



CONNECT CORE CONCEPTS IN HEALTH BRIEF

SEVENTEENTH EDITION

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CONNECT CORE CONCEPTS IN HEALTH: BRIEF, SEVENTEENTH EDITION

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Marcia Seyler

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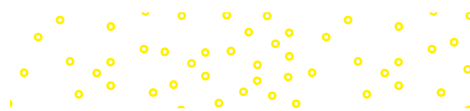
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PROVEN, SCIENCE-BASED CONTENT

Now in its seventeenth edition, *Connect Core Concepts in Health* remains the leading health textbook in U.S. higher education. In 2020, *Connect Core Concepts in Health* won the Textbook and Academic Authors McGuffey Award for Excellence and Longevity. The book's unique psychological approach to mind-body health encourages students to take proactive self-assessments. Students can stay current on the latest studies while learning how to negotiate cross-cultural ideas of what it means to be healthy and how to live in our diverse, consumer-oriented society. McGraw Hill Education's digital and teaching learning tools also integrate *Connect Core Concepts in Health's* authoritative, science-based content.

Take Charge challenges students to take meaningful action toward personal improvement.

Critical Consumer helps students navigate the numerous and diverse health-related products currently available.

Diversity Matters introduces the many ways that cultural and gendered ideas of health come to influence our health strengths, risks, and behaviors.

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

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

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

Quick Stats updated for the seventeenth edition, focuses attention on particularly striking statistics related to the chapter content.

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

CONNECT IS PROVEN EFFECTIVE



McGraw Hill Education Connect[®] is a digital teaching and learning environment that improves performance over a variety of critical outcomes; it is easy to use and proven effective. Connect[®] empowers students by continually adapting to deliver precisely what they need, when they need it, and how they need it, so your class time is more engaging and effective. Connect for *Core Concepts in Health* offers a wealth of interactive online content, including health labs and self-assessments, video activities on timely health topics, and practice quizzes with immediate feedback.

PERSONALIZED LEARNING



Available within Connect, *SmartBook 2.0*[®] makes study time as productive and efficient as possible by identifying and closing knowledge gaps. SmartBook 2.0 identifies what an individual student knows and doesn't know based on the student's confidence level, responses to questions, and other factors. SmartBook 2.0 builds an optimal, personalized learning path for each student, so students spend less time on concepts they already understand and more time on those they don't. As a student engages with SmartBook 2.0, the reading experience continuously adapts by highlighting the most impactful content that person needs to learn at that moment. This ensures that every minute spent with SmartBook 2.0 is returned to the student as the most value-added minute possible. The result? More confidence, better grades, and greater success.

SmartBook 2.0 is now optimized for phones and tablets. Its interactive features are also accessible for students with disabilities. Just like our new ebook and ReadAnywhere app, SmartBook 2.0 is available both online and offline.

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			

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.

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 organs that secrete hormones into the bloodstream to influence metabolism and other body processes.

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

DIETARY ANALYSIS TOOL

NutritionCalc Plus is a suite of powerful dietary self-assessment tools that help students track their food intake and activity and analyze their diet and health goals. Students and instructors can trust the reliability of the ESHA database while interacting with a robust selection of reports. This tool is provided at no additional charge inside Connect Personal Health.

APPLICATION-BASED ACTIVITIES

New to this edition, Application-Based Activities help your student assess their own health and behavior. Twelve new self-assessments and five new Portfolio Health Profiles include privacy controls to protect student data.

WRITING ASSIGNMENT

McGraw Hill's new Writing Assignment tool delivers a learning experience that improves students' written communication skills and conceptual understanding with every assignment. Assign, monitor, and provide feedback on writing more efficiently and grade assignments within McGraw Hill Connect®. Writing Assignment gives students an all-in-one place interface, so you can provide feedback more efficiently.

Features include:

- Saved and reusable comments (text and audio)
- Ability to link to resources in comments
- Rubric building and scoring
- Ability to assign draft and final deadline milestones
- Tablet ready and tools for all learners

CHAPTER-BY-CHAPTER CHANGES

The seventeenth edition focuses on current events, health trends, and content changes informed by the COVID-19 pandemic.

The authors revised in response to current events and reviewer feedback.

Chapter 1: Taking Charge of Your Health

- A new figure illustrating how lifestyle choices correlate to overall health.
- Expanded discussion of how healthy habits relate to quality of life and reduced risk of death.
- New Diversity Matters feature about health inequality and the COVID-19 pandemic.
- Updated data about the leading causes of death among college-age Americans.
- Updated data about the top 10 health issues affecting college students' academic performance.

Chapter 2: Stress: The Constant Challenge

- Revised discussion of the fight, flight, or freeze response to describe physiological reactions to stress.
- Expanded discussion of the social stressors that impact girls and women more than men.
- Updated research about how social media can affect stress young people.

Chapter 3: Psychological Health

- Update of language surrounding social anxiety disorder.
- New questions for reflection about digital technology, fear of missing out, and mental health.
- New discussion of the correlation between education about psychological symptoms and the number of college students who report seeking help for mental illness.

Chapter 4: Sleep

- New discussion of circadian rhythm variation among individuals.
- Revised content about circadian rhythm disruptions and their impact.
- Revised discussion of how the homeostatic sleep drive and the circadian system work together to regulate sleep.
- Revised explanation about how sleep quality and duration change across the life span.

Chapter 5: Intimate Relationships and Communication

- Expanded discussion of gender roles, culture, and their effects individuals.
- New content about nonsexual intimate relationships, including peer relationships.
- Expanded discussion of premarital sex, sex education, and the average age of Americans' first sexual experiences.
- New content about how to recognize unhealthy relationships and how these standards have changed over time.
- Revised discussion of how social media and digital tools affect relationships, including a discussion of online bullying, stalking, and violations of privacy.
- New discussion of cultural norms for finding and choosing romantic partners, including the role of online dating.
- Updated examination of marriage, cohabitation, and the factors that influence these trends, including an expanded discussion of trends surrounding the decision to remain single.
- Revised discussion of how spousal and parent roles have changed over time. This includes an updated exploration of single parenthood and blended families.

Chapter 6: Sexuality, Pregnancy, and Childbirth

- Updated discussion of intersex conditions, how doctors assign genders, and how intersex individuals make key choices about their sex and gender.
- Expanded explanations of consent have been added throughout the chapter to highlight this important topic.
- Discussion of fetal programming has been removed.

Chapter 7: Contraception and Abortion

- Revised Wellness on Campus feature about contraception use and pregnancy among college students.
- New figure with updated data about contraceptive effectiveness.
- Updated content about how attitudes about gender differences can influence contraception choices, including discussing options with a partner, sharing the costs of

contraception, and policies to support contraceptive health care.

- Revised Diversity Matters box about barriers to contraceptive use.
- Updated discussion of the long-term mental health impact of having an abortion as opposed to being turned away.
- New figure illustrating access to abortion facilities in all 50 states.
- New coverage of policies that affect abortion in the United States, including refusal laws and state legislation that challenges *Roe v. Wade*.

Chapter 8: Drug Use and Addiction

- Updated data of drug use among high-school seniors, including vaping marijuana (newly added), smoking marijuana, and prescription pain killers. This includes a new data about high-school drug use and race/ethnicity.
- Revised content about gender differences in drug use, overdose deaths, and substance use disorder.
- Expanded discussion of how addiction works on a physiological level, including drug effects on neurotransmitters, receptors, and neurons.
- Revised discussion of the opioid epidemic, including updated data and the role of synthetic opioids.
- Revised discussion of use and abuse of stimulant ADHD medications.
- New content about the United Nations' findings about addiction as a public health issue. This includes the costs of treatment and drug-related incarceration, and recommendations for addressing addiction.

Chapter 9: Alcohol and Tobacco

- Revised discussion of gender differences in alcohol use and alcohol's effects.
- Updated discussion of driving under the influence, including updated data and discussion questions.
- Expanded discussion of e-cigarettes, including updated data, a new discussion of vaping THC and CBD products, and new recommendations from the Centers for Disease Control.
- New figure illustrating tobacco and e-cigarette use among high-school and college students.
- Updated discussion of federal regulation of e-cigarettes and vaping products and devices.

Chapter 10: Nutrition Basics

- Updated material on the *2020–2025 Dietary Guidelines for Americans*.
- Revised discussion of the risks and regulation of trans fats.

- New practical advice for how students can afford to eat healthier on a budget.
- Expanded discussion of plant-based products and meat alternatives, including those that mimic meat.

Chapter 11: Exercise for Health and Fitness

- Revised explanation of the physical activity pyramid to enhance clarity.

Chapter 12: Weight Management

- New section explaining the various models to describe individual differences in weight and the underlying factors that determine a person's weight, including genetics, body composition, hormones, culture, behavior, and the microbiome.
- Revised Wellness on Campus feature providing practical ways to change behavior for healthy weight management.
- New discussion of intermittent fasting as a weight-loss strategy.
- Expanded discussion of how to assess safe and effective weight-loss programs.
- Updated explanation of avoidant restrictive food intake disorder (ARFID), a new DSM-5 diagnosis (previously referred to as "selective eating disorder.")

Chapter 13: Cardiovascular Health and Cancer

- New Take Charge box about using online health tools for cardiovascular health.
- New explanation of CAR-T cell immunotherapy.

Chapter 14: Immunity and Infection

- Updated discussion of 2019 measles outbreak, including the role of reduced vaccination rates and the long-term effects of measles.
- New section on the COVID-19 pandemic, including the virus's symptoms, epidemiology, and similarity to other coronaviruses. It also includes sections on the response of the global public health sector.
- New section on the prevention of COVID-19 and similar viruses, and the reasons behind COVID-19's quick spread and difficult treatment. This includes specific behaviors students can take in public and at home to reduce their risk of infection and treat symptoms.
- Updated discussion of the risks of antibacterial soaps in generating drug-resistant bacteria.
- Extensive data updates about long-term trends in sexually transmitted infections.
- New Diversity Matters box about global disparities in cases of HIV/AIDS.
- Revised Wellness on Campus feature about the risks of a range of sexual behaviors, trends in STI contraction, and how to prevent infection.

- Updated discussions of treatment and diagnoses of HIV cases globally and in the United States.
- Revised feature about STI screening and prevention on college campuses, including strategies for protection.

Chapter 15: Environmental Health

- Updated discussion of the impact of climate change, including recent wildfires in California, Australia, and the Amazon rainforest.

Chapter 16: Conventional and Complementary Medicine

- New table showing common alternative mind-body therapies used in the United States.
- Updated statistics about the increased popularity of yoga and meditation in the United States.

Chapter 17: Personal Safety

- Updated content about preventing distracted driving and the digital tools available to support safe driving.
- Updated explanation of harassment, including strategies for better understanding what type of behavior and communication is appropriate.

Chapter 18: Aging: An Ongoing Process

- Revised discussion of data about gerontology and the study of aging.
- Revised content about the social effects of aging, including the impact of retirement, the death of a spouse, and divorce.
- Revised section about elderly people being vulnerable to crime.
- Reorganized and updated sections about hearing loss, arthritis, falls, sexual functioning, and cognitive changes.
- Revised discussion of the gender gap in life expectancy and differences in aging between men and women.
- Revised discussion of living and care options.
- Revised discussion of advance directives and specific tools for planning them.
- Updated discussion of organ donation, including how to register and what process is used for donating organs.
- Updated discussion of physician-assisted death, including legislation affecting death-with-dignity laws.

YOUR COURSE, YOUR WAY

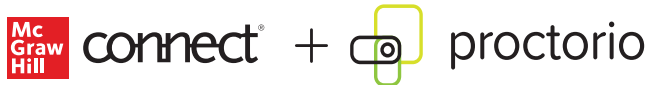


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Remote Proctoring & Browser-Locking Capabilities



New remote proctoring and browser-locking capabilities, hosted by Proctorio within Connect, provide control of the assessment environment by enabling security options and verifying the identity of the student.

Seamlessly integrated within Connect, these services allow instructors to control students' assessment experience by restricting browser activity, recording students' activity, and verifying students are doing their own work.

Instant and detailed reporting gives instructors an at-a-glance view of potential academic integrity concerns, thereby avoiding personal bias and supporting evidence-based claims.



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resources and services, including eBooks, test banks, PowerPoint slides, animations, and learning objects—from any Learning Management System (LMS), at no additional cost to an institution. Users also have single sign-on access to McGraw Hill digital platforms, including Connect, Create, and Tegrity, a fully automated lecture caption solution.

INSTRUCTOR RESOURCES

Core Concepts in Health offers an array of instructor resources for the personal health course:

Instructor's manual. The instructor's manual provides a wide variety of tools and resources for presenting the course, including learning objectives and ideas for lectures and discussions.

Test bank. By increasing the rigor of the test bank development process, McGraw Hill has raised the bar for student assessment. Each question has been tagged for level of difficulty, Bloom's taxonomy, and topic coverage. Organized by chapter, the questions are designed to test factual, conceptual, and higher order thinking.

Test Builder. New to this edition and available within Connect, Test Builder is a cloud-based tool that enables instructors to format tests that can be printed and administered within a Learning Management System. Test Builder offers a modern, streamlined interface for easy content configuration that matches course needs, without requiring a download.

Test Builder enables instructors to:

- Access all test bank content from a particular title
- Easily pinpoint the most relevant content through robust filtering options
- Manipulate the order of questions or scramble questions and/or answers
- Pin questions to a specific location within a test
- Determine your preferred treatment of algorithmic questions
- Choose the layout and spacing
- Add instructions and configure default settings

PowerPoint. The PowerPoint presentations highlight the key points of the chapter and include supporting visuals. All slides are WCAG compliant.

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Taking Charge of Your Health

CHAPTER OBJECTIVES

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

CHAPTER

1

When was the last time you felt truly healthy? Not just free from illness, but energized, hungry, and flexible, like all your muscles just got a good workout? Many of us do not feel this way. We're overweight; we smoke; we eat a lot of sugar; we don't sleep well.

The good news? There is always something we could be improving. This book can help you learn about the many aspects of life that work together to get you feeling on top of your game.

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* can be determined

or influenced by factors beyond your control, such as your genes, age, and family history. *Wellness* is determined largely by the decisions you make about how you live. These decisions 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 continual and dynamic, involving change and growth. Figure 1.1 lists specific qualities and behaviors associated with the nine dimensions of wellness.

Physical Wellness Your physical wellness includes not just your body's overall condition and the absence of disease

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.

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



FIGURE 1.1 Qualities and behaviors associated with the dimensions of wellness. Carefully review each dimension and consider your personal wellness strengths and weaknesses.

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. It 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 constantly challenge their minds. An active mind is essential to wellness because it detects problems, finds solutions, and directs behavior. People with active minds often 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. It involves creating relationships with others and suspending judgment of others' behavior until you have “walked in their shoes.” It also includes accepting and valuing 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 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. 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.

The Long and the Short of Life Expectancy

Studies suggest that our genes can determine up to 25% of the variability in life span. A new study found correlations among genes, behavior, and how long we might expect to live. The study found that the strongest correlations between genes and

mortality are susceptibility to coronary artery disease and modifiable behaviors such as cigarette smoking.

Education helps us live longer. Consider smoking to understand the effect of education on life span. People with more education smoke less, so they have a lowered risk for lung cancer. For example, smoking a pack of cigarettes per day over 20 years reduces **life expectancy** by seven years. Each year spent in higher education correlates to an additional year of life.

Other factors, such as obesity and drug use, also strongly correlate to life span (Figure 1.2). Except for smoking, no other modifiable risk factor contributes to a shorter life span than obesity. (See box “Life Expectancy and the Obesity Epidemic.”)

In 2018, there were over 67,000 drug-related deaths, two-thirds of which involved opioids.

In the early 20th century, **morbidity** and **mortality rates** (rates of illness and death, respectively) from common **infectious diseases** (e.g., pneumonia, tuberculosis, and diarrhea) were much higher than Americans experience today. By 1980, life expectancy had nearly doubled, due largely to the development of vaccines and antibiotics to fight

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

morbidity rate The relative incidence of disease among a population.

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.

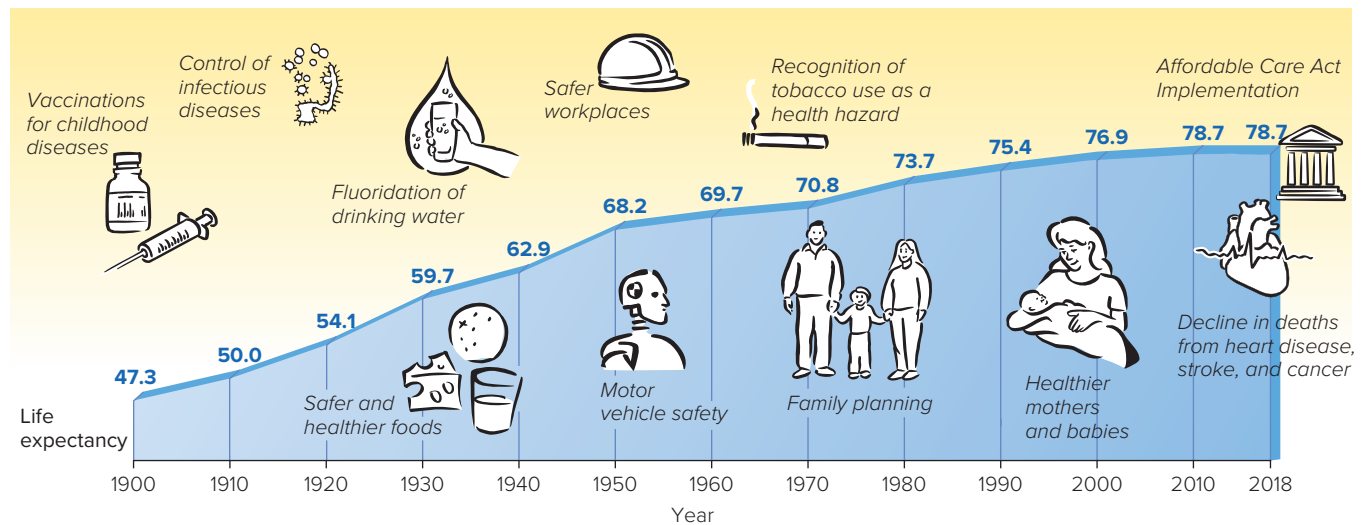


FIGURE 1.2 Public health, life expectancy, and quality of life. Public health achievements during the 20th century are credited with adding more than 25 years to life expectancy for Americans, greatly improving quality of life, and dramatically reducing deaths from infectious diseases. Public health improvements continue into the 21st century, including greater roadway safety and a steep decline in childhood lead poisoning. Between 2014 and 2017, U.S. life expectancy declined, likely due to the opioid and obesity epidemics. Life expectancy rose 0.1 year in 2018.

SOURCES: 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; Xu, J. Q., et al. 2020. Mortality in the United States, 2018. NCHS Data Brief, no 355. Hyattsville, MD: National Center for Health Statistics (<https://www.cdc.gov/nchs/products/databriefs/db355.htm>).