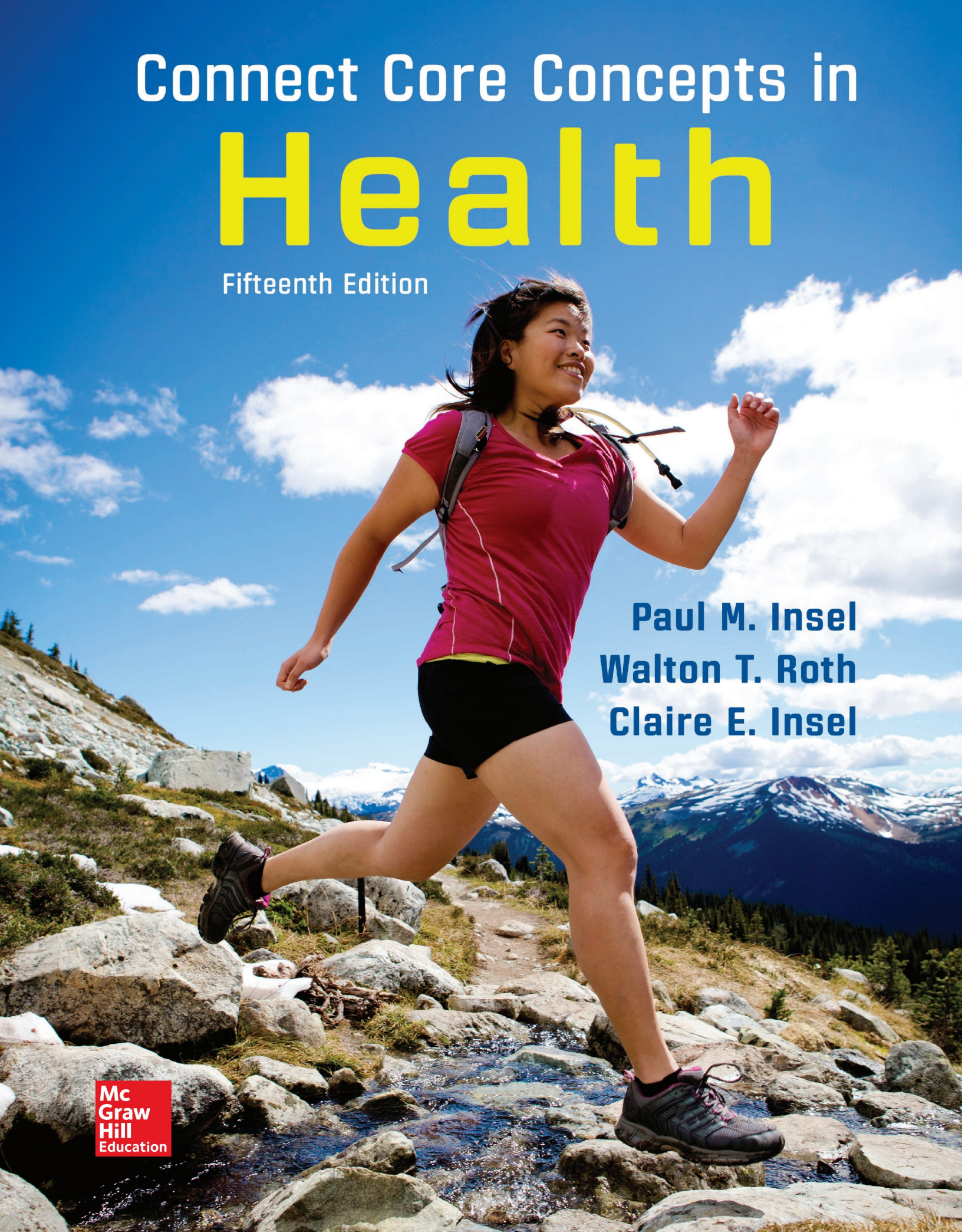


Connect Core Concepts in **Health**

Fifteenth Edition

**Paul M. Insel
Walton T. Roth
Claire E. Insel**

**Mc
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Hill
Education**



CONNECT CORE CONCEPTS IN HEALTH

FIFTEENTH EDITION

Paul M. Insel

Stanford University

Walton T. Roth

Stanford University

Claire E. Insel

*California Institute of
Human Nutrition*





CONNECT CORE CONCEPTS IN HEALTH, FIFTEENTH EDITION

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Using Food Labels

WELLNESS WORKSHEET

Informed Food Choices

Be sure to complete all portions of the lab. There are two parts, appearing on two separate screens. Once you complete all content in a particular part, you will be able to navigate to the next screen using the navigation map at the top or bottom of the activity.

USING FOOD LABELS

Choose three food items to evaluate. You might want to select three similar items, such as regular, low-fat, and fat-free salad dressing, or three very different items. Record the information from their food labels in the table below.

To receive an initial score of complete, fill out all fields in the table. Enter a zero (0) in a field if a food does not contain a particular nutrient. Enter only whole numbers and decimals in the log. For example, enter a half gram of dietary fiber as 0.5, not 1/2.

Food Items			
Serving size			

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Physical Responses to Stressors

Imagine a close call. As you step off the curb, a car careens toward you. With just a fraction of a second to spare, you leap safely out of harm's way. In that split second of danger and in the moments following it, you experience a predictable series of physical reactions. Your body goes from a relaxed state to one prepared for physical action to cope with a threat to your life.

Two systems in your body are responsible for your physical response to stressors: the nervous system and the endocrine system. Through rapid chemical reactions affecting almost every part of your body, you are primed to act quickly and appropriately in time of danger.

The Nervous System

The nervous system consists of the brain, spinal cord, and nerves. Part of the nervous system is under voluntary control, as when you tell your arm to reach for a chocolate. The part that is *not* under conscious supervision—for example, the part that controls the digestion of the chocolate—is the **autonomic nervous system**. In addition to digestion, it controls your heart rate, breathing, blood pressure, and hundreds of other involuntary functions.

The autonomic nervous system consists of two divisions:

- The **parasympathetic division** is in control when you are relaxed. It aids in digesting food, storing energy, and promoting growth.
- The **sympathetic division** is activated when your body is stimulated, for example, by exercise, and when there is an emergency, such as severe pain, anger, or fear.

EXPERIENCE REACTIONS BY TAKING THE PULSE.

- The brain releases **endorphins**—chemicals that can inhibit or block sensations of pain—in case you are injured.

As a group, these nearly instantaneous physiological changes give you the heightened reflexes and strength you

stress response The physical and emotional reactions to a stressor.

stress The general physical and emotional state that the stressor produces.

nervous system The brain, spinal cord, and nerves.

autonomic nervous system The part of the nervous system that controls certain basic body processes; consists of the sympathetic and parasympathetic divisions.

parasympathetic division The part of the autonomic nervous system that moderates the excitatory effect of the sympathetic division, slowing metabolism and restoring energy supplies.

sympathetic division Division of the autonomic nervous system that reacts to danger or other challenges by accelerating body processes.

endocrine system The system of glands, tissues, and cells that secrete hormones into the bloodstream to influence metabolism and other body processes.

hormone A chemical messenger produced in the body and transported in the bloodstream to target cells or organs for specific regulation of their activities.

After being bullied for several weeks by the same individuals, Alex decided to hold his ground and be assertive. He felt his breathing elevate and his heart rate increase. What type of reaction was Alex experiencing?

Click the answer you think is right.

cognitive restructuring

homeostasis

fight-or-flight

downshifting

Do you know the answer?

[Read about this](#)

I know it Think so Unsure No idea

Connect Insight[®] is Connect's new one-of-a-kind visual analytics dashboard—now available for both instructors and students—that provides at-a-glance information regarding student performance, which is immediately actionable. By presenting assignment, assessment, and topical performance results together with a time metric that is easily visible for aggregate or individual results, Connect Insight gives the user the capability to take a just-in-time approach to teaching and learning, which was never before available. Connect Insight presents data that empowers students and helps instructors improve class performance in a way that is efficient and effective.



PROVEN, SCIENCE-BASED CONTENT

McGraw-Hill’s digital teaching and learning tools are built on the solid foundation of *Connect Core Concepts in Health*’s authoritative, science-based content. *Connect Core Concepts in Health* is written by experts who work and teach in the fields of exercise science, medicine, physical education, and health education. *Connect Core Concepts in Health* provides accurate, reliable, current information on key health and wellness topics, while also addressing issues related to mind–body health, research, diversity, and consumer health. The pedagogical program for the 15th edition maintains important features on behavior change, personal reflection, critical thinking, and other key content and skills.

Assess Yourself features provide assessments for students to use in analyzing their own health and health-related behaviors.

Take Charge boxes challenge students to take meaningful action toward personal improvement.

Critical Consumer sections help students to navigate the numerous and diverse set of health-related products currently available.

Diversity Matters features discuss the ways that our personal backgrounds influence our health strengths, risks, and behaviors.

Wellness on Campus sections focus on health issues, challenges, and opportunities that students are likely to encounter on a regular basis.

Behavior Change Strategy sections offer specific behavior management/modification plans related to the chapter topic.

Ask Yourself: Questions for Critical Thinking and Reflection encourage critical reflection on students’ own health-related behaviors.

Quick Stats sections, updated for the 15th edition, focus attention on particularly striking statistics related to the chapter content.

Tips for Today and the Future end each chapter with a quick, bulleted list of concrete actions readers can take now and in the near future.



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WHAT'S NEW IN **CONNECT CORE CONCEPTS IN HEALTH**, 15TH EDITION?

UPDATES INFORMED BY STUDENT DATA

Changes to the 15th edition reflect new research findings, updated statistics, and current hot topics that impact students' wellness behaviors. Revisions were also guided by student performance data collected anonymously from the tens of thousands of students who have used LearnSmart with *Connect Core Concepts in Health*. Because virtually every text paragraph is tied to several questions that students answer while using LearnSmart, the specific concepts that students are having the most difficulty with can be pinpointed through empirical data.

Aggregated student performance data collected anonymously from LearnSmart helps pinpoint concepts students find most challenging, guiding revisions to the text and Connect program.

65 %
0:34
2410

Sleep and Stress Stress hormone levels in the bloodstream vary throughout the day and are related to sleep patterns. Peak concentrations occur in the early morning, followed by a slow decline during the day and evening. Concentrations return to peak levels during the final stages of sleep and in the early morning hours. Stress hormone levels are low during non-REM sleep and increase during REM sleep. With each successive sleep cycle during the night, REM sleep lasts a little longer. This increase in REM sleep duration with each sleep cycle may underlie the progressive increase in circulating stress hormones during the final stages of sleep.

76 %
0:34
3404

Even though stress hormones are released during sleep, it is the *lack* of sleep that has the greatest impact on stress. In someone who is suffering from **sleep deprivation** (not getting enough sleep over time), mental and physical processes steadily deteriorate. A sleep-deprived person experiences headaches, feels irritable, is unable to concentrate, and is more prone to forgetfulness. Poor-quality sleep has long been associated with stress and depression.

CHAPTER-BY-CHAPTER LIST OF CHANGES

Chapter 1: Taking Charge of Your Health

- New *Take Charge* feature: Life Expectancy and the Obesity Epidemic
- New section on the Affordable Care Act
- New information on qualities and behaviors associated with each dimension of wellness
- Updated information on making life changes, on financial wellness, on key wellness issues for college students, and on health disparities, including an updated *Diversity Matters* feature: Moving toward Health Equality
- Updated statistics on leading causes of death in the United States; key contributors to death among Americans;

progress toward Healthy People 2020 targets; and deaths attributed to low educational attainment, poverty, and income inequality

Chapter 2: Stress: The Constant Challenge

- New major section on sleep and its role in stress, including a new *Behavior Change Strategy*: Taking Control of Your Sleep and a new *Take Charge* feature: Digital Devices: Help or Harm for a Good Night's Sleep?
- New information on the influence of motivation on health, on connectedness and health, and on gender and stress; updated information on steps for managing stress

- Updated *Diversity Matters* feature: Diverse Populations, Discrimination, and Stress; updated *Wellness on Campus* feature: Coping with News of Traumatic Events; updated *Take Charge* feature: Mindfulness Meditation

Chapter 3: Psychological Health

- Updated information on psychological defense mechanisms; mood disorders; professional help; and warning signs, risk factors, and preventive factors related to suicide
- Updated *Diversity Matters* feature: Ethnicity, Culture, and Psychological Health and updated *Wellness on Campus* feature: Deliberate Self-Harm
- New and updated statistics on the prevalence of selected psychological disorders among Americans, on suicide methods, and on the prevalence of suicidal thoughts

Chapter 4: Intimate Relationships and Communication

- Updated information on gender roles, sexual orientation, and gender identity in relationships
- New and updated statistics on marital status; median age of marriage; married women in the labor force; and Americans' attitudes toward gay relationships, online dating, cohabitation, and single-parent families
- Updated information on digital communication and social networks and on strategies of strong families
- Updated *Wellness On Campus* feature: Hooking Up and updated *Diversity Matters* feature: Marriage Equality

Chapter 5: Sex and Your Body

- Updated *Diversity Matters* feature: Genital Alteration
- Updated information on differentiation of an embryo, intersex, gender roles, sexual orientation, gender identity, commercial sex, and treatments for female hypoactive sexual desire disorder

Chapter 6: Contraception

- Updated information on modern versus traditional contraception
- New figure on women's use of contraception and its effectiveness
- Updated statistics on the rate of unintended pregnancies and contraceptive use worldwide
- Updated *Critical Consumer* feature: Obtaining a Contraceptive from a Health Clinic or Physician and *Diversity Matters* feature: Barriers to Contraceptive Use

Chapter 7: Abortion

- Updated statistics on pregnancy, birth, and abortion rates
- New information about the history of abortion, safety of abortions, and medical versus aspiration abortion
- Updated information on personal considerations for men about abortion, legal restrictions and state-specific requirements for abortion, and the public debate about abortion

Chapter 8: Pregnancy and Childbirth

- New coverage related to the Zika virus
- Updated statistics on the average age of first-time mothers in the United States; costs of raising a child; infertility; fetal alcohol syndrome; depression during pregnancy; hospital versus at-home births in the United States; breastfeeding; and premature births, low birth weight, and infant mortality
- Updated information on the second trimester of pregnancy and on avoiding drugs and other environmental hazards
- Updated *Critical Consumer* feature: Home Pregnancy Tests and *Take Charge* feature: Physical Activity during Pregnancy

Chapter 9: Drug Use and Addiction

- New information on Internet gaming disorder
- Updated statistics on drug overdose deaths, nonmedical drug use among Americans, heroin use and deaths, use of opioid painkillers and correlation with heroin use, psychoactive drugs and their potential for substance disorder and addiction, sex and drug use, drug use among college students, workplace drug testing, and state and federal prison inmates serving time for drug offenses
- Updated information on diagnosing drug use and addiction; risk factors for drug use and addiction; commonly misused drugs and their effects; and marijuana legalization, medical uses for marijuana, and long-term effects of using marijuana
- Updated *Diversity Matters* feature: Drug Use and Race/Ethnicity

Chapter 10: Alcohol: The Most Popular Drug

- New information about alcohol absorption
- Updated information on the possible health benefits of alcohol
- Updated *Wellness on Campus* features: Alcoholic Energy Drinks: The Dangers of Being "Drunk and Wide Awake"; and Peer Pressure and College Binge Drinking

- Updated statistics on alcohol use disorder and suicide; drunk driving; binge drinking and heavy alcohol use; fetal alcohol syndrome; arrests for drug and alcohol-related offenses; and the contribution of alcohol use to murders, assaults, and rapes

Chapter 11: Tobacco Use

- New and updated information on e-cigarettes, tobacco additives, tolerance and withdrawal, and economic costs of cigarettes
- Updated statistics on annual deaths from tobacco-related causes, deaths among nonsmokers due to environmental tobacco smoke, demographics of smokers, American teen smokers, quitting smoking, total health care costs of smoking, and state rates of smoking
- Updated *Critical Consumer* feature: Tobacco Advertising

Chapter 12: Nutrition Basics

- New section on the Dietary Guidelines for Americans 2015–2020
- Updated information on added sugars, dietary fat, energy needs, building and supporting healthy eating patterns, how the U.S. diet compares to recommendations, the DASH eating plan, biotech crops, and food safety
- New information on calorie labeling for restaurants and vending machines
- Updated information on the Social-Ecological Model for food and physical activity decisions
- New *Take Charge* feature: Positive Changes to Meet Dietary Guidelines; updated *Take Charge* feature: Fats and Health; and updated *Critical Consumer* feature: Using Food Labels

Chapter 13: Exercise for Health and Fitness

- New information on the health benefits of exercise, the risks of sedentary time, core training, and managing athletic injuries
- New *Take Action* feature: Move More, Sit Less and updated *Critical Consumer* feature: What to Wear
- Updated information on target heart rate range, core muscles, and differences in muscular strength between sexes

Chapter 14: Weight Management

- Updated information on energy intake, dietary patterns, and sleep as lifestyle factors for weight management
- Updated information on environmental factors in weight management, safety and effectiveness of

common over-the-counter weight loss pills, and prescription weight loss drugs

- New information on gut microbiota, eating disorders, and positive body image
- Updated statistics on the prevalence of obesity in America and on the amount of money spent on weight loss efforts per year in America
- Updated *Wellness on Campus* feature: The Freshman 15: Myth or Fact?; *Critical Consumer* feature: Evaluating Fat and Sugar Substitutes; *Take Charge* feature: Lifestyle Strategies for Successful Weight Management; and *Critical Consumer* feature: Are All Calories and Dietary Patterns Equal for Weight Loss?

Chapter 15: Cardiovascular Health

- New information on treatments for high blood pressure, medications for high cholesterol, and e-cigarettes and their relationship to cardiovascular disease
- Updated statistics on the prevalence of overall cardiovascular disease, high cholesterol, diabetes and prediabetes, heart attack and stroke deaths, recurrent heart attacks, heart failure, and cardiovascular disease deaths attributed to smoking and environmental tobacco smoke

Chapter 16: Cancer

- New information on genomic research
- Updated information on early detection of cancer, foods that increase risk of colorectal cancer, recommendations for mammography, skin cancer treatments, biological therapies/immunotherapy, and cancer vaccines
- Updated statistics on the number of annual cancer cases and deaths; five-year survival rates; and cancer deaths caused by poor diet, exercise habits, obesity, and smoking

Chapter 17: Immunity and Infection

- New coverage of Zika disease, new information on climate change and allergies
- Updated information on HPV, Ebola, West Nile virus, *E. coli*, and hantavirus
- Updated information on immunization recommendations, vaccination efficacy and rates, and deaths due to infectious diseases worldwide
- Updated statistics on the H5N1 virus, tuberculosis, polio, tickborne infections, pertussis, HPV vaccination, and antibiotic resistance
- Updated *Diversity Matters* feature: Poverty, Ethnicity, and Asthma

Chapter 18: Sexually Transmitted Infections

- Updated information on HIV diagnosis and treatment
- Updated information and statistics on hepatitis B, syphilis, and trichomoniasis
- Updated *Diversity Matters* feature: HIV/AIDS around the World; *Wellness on Campus* feature: The Riskiest Sexual Behavior Is Becoming More Common; and *Critical Consumer* feature: Getting an HIV Test
- Updated statistics on new STI cases; direct medical costs of STIs; number of Americans living with HIV; percentage of HIV-infected Americans who do not know of their infections; and rates of chlamydia, gonorrhea, human papillomavirus, genital herpes, and syphilis

Chapter 19: Environmental Health

- New information on pesticides, preventing air and chemical pollution, the 2015 UN Climate Change Conference, and the effects on children whose mothers were exposed to air pollution while pregnant
- Updated information on carbon dioxide levels in the atmosphere, climate change, and the hole in the ozone layer
- Updated statistics on world population growth, energy consumption of selected countries, renewable energy use, deaths from air pollution per year, and trash and compost generated in America

Chapter 20: Conventional and Complementary Medicine

- New information on integrative health, evaluating complementary and alternative therapies, and acupuncture
- Updated statistics on the number of Americans using complementary and alternative therapies
- New information on types of research studies, the placebo effect, recognized medical specialties, choosing a specialist, and key concepts in health care insurance coverage

- Updated *Critical Consumer* feature: Health Care Reform with the ACA

Chapter 21: Personal Safety

- New information on head injuries in contact sport
- New and updated information on preventing acquaintance rape
- Updated *Wellness on Campus* feature: Cell Phones and Distracted Driving and *Diversity Matters* feature: Injuries among Young Men
- New and updated statistics on deaths and costs of injuries, leading causes of deaths from unintentional injuries, deaths from motor vehicle crashes in the United States, use of seat belts, bicycle helmet laws, pedestrian injuries, gun ownership, sexual assaults, arrests, and violent crimes

Chapter 22: Aging: A Vital Process

- Updated statistics and information on the number of older Americans, life expectancy, poverty rates, living arrangements of people 65 and older, and Social Security benefits

Chapter 23: Dying and Death

- Updated information on defining and learning about death, physician-assisted death and voluntary active euthanasia, the shortage of organs among some racial or ethnic groups, autopsies, and helping children cope with loss
- Updated *Critical Consumer* feature: A Consumer's Guide to Funerals
- New *Take Charge* feature: Surviving the Violent Death of a Loved One
- Updated statistics on people who die in hospice and on people waiting for an organ transplant and the number of people who die waiting for one

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INSTRUCTOR RESOURCES

Instructor resources available through Connect for *Connect Core Concepts in Health* include a Course Integrator Guide, Test Bank, Image Bank, and PowerPoint presentations for each chapter. A static PDF version of the interactive Wellness Worksheets offered in Connect is also available.

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Academic Contributors

Steve Flowers, MA, LMFT
Mindfulness Based Stress Reduction Program at Enloe
Medical Center
Stress: The Constant Challenge

Heidi Roth, MD
University of North Carolina—Chapel Hill
Sleep Medicine

Michael Joshua Ostacher, MD, MPH, MMSc
Stanford University School of Medicine
Psychological Health

Inge Hansen, PsyD
Stanford University
Intimate Relationships and Communication

Christine Labuski, PhD
Virginia Polytechnic Institute and State University
Sex and Your Body

Kamilee Christenson, MD
Stanford University
Contraception

Anna Altshuler, MD, MPH
California Pacific Medical Center
Abortion

Jeroen Vanderhoeven, MD
Swedish Medical Center
Pregnancy and Childbirth

Chwen-Yuen Angie Chen, MD, FACP, FASAM
Internal and Addiction Medicine, Stanford University
Drug Use and Addiction

Johanna Rochester, PhD
The Endocrine Disruption Exchange
*Tobacco Use
Environmental Health*

Melissa Bernstein, PhD, RD, LD
Rosalind Franklin University of Medicine and Science
Nutrition Basics

Tom Fahey, EdD
California State University—Chico
Exercise for Health and Fitness

Kim McMahon, MS, RD, LD
Benedictine University and Logan College
Weight Management

Jonathan Schwartz, MD
Stanford University School of Medicine
Cardiovascular Health

Somasundaram Subramaniam, MD, MS
Swedish Cancer Institute
Cancer

Martha Zuniga, PhD
University of California—Santa Cruz
Immunity and Infection

Candice J. McNeil, MD, MPH
Wake Forest University Health Sciences
Sexually Transmitted Infections

Robert Jarski, PhD, PA
School of Health Sciences, Oakland University
Conventional and Complementary Medicine

Marcia Seyler, MPhil
Aging: A Vital Process

Nancy Kemp, MD, MA
Green Valley Hospice
Dying and Death

Academic Advisors and Reviewers for the 15th Edition

Ronald Baldwin, Beaufort County Community College

Kathy Bingham, Antelope Valley College

Mia M. Botkin, Moreno Valley College

Paula Congleton, Santa Barbara City College

Wendy Frappier, Minnesota State University Moorhead

James Metcalf, George Mason University

Kristin Newton, Gardner-Webb University

Jodi Rees, Indiana State University

Scott Rogers, College of Southern Idaho

Richard Scheidt, Fresno City College

Carol Sloan, Henry Ford College

Teresa K. Snow, Georgia Institute of Technology

Susan Stockton, University of Central Missouri

B. Denise Stokich, University of Nevada, Reno

Robert O. Walsh, Utah Valley University

Heidi Wiedenfeld, Texas Tech University

Taking Charge of Your Health



CHAPTER OBJECTIVES

- Define wellness as a health goal
- Explain two major efforts to promote national health
- List factors that influence wellness
- Explain methods for achieving wellness through lifestyle management
- List ways to promote lifelong wellness for yourself and your environment

TEST YOUR KNOWLEDGE

1. Which of the following lifestyle factors influence wellness?
 - a. Managing your finances
 - b. Cultivating a support group
 - c. Exercising regularly
2. The terms *health* and *wellness* mean the same thing. True or False?
3. What is the leading cause of death for college-age students?
 - a. Alcohol misuse
 - b. Motor vehicle accidents
 - c. Cancer
4. A person's genetic makeup determines whether he or she will develop certain diseases (such as breast cancer), regardless of that person's health habits. True or False?

ANSWERS

1. **ALL THREE.** All of these practices affect your sense of well-being.
2. **FALSE.** The term *health* refers to the overall condition of the body or mind and to the presence or absence of illness or injury. The term *wellness* refers to optimal health and vitality, encompassing the dimensions of well-being.
3. **B.** Motor vehicle accidents are the leading cause of death for people aged 15–24 years.
4. **FALSE.** In many cases, behavior can counter the effects of heredity or environment. For example, diabetes may run in families, but this disease is also associated with controllable factors, such as being overweight and inactive.

The next time you ask someone, “How are you?” and you get the automatic response “Fine,” be grateful. If that person had told you how he or she actually felt—physically, emotionally, mentally—you might wish you had never asked.

Your friend might be one of the too many people who live most of their lives feeling no better than just all right, or so-so, or downright miserable. Some do not even know what optimal wellness is. How many people do you know who feel great most of the time? Do you?

WELLNESS AS A HEALTH GOAL

Generations of people have viewed good health simply as the absence of disease, and that view largely prevails today. The word **health** typically refers to the overall condition of a

person's body or mind and to the presence or absence of illness or injury. **Wellness** expands this idea of good health to include living a rich, meaningful, and energetic life. Beyond the simple presence or absence of disease, wellness can refer to optimal health and vitality—to living life to its fullest. Although we use the words *health* and *wellness* interchangeably, they differ in two important ways:

- *Health*—or some aspects of it—can be determined or influenced by factors beyond your control, such as your genes, age, and family history. Consider, for example, a 50-year-old man with a strong family history of early heart disease. This factor increases this man's risk of having a heart attack at an earlier age than might be expected.

- *Wellness* is determined largely by the decisions you make about how you live. That same 50-year-old man can reduce his risk of an early heart attack by eating sensibly, exercising, and having regular screening tests. Even if he develops heart disease, he may still live a long, rich, meaningful life. These factors suggest he should choose not only to care for himself physically but also to maintain a positive outlook, enjoy his relationships with others, challenge himself intellectually, and nurture other aspects of his life.

health The overall condition of body or mind and the presence or absence of illness or injury.

TERMS

wellness Optimal health and vitality, encompassing all the dimensions of well-being.

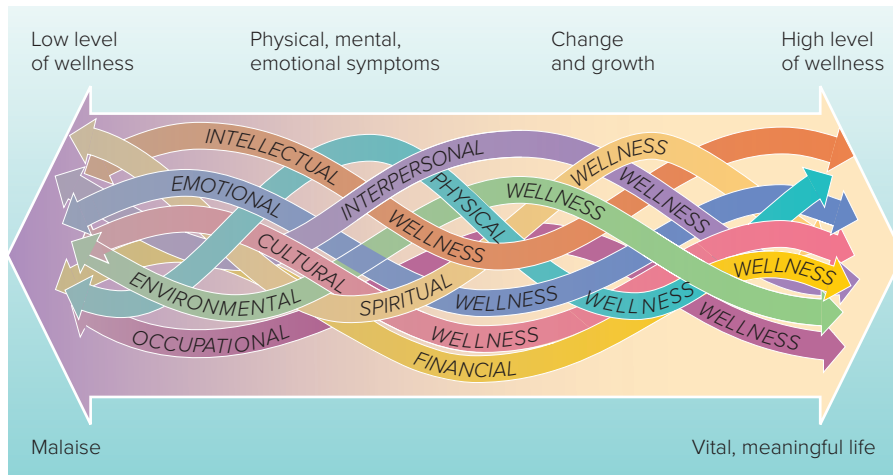


FIGURE 1.1 The wellness continuum. The concept of wellness includes vitality in a number of interrelated dimensions, all of which contribute to wellness.

Wellness, therefore, involves conscious decisions that affect **risk factors** that contribute to disease or injury. We cannot control risk factors such as age and family history, but we can control lifestyle behaviors.

Dimensions of Wellness

The process of achieving wellness is continuing and dynamic (Figure 1.1), involving change and growth. Wellness is not static. The encouraging aspect of wellness is that you can actively pursue it. Here are nine dimensions of wellness:

- Physical
- Emotional
- Intellectual
- Interpersonal
- Cultural
- Spiritual
- Environmental
- Financial
- Occupational

These dimensions are interrelated and may affect each other, as the following sections explain. Figure 1.2 lists specific qualities and behaviors associated with each dimension.

Physical Wellness Your physical wellness includes not just your body’s overall condition and the absence of disease but also your fitness level and your ability to care for yourself. The higher your fitness level, the higher your level of physical wellness. Similarly, as you develop the ability to take care of your own physical needs, you ensure greater physical wellness. The decisions you make now, and the habits you develop over your lifetime, will determine the length and quality of your life.

Emotional Wellness Trust, self-confidence, optimism, satisfying relationships, and self-esteem are some of the qualities of emotional wellness. Emotional wellness is dynamic and involves the ups and downs of living. No one can achieve an emotional “high” all the time. Emotional wellness fluctuates with your intellectual, physical, spiritual, cultural, and interpersonal health. Maintaining emotional wellness requires exploring thoughts and feelings. *Self-*

acceptance is your personal satisfaction with yourself—it might exclude society’s expectations—whereas *self-esteem* relates to the way you think others perceive you; *self-confidence* can be a part of both acceptance and esteem. Achieving emotional wellness means finding solutions to emotional problems, with professional help if necessary.

Intellectual Wellness Those who enjoy intellectual wellness continually challenge their minds. An active mind is essential to wellness because it detects problems, finds solutions, and directs behavior. Throughout their lifetimes people who enjoy intellectual wellness never stop learning. Often they discover new things about themselves.

Interpersonal Wellness Satisfying and supportive relationships are important to physical and emotional wellness. Learning good communication skills, developing the capacity for intimacy, and cultivating a supportive network are all important to interpersonal (or social) wellness. Social wellness requires participating in and contributing to your community and to society.

Cultural Wellness Cultural wellness refers to the way you interact with others who are different from you in terms of ethnicity, religion, gender, sexual orientation, age, and customs (practices). It involves creating relationships with others and suspending judgment on others’ behavior until you have lived with them or “walked in their shoes.” It also includes accepting, valuing, and even celebrating the different cultural ways people interact in the world. The extent to which you maintain and value cultural identities is one measure of cultural wellness.

Spiritual Wellness To enjoy spiritual wellness is to possess a set of guiding beliefs, principles, or values that give meaning and purpose to your life, especially in difficult times. The spiritually well person focuses on the positive

risk factor A condition that increases your chances of disease or injury.

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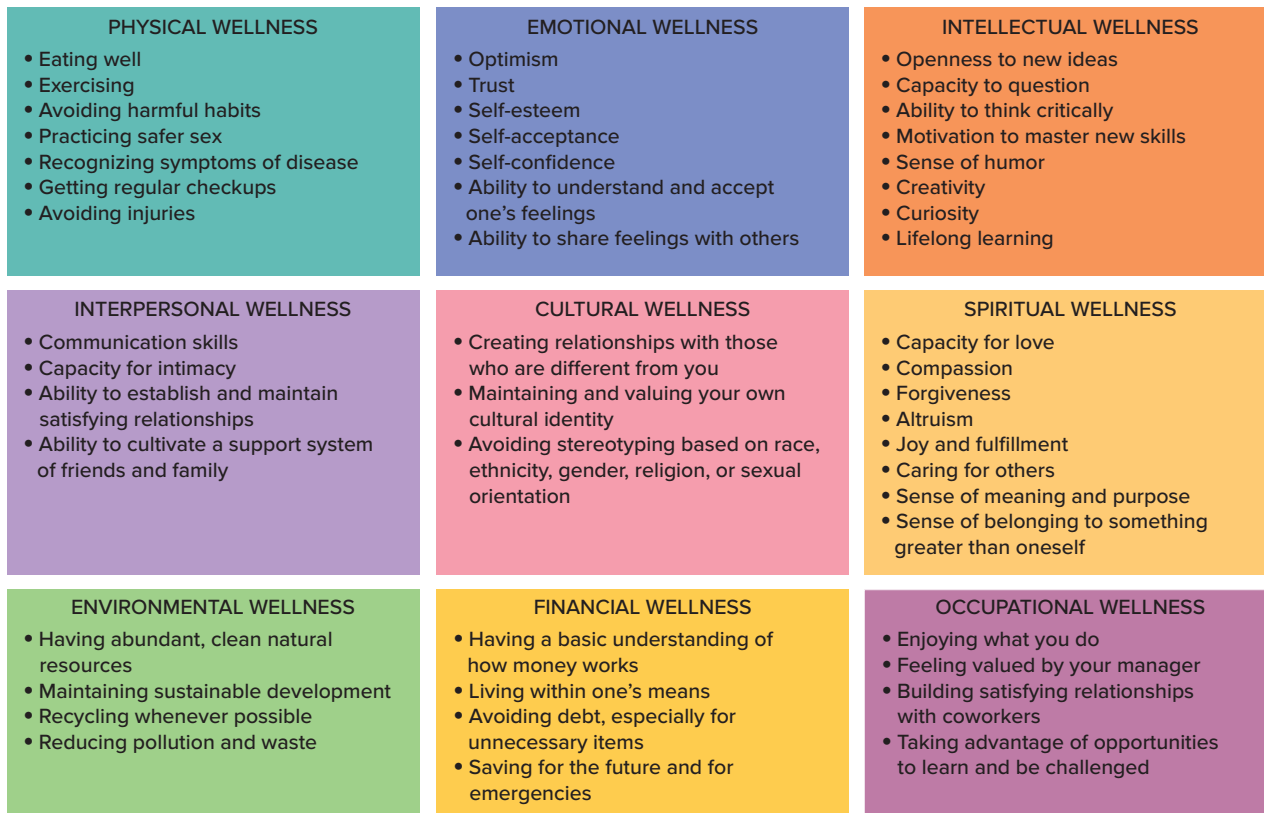


FIGURE 1.2 Qualities and behaviors associated with the dimensions of wellness. Carefully review each dimension and consider your personal wellness strengths and weaknesses.

aspects of life and finds spirituality to be an antidote for negative feelings such as cynicism, anger, and pessimism. Organized religions help many people develop spiritual health. Religion, however, is not the only source or form of spiritual wellness. Many people find meaning and purpose in their lives through their loved ones or on their own—through nature, art, meditation, or good works.

Environmental Wellness Your environmental wellness is defined by the livability of your surroundings. Personal health depends on the health of the planet—from the safety of the food supply to the degree of violence in society. Your physical environment can support your wellness or diminish it. To improve your environmental wellness, you can learn about and protect yourself against hazards in your surroundings and work to make your world a cleaner and safer place.

Financial Wellness Financial wellness refers to your ability to live within your means and manage your money in

a way that gives you peace of mind. It includes balancing your income and expenses, staying out of debt, saving for the future, and understanding your emotions about money. See the “Financial Wellness” box.

Occupational Wellness Occupational wellness refers to the level of happiness and fulfillment you gain through your work. Although high salaries and prestigious titles are gratifying, they alone may not bring about occupational wellness. An occupationally well person enjoys his or her work, feels a connection with others in the workplace, and takes advantage of the opportunities to learn and be challenged. Another important aspect of occupational wellness is recognition from managers and colleagues. An ideal job draws on your interests and passions, as well as your vocational skills, and allows you to feel that you are making a contribution in your everyday work.

New Opportunities for Taking Charge

Wellness is a fairly new concept. One hundred and fifty years ago, Americans considered themselves lucky just to survive to adulthood. A boy born in 1850, for example, could expect to live only about 38 years and a girl, 40 years. **Morbidity** and **mortality rates** (rates of illness and death, respectively) from common **infectious diseases** (such as pneumonia, tuberculosis, and diarrhea) were much higher than Americans experience today.

morbidity rate The relative incidence of disease among a population.

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mortality rate The number of deaths in a population in a given period; usually expressed as a ratio, such as 75 deaths per 1000 members of the population.

infectious disease A disease that can spread from person to person, caused by microorganisms such as bacteria and viruses.



Researchers surveyed nearly 90,000 college students about their financial behaviors and attitudes. According to results released in 2016, a large percentage of students feel less prepared to manage their money than to handle almost any other aspect of college life. They also express distress over their current and future financial decisions. Front and center in their minds is how to manage student loan debt. *Financial wellness* means having a healthy relationship with money. Here are strategies for establishing that relationship:

Follow a Budget

A budget is a way of tracking where your money goes and making sure you're spending it on the things that are most important to you. To start one, list your monthly income and expenditures. If you aren't sure where you spend your money, track your expenses for a few weeks or a month. Then organize them into categories, such as housing, food, transportation, entertainment, services, personal care, clothes, books and school supplies, health care, credit card and loan payments, and miscellaneous. Knowing where your money goes is the first step in gaining control of it.

Now total your income and expenditures and examine your spending patterns. Use this information to set guidelines and goals for yourself. If your expenses exceed your income, identify ways to make some cuts. For example, if you spend money going out at night, consider less expensive options like having a weekly game night with friends or organizing an occasional potluck.

Be Wary of Credit Cards

Students have easy access to credit but little training in finances. The percentage of students who have access to credit cards has increased from 28% in 2012 to 41% in 2015. This increase in credit card use has also correlated with an increase in paying credit card bills late, paying only the minimum amount, and having larger total outstanding credit balances.

Shifting away from using credit cards and toward using debit cards is a good strategy for staying out of debt. Familiarity with financial terminology helps as well. Basic financial literacy with regard to credit cards involves understanding terms like *APR* (annual percentage rate—the interest you're charged on your balance), *credit limit* (the maximum amount you can borrow), *minimum monthly payment* (the smallest payment your creditor will accept each month), *grace period* (the number of days you have to pay your bill before interest or penalties are charged), and *over-the-limit* and *late fees* (the amounts you'll be charged if you go over your credit limit or your payment is late).

Manage Your Debt

A 2015 study indicated that graduating college students often had debts of \$35,000—and this amount is expected to rise. When it comes to student loans, having a direct, personal plan for repayment can save time and money, reduce stress, and help you prepare for the future. However, only about 10%

of students surveyed feel they have all the information needed to pay off their loans. Work with your lender and make sure you know how to access your balance, when to start repayment, how to make payments, what your repayment plan options are, and what to do if you have trouble making payments. Information on managing federal student loans is available from <https://studentaid.ed.gov/sa/>.

If you have credit card debt, stop using your cards and start paying them off. If you can't pay the whole balance, try to pay more than the minimum payment each month. It can take a very long time to pay off a loan by making only the minimum payments. For example, paying off a credit card balance of \$2000 at 10% interest with monthly payments of \$20 would take 203 months—nearly 17 years. Check out an online credit card calculator like <http://money.cnn.com/calculator/pf/debt-free/>. If you carry a balance and incur finance charges, you are paying back much more than your initial loan.

Start Saving

If you start saving early, the same miracle of compound interest that locks you into years of credit card debt can work to your benefit (for an online compound interest calculator, visit <http://www.interestcalc.org>). Experts recommend “paying yourself first” every month—that is, putting some money into savings before you pay your bills. You may want to save for a large purchase, or you may even be looking ahead to retirement. If you work for a company with a 401(k) retirement plan, contribute as much as you can every pay period.

Become Financially Literate

Most Americans have not received any basic financial training. For this reason, the U.S. government has established the Financial Literacy and Education Commission ([MyMoney.gov](http://www.mymoney.gov)) to help Americans learn how to save, invest, and manage money better. Developing lifelong financial skills should begin in early adulthood, during the college years, if not earlier, as money-management experience appears to have a more direct effect on financial knowledge than does education. For example, when tested on their basic financial literacy, students who had checking accounts had higher scores than those who did not.

SOURCES: Smith, C., and G. A. Barboza. 2013. The role of trans-generational financial knowledge and self-reported financial literacy on borrowing practices and debt accumulation of college students. *Social Science Research Network* (<http://ssrn.com/abstract=2342168>); Plymouth State University. 2013. *Student Monetary Awareness and Responsibility Today!* (<http://www.plymouth.edu/office/financial-aid/smart/>); U.S. Financial Literacy and Education Commission. 2013. *MyMoney.gov* (<http://www.mymoney.gov>); Sparshott, J. 2015. Congratulations, Class of 2015. You're the most indebted ever (for now). *Wall Street Journal*, May 8, 2015 (<http://blogs.wsj.com/economics/2015/05/08/congratulations-class-of-2015-youre-the-most-indebted-ever-for-now/>); EverFi. 2016. *Money Matters on Campus: Examining Financial Attitudes and Behaviors of Two-Year and Four-Year College Students* (www.moneymattersoncampus.org).

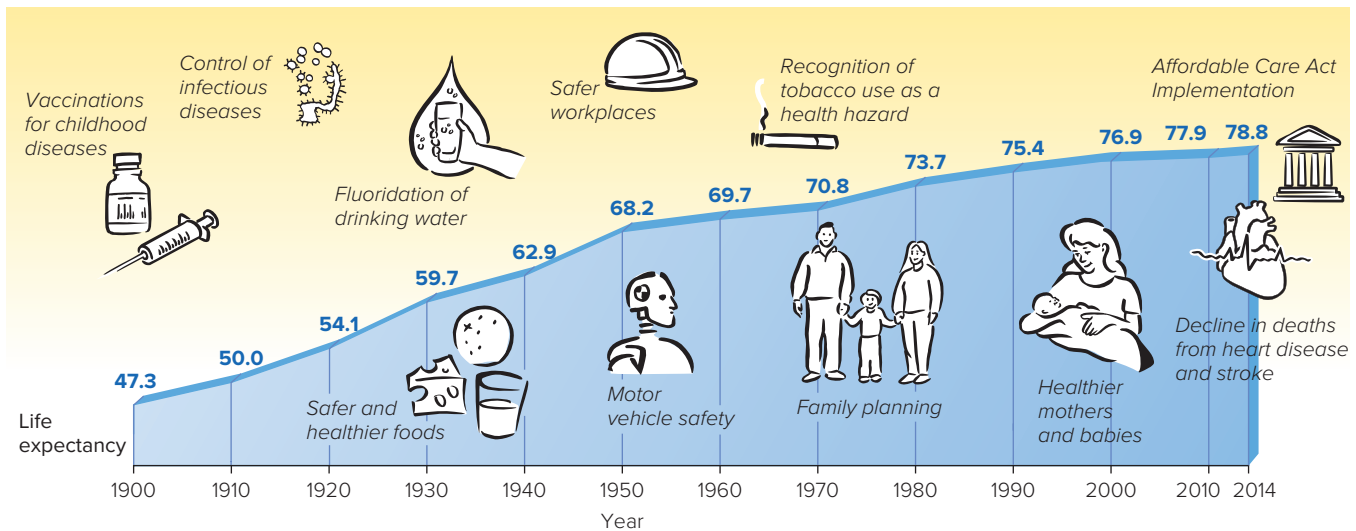


FIGURE 1.3 Public health, life expectancy, and quality of life. Public health achievements during the 20th century are credited with adding more than 25 years to life expectancy for Americans, greatly improving quality of life, and dramatically reducing deaths from infectious diseases. Public health improvements continue into the 21st century, including greater roadway safety and a steep decline in childhood lead poisoning. In 2013, the government mandated that all Americans be covered by health insurance, a protection already long established in most other industrialized countries.

SOURCES: Kochanek, K.D., et al. 2016. Deaths: Final data for 2014. *National Vital Statistics Reports* 65(4); Centers for Disease Control and Prevention. 2011. Ten great public health achievements—United States, 2001–2010. *MMWR* 60(19): 619–623; Centers for Disease Control and Prevention. 1999. Ten great public health achievements—United States, 1900–1999. *MMWR* 48(50): 1141.

By 1980, **life expectancy** nearly doubled, due largely to the development of vaccines and antibiotics to fight infections, and to public health measures such as water purification and sewage treatment to improve living conditions (Figure 1.3). But even though life expectancy has increased, poor health will limit most Americans’ activities during the last 15% of their lives, resulting in some sort of **impaired life** (Figure 1.4). Today a different set of diseases has emerged as our major health threat: Heart disease, cancer, and chronic lower respiratory diseases are now the three leading causes of death for Americans (Table 1.1). An obesity epidemic, beginning in the late 1970s, has also spurred predictions that American life expectancy will decline within the next several decades (see box “Life Expectancy and the Obesity Epidemic” on p. 8). Obesity and poor eating habits can lead to all of the major **chronic diseases**.

The good news is that people have some control over whether they develop chronic diseases. People make choices every day that increase or decrease their risks for such diseases. For example, each of us can take personal responsibility for **lifestyle choices** regarding smoking, diet, exercise, and alcohol use. Table 1.2 shows the estimated number of annual deaths tied to selected underlying causes. For example, the estimated 90,000 deaths tied to alcohol includes deaths due directly to alcohol poisoning as well as a proportion of deaths from causes such as liver cancer and injuries. Similarly, sexual behavior is linked to a proportion of all

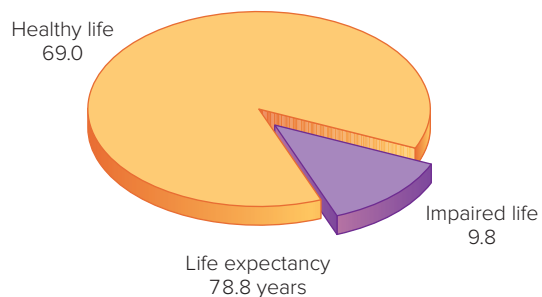


FIGURE 1.4 Quantity of life versus quality of life. Years of healthy life as a proportion of life expectancy in the U.S. population.

SOURCE: Kochanek, K. D., et al. 2016. Deaths: Final data for 2014. *National Vital Statistics Reports* 65(4). National Center for Health Statistics. 2012. *Healthy People 2010 Final Review*. Hyattsville, MD: National Center for Health Statistics.

life expectancy The period of time a member of a given population is expected to live. **TERMS**

impaired life The period of a person’s life when he or she may not be able to function fully due to disease or disability.

chronic disease A disease that develops and continues over a long period, such as heart disease, cancer, or diabetes.

lifestyle choice A conscious behavior that can increase or decrease a person’s risk of disease or injury; such behaviors include smoking, exercising, and eating a healthful diet.