well—and perhaps how long—you will live.

The time to start is *now*. Every day you make choices that have short- and long-term consequences for your health. Eat a high-fat meal, and your blood chemistry changes. Spend a few hours slumped in front of the television, and your metabolism slows. Chug a high-caffeine energy drink, and your heart races. Have yet another beer, and your reflexes slow. Text while driving, and you may weave into another lane. Don't bother with a condom, and your risk of sexually transmitted infection (STI) skyrockets.

Sometimes making the best choices demands making healthy changes in your life. This chapter will show you how—and how to live more fully, more happily, and more healthfully. This is an offer that you literally cannot afford to refuse. Your life may depend on it—starting now.

Health and Wellness

health A state of complete well-being, including physical, psychological, spiritual, social, intellectual, and environmental dimensions.

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

By simplest definition, **health** means being sound in body, mind, and spirit. The World Health Organization defines *health* as “not merely the absence of disease or infirmity” but “a state of complete physical, mental, and social well-being.”² Health is the process of discovering, using, and protecting all the resources within our bodies, minds, spirits, families, communities, and environment.

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

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

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

✓ check-in How would you define health?

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

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

✓ check-in What does wellness mean to you?

The Dimensions of Health

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

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

The following are the most commonly recognized dimensions of health and wellness, but some models treat emotional, cultural, or financial health as separate categories rather than aspects of psychological, social, or occupational health.

.....
✓ **check-in** What do you consider the most important or relevant dimensions of health?
.....

Physical Health Webster's 1913 dictionary defined *health* as "the state of being hale, sound, or whole, in body, mind, or soul, especially the state of being free from physical disease or pain." More recent definitions conceive health as "an optimal state of physical, mental, and social well-being, not merely the absence of disease or infirmity."

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

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

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

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

Health educators are placing greater emphasis on social health in its broadest sense as they

expand the traditional individualistic concept of health to include the complex interrelationships between one person's health and the health of the community and environment. This change in perspective has given rise to a new emphasis on **health promotion**, which educators define as "any planned combination of educational, political, regulatory, and organizational supports for actions and conditions of living conducive to the health of individuals, groups, or communities." Examples on campus include establishing smoke-free policies for all college buildings, residences, and dining areas; prohibiting tobacco advertising and sponsorship of campus social events; promoting safety at parties; and enforcing alcohol laws and policies.

Intellectual Health Your brain is the only one of your organs capable of self-awareness. Every day you use your mind to gather, process, and act on information; to think through your values; to make decisions, set goals, and figure out how to handle a problem or challenge. Intellectual health refers to your ability to think and learn from life experience, your openness to new ideas, and your capacity to question and evaluate information. Throughout your life, you'll use your critical thinking skills, including your ability to evaluate health information, to safeguard your well-being.

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

Occupational Health In the coming decades, you will devote much of your time and energy to your career. Ideally, you will contribute your unique talents and skills to work that is rewarding in many ways—intellectually, emotionally, creatively, financially. Yet every job presents physical, psychological, and mental challenges that can affect your well-being. College provides the opportunity for you to choose and prepare for a career that is consistent with your personal values and beliefs. Now is also the time to build the healthy habits and coping skills that will enable you to balance work and other endeavors throughout your life.

.....
✓ **check-in** How do you rate yourself on each of these dimensions of health?
.....

health promotion Any planned combination of educational, political, regulatory, and organizational supports for actions and conditions of living conducive to the health of individuals, groups, or communities.

Health in America

Although the United States ranks among the wealthiest nations in the world, it is far from the healthiest. We spend more than any other nation on health care: a whopping \$2.9 trillion, about 18 percent of our GDP (gross domestic product).

Life expectancy at birth in the United States has increased to an all-time high of 76.4 years for men and 81.2 years for women, but citizens of other affluent nations, such as Japan and Switzerland, live significantly longer.³ A major study by the National Research Council and Institute of Medicine concluded that “Americans live shorter lives and experience more injuries and illnesses than people in other high-income countries.”⁴ Among the diseases taking the greatest toll on Americans’ well-being are hypertension, heart disease, diabetes, arthritis, and autoimmune disorders.⁵

Rather than focus solely on life expectancy, experts are calculating healthy life expectancy (HALE), based on years lived without disease or disability. On average, life expectancy at birth for Americans averages about age 79, but the average HALE is considerably shorter: about 68 years.⁶

If you are under age 50, you may think this doesn’t apply to you. Think again. The Americans experiencing the greatest health deficits and most years lost to illness, disability, and premature death are not the elderly but young adults. As a young American, your probability of reaching your 50th birthday is lower than in almost every other high-income nation.⁷

In comparison with almost all of 16 high-income “peer” countries—Australia, Austria, Canada, Denmark, Finland, France, Germany, Italy, Japan, Norway, Portugal, Spain, Sweden, Switzerland, the Netherlands, and the United Kingdom—Americans have shorter life expectancies.

Deaths before age 50 account for about two-thirds of the difference in life expectancy for American men and one-third of the difference for American women, compared with their counterparts in other nations.⁸

.....
✓ **check-in** How do you think your life expectancy and your healthy life expectancy (HALE) compare?
.....

How We Lag Behind

Here are some of the key areas in which the United States lags behind other first-world nations:

- **Birth outcomes.** Although infant mortality rates have improved, they remain higher

in the United States than in other nations.

American babies also are more likely to have low birth weights. Our children are less likely to live to age 5 than those in other developed countries.

- **Injuries and homicides.** Since the 1950s, American adolescents and young adults have died at higher rates from traffic accidents and violence than their counterparts in other countries.
- **Teen pregnancy and sexually transmitted infections (STIs).** Adolescents in the United States have the highest rates of pregnancy among developed nations and are more likely to acquire an STI.
- **HIV and AIDS.** The United States has the second-highest prevalence of HIV infections among its peer nations and the highest incidence of AIDS.
- **Drug-related mortality.** Americans lose more years of life to alcohol and other drugs than people in peer countries, even when deaths from drunk driving are excluded.
- **Obesity and diabetes.** The United States has the highest obesity rate among high-income countries in every age group. From age 20 onward, Americans have the highest prevalence of diabetes and high glucose levels (discussed in Chapter 15) among peer countries.
- **Heart disease.** Americans who survive to age 50 have more cardiovascular risk factors (discussed in Chapter 15) than their counterparts in Europe. Adults over age 50 are more likely to develop and die from cardiovascular disease than those in other high-income countries.
- **Chronic lung disease.** Lung disease is more prevalent and deadly in the United States than in European countries.
- **Disability.** Adults in the United States report a higher prevalence of arthritis and activity limitations than their counterparts in other affluent nations.

Closing the Gap

Americans could be living both longer and healthier lives, but only a minority have adopted healthy behaviors. Here are the latest findings on our health and habits from the Centers for Disease Control and Prevention (CDC):

- **Fitness:** Fewer than 20 percent of men and women exercise regularly.

- **Weight:** The percentage of obese Americans has risen from 30 percent in 2000 to 34 percent today. Two-thirds of the population are either overweight or obese.
- **Overall health:** Ten percent of all Americans describe their health as fair or poor. This percentage increases to 18 percent of those over age 65.
- **Medical conditions:** Almost one-third (33 percent) of Americans over age 20 have hypertension; 15 percent have high cholesterol; 12 percent have diabetes. About 18 percent of Americans over age 65 have had cancer.
- **Health care:** Almost one-quarter (23 percent) of men and women between ages 18 and 44 did not see a health-care professional in the previous year.

✓ **check-in** How would you rate your health habits?

Healthy People 2020

Every decade since 1980, the U.S. Department of Health and Human Services (HHS) has published a comprehensive set of national public health objectives as part of the Healthy People Initiative. The department's vision is to create a society in which all people can live long, healthy lives. Its mission includes identifying nationwide health improvement priorities, increasing public awareness of health issues, and providing measurable objectives and goals.

Drawing on the lessons learned and needs identified in *Healthy People 2010*, HHS has set the following overarching goals for *Healthy People 2020*:

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

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

- **Nutrition and weight status:** Prevent inappropriate weight gain in youths and adults.
- **Tobacco use:** Increase smoking-cessation success by adult smokers.
- **Sexually transmitted infections:** Increase the proportion of adolescents who abstain



Zoonar GmbH/Alamy

Your choices and behaviors during your college years can influence how healthy you will be in the future.

from sexual intercourse or use condoms if sexually active.

- **Substance abuse:** Reduce misuse of prescription drugs.
- **Heart disease and stroke:** Increase overall cardiovascular health in the U.S. population.
- **Injury and violence prevention:** Reduce sports and recreation injuries.

✓ **check-in** If you were setting personal health objectives to attain by 2020, what would they be?

Health Disparities

Despite improvements in the overall health of the nation, Americans who are members of racial and ethnic groups—including black or African Americans, American Indians, Alaska Natives, Asian Americans, Hispanics, Latinos, and Pacific Islanders—are more likely than whites to suffer disease and

disability. “Multiple disadvantages,” as researchers refer to the extra challenges minorities face, increase the likelihood of major depression, poor physical health, functional limitations, and premature death.⁹ The longevity gap between white and black women is four years; for white and black men it is six years.

Genetic variations, environmental influences, and specific health behaviors contribute to health disparities, but poverty is a key factor. Many minorities have not been able to afford the tests and treatments that could prevent illness or overcome it at the earliest possible stages. According to public health experts, low income may account for one-third of the racial differences in death rates for middle-aged African American adults.

.....
✓ **check-in** Are you a member of a racial or ethnic minority? If so, do you think this status affects your health or health care?
.....

If you are a member of a racial or ethnic minority, you need to educate yourself about your health risks, take responsibility for those within your control, and become a savvy, assertive consumer of health-care services. The federal Office of Minority Health and Health Disparities (www.cdc.gov/omhd), which provides general information and the latest research and recommendations, is a good place to start.

Why Race Matters If, like many other Americans, you come from a racially mixed background, your health profile may be complex. Here are just some of the differences race makes:

- Black Americans lose substantially more years of potential life to homicide (nine times as many), stroke (three times as many), and diabetes (three times as many) as whites. Also, compared with whites, blacks have more new AIDS cases.
- About one in three Hispanics has prediabetes; only about half of Hispanics with diabetes have it under control.¹⁰
- American Indian and Alaska Native women are less likely to receive prenatal care, and Asian American women have significantly lower rates of mammography.
- Caucasians are prone to osteoporosis (progressive weakening of bone tissue); cystic fibrosis; skin cancer; and phenylketonuria (PKU), a metabolic disorder that can lead to cognitive impairment
- Native Americans, including those indigenous to Alaska, are more likely to die young than the population as a whole, primarily as a result of accidental injuries, cirrhosis of the liver, homicide, pneumonia, and complications of diabetes.
- The suicide rate among American Indians and Alaska Natives is 50 percent higher than the national rate. The rates of co-occurring mental illness and substance abuse (especially alcohol abuse) are also higher among Native American youth and adults.

Cancer Screening and Management

Overall, black Americans are more likely to develop cancer than persons of any other racial or ethnic group. As discussed in Chapter 15, medical scientists have debated whether the reason might be that treatments are less effective in blacks or whether many are not diagnosed early enough or treated rigorously enough:

- Black women have higher rates of colon, pancreatic, and stomach cancer. Black men have higher rates of prostate, colon, and stomach cancer.
- African Americans have the highest death rates for lung cancer of any racial or ethnic group in the United States.
- African American women are more than twice as likely to die of cervical cancer as are white women and are more likely to die of breast cancer than are women of any racial or ethnic group except Native Hawaiians.

YOUR STRATEGIES FOR PREVENTION

If You Are at Risk

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

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

- Native Hawaiian women have the highest rates of breast cancer. Women from many racial minorities, including those of Filipino, Pakistani, Mexican, and Puerto Rican descent, are more likely to be diagnosed with late-stage breast cancer than white women.

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

Diabetes American Indians and Alaska Natives, African Americans, and Hispanics are twice as likely to be diagnosed with diabetes as are non-Hispanic whites.

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

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

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

HIV and Sexually Transmitted Infections Although African Americans and Hispanics represent only about one-quarter of the U.S. population, they account for about two-thirds of adult AIDS cases and more than 80 percent of pediatric AIDS cases. Yet only one in three HIV-infected black Americans is receiving treatment.¹¹

Sex, Gender, and Health

Medical scientists define *sex* as a classification, generally as male or female, according to the reproductive organs and functions that derive from the chromosomal complement. *Gender* refers to a person's self-representation as male or female



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Heredity places this Pima Indian infant at higher risk of developing disease, but environmental factors also play a role.

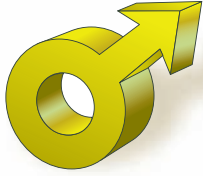
or how social institutions respond to a person, on the basis of the individual's gender presentation. Gender is rooted in biology and shaped by environment and experience.

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

Here are some health differences between men and women:

- Although many assume that men are the stronger sex, they die at a higher rate than women. About 115 males are conceived for every 100 females, but more males die before birth.
- Boys are more likely to be born prematurely, to suffer birth-related injuries, and to die before their first birthdays than girls.

He:



- averages 12 breaths a minute
- has lower core body temperature
- has a slower heart rate
- has more oxygen-rich hemoglobin in his blood
- is more sensitive to sound
- produces twice as much saliva
- has a 10 percent larger brain
- is 10 times more likely to have attention deficit disorder
- as a teen, has an attention span of 5 minutes
- is more likely to be physically active
- is more prone to lethal diseases, including heart attacks, cancer, and liver failure
- is five times more likely to become an alcoholic
- has a life expectancy of 76 years

She:



- averages 9 breaths a minute
- has higher core body temperature
- has a faster heart rate
- has higher levels of protective immunoglobulin in her blood
- is more sensitive to light
- takes twice as long to process food
- has more neurons in certain brain regions
- is twice as likely to have an eating disorder
- as a teen, has an attention span of 20 minutes
- is more likely to be overweight
- is more vulnerable to chronic diseases, like arthritis and autoimmune disorders, and age-related conditions like osteoporosis
- is twice as likely to develop depression
- has a life expectancy of 81 years

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FIGURE 1.1 Some of the Many Ways Men and Women Are Different

- Men's overall mortality rate is 41 percent higher than women's. They have higher rates of cancer, heart disease, stroke, lung disease, kidney disease, liver disease, and HIV/AIDS. They are four times more likely to take their own lives or to be murdered than women.
- Cardiovascular disease is the leading cause of death for women in the United States, yet only about one-third of clinical trial subjects in cardiovascular research are female, and just 31 percent of studies that include women report outcomes by sex.¹²
- Lung cancer is the leading cause of cancer death among women, with increased rates particularly among young female nonsmokers.¹³
- Women are 70 percent more likely than men to suffer from depression over the course of their lifetimes.¹⁴

✓ **check-in** How do you think your gender affects your health?

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

- **Biological factors:** For example, women have two X chromosomes and men only one, and men and women have different levels of sex hormones (particularly testosterone and estrogen).
- **Social factors:** These include work stress, hostility levels, and social networks and supports.

- **Behavioral factors:** Men and women differ in risky behavior, aggression, violence, smoking, and substance abuse.
- **Health habits:** The sexes vary in terms of regular screenings, preventive care, and minimizing symptoms.

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

Health on Campus

As one of an estimated 21 million college students in the United States, you are part of a remarkably diverse group. Today's undergraduates come from every age group and social, racial, ethnic, economic, political, and religious background. Some 12 million are female; 9 million, male. You may have served in the military, started a family, or emigrated from another country. You might be enrolled in a two-year college, a four-year university, or a technical school. Your classrooms might be in a busy city or a small town—or they might exist solely as a virtual campus. Although

the majority of undergraduates are “traditional” age (between 18 and 24 years old), more of you than ever before—8 million—are over age 25.¹⁵

Today’s college students are both similar to and different from previous generations in many ways. Among the unique characteristics of current undergraduates are the following:

- They are the first generation of “digital natives,” who’ve grown up in a wired world.
- They are the most diverse in higher-education history. About 15 percent are black; an equal percentage are Hispanic.
- They are both more connected and more isolated than their predecessors, with a “tribe” of friends, family, and acquaintances in constant contact through social media but with weak interpersonal, communications, and problem-solving skills.
- More students are working, working longer hours, taking fewer credits, requiring more time to graduate, and leaving college with large student loan debts.
- They are more coddled and protected by parents, who remain very involved in their daily lives.
- They were born into a nation enduring “unrelenting and profound change at a speed and magnitude never before experienced.”
- They face a future in which the pace and scale of change will constantly accelerate.

.....
✓ **check-in** A recent analysis of community college students identified four types of entering undergraduates: dreamers, drifters, passengers, and planners. What kind are you?
.....

If you’re a dreamer, seek guidance to fill in the details of your “big picture” goal for college.
.....

If you’re a drifter, focus on developing specific strategies to reach your educational goals.
.....

If you’re a passenger, find a mentor or advisor to help you interpret what you learn.
.....

If you’re a planner, look for help in applying the information you’ve gathered to your unique situation.¹⁶
.....

College and Health

Although the words “college health” often appear together, they are, in fact, two different things

that profoundly influence each other. Healthier students get better grades and are more likely to graduate. A college education boosts health status, income, and community engagement later in life.¹⁷

Yet the transition from high school to college is considered an at-risk period for health and healthy behaviors. As studies in both the United States and Europe have documented, from their final year of high school to the second year of college, students are likely to do the following:

- Gain weight. In a recent study, undergraduates put on around six pounds—nine pounds for the men; four pounds for the women.¹⁸
- Cut back on their participation in sports—perhaps because they move away from hometown teams or they lack free time.
- Decrease some sedentary behaviors, such as viewing TV/DVDs and playing computers, but increase others, such as Internet use and studying.
- Eat less fruit and fewer vegetables.
- Consume more alcohol.¹⁹

Although healthier than their peers who are not attending college, undergraduates have significant health issues that can affect their overall well-being and ability to perform well in an academic environment:

- More than half report common acute illnesses, such as colds and flus, that interfere with their studies.
- A significant proportion report symptoms of depression, anxiety, and other mental disorders.
- For many, poor sleep has an impact on academic performance.
- Undergraduates are more likely to use alcohol and drugs than nonstudents their age.
- College students experience higher rates of interpersonal violence.
- On the positive side, college students are less likely to be overweight or obese, to smoke, to consume high-fat and low-fiber foods, to have high cholesterol levels, and to engage in high-risk sexual behavior than young adults who are not attending college.²⁰

College also represents a rite of passage, when undergraduates typically engage in “adult” behaviors, such as drinking, getting involved in intimate relationships, and taking personal responsibility for health behaviors (such as sleep schedules and nutrition) that their parents may have previously supervised. Students cramming for a big