



Questions AND Answers

Sixth Edition

A Guide to Fitness and Wellness



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A Guide to Fitness and Wellness

Gary Liguori
Sandra Carroll

Mc
Graw
Hill





QUESTIONS AND ANSWERS: A GUIDE TO FITNESS AND WELLNESS, SIXTH EDITION

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Preface

Real Students' Questions; Practical, Research-Based Answers

Questions and Answers is built on questions—real questions about real health and wellness issues collected from real students at both 2- and 4-year schools across the United States. In responding to these student inquiries, authors Gary Liguori and Sandra Carroll combine the latest science-based knowledge with practical guidance on concrete actions students can take now to improve their fitness and wellness.

Questions and Answers's active learning approach includes a focus on behavior change and the latest research and science. Paired with McGraw Hill Connect (TM), a digital assignment and assessment platform that strengthens the link between faculty, students, and coursework, more can be accomplished in less time. Connect Fitness & Wellness is particularly useful for remote and hybrid courses and includes assignable and assessable videos, quizzes, exercises, and labs.

FOCUS ON BEHAVIOR CHANGE

Questions and Answers's results-centered pedagogy ensures that the content of each chapter works toward the larger goal of making students active participants in their own life-learning. Critical thinking questions and calls to action prompt students to evaluate the content and connect it to their own experiences.

Online video case studies follow real college students attempting to change their behavior and prompt readers to apply lessons from these experiences to their own behavior-change goals. A series of lab activities provide tracking tools and self-assessment forms that can be completed in print or online.

LATEST RESEARCH AND SCIENCE

The Sixth Edition features new research-based coverage of the impact of COVID-19 on fitness and behavior change, telemedicine and telehealth, and 2021 American College of Sports Medicine Guidelines for Exercise Testing and Prescription. Additionally, every chapter has been updated to reflect current scientific thinking, data, and statistics from such authoritative sources as the Centers for Disease Control and Prevention, the American Cancer Society, the American Heart Association, the U.S. Food and Drug Administration, and the U.S. Department of Agriculture.

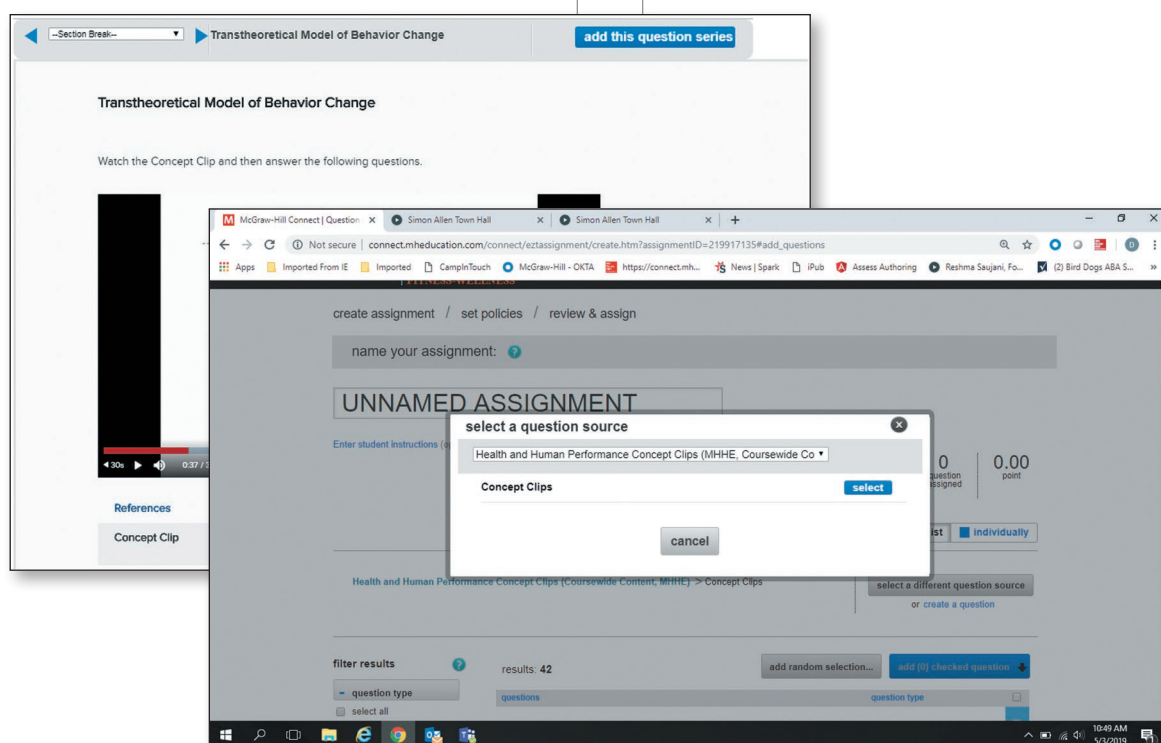


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McGraw Hill Connect® is a digital teaching and learning environment that improves performance over a variety of critical outcomes; it is easy to use, and it is proven effective. Connect® empowers students by continually adapting to deliver precisely what they need, when they need it, and how they need it, so your class time is more engaging and effective. Connect for *Fitness and Wellness* offers a wealth of interactive online content, including fitness and wellness

labs and self-assessments, video activities, and practice quizzes with immediate feedback.

New **Concept Clips** on the cardiorespiratory system and stress response are included for the Sixth Edition. Assignable and assessable through Connect, Concept Clips use colorful animation and audio narration to promote student comprehension in an easy-to-understand, step-by-step presentation.



New to this edition, McGraw Hill's **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 location 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

New **NewsFlash** activities on topics ranging from racial health disparities in COVID-19 pandemic to Pilates to firm up the core tie current events to fitness and wellness concepts. After interacting with a contemporary news story, students are assessed on their understanding and their ability to make the connections between real-life events and course content.

Finally, a Dietary Analysis Tool called **NutritionCalc Plus** provides 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 Research nutrient database while interacting with a robust selection of intuitive reports. The interface was updated to accommodate ADA requirements and a modern mobile experience native to today's students. This tool is provided at no additional charge inside Connect for *Fitness and Wellness*.

PERSONALIZED LEARNING

 **SMARTBOOK®** Available within Connect, SmartBook® makes study time as productive and efficient as possible by identifying and closing knowledge gaps. SmartBook identifies what an individual student knows and doesn't know based on the student's confidence level, responses to questions, and other factors. SmartBook 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, the reading experience continuously adapts by highlighting the most impactful content that a person needs to learn at that moment. This ensures that every minute spent with SmartBook is returned to the student as the most value-added minute possible. The result? More confidence, better grades, and greater success.

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



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Read or study when it's convenient for you with McGraw Hill's free ReadAnywhere app. Available for iOS or Android smartphones or tablets, ReadAnywhere gives users access to McGraw Hill tools including the eBook and SmartBook or Adaptive Learning Assignments in Connect. Take notes, highlight, and complete assignments offline—all of your work will sync when you open the app with WiFi access. Log in with your McGraw Hill Connect username and password to start learning—anytime, anywhere!

PREPARE STUDENTS FOR HIGHER-LEVEL THINKING

New to this edition, additional Lab Activities and Self-Assessments were redesigned and added as **Application-Based Activities** to offer enhanced accessibility, a privacy option, and aggregated student self-assessment results by

section. Appearing in Connect, these activities help your students assess their own health and behavior.

New topics include stress and anxiety related to the outbreak of COVID-19 and adapting an exercise program for changing situations.

With just a smartphone, tablet, or webcam, students and instructors can capture video with ease. **Video Capture Powered by GoReact** doesn't require any extra equipment or complicated training. All it takes is five minutes to set up and start recording! Use Video Capture to create your own custom video capture assignment, including lab activities, exercises, presentations, self-review, and peer review. With customizable rubrics, time-coded comments, and visual markers, students will see feedback at exactly the right moment, and in context, to help improve their skills.

TRUSTED SERVICE AND SUPPORT

- Connect integrates with your LMS to provide single sign-on and automatic syncing of grades. Integration with Blackboard®, D2L®, and Canvas also provides automatic syncing of the course calendar and assignment-level linking.
- Connect offers comprehensive service, support, and training throughout every phase of your implementation. If you're looking for some guidance on how to use Connect, or want to learn tips and tricks from super users, you can find tutorials as you work. Our Digital Faculty Consultants and Student Ambassadors offer insight into how to achieve the results you want with Connect. www.mheducation.com/connect

Content Changes by Chapter

Consistent with previous editions, content changes include updated research, statistics, and trends.

CHAPTER 1—INTRODUCTION TO HEALTH, WELLNESS, AND FITNESS

- Updated facts and figures on the following:
 - Life expectancy and years of healthy life
 - Leading causes of death in the United States
 - Causes of death among the young
 - Most common health problems of college students
 - College student health problems that most impacted academics
 - Smoking
- Added new research on social media and social wellness
- Added new research on telemedicine and telehealth
- Added new information on Healthy People 2030
- Added new Fast Facts box on the limitations of U.S. recycling
- Added new Mind-Stretcher, Critical Thinking Activity on COVID-19 and what it revealed about our interconnectedness

CHAPTER 2—POSITIVE CHOICES/ POSITIVE CHANGES

- Updated facts and figures on helping children develop healthy behaviors and partnering for behavior change
- Added new Fast Facts feature on pros and cons of remote learning

CHAPTER 3—FUNDAMENTALS OF PHYSICAL FITNESS

- Updated facts and figures on the following:
 - Rates of leisure time physical activity among Americans
 - Rates of disability in the United States
 - Health clubs and health club users
- Added new research on exercise and cognition in Research Brief called “Exercise Makes You Smarter”

CHAPTER 4—CARDIORESPIRATORY FITNESS

- Clarified and expanded discussion of the importance of training
- Added material on gender transitioning and fitness

- Integrated new 2018 U.S. Physical Activity Guidelines
- Integrated 2021 American College of Sports Medicine Guidelines for Exercise Testing and Prescription
- Added new Max Heart rate formula
- Clarified material on measuring fitness
- Updated content on amount of time needed to spend on cardio

CHAPTER 5—MUSCLE FITNESS

- Added information about core and functional training
- Clarified information on muscle toning, especially for women
- Explained the connection between muscle fitness and improved mental health
- Added information about achieving muscle fitness in one’s home or other non-gym settings in light of the COVID-19 pandemic
- Clarified and updated information regarding extreme workouts
- Clarified and expanded information on the culture’s preoccupation with the six pack

CHAPTER 6—FLEXIBILITY AND LOW-BACK FITNESS

- Updated facts and figures on Smart shoes/technology
- Updated American College of Sports Medicine recommendations on flexibility

CHAPTER 7—BODY COMPOSITION BASICS

- Updated facts and figures on height and weight of Americans
- Added new information on the Female and Male Athlete Triad
- Clarification of links among biological sex, metabolic rate, and patterns of fat storage
- Updated Research Brief box: Screen Time and Waistline
- Updated Fast Facts box: “Fit or Fat” or “Fit and Fat”?
- Updated discussion of body image and its link with media portrayals
- Updated Research Brief box: You Are What You Drink

CHAPTER 8—NUTRITION BASICS: ENERGY AND NUTRIENTS

- Aligned content with the U.S. Department of Agriculture 2020–2025 Healthy Eating Guidelines

- Added new Financial Wellness Tip on designer coffee—the expense and the calories
- Clarified content on energy dense versus nutrient dense
- Updated Fast Facts box regarding tainted drinking water in urban areas
- Updated Research Brief feature on parent and peer influence on eating habits
- Re-emphasized content regarding vitamins and minerals of special concern

CHAPTER 9—EATING FOR WELLNESS AND WEIGHT MANAGEMENT

- Added content on food insecurity and food deserts
- Added references to meals that appeal to many cultures, not just U.S-centric
- Added content on plant-based diets
- Updated content on over-the-counter/FDA-approved weight-loss supplements

CHAPTER 10—MENTAL HEALTH AND WELLNESS

- Broadened chapter focus beyond stress to include a more complete range of mental health challenges
- Updated Most/Least Stressed Cities
- Added discussion of relationship between stress and weight gain
- Added discussion of the impact of COVID-19 on mental health
- Updated content on Gen Z attitudes about Stress

CHAPTER 11—CHRONIC DISEASES

- Updated facts and figures on the following:
 - Lifetime probability of getting cardiovascular disease, cancer, or diabetes, by sex
 - Percentage of deaths from various forms of cardiovascular disease
 - Prevalence of blood pressure issues among adults
 - Estimated new cases, deaths, and five-year survival rates for various cancers
 - Rates of diabetes and pre-diabetes
- Updated hypertension categories
- Updated high-density lipoproteins (HDL) risk categories
- Updated cancer screening guidelines
- Added new information on cardiovascular disease prevalence by sex and ethnicity
- Added new information on environmental racism and its impact on chronic disease

CHAPTER 12—INFECTIOUS DISEASES

- Updated data on infectious disease rates
- Added data on COVID-19-related deaths
- Added discussion of how COVID-19 is transmitted
- Added discussion of risk of contracting COVID-19 compared with other infectious diseases
- Updated information on infectious disease prevention strategies, including what was learned from COVID-19
- Updated Cold and Influenza section to include COVID-19
- Updated data on college students and condom use

CHAPTER 13—SUBSTANCE USE, DEPENDENCE, AND ADDICTION

- Updated data on substance use
- Clarified content on addiction and dependence
- Added section called CBD: What We Know So Far
- Added information on the latest technology for curbing drunk driving

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Instructor Resources

- **Instructor's Manual** The instructor's manual includes materials to support course and class planning. Each chapter of the manual provides learning objectives, key terms, a lecture outline, discussion questions, classroom activities, and Internet resources. Each manual chapter also lists materials that can be assigned via Connect.
- **Test Bank** The test bank includes multiple choice, true/false, fill-in-the-blank, matching, and essay questions.

Questions are aligned to learning objectives, chapter content, and Bloom's taxonomy. They are designed to assess factual, conceptual, and applied understanding.

- **Test Builder** Available within Connect, Test Builder is a cloud-based tool that enables instructors to format tests that can be printed, administered within a Learning Management System, or exported as a Word document of the test bank. Test Builder offers a modern, streamlined interface for easy content configuration that matches course needs, without requiring a download.

Test Builder allows you 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.

Test Builder provides a secure interface for better protection of content and allows for just-in-time updates to flow directly into assessments.

- **PowerPoint Presentation** The PowerPoint presentations include key points and supporting images. The presentations are now WCAG compliant.
- **Image Gallery** The Image Gallery features the complete set of downloadable figures and tables from the text. These can be embedded into PowerPoint slides.
- **Remote Proctoring & Browser-Locking Capabilities** 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.

About the Authors



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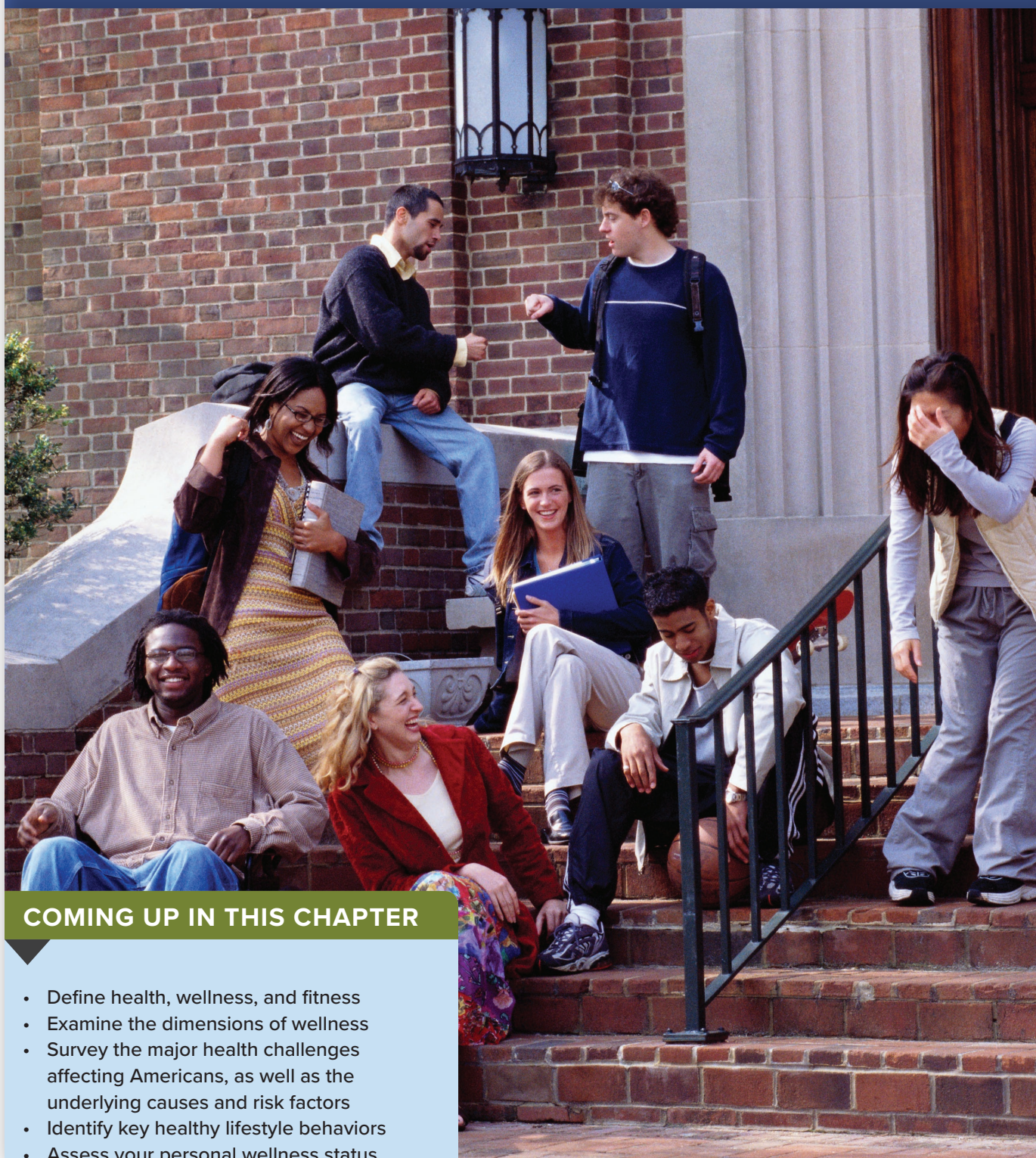
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Introduction to Health, Wellness, and Fitness

1



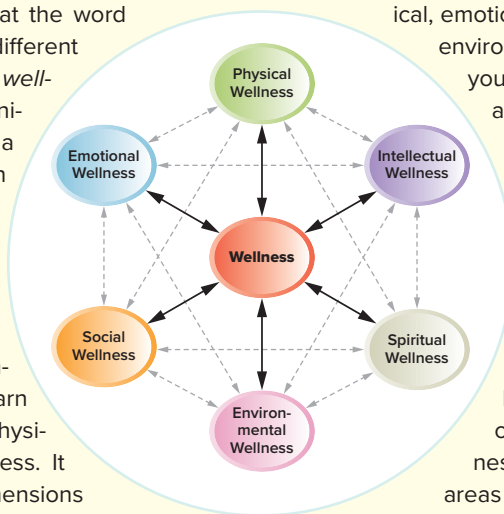
COMING UP IN THIS CHAPTER

- Define health, wellness, and fitness
- Examine the dimensions of wellness
- Survey the major health challenges affecting Americans, as well as the underlying causes and risk factors
- Identify key healthy lifestyle behaviors
- Assess your personal wellness status

Chuck Savage/Getty Images

Ask 10 people what health is, and you'll probably get 10 different answers. The truth is that the word *health* means different things to different people. If you throw in the terms *wellness* and *physical fitness*, the definitions may get even trickier. To gain a sound understanding of your own health and wellness, it's essential to clarify these concepts and to learn about the factors that influence them.

This book introduces the concept of health and surveys recommended health habits. You'll learn that wellness is more than just physical health or the absence of illness. It encompasses all six of the dimensions



illustrated in the Wellness Integrator figure, including physical, emotional, intellectual, social, spiritual, and environmental wellness. To be truly well, you must develop and balance all the aspects of wellness.

This first chapter provides a framework for thinking about health and wellness—their dimensions and their connections to your behavior, environment, goals, and aspirations. We'll also look at key health challenges, both general and those particularly affecting college students. You'll also have the opportunity to assess your own wellness status and to identify potential areas for improvement.

Personal Health and Wellness

Although people talk a great deal about health and wellness, there are no universally accepted definitions. However, the various definitions of these closely related concepts share many characteristics.

Evolving Definitions of Health

Q I haven't been sick in over a year. Can I rate myself as healthy?

That would depend on your definition of *healthy*. For many people, health is something they think about only if they notice a sudden change for the worse—for example, an illness or injury. From this perspective, health is an either-or state: You are either healthy or unhealthy, with no middle ground. If you think about health in this way, you'll miss important opportunities to improve your health and well-being throughout your life.

Health comes from the Old English word *hoelth*, meaning “a state of being sound and whole,” generally in reference to the body. The ancient Greek physician Hippocrates was one of the first credited with using observation and inquiry to assess health status—rather than considering health to be a divine gift. He and other physicians of his time believed health was a condition of balance or equilibrium; therefore, ill-health or disease was caused by imbalance among elements in the body. Much of Hippocrates's teachings were aimed at preventing illness by promoting “healthy balance” through means such as good hygiene, exercise, eating well, and moderation in all things—ideas that are still important today.

Many other visions and definitions of health have surfaced over the years. A widely used modern definition comes from the constitution of the World Health Organization (WHO): “Health is a state of complete physical, mental, and

Fast Facts

No April Fools

April 7 is World Health Day, the anniversary of the day in 1948 when the World Health Organization's constitution was adopted. On this date, thousands of events around the globe demonstrate the importance of health for happy and productive lives. Each year, World Health Day highlights a different area of WHO concern. Recent themes have included depression, diabetes, food safety, hypertension, universal health coverage, and the effects of urbanization on health.

In 2021, the theme was “Building a Fairer, Healthier World”—chosen after the COVID-19 pandemic highlighted the great health disparities between various populations, as it had the greatest negative impact on those already most vulnerable. Visit <https://www.who.int/campaigns/world-health-day/> to learn more.



ixpert/Shutterstock

health A condition with multiple dimensions that falls on a continuum from negative health, characterized by illness and premature death, to positive health, characterized by the capacity to enjoy life and to withstand life's challenges.

social well-being, and not merely the absence of disease or infirmity.”¹ This definition emphasizes the important idea that health is more than just the absence of disease. However, some critics point out that *complete* well-being is unrealistic for most people and that health is not a single state but rather a dynamic condition.

Over the years, some professionals have modified and expanded the WHO definition to include the idea of health status as a continuum.² That is the framework we'll use in this book: **Health** is a condition with multiple dimensions that falls on a continuum from negative health, characterized by illness and premature death, to positive health, characterized by the capacity to enjoy life and to withstand life's challenges.

At different times, your health status may be on different points on the continuum—and it may be moving in either a positive or a negative direction (Figure 1-1). Many young adults fall into the positive half of the continuum, experiencing minor, short-term illnesses interspersed with periods of no symptoms. However, in terms of other factors—habits that influence future health risks and current subjective feelings of mood, energy level, and sense of well-being—they may not feel “healthy” at all. It is in these areas that the concept of wellness can provide a useful framework for action.

Actively Working Toward Wellness

Are health and wellness the same?

Health and wellness are closely related, and some people use the terms interchangeably. In this book, we define the term *wellness* differently from *health*. **Wellness** is a more personalized concept than health and has several additional key characteristics:

- Wellness has multiple, clearly defined dimensions; balance is very important, but you can be at a different

Behavior Change Challenge

Integrating the Dimensions of Wellness

Erika is a 23-year-old student and the mother of two young children. She experienced an abusive marriage and wants to make changes in her life for herself and her children.



Brella Productions/McGraw-Hill Education

Erika's goal is to complete a 5K run, and while training, she hopes to return to her pre-marriage weight. View the video within the Connect assignment to learn more about Erika's story and her behavior change plan and strategies. Think about how the various dimensions of wellness might influence her plan. As you watch, consider the following questions:

- How does Erika go about developing her plan? What social and environmental resources does she use? What similar types of resources are available to help you in your mission to change your behavior?
- What intellectual and other strategies does Erika use to stay motivated? What role does self-esteem play? Which of Erika's experiences will help you make positive behavior changes and improve your wellness?



level of wellness for each dimension (see the next section).

- Wellness is an active process, meaning you can always work to improve your wellness status.

wellness An active process of adopting patterns of behavior that can improve an individual's health and perceptions of well-being and quality of life in terms of multiple, intertwined dimensions.



Figure 1-1 The health continuum. At the negative end of the continuum are serious illness and premature death. At the positive end of the continuum is the capacity to enjoy life and to withstand challenges.

Source: Adapted from Miller, J. (2005). Wellness: The history and development of a concept. *Spektrum Freiziet*, 27, 84–106.

Photo: mevans/Getty Images

- Individual responsibility and choice are critical wellness components; by becoming aware of the factors that affect you and by making appropriate choices, you can significantly affect your level of wellness.
- Wellness status is a reflection of your own perceptions about your health and well-being.

Two people at similar places on the health continuum may perceive their wellness status very differently. An individual with a severe illness or impairment may still have a strong sense of well-being and may be living up to her or his full wellness potential. Wellness is determined by the decisions people make about how to live their lives with vitality and meaning.

Discovering Dimensions of Wellness

Q Can you be physically unfit but still be happy and social at the same time?

Yes, you can. This question gets at a key aspect of wellness—that it has various dimensions, and although the dimensions are interrelated, you can be at a different level of wellness for each. A physically unfit person might not rate highly in the physical dimension of wellness but may fare much better in other dimensions, such as social and intellectual wellness. On the flip side, someone who is very fit and the picture of what we'd call physical health may rate poorly in terms of the other dimensions of wellness. True wellness requires addressing *all* the dimensions. Let's take a closer look at characteristics and behaviors associated with each of the six dimensions in our wellness model.

PHYSICAL WELLNESS. Mention physical wellness, and many will picture someone who is active and looks fit. However, physical wellness isn't only about physical fitness or appearance. **Physical wellness** is the complete physical condition and functioning of the body—both the visible aspects, such as how fit one looks, and those that are not, such as blood pressure and bone density. Throughout your life, physical wellness is reflected in your ability to accomplish your daily activities and to care for yourself.

Regular physical activity and healthy eating are the foundation behaviors of physical wellness, but they are just a beginning. Ask yourself these questions:

- Do I get enough sleep?
- Do I use alcohol and drugs responsibly?
- Do I make intentional and responsible sexual choices?
- Do I use sunscreen?
- Do I practice safe driving?
- Do I manage injuries and illnesses appropriately, practice self-care, and seek medical assistance when necessary?

Maintaining physical wellness means making informed health decisions on many fronts and offers many opportunities for improving your quality of life.



Wellness is determined by the choices people make about how to live their lives with energy and meaning. Someone with a physical impairment can achieve a high level of wellness.

Kohei Hara/Getty Images

How does physical fitness relate to physical wellness? **Physical fitness** is the ability to carry out daily tasks with vigor and alertness, without undue fatigue, and with ample energy to enjoy leisure-time pursuits and respond to emergencies.³ This definition ties closely with wellness and quality of life. But fitness also has measurable components, including muscle strength and joint flexibility. Your level of fitness depends on specific physical attributes, including the functioning of your heart, lungs, blood vessels, and muscles. In short, good physical fitness doesn't equal good physical wellness; fitness is just one piece of physical wellness, and a person with a high fitness level can have serious risks to his or her physical health. For example, being physically fit doesn't prevent the damage that smoking does to the lungs, arteries, and other body systems.

For physical wellness, you should strive for a fitness level that meets your goals for daily functioning and recreational pursuits. A certain level of fitness is needed to reap its many associated health benefits, such as reduced risk of chronic diseases like heart disease and cancer, but you don't need an extremely high level of fitness for health and wellness. Inactive people can reap many of the benefits of fitness when they add a modest amount of activity to their daily routine (Figure 1-2).

Some individuals strive for high fitness because they have specific goals related to physical performance. For example, ballet dancers and gymnasts need a much greater degree of joint flexibility than the typical person in order to perform with excellence. Don't be discouraged from physical activity because you think you must exercise very intensely or become extremely fit in order to obtain wellness benefits. Also bear in mind that physical activity has many

physical wellness

Dimension of wellness referring to the complete physical condition and functioning of the body; focuses on behaviors that support physical aspects of health, including diet, exercise, sleep, stress management, and self-care.

physical fitness The ability to carry out daily tasks with vigor and alertness, without undue fatigue, and with ample energy to enjoy leisure-time pursuits and respond to emergencies.

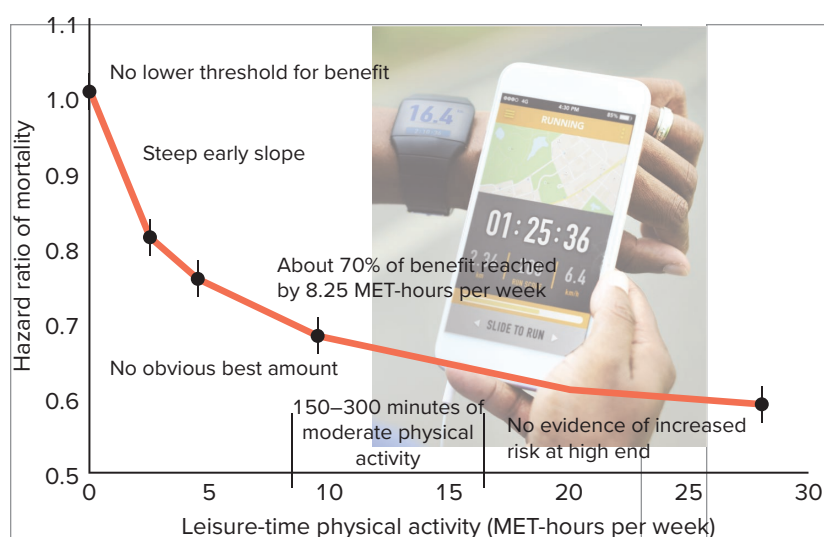


Figure 1-2 The risk of dying prematurely declines as people become physically active.

Note: Some activities are of higher intensity because they require more energy. Energy expenditure is expressed in multiples of the metabolic equivalent of task (MET).

- 1 MET = energy expended while sitting at rest
- <3 MET = light intensity (leisurely walking, light household chores)
- 3 to <6 MET = moderate intensity (brisk walking, raking the yard)
- >6 MET = vigorous intensity (jogging, shoveling snow)

Source: U.S. Department of Health and Human Services. (2018). *Physical Activity Guidelines for Americans, 2nd ed.* Washington, DC: Department of Health and Human Services.

Photo: Rawpixel.com/Shutterstock

immediate benefits, including improved mood, reduced stress, and increased energy level.

Although all physical activity can affect wellness, not all activity builds physical fitness—for example, for most people, just walking down the hall doesn't increase measures of fitness. That usually requires **exercise**—planned, structured, repetitive body movements specifically designed to develop physical fitness. You'll learn much more about physical activity, exercise, and physical fitness in later chapters, along with details on how to put together an exercise program that is right for you.

Research Tidbit: Physical activity reduces many major mortality risk factors including various forms of heart disease, diabetes, and cancer. Results of several studies suggest that regular physical activity is associated with an increase in life expectancy regardless of past activity levels. Some studies suggest as much as 10 years may be gained.⁴

EMOTIONAL WELLNESS. Emotional wellness is based on your ability to carry on your day-to-day activities while understanding your feelings and expressing them in constructive and appropriate ways. It involves accepting your feelings, monitoring your emotional reactions, and recognizing your strengths and limitations. It is also exemplified by your ability to cope with, manage, and adapt to normal stressors. The following qualities are associated with emotional wellness:

- Optimism
- Enthusiasm
- Trust

- Self-confidence
- Self-acceptance
- Resiliency
- Self-esteem

People with a high level of emotional wellness have a generally positive outlook and strive to be content. They demonstrate stability, persistence, positivity, and an inclination to weather challenges. They accept responsibility, face problems, and effectively progress toward solutions. They can live and work autonomously while also reaching out to others. They are willing to seek help from other people or resources if needed.

Research Tidbit: There is a significant association between stress and mortality. The association holds true regardless of age, sex, occupational class, body mass index, systolic blood pressure, diabetes, physical activity, smoking, or alcohol consumption.⁵

INTELLECTUAL WELLNESS. Intellectual wellness is characterized by the ability to think logically and solve problems in order to meet life's challenges successfully. An active and engaged mind is vital for making sound choices related to all the dimensions of wellness. Do you relish learning new skills, solving problems,

and exploring ideas? People who enjoy a high level of intellectual wellness are creative, open to new ideas, and motivated to learn new information and new skills. They actively seek ways to challenge their minds and pursue intellectual growth. They can apply critical thinking as they gather and evaluate information and use it to make sound decisions.

Every health consumer should know how to use critical thinking to evaluate the quality of health and wellness information; see the box "Finding Sound Health and Wellness Information" later in the chapter for more information.

Research Tidbit: Research indicates that lower education levels are associated with recurrent medical conditions and increased mortality. And although the reasons for this are unclear, having a college education is associated with lower overall mortality rates—by as much as 8–10 percent.⁶

SOCIAL WELLNESS. Human beings are social by nature—some more than others, but all of us are social creatures. **Social wellness** is defined by the ability to develop and

exercise Planned, structured, repetitive body movements specifically designed to develop physical fitness.

emotional wellness Dimension of wellness that focuses on one's ability to manage and express emotions in constructive and appropriate ways.

intellectual wellness Dimension of wellness that focuses on developing and enhancing one's knowledge base and critical thinking, decision-making, and problem-solving skills.

social wellness Dimension of wellness that focuses on one's ability to develop and maintain positive, healthy, satisfying interpersonal relationships, and appropriate support networks.



Research Brief

Social Networking and Social Wellness

Social media use is an integral part of life for many, if not most, college students. In fact, studies reveal college students and youth are the largest users of social media.

Is this a good thing? Research in this area is growing rapidly, and the results are a bit mixed. Surprisingly, though, for the most part, research indicates use of social media can have a positive influence on college students' social and emotional wellness when used with care and purpose.

One study examined social media use of incoming college students and whether it succeeded in combating the loneliness and other emotional challenges often associated with the transition to on-campus college life. An interesting result of the study was that students who attempted to reinvent themselves online—that is, pretend to be something they're not—experienced greater loneliness. Those who remained “true to themselves” were happier and less lonely. Other results indicated that social media can reduce feelings of loneliness by facilitating offline relationships (for example, by discovering and exploring college activities) and maintaining ties to old friends.

Other studies that examined social media use in relation to social adjustment to college published these findings:

- Using Facebook and Instagram with on-campus friends and family was related to better social adjustment.
- Using Instagram with strangers was related to poorer social adjustment.
- Students who frequently used Facebook, Instagram, and Twitter to interact with off-campus friends were less well-adjusted.
- Students who were the first in their family to go to college engaged in less Facebook interaction with on-campus friends than continuing students, but for both groups, the interaction was related to better social adjustment.

A separate study examined the relationship between what the researchers called the Fear of Missing Out

(FoMO), social media intensity (amount of use), and social connection. The relationship between FoMO and social media intensity was positive (meaning social media use increased), but the relationship with social connection was negative (meaning social connection did not increase). A follow-up study examined the relationship of FoMO to well-being. The results were also negative, meaning that FoMO can lead to increased social media use, which is also associated with less social connection and decreased well-being. However, further investigation led researchers to believe the relationship between FoMO, social media intensity, weaker social connection, and lesser well-being can be altered when the FoMO and increased social media use are directed at bonding and maintaining relationships. In short, positive connections resulted when young people carefully chose and directed their social media activities.

Analyze and Apply

- Do you know how much time you spend using social media? Track it to see if you've estimated correctly. Do you think you need to cut back? Why? What might you substitute for social media to benefit your social wellness?
- After you sign off from social media, how do you feel? Do you feel better and more connected? If not, how might you redirect your use of social media?

Sources: Roberts, J. and David, M. (2019). The social media party: Fear of Missing Out (FoMO), social media intensity, connection, and well-being. *International Journal of Human-Computer Interaction*, 36(1), 1–7; Thomas, L., et al. (2020). Student loneliness: The role of social media through life's transitions. *Computers & Education*, 146; Yang, C. (2020). Similar patterns, different implications: First-generation and continuing college students' social media use and its association with college social adjustment. *Journal of College Student Retention: Research, Theory & Practice*, <https://doi.org/10.1177/1521025120902755>

Yang, C. and Lee, Y. (2018). Interactants and activities on Facebook, Instagram, and Twitter: Associations between social media use and social adjustment to college. *Applied Developmental Science*, 1, 62–78.

maintain positive, healthy, satisfying interpersonal relationships, and appropriate support networks. This includes building relationships with individuals and groups both inside and outside one's family, as well as contributing to the broader community in which one lives. The ability to communicate effectively and to develop a capacity for intimacy are key elements of social wellness. Do you have friends or family members whom you can confide in and lean on for support? Are people comfortable confiding in you and coming to you for help? Do you get along with others and communicate with respect, despite differences of opinion or

values? Are you a good listener? What do you contribute to the greater community?

Research Tidbit: Not only can social relationships affect our mental state, but research also indicates that both the quantity and quality of these relationships have a direct link to measures of physical health, including abdominal obesity, inflammation, and high blood pressure—all of which can affect long-term health and longevity. These effects emerge in childhood and cascade throughout life to foster cumulative advantages or disadvantages in health. Some research suggests that having healthy relationships may be



Social wellness is exemplified by positive, satisfying interpersonal relationships.

PeopleImages/DigitalVision/Getty Images

as important to wellness as are adequate sleep, a good diet, and not smoking.⁷

SPIRITUAL WELLNESS. Wellness involves more than striving for physical health; it is also a search for meaning, purpose, and fulfillment. **Spiritual wellness** means having a set of values, beliefs, or principles that give meaning and purpose to your life and help guide your choices and actions.

Compassion, forgiveness, altruism (unselfish helping of others), tolerance, and the capacity for love are all qualities associated with spiritual wellness. Do the choices you make every day reflect your values and priorities? Or do you sometimes act in ways that conflict with your values?

People develop and express spirituality in different ways. For some people, purpose and direction come from organized religion or the belief in a higher power in the universe; they may engage in spiritual practices such as prayer and meditation. Others may express spirituality through the arts, volunteer work, or personal relationships. See the box “It’s Good to Be Good” for more information about the connection between personal wellness and volunteerism.

Spirituality is sometimes considered a controversial part of wellness models, because it touches on issues or beliefs that some people prefer to keep private and that other people feel compelled to share—or at times to press upon others. Even if talking about spirituality or specific religious issues can occasionally make people uncomfortable, spirituality is not a topic to be avoided or a less important part of personal wellness. The fact that many people become so impassioned about spiritual matters speaks to the relevance of spirituality in their lives.

spiritual wellness

Dimension of wellness that focuses on developing a set of values, beliefs, or principles that give meaning and purpose to life and guide one’s actions and choices.



Research Brief

It’s Good to Be Good

Researchers have investigated whether helping others—by participating in organized volunteer work or by providing *instrumental support* (for example, assistance with household or child-care tasks, or finances) to friends or family members—affects the health of the helper. Most studies have found clear benefits for both physical and mental health.

An analysis of multiple research studies examined the volunteer habits of middle-aged and older adults. Researchers found those who were frequent volunteers had significantly reduced mortality (death from any cause). Similar benefits to health and well-being have been found for people of all ages. In another study, researchers investigated the relationship between volunteering and self-reported health and happiness. Results indicate that those who volunteered reported being healthier and happier.

How does helping others improve health? The health benefits may stem from a reduction in the levels and the physiological effects of stress for people who volunteer,

including changes in the levels of hormones and certain brain chemicals. Helping others may also serve to increase empathic emotions. Volunteering provides opportunities for social interaction and support as well as a distraction from one’s own worries. Researchers caution, however, that helping needs to be voluntary and not overwhelming, or it won’t reduce stress.

Analyze and Apply

- What lesson from the study’s results can you apply to your own life?
- If you can’t commit to being a regular volunteer, what random acts of kindness might you engage in each day to lighten the burden of others?

Sources: Borgonovi, F. (2008). Doing well by doing good: The relationship between formal volunteering and self-reported health and happiness. *Social Science & Medicine*, 66(11), 2321–2334; Okun, M., et al. (2013). Volunteering by older adults and risk of mortality: A meta-analysis. *Psychology and Aging*, 28(2), 564–577; Yeung, J., et al. (2018). Volunteering and health benefits in general adults: Cumulative effects and forms. *BMC Public Health*, 18(8), 1–8.

Regardless of the controversies and your specific beliefs, spirituality—however you may express it in your own life—is an essential part of your overall well-being. The values, beliefs, and principles you live by are an indispensable part of the whole you. As noted neurologist and psychiatrist Viktor E. Frankl observed, “The spiritual dimension cannot be ignored, for it is what makes us human.”⁸

Research Tidbit: In a 35-year clinical study of Harvard graduates, researchers found that those graduates who expressed hope and optimism lived longer and had fewer illnesses in their lifetime.⁹

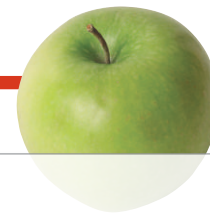
ENVIRONMENTAL WELLNESS. Your own wellness depends on your surroundings. Does your physical environment support your wellness or detract from it? Do you have

toxins in your surroundings from secondhand smoke, industrial pollution, or poor water quality? Do you live in a community with a high degree of violence or an absence of markets for healthy food? What actions can you take to make your world a cleaner, safer place?

Environmental wellness recognizes the interdependence of your wellness with the condition and livability of your surroundings. Do your choices reflect your awareness of the health of the planet and your place on it? See the box “Why Sustainability Matters—and What You Can Do” for some easy steps to improve your environment.

environmental wellness

Dimension of wellness that focuses on the condition and livability of the local environment and the planet as a whole.



Wellness Strategies

Why Sustainability Matters—And What You Can Do



What is sustainability? Does it mean we're supposed to recycle everything?

Recycling, while useful, is only a very small part of sustainability. Sustainability rests on the idea that our very survival and well-being depend on our natural environment. Sustainability is crucial for ensuring that we have, and will continue to have, the water and other natural resources we need to support human health and our environment.

You can do many things to help the environment. Scan the following lists. Some of these practices may be beyond your ability right now, but even a few changes can make a difference.

In the dorm or at home

- Use energy-saving compact fluorescent or LED bulbs; use natural rather than electric light when possible.
- Turn off unnecessary electrical devices when you leave a room for more than 15 minutes; unplug appliances and electronics when not in use.
- Enable your computer to go into “sleep mode” when not in use; turn off your computer overnight.
- Unplug your cell phone charger when charging is complete.
- Pull down window shades at night in the winter and during the day in the summer.
- Purchase a water filter and refill a reusable container instead of buying cases of bottled water.
- Eat locally grown foods.
- Buy inexpensive cloth napkins and washable mugs and plates rather than disposable ones.
- Turn off and defrost the refrigerator over long breaks.
- Take shorter showers; don't run the water before getting in, and turn off the water when lathering.

- Turn off the faucet while brushing your teeth and shaving.
- Report or repair leaky faucets and shower heads.
- Don't use the toilet as a garbage bin. Toss tissues and waste in trash cans.
- Only wash full laundry loads, and use cold water.
- Air-dry laundered clothing whenever possible.
- Use products containing the least amount of bleaches, dyes, and fragrances.
- Commit to producing less food waste. As much as 30–40 percent of food produced in the United States is wasted. Learn more about food waste and what you can do at <https://www.usda.gov/foodwaste/faqs>.



FangXiaNuo/Getty Images

In the classroom or office

- Use refillable binders instead of notebooks or use a laptop.
- Recycle paper and use recycled paper.

(Continued)

(Continued)

- Take notes on both sides of paper, and use both sides when printing and photocopying.
- If it's OK with your instructor, hand in assignments by printing on both sides of the page.
- Save any single-sided pages that you've printed and use the backs to print out drafts and other things you don't have to turn in.
- Use your printer's low-quality setting to save ink.
- Bookmark Web pages instead of printing them for research.
- Edit on-screen, not on paper.
- Use e-mail to minimize paper use.
- Advertise events using e-mail and by posting rather than papering the campus.

In the car

- Drive less, especially during peak traffic periods or on hot days.
- Use public transportation, walk, or ride a bike.
- Shop by phone, mail, or the Internet.
- Combine your errands into one trip.
- Carpool. Sharing rides reduces emissions.
- Avoid revving or idling engine over 30 seconds.
- Avoid waiting in long drive-thru lines at fast-food restaurants or banks. Park your car and go in.
- Accelerate gradually; maintain speed limit and use cruise control on the highway.
- Follow your owner's manual on recommendations for maximum economic efficiency.
- Use an energy-conserving (EC) grade of motor oil.

- Minimize air conditioning use.
- Get regular engine tune-ups and car maintenance checks.
- Use EPA-certified facilities for air conditioner repairs.
- Replace your car's air filter and oil regularly.
- Keep your tires properly inflated and aligned.
- When gassing up, avoid spilling gas and don't "top off" the tank.

In the store

- Use a reusable tote bag instead of a plastic or paper bag for shopping.
- Purchase durable rather than disposable products.
- Say no to single-use plastic, such as straws and to-go cups.
- If you get a plastic bag, reuse it.
- Go vintage. Buying used clothing saves money, decreases the use of resources to make clothing, and reduces the problem of sweatshops.
- Buy used furniture and household articles.
- Buy recycled products, such as paper.
- Use environmentally safe cleaning products.

What other steps can you take to help the environment?

Sources: Adapted from U.S. Environmental Protection Agency. (2020). What is sustainability? <https://www.epa.gov/sustainability>; U.S. Environmental Protection Agency. (2020). Greener living. <https://www.epa.gov/environmental-topics/greener-living>; Goucher College. (n.d.). Tips for students, save the planet—starting with your little corner of it. <https://www.goucher.edu/environmental-sustainability/what-you-can-do/tips-for-students>

Fast Facts

Rebuilding U.S. Recycling

The United States has traditionally sent plastics to China for recycling. As a result, recycling has been costly. Currently, many companies can use new (virgin) plastic products more cheaply than recycled plastics.

To further complicate the problem, in 2018, China stopped accepting waste imports for recycling from throughout the world. How will this affect the United States? Plastic waste will continue to grow astronomically as long as companies keep using primarily new products. Some companies are committing to use less plastic or recycled plastic, but it will take time. Consumers can help by researching and supporting companies that use recycled plastics. And they can reduce their own use of plastic by saying no to single-use plastics such as drinking straws and grocery bags.

Research Tidbit: A study revealed that psychological well-being, meaningfulness, and vitality were “robustly correlated with connectedness with nature.” The authors suggest that when one feels this connection, it supports a “personal disposition relevant for environmental as well as human health.” Further research indicates that frequent childhood experiences in nature as well as nature-related hobbies may deepen this connection.¹⁰

Assess your wellness status in each of these dimensions by completing Lab Activity 1-2.

OTHER WELLNESS DIMENSIONS.

The wellness model in this book incorporates the six dimensions previously described—physical, emotional, intellectual, social, spiritual, and environmental. Other models may highlight

MYTH or FACT?

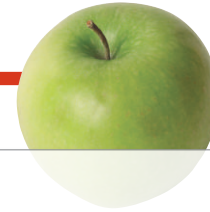
People spend more money when they use a credit card instead of cash.

See appendix to find out.



different dimensions, including two we'll consider briefly here in terms of their relevance to college students: financial wellness and occupational wellness. Both can be important to wellness, and they encompass many aspects of the six dimensions we've already discussed.

Financial wellness refers to appropriate management of financial resources, a task that typically requires self-discipline and critical thinking skills. Take advantage of budgeting resources and financial planning help available on your campus



Wellness Strategies

Financial Strategies for College Students

Q How can I achieve financial wellness? I can barely get by.

Financial wellness doesn't refer to being rich but rather to managing your financial resources appropriately. Money doesn't guarantee good health and happiness, but financial difficulties can strain physical, emotional, and social dimensions of wellness and thus reduce your overall well-being. A study conducted at Ohio State University's office of student affairs also correlated increased financial stress with decreased GPA. Financial security provides peace of mind and reduces stress. The big message? Live within your financial means and, when possible, save for the future.

For many traditional-age college students, money management is a relatively new experience. Unfortunately, many learn from their mistakes rather than by educating themselves upfront. They build up debt while in college, not realizing the long-term implications. Although some accumulation of debt may be necessary for long-term benefit, as in the case of student loans, it's important to distinguish between necessary and unnecessary expenses and to manage resources accordingly.

Credit card debt can quickly become a major financial pitfall for some students. Since the Credit Card Act was enacted in 2009 (making it illegal to approve a credit card for anyone under 21 without an adult co-signer or proof of sufficient income), student credit card debt has declined significantly. Although many students seem to prefer debit cards, 56 percent of students still have at least one credit card, and 5 percent use their card for tuition and/or other school-related expenses. As noted earlier, financial stress can negatively affect personal wellness. Research has shown a correlation between college students' credit card debt and a number of health risks, including being overweight, physical inactivity, poor nutritional habits, substance use, and violence.

Learning to develop and manage a budget is another common challenge for students. The majority of college students do not have a budget, and many who do don't stick to it. As a rule, women are more likely than men to have a budget, married students are more likely than unmarried students to follow a budget, and students over age 35 are most likely to stick to their budgets more often.

It's never too late—or too early—to make choices to improve your financial wellness. Many campuses have resources to help you develop a financial wellness plan. If assistance is not available at your school, many reputable financial planning tools are within reach. Your bank, credit union, or other financial institution may offer free access to Web-based financial management tools; also review the resources from the Financial Literacy & Education Commission (<http://www.mymoney.gov>). When you do seek financial advice, choose your sources wisely and follow up with knowledgeable individuals you trust.

Here are some specific tips to help college students stay on track financially:

- Track your income and spending carefully; you're less likely to buy on impulse when you become more aware of where your money is going.
- Be frugal: Take advantage of student discounts on everything from pizza to school supplies.
- Keep only one credit card, and use it sparingly.
- Build up an emergency fund; if you run into trouble, many colleges provide grants or emergency loans (just make sure you are using additional loan money for something related to school, like computer repair, and not an expensive spring break trip that you can't really afford).
- Develop a personal budget, and review it often.
- Use caution: Don't give out your personal account or other numbers, don't leave payments in unsecure mailboxes, and review bills and statements carefully.

Changes don't have to be huge to make a difference. What one realistic thing could you do immediately to improve your financial wellness? Are there other relatively simple steps that could have a positive impact? Visit <http://www.moneymanagementtips.com/students.htm> for additional tips.

Sources: Gonzalez, J., & Holmes, T. (2019). Credit card debt statistics. Creditcards.com. <http://www.creditcards.com/credit-card-news/credit-card-debt-statistics-1276.php>; Henry, R. A., Weber, J. G., & Yarbrough, D. (2001). Money management practices of college students. *College Student Journal*, 35(2), 244–249; Nelson, M., Lust, K., Story, M., & Ehlinger, E. (2008). Credit card debt, stress, and key health risk behaviors among college students. *American Journal of Health Promotion*, 22(6), 400–407.

and in your community (see the box “Financial Strategies for College Students”). Watch out for common financial pitfalls, including making poor choices about which credit cards to get, overusing credit cards, failing to set up a budget, and letting friends or your own unrealistic expectations pressure you into spending more than you should. Working toward wellness doesn’t have to be an expensive endeavor; check the Dollar Stretcher tips throughout this book for strategies to save money while you boost your wellness.

Occupational wellness refers to the satisfaction, fulfillment, and enrichment you obtain through work. If you consider the hours, days, and years you’re likely to spend at work, you can clearly see why your job choices are important to health and wellness. You want to work in environments that help you increase personal satisfaction, find enrichment and meaning, build useful skills, and contribute to your community. When you think about your potential career choices, consider your values, skills, personal qualities, and goals. Although a high-paying job may sound like the best choice, if you don’t value and enjoy what you’ll be doing every day, you’ll gain little satisfaction from your work. Look for opportunities to learn and grow, to engage your personal interests, and to end each day feeling that your time has been well spent.

Integrating the Dimensions: Recognizing Connections and Striving for Balance

Q If you change your behavior for fitness, will that help other areas of your life too?

Absolutely. Any activity or choice that affects one dimension of wellness will directly or indirectly affect the other dimensions, and each dimension is vital in the quest for optimal wellness. For example, engaging in physical activity reduces stress and improves mood (emotional wellness) and is linked to the maintenance of cognitive functioning (intellectual wellness); it may also provide opportunities for enjoyable interaction with others (social wellness). The influence also runs in the opposite direction: Strong intellectual wellness helps you plan a successful program for building fitness, and your social support system can be a huge plus as you work to change your exercise behavior.

To improve wellness, you must integrate all the dimensions of wellness with the personal choices and actions

that affect your health and well-being. Balance among the dimensions is also critical for wellness. Don’t focus on a few dimensions and neglect others. Doing that is like removing a few spokes from a wheel: In most ways, it still looks like a wheel, but it no longer functions optimally. Figure 1-3, “Wellness Integrator,” shows the close relationship among the dimensions—and with your own choices and actions. You’ll also see a wellness integrator figure, tailored to each chapter’s specific topic, at the start of every chapter of this book.

DOLLAR STRETCHER Financial Wellness Tip

To get a handle on your finances and plan a budget, start by tracking all your income and expenses for several weeks. Many people find that by tracking expenditures, they cut back on nonessentials. Apps or online templates are available to help you. Begin by searching for tools that are simple, free, and created for college students. If needed, you can progress to more complex models.

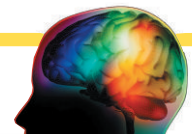
Health in the United States: The Bigger Picture

Health is an issue not only for ourselves, our family, and our friends but also for communities and the nation as a whole. Our life-altering interconnectedness became particularly evident during the recent COVID-19 pandemic.

A healthy population is creative and productive, the engine for economic growth. An unhealthy population raises national health care costs and lowers productivity. This is true in general, but it became more painfully evident during the recent pandemic as we watched its disproportionately large impact on those with underlying health conditions, those from minority populations, and those with the fewest economic resources—all while we saw our health care facilities and staff stretched beyond their capacities.

Tracking the health status of Americans and developing strategies for extending healthy life and reducing the burdens of illnesses—both existing and new illnesses—as well as various disabilities are key goals of federal health agencies. But, what exactly gets measured/tracked?

Mind Stretcher Critical Thinking Exercise



If you have doubts about the effect of one component of wellness on others, you need only think back to the coronavirus pandemic that began in 2020 and the devastating impact it had on us—not only physically but also intellectually, spiritually, environmentally, socially, emotionally, and economically. How many examples can you identify of how the impact of the virus on one area of wellness also impacted other areas of wellness?

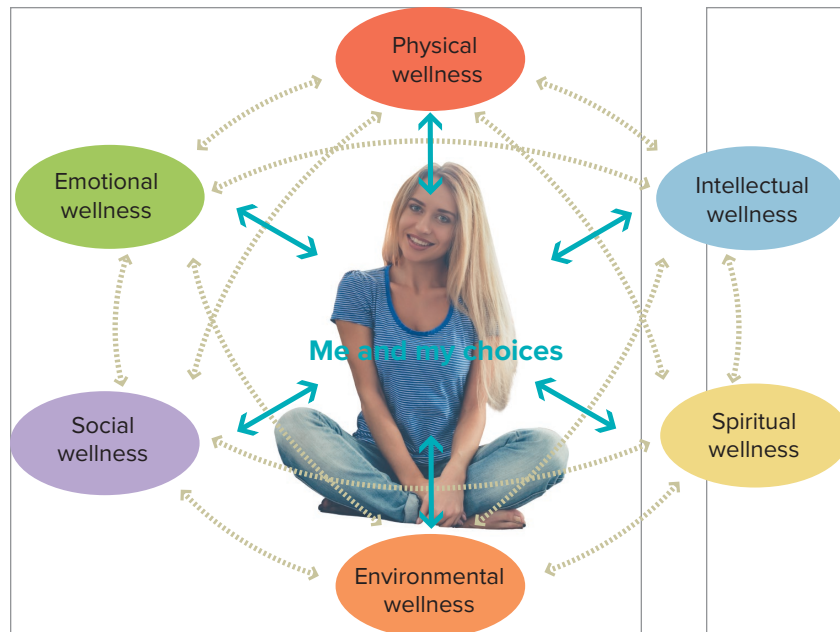


Figure 1-3 Wellness integrator. The dimensions of wellness are linked to one another and to you and your choices.

Photo: VGstockstudio/Shutterstock

Measures of Health and Wellness

Q By what standards is health measured?

We have no single best measure of health. Consider the possible criteria: Is the issue how long people live? How well they live? What they die from? The rates of specific diseases and injuries? How much money do people spend on health care? Different measures of health and wellness show us different things about individuals and the societies they live in.

Q What are the chances of living to 100?

LIFE EXPECTANCY.

It would depend on your age, location, and current health status.

life expectancy The average number of years people born in a given year are expected to live.

Life expectancy is the average number of years people born in a given year are expected to live. Your expected life span at any given time depends

on your age. What does this mean? The life expectancy figure projected at birth is an estimated average. In reality, we know some people will live to be older, and unfortunately, some will die young. A hypothetical average American born in 2017 is expected to live to age 78.6—but a person who was 65 in 2017 could expect 19.4 more years (age 84.4), a person who was 85 could expect 6.6 more years (age 91.6), and a person 100 would expect 2.2 more years (age 102.2).¹¹ The longer life expectancy as one ages reflects the fact that someone who has already lived that long has shown a fairly good level of health and has escaped some of the causes of death common among younger individuals.

The average life expectancy number hides some disparities. Women live longer than men (81.1 years versus 76.1 years for those born in 2017), and Hispanics live longer than whites or African Americans (81.8 years versus 78.8 years and 75.3 years, respectively). And if you were wondering how life expectancy in the United States stacks up against other countries, it ranks forty-sixth overall.¹² Obviously, there's room for improvement in the United States.

Life expectancy increased dramatically in the past century. A child born in 1900 had an average life expectancy of only 47 years, compared to close to 80 years today. Much of this difference is due to decreased rates of death among infants and children. In 1900, more than 30 percent of all deaths occurred among children under age 5; today that figure is less than 2 percent. Improvements in public health helped fuel this dramatic change in life expectancy.¹³

- Vaccinations for childhood diseases, improved sanitation, safer foods, and the development of antibiotics dramatically decreased deaths from infectious diseases like cholera, typhoid, measles, and tuberculosis.

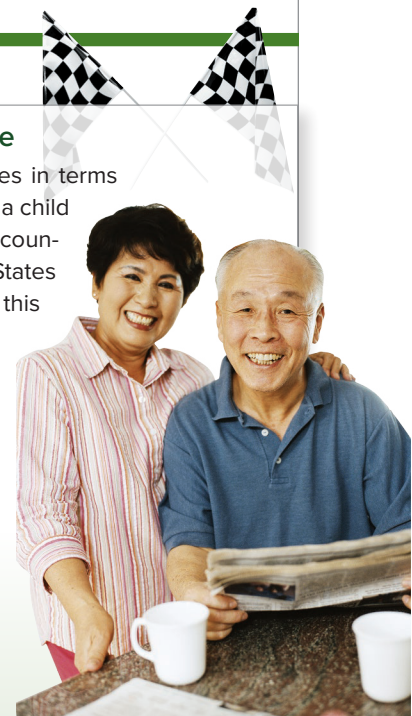
Fast Facts

Living to a Ripe Old Age

Here are the top-10 countries in terms of life expectancy at birth for a child born today. Note that some countries are tied. (The United States ranks forty-fifth, so it's not on this list.)

1. Monaco (89.4)
2. Singapore (86.1)
3. Macau (84.8)
4. Japan (84.6)
5. San Marino (83.68)
6. Canada (83.62)
7. Iceland (83.45)
8. Hong Kong (83.41)
9. Andorra (83.2)
10. Israel (83.1)

Source: Central Intelligence Agency. (2021). The world factbook online. <https://www.cia.gov/the-world-factbook/>



BananaStock/Alamy Stock Photo

- Better hygiene, nutrition, and health care reduced maternal and infant mortality by over 90 percent; mothers and babies are much more likely to survive and thrive today.
- Millions of smoking-related deaths were prevented by the recognition that tobacco use is a health hazard and by the subsequent anti-smoking campaigns and laws protecting nonsmokers from environmental tobacco smoke.
- Improvements in motor vehicle safety (better-designed roads and cars; use of seat belts, child safety seats, and motorcycle helmets) and in workplace safety reduced motor vehicle–related deaths and occupational injuries and deaths.

Further improvements in life expectancy are possible, but they will require action by both individuals and health systems. We still see considerable disparity in health and life expectancy among various groups in the United States. Some racial differences are noted above. Additionally, those who have fewer economic resources often lack access to adequate health care, sources of healthy food, and other health resources. Programs that address these kinds of disparities can improve overall health and life expectancy in the country.

Q Why do women usually live longer than men?

The gap in life expectancy between the sexes is due to both behavioral and biological factors. In the developing world, women do not fare as well as men due to high rates of maternal mortality (deaths related to pregnancy and childbirth). In the developed world, women live on average 5–10 years longer than men; among people over age 100 in the United States, 81.2 percent are women.¹⁴

A significant factor in men's and women's different death rates in the United States is the number of men who die as a

result of risky and violent behavior. Young men in particular are much more likely than young women to die from unintentional injuries (accidents), assault (murder), and suicide.¹⁵ Is risky male behavior due to some biological factor, such as higher levels of the hormone testosterone, or does it relate to cultural norms for males? Both biological and cultural factors may play a role. With respect to suicide, the higher rate of deaths among men is a function of the choice of method: Women are more likely than men to attempt suicide, but men are much more likely to succeed because they tend to choose more lethal methods (such as a firearm). Higher smoking rates and excess alcohol consumption among men may be linked to cultural and social norms for behavior.

Another reason women have a longer average life expectancy is that they tend to develop cardiovascular disease, the leading cause of death among Americans, at a later age than men. One factor may be biological differences between the sexes—levels of hormones or iron status, for example. Women also have healthier behaviors on average: They are less likely to smoke, they have healthier diets, and they are more likely to deal with stress in positive ways, such as by seeking social support.

Both men and women can take steps to improve their lifestyle and the likelihood that they'll live a long and healthy life.

Q Do you have to be super healthy to live longer?

QUALITY OF LIFE.

Yes and no. Superior health helps, but it does not guarantee longevity—that is, a long life. A

high level of health means that you are free from serious or chronic illness, at least for the moment, so you're on the positive side of the health continuum. However, many people with chronic illness live for years with symptoms of varying severity. Importantly, longevity isn't the only goal of health and wellness. You want not only *more* years but *more healthy* years, more years in which you enjoy a high quality of life.



The development and use of vaccines helped increase U.S. life expectancy by dramatically reducing illness and death from infectious diseases such as smallpox, measles, mumps, diphtheria, pertussis (whooping cough), polio and, more recently, Covid 19. MICHAEL REYNOLDS/EPA-EFE/Shutterstock

Tech Tip

Calculating Life Expectancy

Want a better understanding of life expectancy? Try some of the many online life expectancy calculators provided by insurance companies to help their customers with long-term financial planning. The best calculators will allow you to enter more of your own personal data and actually watch the life expectancy number fluctuate as you enter your age, gender, personal characteristics, and health habits. It's a good way to visualize how different risk factors can affect your projected long-term well-being.

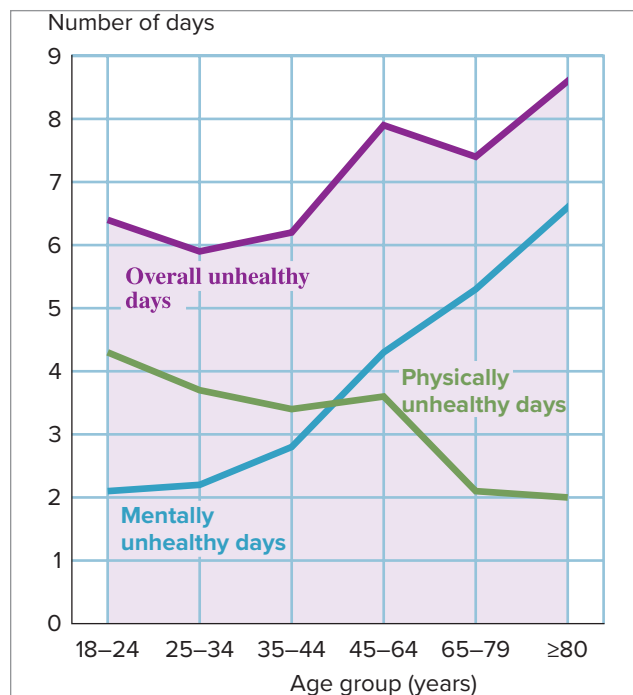
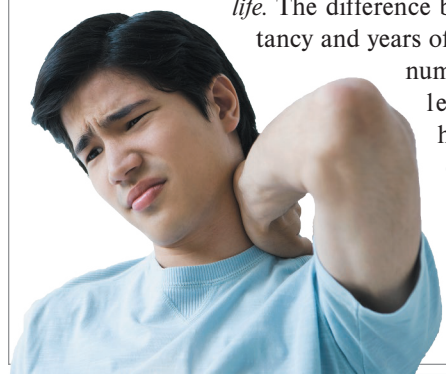


Figure 1-4 Quality of life among Americans: Unhealthy days during a 30-day period. Overall unhealthy days and physically unhealthy days tend to increase with age, but mentally unhealthy days are highest for younger age groups.

Source: Centers for Disease Control and Prevention. (2013). Health-related quality of life—United States, 2010 and 2006." *MMWR*, 62(3), 105–111.

Your overall perception of your wellness is one way to assess your quality of life. But researchers use more specific measures for research and comparative purposes. One measure is *unhealthy days*, or the estimate of the number of days of poor or impaired physical or mental health in the past 30 days. As you can see from Figure 1-4, young adults report more mentally unhealthy days, and older adults report more physically unhealthy days. Note that young adults might be on the positive end of the health continuum because they have no symptoms, yet they rate their stress level so high that they feel unwell several days each month—a sign that there is definite room for improvement in several dimensions of wellness.

A related measure is *years of healthy life*. The difference between life expectancy and years of healthy life is the number of years of less-than-optimal health due to chronic or acute diseases or limitations. Currently, Americans can expect an average of 68 years of life in good or better health and



PhotoAlto/Alix Minde/Getty Images

a life expectancy of 78 years, meaning that about 10 years will be spent in less-than-optimal health.¹⁶ Good lifestyle choices now can help you not only live longer but also have more years of healthy life.

The National Healthy People Initiative

Q Have people in the United States shown any substantial improvement in physical health in the past few years, or are we all just getting less and less healthy?

Some measures of health have improved; others have worsened. For the details, check the data for Healthy People objectives. The national Healthy People initiative, sponsored by the U.S. Department of Health and Human Services, is a broad collaborative effort with the goal of improving health—the health of each individual, of communities, and of the nation. Healthy People plans, published each decade since 1990, set specific health goals framed on 10-year agendas. Progress is tracked throughout the decade, followed by the updated plan for the next 10 years.

The current plan, *Healthy People 2030*, was released in 2020. This plan reflects a more focused, evidence-based, and statistically rigorous set of objectives than in previous plans. These objectives are divided into three categories:

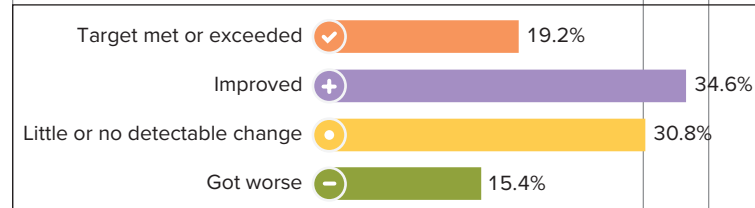
- **Core objectives.** High-priority objectives that have an identified data source, baseline data, a target, and at least two additional data points that can be tracked throughout the decade.
- **Developmental objectives.** High-priority issues of interest that do not yet have reliable baseline data.
- **Research objectives.** Areas that involve a high health or economic burden, or significant disparities between population groups, but that lack the research needed to identify evidence-based interventions to improve health.

Core Objectives are focused on five health areas—(1) health conditions, (2) health behaviors, (3) populations, (4) settings and systems, and (5) social determinants. Below are examples of an objective in each of these areas.

- **Health Conditions Objective:** Reduce the proportion of adults with obesity.
- **Health Behaviors Objective:** Eliminate very low food security in children.
- **Populations Objective:** Increase the proportion of worksites that offer an employee health promotion program.
- **Settings and Systems Objective:** Increase the proportion of people whose water supply meets Safe Drinking Water Act regulations.
- **Social Determinants of Health Objective:** Reduce the proportion of people who can't get medical care when they need it.¹⁷

The Healthy People 2020 initiative included 1,318 objectives spanning 42 topic areas. Leading Health Indicators (LHIs) were a subset of Healthy People objectives selected to communicate high-priority health issues and challenges.

A progress report for *Healthy People 2020* was published in 2021. As with each report, we see that some goals were met while others were not. The figure below shows the overall status of goal achievement.



Here are three examples of specific objectives from *that plan* and the progress we made toward them—or did not:¹⁸

- Reduce the number of infant deaths per 1000 live births from 5.8 to 6.0; the final figure of 6.7 means the target was met.
- Decrease the percent of adults aged 20+ with obesity from 33.9% to 30.5%; the final figure of 38.6% means we are further from the target than when we started.
- Increase the number of students graduating from high school within 4 years of starting 9th grade from 79% to 87%; the final figure of 85% means we are moving in a positive direction but have not yet met this target.

See more information and progress updates of Healthy People 2020 at https://www.cdc.gov/nchs/healthy_people/hp2020-final-review.htm.



Wonwoo Lee/Image Source.

Leading Causes of Death: Globally and within the United States

Q How does the United States compare to other countries in terms of diseases?

We are very fortunate in the United States. In developing nations, people suffer and die primarily from diseases and conditions related to the lack of necessities and basic public health measures. By comparison, people in the United States enjoy a relative abundance of resources. Yet sometimes abundance can lead to dangerous excess. Even in lower-income areas of the United States, the primary causes of death are linked to lifestyles. Illnesses such as diabetes and cardiovascular disease, for example, are highly correlated with lifestyle choices, including overindulgence in fat, sugar, and alcohol.

Figure 1-5 compares the general categories of leading causes of death in developing regions and developed

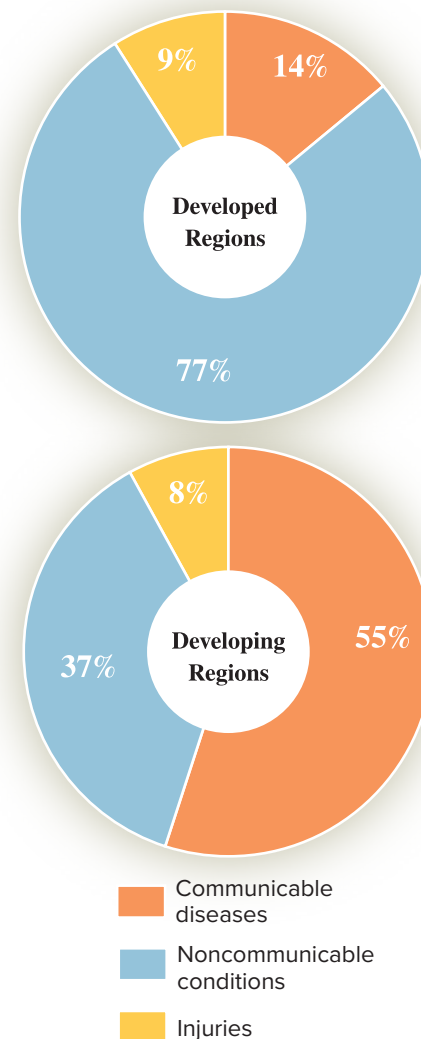


Figure 1-5 Causes of death in developed and developing regions of the world.

Source: Crow, B., & Ladha, S. (2011). *The atlas of global inequalities*. Oakland: University of California Press.

regions. The high percentage of deaths in developing countries from communicable (infectious) diseases is similar to what was seen in the United States in 1900. In developed

communicable (infectious) disease A disease that can be passed from one person to another; typically caused by a pathogen such as a bacterium or virus.

noncommunicable (chronic) disease A disease that is not infectious or contagious; many are long-lasting or frequently recurring diseases that develop over time and are the result of the interplay of genetic, environmental, and lifestyle factors.

risk factor A behavior or a characteristic that increases susceptibility to the development, onset, or progression of a disease or an injury.

countries, most deaths are now due to noncommunicable (chronic) diseases.

Communicable (infectious) diseases are those caused by a pathogen such as a bacterium or virus; they typically develop very quickly and are contagious. People who contract an infectious disease, except for serious ones like HIV infection and hepatitis, often recover completely if they receive appropriate treatment.

By contrast, **noncommunicable (chronic) diseases** are not caused by pathogens and are not contagious; they are mostly long-lasting or frequently recurring diseases that develop over time from a combination of genetic, environmental, and lifestyle factors. They include heart disease, some forms of cancer, and diabetes. People with chronic diseases must often adapt their lives to accommodate the symptoms and effects of the disease. Nearly

75 percent of the people in the United States develop and die from some form of chronic disease. (We examine chronic and infectious diseases in greater detail in Chapters 11 and 12.)

Q It seems as if everyone has some kind of cancer. Is cancer now the leading cause of death for Americans?

For many age groups, yes—but not overall (Table 1-1). Although deaths from heart disease have fallen significantly in recent decades, heart disease is still the number-one killer of Americans. Cancer tops heart disease as a cause of death for younger people, but among people age 75 and older, heart disease kills many more than cancer. As you can see from Table 1-1, these two chronic diseases—heart disease and cancer—are responsible for nearly half of all deaths in the United States each year.

Q What is the leading cause of death for young adults like most college students?

Few traditional-age college students die from heart disease or cancer, and their overall death rates are low. The top causes of death in this age group are accidents, assault (homicide), and suicide, all of which can stem from risky behaviors, violence, and depression (Figure 1-6). The chronic diseases that are the major causes of death for the population as a whole develop over many years, and their symptoms may not appear until middle or later adulthood. That doesn't mean young adults should ignore them. Your habits *now* can

TABLE 1-1 Leading Causes of Death in the United States, All Ages

RANK	CAUSE	NUMBER OF DEATHS	PERCENTAGE OF ALL DEATHS
1	Heart disease	647,457	23.0%
2	Cancer	599,108	21.3%
3	Accidents (unintentional injuries)	169,936	6.0%
4	Chronic lower respiratory diseases	160,201	5.7%
5	Stroke	146,383	5.2%
6	Alzheimer's disease	121,404	4.3%
7	Diabetes	83,564	3.0%
8	Influenza and pneumonia	55,692	2.0%
9	Kidney disease	50,633	1.8%
10	Suicide	47,173	1.7%

Source: National Center for Health Statistics. (2019). Deaths: Leading causes for 2017. *National Vital Statistics Reports*, 68(6).

have a big influence on whether and when you develop a serious chronic disease.

Q What can be done to decrease the leading causes of death?

A great deal. To begin with, it's important to understand the basics about **risk factors**, which are factors that increase your susceptibility for the development, onset, or progression of a disease or an injury. Smoking is an example of a risk factor; smokers are far more likely than nonsmokers to develop heart disease and cancer. Not wearing a seat belt is another risk factor; if you don't buckle up, you are far more likely to be seriously injured in a crash than is a consistent seat belt user.

Risk factors are of two types—those that cannot be changed and those that can be changed. Age is a common

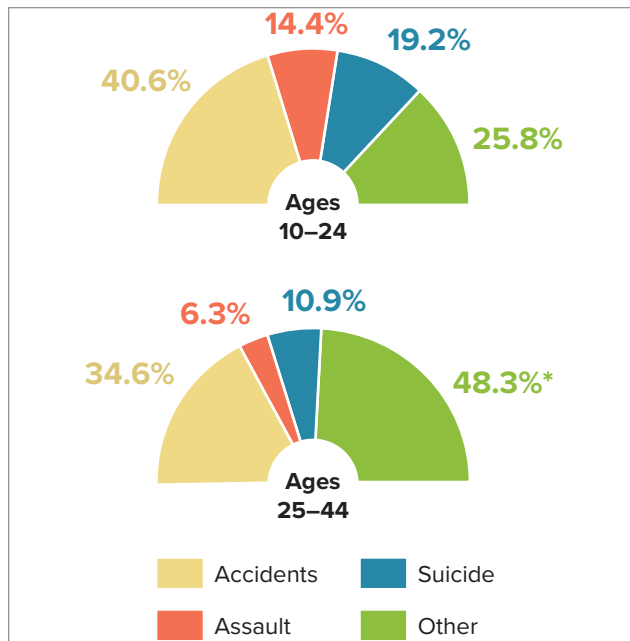


Figure 1-6 Leading causes of death among young adults. Young adults are most likely to die from causes related to risky behavior and violence.

*Includes primarily chronic diseases

Source: National Center for Health Statistics. (2019). Deaths: Leading Causes for 2017. *National Vital Statistics Reports*, 68(6).

risk factor for chronic disease that you can't change; for example, years of wear and tear on your joints increase the risk of developing arthritis. However, you can change other risk factors for arthritis, such as excess body weight. Most chronic diseases develop from a combination of risk factors, some of which are under your control. In short, through your own actions, you can reduce your risk for most major chronic diseases and types of injuries. Later in this chapter, we'll review the components of a wellness lifestyle that can help you both increase wellness and reduce the risk of health problems throughout your life.

Q How many people die from obesity?

Obesity isn't on the list of leading causes of death among Americans. However, it is an important *underlying* cause of many chronic diseases. In a landmark study, researchers examined the lifestyle and environmental factors that contribute to the leading causes of death, and they identified and ranked what they call the *actual* causes of death (Table 1-2). Obesity appears near the top of this list, because it contributes to heart disease, cancer, and diabetes, among other serious health conditions. Large decreases in life expectancy have been seen in obese people: Depending on age, sex, race, and body mass index, obesity can decrease life expectancy 0.2 to 11.7 years—with the greater number of years lost by those who are obese at a younger age.¹⁹

TABLE 1-2 Actual Causes of Death among Americans

CAUSE	NUMBER OF DEATHS PER YEAR	PERCENTAGE OF TOTAL DEATHS PER YEAR
Tobacco	440,000	18.1%
Obesity (poor diet and inactivity)	112,000	4.6%
Alcohol consumption	85,000	3.5%
Microbial agents	75,000	3.1%
Toxic agents	55,000	2.3%
Motor vehicles	43,000	1.8%
Firearms	29,000	1.2%
Sexual behavior	20,000	0.8%
Illicit drug use	17,000	0.7%

Sources: Flegal, K., Graubard, B. Williamson, D., & Gail, M. (2005). Excess deaths associated with underweight, overweight, and obesity. *JAMA*, 293, 1861–1867; Mokdad, A., Marks, J., Stroup, D., & Gerberding, J. (2004). Actual causes of death in the United States, 2000. *JAMA*, 291, 1238–1245 [original study]; Mokdad, A., Marks, J., Stroup, D., & Gerberding, J. (2005). Correction: Actual causes of death in the United States, 2000 (letter). *JAMA*, 293(3), 293–294.

Tobacco use (including smoking and secondhand smoke exposure) is actually the leading preventable cause of death in the United States. Individuals who are obese and subject to the effects of tobacco use may face even greater complications and lost years of life.²⁰ All the factors in Table 1-2 are included in the discussion of a wellness lifestyle later in the chapter.

Health and Wellness on Campus

Q What are the main health and wellness concerns of college students?

Many college students ignore their health and push their limits in terms of stress, lack of sleep, relationship strain, and poor time management. Even if the hectic life of a college student doesn't lead to illness, it can leave one feeling exhausted, overwhelmed, and generally unwell. In a recent survey in which nearly 70,000 college students identified

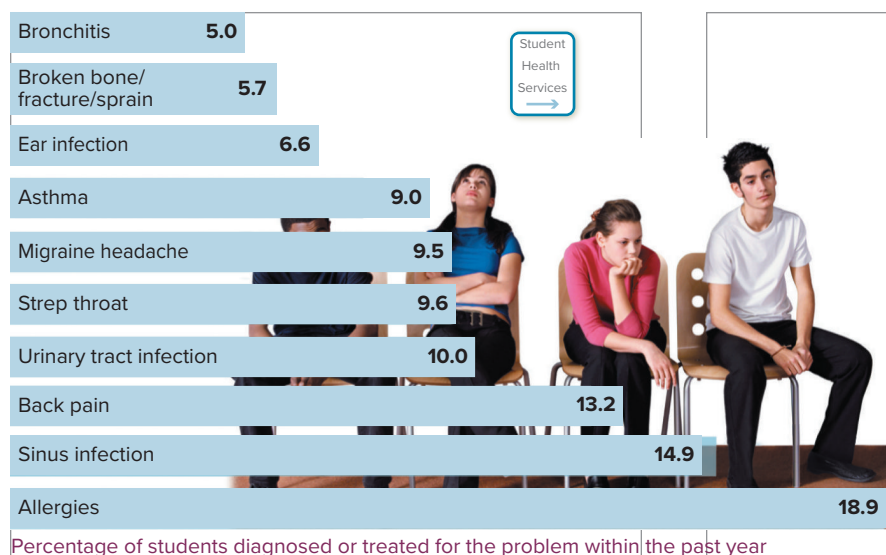


Figure 1-7 Most common health problems reported by college students.

Source: American College Health Association. (2019). *American College Health Association National College Health Assessment II: Reference Group Executive Summary Spring 2019*. Baltimore, MD: American College Health Association.

Photo: Corbis/VCG/Getty Images

health problems that affected them during the previous school year, back pain and allergies topped the list.

As Figure 1-7 shows, most health problems reported by students aren't of the chronic variety. Many are short-lived and curable. Why then should they be such a concern? The reason is that although the physical effects on the body may be short-lived, these health problems also affect other areas of life.

Are the academic, financial, time-management, and relationship effects all short-term, or do some have long-term implications? Table 1-3 shows a range of common health issues that affect the academic life of college students. The high percentages of students reporting these health problems also indicate that students' health behaviors are not optimal and that there is plenty of room for improvement in multiple wellness dimensions.

TABLE 1-3 Academic Impact of Selected Health Problems*

	PERCENTAGE OF STUDENTS REPORTING AN ACADEMIC IMPACT
Stress	34.2%
Anxiety	27.8%
Sleep difficulties	22.4%
Depression	20.2%
Cold/flu/sore throat	14.8%
Concern for a troubled friend or family member	11.7%
Relationship difficulties	9.5%
Attention-deficit/hyperactivity disorder (ADHD)	6.0%
Sinus infection/ear infection/bronchitis/strep throat	4.5%
Alcohol use	2.9%

*Academic impacts include a lower grade on an exam or important project; a lower grade in a course; an incomplete or dropping of a course; or a significant disruption in thesis, dissertation, research, or practicum work.

Source: American College Health Association. (2019). *American College Health Association National College Health Assessment II: Reference Group Executive Summary Spring 2019*. Baltimore, MD: American College Health Association.

Students whose academic performance is being hurt by stress, sleep difficulties, depression, anxiety, relationship difficulties, or alcohol use are certainly not living up to their full wellness potential.

The truth is that when it comes to your health, any problem may produce longer-term consequences than just a missed class or two. Your finances, your relationships, and your risk for chronic conditions are among the many aspects of life that can be affected. How do you break the cycle—or at least interrupt it? It comes back to the issue of risk and responsibility. It's up to you to make good choices and to avoid risk when you can. That's where a wellness lifestyle comes into play: Make choices every day that will help boost your health and well-being now and in the future.

Factors Influencing Individual Health and Wellness

Although this book stresses the role of individual choice and behavior in health and wellness, those aren't the only factors. You have the most control over your individual lifestyle choices, but several other factors also influence your well-being. Even for those you can't control or change, you can make choices to help improve wellness. For example, even though a condition like high blood pressure may be common in your family—a reality that increases your personal risk of developing it—genetics isn't the only risk factor. You can choose to limit the salt in your diet and get regular blood pressure checks, both of which may reduce your risk of developing high blood pressure or limit its adverse effects if you do develop it. In this section, we'll review various influences on individual health and wellness, first with special attention to behavior choices (Figure 1-8). We'll then look at some additional factors that can influence your well-being. Just as the dimensions of wellness interact, so do the factors that determine your health and wellness status.

Behavior Choices That Influence Wellness



What basic things should I do every day or every week for a healthy lifestyle?

Your day-to-day decisions and actions affect all dimensions of wellness—physical, emotional, intellectual, social, spiritual, and environmental—as well as your overall health status

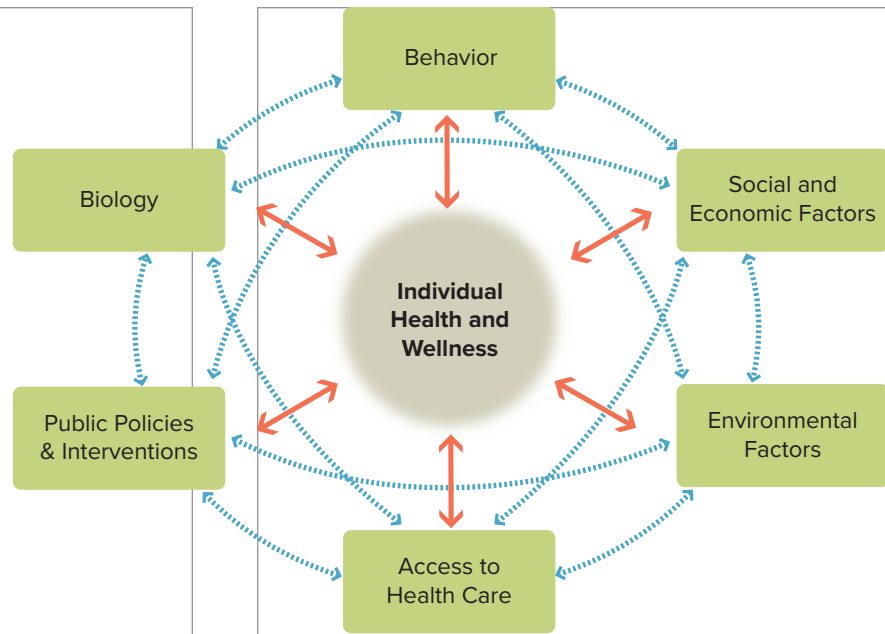


Figure 1-8 Factors that influence health and wellness status.

and risk for chronic diseases and premature death. Let's look at some best practices.

BE PHYSICALLY ACTIVE. Your body is designed to function best when it is active—and busy isn't the same thing as active. Because so much of contemporary life is tied to technologies that keep us inactive, most people need to purposely plan time for physical activity. You'll find it well worth the time and effort. Physically active individuals live longer and healthier lives (see Figure 1-2). And many of the benefits of physical activity are immediate: It reduces stress and anxiety, helps you sleep better, and boosts your mood and self-esteem. Chapter 3 goes into much more detail about the benefits of physical activity and physical fitness, and later chapters will guide you in putting together an exercise program that is right for you.

CHOOSE A HEALTHY DIET. Think about *diet* as your daily eating habits, not as a temporary restriction of the foods you eat. Eating well means choosing more healthful foods and fewer harmful foods, most of the time. Nutrition and dietary planning will be discussed in detail in Chapters 8 and 9. General guidelines for healthy eating include the following:

- Eat more fruits, vegetables, legumes, whole grains, fish, and low-fat or nonfat dairy products.
- Consume fewer sugary foods and drinks, unhealthy fats, refined carbohydrates, salty foods, and full-fat dairy products, as well as less red meat.
- Balance your overall energy (calorie) intake with your level of physical activity to prevent weight gain.

A healthy diet will give you the energy and nutrients you need today and limit the substances that increase your risk for chronic diseases in the future.

MAINTAIN A HEALTHY WEIGHT. Achieving and maintaining a healthy weight depend on your diet and activity habits—and on your ability to manage stress and make sound choices. A healthy weight is perhaps the most challenging lifestyle goal to achieve in our society, where environmental influences often work against our efforts. But even modest success at weight management improves health, reduces chronic disease risk, and makes people feel better about themselves. Chapter 7 provides information on assessing body weight and body composition, and Chapter 9 presents healthy eating strategies for weight management.

AVOID TOBACCO IN ALL FORMS. As shown in Table 1-2, tobacco use is the leading preventable cause of death, accounting for about one in five deaths every year.²¹ In the short term, smoking impairs your lung function and your immune system; in the long term, it is a major risk factor for 8 of the top 10 causes of death. Smoking also kills thousands of nonsmokers every year. No form of tobacco use is safe. Although smoking rates have dropped significantly over the past 50 years, about 20 percent of Americans are still smokers. Strategies for quitting smoking are described in Chapter 13.

MANAGE STRESS AND GET ADEQUATE SLEEP. Many college students feel stressed out and short on sleep. Excess negative stress is uncomfortable in the short term

and can have serious health consequences over time. Learn to recognize the key causes of stress in your life and develop coping strategies—time management, social support, exercise, a relaxation technique. Don't turn to alcohol, tobacco, or overeating in an effort to reduce stress; they are ineffective and harmful to your health in other ways. Getting adequate sleep is one of the best strategies for reducing stress and improving your ability to cope. For more on stress management, see Chapter 10.

LIMIT ALCOHOL CONSUMPTION. If you drink alcohol, do so moderately and in situations that don't put yourself or others at risk. Excess alcohol consumption damages the body, and intoxication is linked to high risk of injuries and violence. See Chapter 13 for more on the health effects of alcohol.

AVOID RISKY BEHAVIORS. Risky behaviors such as the following greatly increase the likelihood of an injury or illness:

- Dangerous driving, including driving at high speeds, driving while distracted, and not wearing a seat belt
- Unsafe handling of firearms
- Unprotected sexual activity, which carries the risk of sexually transmitted infections
- Not using appropriate safety equipment during sports and recreational activities (for example, helmets and personal flotation devices) or during work activities (for example, goggles, gloves, helmets)
- Drug or alcohol intoxication, which can be dangerous in itself (for example, alcohol poisoning) and can also lead to other risky behaviors, including unintentional injuries and violence

Make safety a priority for yourself and those around you. Most safety-related behaviors aren't complicated, but they can be challenging in some circumstances. Use common sense, plan ahead, and don't let peer pressure or lack of commitment get in the way of safe choices.

Behaviors related to safe driving deserve special mention. Motor vehicle crashes are the leading cause of death for Americans ages 5–24.²² People don't think of driving as a risky behavior, but it is probably the most dangerous thing most of us do on any given day. Treat driving with the attentiveness it deserves, and always drive (or ride) safely. Pay attention, don't speed, wear your seat belt, don't text or talk on the phone, don't tailgate, and use signals before turning or changing lanes. Just because you've previously gotten away with driving too fast—or while distracted by texting, talking, or changing the radio station—doesn't mean you will be so lucky next time.

LIMIT EXPOSURE TO RADIATION AND TOXINS. Exposure to pollutants and other environmental toxins is a risk factor for a number of health problems. The most common source of radiation exposure is sunlight. Always use sunscreen, and don't use tanning lamps (see Chapter 11).

Fast Facts

Smoking by the Numbers

- Cigarette smoking is estimated to be responsible for \$300 billion in annual health-related economic losses in the United States (for direct medical costs and lost productivity).
- For the promotion of cigarettes and smokeless tobacco, the tobacco industry spends approximately \$9.06 billion per year/\$25 million per day/\$1 million per hour.
- An estimated 34.2 million people, or 13.7 percent of all adults (age 18+) in the United States, currently smoke cigarettes.
- Each year 2,000 persons under age 18 smoke their first cigarette.
- Smoking kills over 480,000 Americans a year. On average, smokers die 10 years earlier than nonsmokers.
- Worldwide smoking kills more than 7 million people a year. If current trends continue, that number will be 8 million by the year 2030.

Source: Centers for Disease Control and Prevention. (2020). Smoking & tobacco use. https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/index.htm

Fast Facts

Driving Distracted?

Distracted driving is driving while doing another activity that takes your attention away from driving. Distractions can be visual (taking your eyes off the road), manual (taking your hands off the wheel), or cognitive (taking your mind off driving).

Startling stats:

- Every day in the United States, 8 people are killed and nearly 1,100 more are injured in crashes that are reported to involve a distracted driver.
- On any given day in America, approximately 481,000 drivers are using cell phones or manipulating electronic devices while driving.
- Drivers in their 20s are responsible for 34 percent of fatal driving accidents that are attributed to cell phone distraction. Drivers ages 15–19 are responsible for 9 percent.
- Five seconds is the average time your eyes are off the road while texting. When traveling at 55 mph, that's enough time to cover the length of a football field—blindfolded.

For your safety and that of others, limit all types of distractions while driving. Keep your eyes on the road, your hands on the wheel, and your mind on what you're doing.

Sources: Adapted from CDC Injury Prevention & Control. (2020). Distracted driving. https://www.cdc.gov/motorvehiclesafety/distracted_driving/index.html; U.S. Department of Transportation. (2020). Traffic safety facts. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812926>



Chris Ryan/age fotostock

Have X-rays only when they are medically necessary. If you live or work in an area with high pollution levels—for example, in a building that may have high levels of radon or asbestos or lead in the water—find out what you can do to protect yourself. You can boost the environmental wellness of your community through such strategies as reducing driving time, saving energy and water, and disposing of hazardous wastes properly. For more on limiting your exposure to toxins and on improving the environment, visit the Web site for the U.S. Environmental Protection Agency (<http://www.epa.gov>).

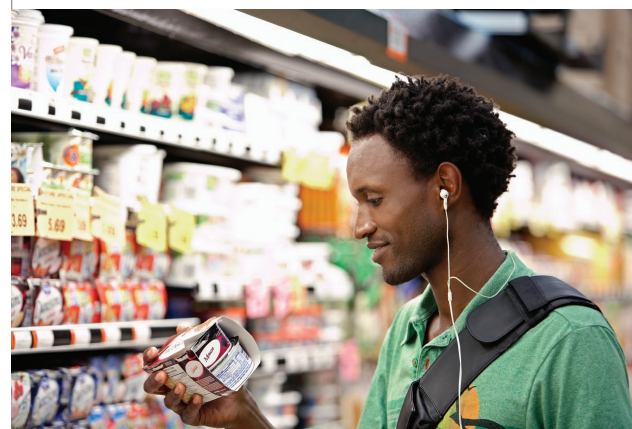
PRACTICE GOOD SELF-CARE. To reduce your risk of infections, wash your hands frequently and limit your exposure to people who are ill with colds or the flu. Practice good

dental care by brushing and flossing regularly. Use over-the-counter remedies carefully, following the label instructions. For more on avoiding and treating infectious diseases, see Chapter 12.

If you have a chronic or recurring medical condition—asthma, diabetes, or migraine headaches, for example—follow your health care provider's instructions for managing it. Take preventive medications if you need them. Having a chronic condition is challenging, but it doesn't mean you can't achieve optimal wellness. Take whatever actions you can to manage your condition and limit its impact on your life; see the box “Living Well with Migraine Headaches” in this chapter and look for other “Living Well with . . .” boxes throughout the book for tips and strategies about managing common chronic conditions.

SEEK APPROPRIATE MEDICAL CARE. Don't wait until you're sick to visit a health care provider. Get recommended checkups, screening tests, and immunizations. Don't ignore symptoms; if you aren't sure whether they need to be evaluated, you can usually call or e-mail a doctor's office, a clinic, or your campus health center for advice. You may even be able to schedule a remote visit (see the box “In-Person or Remote: The Advantages and Disadvantages of Telemedicine and Telehealth”). And don't neglect your mental health; if symptoms of emotional or psychological problems are interfering with your daily life, seek help. For additional advice on evaluating symptoms, treating minor medical problems, and getting appropriate tests and vaccines, visit the Web site of the American Academy of Family Physicians (<http://familydoctor.org>).

APPLY CRITICAL THINKING SKILLS AS A HEALTH CONSUMER. A high level of intellectual wellness can help you navigate the complex U.S. health care system, with its many products, services, and professionals. Other wellness-related tasks that require critical thinking skills



Use your critical thinking skills to read and understand the information on food, supplement, and drug labels—and to know what that information means for you.

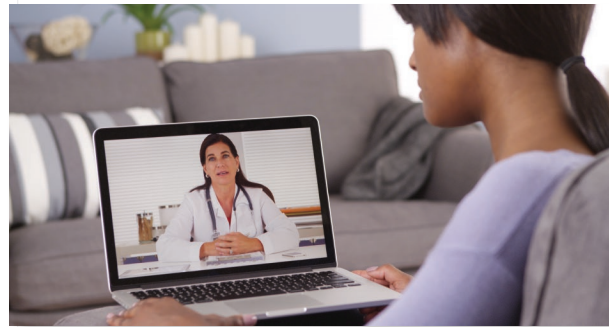
Rob Melnychuk/Fuse/Getty Images

Research Brief

In-Person or Remote? The Advantages and Disadvantages of Telemedicine and Telehealth

Telemedicine and telehealth are not new, but the use of both has increased tremendously in recent months. So, what exactly are telemedicine and telehealth? Telemedicine involves the remote delivery, via technology, of health care. Telehealth is a much broader concept and may include medical visits, the uploading of various measurements and data, the sharing of data between patient and provider or among providers, electronic reminders, requests for prescriptions, group sessions, or even the training of medical professionals. Telehealth may be conducted synchronously (meaning that provider and patient communicate in real time) or asynchronously (one party uploads data, images, or messages to share with the other).

Medical visits are one area of telehealth that has increased significantly. Research indicates that 76 percent of hospitals in the United States currently offer remote visits, typically via video conferencing. The recent COVID-19 pandemic increased the willingness of many patients to try remote visits—by 75 according to a recent survey. Among those over age 50, 25 percent indicated that they had



Rocketclips, Inc./Shutterstock

a virtual health care visit during the first 3 months of the pandemic. The previous year, only 4 percent of the same group had tried virtual visits.

Today you may only need a computer or smartphone to complete your doctor visit. Is this a good thing? Like most things, this approach to health care has advantages and disadvantages—both for the patient and the provider. Let's look at what the research shows.

FOR THE PATIENT

Advantages

- **Less Expense:** People who use telehealth spend less time in the hospital and have fewer immediate expense—for example, for commutes, parking, and childcare.
- **Improved Access:** Individuals with disabilities, the elderly, or those who may be geographically isolated have easier access to care.
- **Preventive Care:** Individuals can more easily get regular check-ups and are thus more likely to address symptoms as they arise rather than waiting until they worsen to get help.
- **Convenience:** Individuals can access care from their own homes and may be able to avoid missing work or school.
- **Slowing the Spread of Infection:** Virtual visits allow one to avoid being in the doctor's office with others who are sick.

Disadvantages

- **Insurance Coverage:** Not all insurers reimburse for virtual appointments. Currently, only about half of U.S. states require insurers to cover telemedicine.
- **Privacy:** Telehealth may require the use of public networks or encrypted sites. Having more medical data stored online increases opportunities for criminals to access information.
- **Delay of Care:** Sometimes a person needs rapid medical attention, and having to schedule a virtual appointment can delay the needed care.
- **Access to Technology:** Those in lower socioeconomic groups who already have difficulty accessing healthcare may experience further difficulties if they do not have access to computers and high-quality internet connections.

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FOR THE PROVIDER**Advantages**

- **Reduced Overhead:** Providers may be able to operate with fewer office staff, supplies, and so on.
- **Additional Revenue:** Providers will have less down time between patients, so they may be able to see more patients.
- **Less Exposure to Infection:** Virtual visits can eliminate the spread of infectious pathogens.
- **Patient Satisfaction:** People who seek the convenience of virtual appointments express happiness with their providers.

Disadvantages

- **Licensing Issues:** State laws vary, and providers may not be able to provide care across state lines. This can be difficult for providers who work near multiple states and/or have patients who do not understand the restrictions.
- **Technology Options:** Finding the right platform to meet patient needs, ensuring a secure network, and ensuring compliance with privacy laws are challenging issues.
- **Inability to Fully Examine Patients:** Providers must rely on patients to self-report, and they sometimes leave out important details.

Analyze and Apply

- Could you personally benefit from using telehealth? How?
- Do you have family members who might benefit from using telehealth? What are some instances in which telehealth might not be appropriate for certain family members? Why?

Sources: Harvard Medical School. (2020). Telehealth: the advantages and disadvantages. Harvard Health Publishing. <https://www.health.harvard.edu/staying-healthy/telehealth-the-advantages-and-disadvantages>; Villines, Z. (2020). Telemedicine benefits: For patients and professionals. Medical News Today. <https://www.medicalnewstoday.com/articles/telemedicine-benefits>

Living Well with . . .**Migraine Headaches**

For those who get migraine headaches, the experience can be debilitating. These recurring, severe headaches cause pulsing or pounding pain, usually on one side of the head, often accompanied by nausea, vomiting, and sensitivity to light and sound. They can last from 6 to 48 hours. For some people, migraines are preceded by warning symptoms known as an aura—visual disturbances consisting of zigzag patterns of flashing lights, blind spots, and tunnel vision. Many people experience a “zombie phase” or “migraine hangover” of fatigue and lethargy after an attack. Migraines can be brought on by a variety of triggers, including bright lights, certain foods and food additives, stress, changes in weather, and hormonal changes (in women).

Research has revealed that migraines are related to a wave of nerve cell activity that sweeps across the brain, affecting nerve pathways and brain chemicals. Researchers are beginning to investigate gene mutations that may cause this abnormal activity in brain cells. Migraines may run in families, and they occur more frequently in women than in men.

There is no cure for migraines, but they can be managed. The goal is to identify and avoid triggers. If you get migraines, keep a headache diary for a while and record the following information:

- When you got a migraine and its severity
- What you've eaten
- How much sleep you've had
- For women, where you are in your menstrual cycle
- Other factors that may have an effect, including stress

If you start to get migraine symptoms, act quickly to treat them. You may be able to reduce or prevent further symptoms by taking these steps:

- Drink water to avoid dehydration.
- Rest in a quiet, dark room with your eyes closed. Try out some of the relaxation techniques discussed in Chapter 10.
- Place a cool cloth on your head.

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Over-the-counter pain relievers and nausea medicines may help manage symptoms during a migraine. Prescription medications can reduce the number of attacks, stop the headache once it starts, and treat pain and other symptoms.

The best way to prevent migraines is to modify your habits and environment to avoid triggers:

- Avoid the personal triggers you have identified through your headache diary.
- Avoid smoking, alcohol, artificial sweeteners, and other known food-related triggers.

- Get regular exercise.
- Get enough sleep.
- Learn to manage stress.

Don't let migraines stop you from living well. Further information about treatment and support is available from the American Migraine Foundation (<http://www.americanmigrainefoundation.org>) and the National Headache Foundation (<http://www.headaches.org>).

Sources: MedlinePlus. (2020). Migraine (<http://www.nlm.nih.gov/medlineplus/ency/article/000709.htm>); Dodick, D. W., & Gargus, J. J. (2008, August). Why migraines strike. *Scientific American*, 56–73.

include finding accurate information, reading food and drug labels, considering the risks and benefits of various tests and treatments, evaluating health insurance plans, and communicating with health care providers. Keep asking questions and

searching for answers. See the box “Finding Sound Health and Wellness Information” to learn more about identifying good sources of information and interpreting the results of medical research studies.

Wellness Strategies

Finding Sound Health and Wellness Information

Q Can I find any good health information on the Web?

Yes, but you must examine Web sites carefully to ensure that the information is valid. When evaluating the quality of health information on Web sites, take these steps:

Consider the source: Know who is responsible for the content, and look for recognized authorities.

- Locate the “about us” page. Is the site run by a branch of the federal government, a nonprofit institution, a college or university, a professional organization, a health system, a commercial organization, or an individual?
- Use caution if the site doesn't provide a way to contact the organization or webmaster.

Focus on quality and find evidence for the claims: Ensure that information is authored by experts or reviewed and approved by an editorial board before it is posted.

- Use caution on sites that don't identify the author and that rely on testimonials and opinions rather than qualified individuals, research, or organizations.
- Look for sites with HONCode certification, meaning that they follow the code of conduct developed by the Health on the Net (HON) Foundation (<http://www.hon.ch>).

Be a cyberskeptic: Avoid quackery.

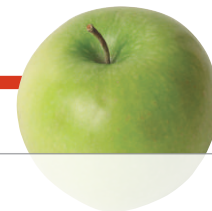
- Beware of claims that are too good to be true, such as a remedy that will cure a variety of illnesses, is a “breakthrough,” will have quick and dramatic results, or relies on a “secret ingredient.”
- Avoid sites that have a sensational writing style (lots of exclamation points, for example) and those that use technical jargon or deliberately obscure—or artificially scientific-sounding—language.
- Get a second opinion. Check more than one site.

Review for currency: Look for dates on Web pages. An article on coping with the loss of a loved one doesn't need to be current, but an article on the latest treatment for diabetes does.

Beware of bias: What is the purpose of the site? Who is funding it?

- Use caution if the site's sponsor is selling something, even if the product is only indirectly referred to on the site. Advertisements that do appear should be labeled; they should say “Advertisement” or “From Our Sponsor.”
- See if it is clear whether the content comes from a noncommercial source or an advertiser is providing it. For example, if a page about treatment for depression

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recommends one drug by name, the drug's manufacturer may have provided that information. Consult other sources to see what they say about the drug and whether other medications can also be used.

Protect your privacy: Health information should be confidential. Look for a privacy policy that tells you what information the site collects and what the site managers do with it. For example, if the site says "We share information with companies that can provide you with useful products," then your information isn't private.

Use this information to evaluate a Web site that you consult for health and wellness information. How does the site rate on the above criteria? Is the site credible? Why or why not?



How do I know which research studies have good information?

Every day, you can find hundreds of news stories related to health. You can use your critical thinking skills to evaluate news reports about medical research findings and to determine whether the results might be important for you.

Questions to ask about a new medical finding:

- Was it a study in the laboratory, with animals, or with people? The results of research with people are more likely to be meaningful for you.
- Does the study include people like you? Were the participants the same age, sex, educational level, income

group, and ethnic background as yourself? Did they have the same health concerns?

- Was it a randomized (participants are randomly assigned to either the treatment or the placebo group), double-blind (neither the participants nor the researchers know who is receiving the treatment and who is receiving the placebo), controlled clinical trial involving thousands of people? This type of study is the most expensive, but it also gives scientists the most reliable results.
- Are the results presented in a precise, easy-to-understand way? They should use absolute risk, relative risk, or some other uncomplicated number.
- If a new treatment was being tested, were there side effects? Sometimes side effects are almost as serious as the disease.
- Who paid for the research? Take special care in evaluating research that was partly or fully funded by a company that stands to gain financially from the results.
- Who is reporting the results? Is the newspaper, television station, or Web site a reliable source of medical news? Was the report written by someone who is trained to interpret medical findings?

Talk with your health care provider before changing your lifestyle or medications on the basis of health headlines or information found online.

Sources: Adapted from National Library of Medicine. (2020). MedlinePlus guide to evaluating health information. <https://medlineplus.gov/evaluatinghealthinformation.html>; National Institute on Aging. (2011). *Understanding risk: What do those headlines really mean?* NIH Publication 11-7482.

CULTIVATE RELATIONSHIPS AND SOCIAL SUPPORT.

People are enriched by others. Strong relationships provide emotional and material support. Connect with groups and individuals that will support and promote your social wellness. Develop and maintain strong, loving ties with family, friends, and significant others. Recognize individual strengths, needs, and styles, and develop skills associated with successful relationships. Spend time with the people who are important to you. Don't neglect family and friends when you are busy—make time for them. Be supportive and kind, and expect that all relationships will have ups and downs. Communicate acceptance and respect and identify methods to successfully deal with differences. In times when gathering with others in person is difficult—as it was during the COVID-19 pandemic—find alternate ways to stay connected.

NOURISH YOUR SPIRITUAL SIDE. Don't neglect spiritual wellness. Consider the values and principles that are important to you, and ask yourself if you need to make changes in your life to be true to them.

- When making decisions, stop and consider your options: Which choice is most consistent with your

values? Don't allow expediency or peer pressure to have undue influence over your actions. Your choices and actions tell those around you what you stand for.

- Are you currently engaging in any spiritual practices or expressing your spirituality in other ways? Find an activity or organization that fits your values and your schedule.

HAVE FUN! Don't make a chore of your efforts to achieve good health and wellness. Wellness is about living with joy and vitality. Cultivate your sense of humor: Laughter improves health and makes you and everyone around you feel better.

How do your health habits compare with the description of a healthy lifestyle in this section? If you're like most people, you are doing well in some areas but could improve in others.

You can use Lab Activity 1-1 to identify areas of concern for you. In Chapter 2, you'll learn more about strategies and techniques for making changes in your health behaviors to improve wellness in both the short and the long terms.

Fast Facts

Be a Volunteer

Almost one in three American adults (30.3 percent of the population) volunteer each year, for an average of about 52 hours per year, or 6.9 billion hours total. Women are more likely to volunteer than men, and rates of volunteerism increase with education level. Popular volunteer activities are preparing and distributing food, fundraising, donating general labor, and supervising youth sports teams. Others include visiting home-bound older adults, working with youth service groups, helping out at an animal shelter, and getting involved in a church.

Volunteering pays significant personal dividends. It doesn't matter what you do—just find an organization and activity you want to support and get involved. You'll boost your wellness as well as serve your community.



Blend Images/Alamy Stock Photo

Source: AmeriCorps. (2018). Volunteering in U.S. hits record high: Worth \$167 billion. <https://www.nationalservice.gov/newsroom/press-releases/2018/volunteering-us-hits-record-high-worth-167-billion>; U.S. Department of Labor, Bureau of Labor Statistics. (2016). *Volunteering in the United States, 2015*. <http://www.bls.gov/news.release/volun.nr0.htm>

Other Factors That Influence Wellness

Q Is my health mostly dependent on my genes and family history?

Genetic inheritance can affect your risk for certain diseases, but in most cases, your genes are just one factor in your disease risk and overall health status. Some relatively rare diseases and disorders are caused by a single gene, but most diseases stem from a complex combination of biological, behavioral, and environmental factors.

Nevertheless, you should know your family health history. If you learn that you are at elevated risk for a particular condition—for example, alcoholism or high cholesterol—you can make informed lifestyle choices to reduce that risk. Someone with a family history of high cholesterol can reduce her personal risk by choosing a diet low in saturated fat and high in fiber and by getting regular exercise.

Separating the effects of genetic inheritance from those of health habits can be difficult; many of us have copied the eating patterns and exercise habits of our parents or caregivers. So, you might have “inherited” both a genetic predisposition for high cholesterol and an eating pattern that increases your risk. Although you can't do anything about your genes, you can change your eating habits for the better.

In the previous section of the chapter, we looked at lifestyle behaviors that affect health and wellness. Let's look next at other factors that influence wellness.

Mind Stretcher

Critical Thinking Exercise



What health habits did your parents and other family members have when you were growing up? Were family members active or sedentary? Did they smoke? What kinds of foods did they eat? How have your health habits, both positive and negative, been influenced by those of your family members and others with whom you grew up?

Research Brief

Healthy Living Counts . . . and Every Choice Matters

A great deal of research has gone into tying specific behaviors to health outcomes—smoking to lung cancer, for example. But it's also important to consider the effects of *combinations* of lifestyle factors. For example, if you smoke, does it matter if you lose weight? If you exercise regularly, is any extra benefit gained from a healthy diet?

One in four Americans has multiple chronic conditions. Eighty-one percent of individuals 65 and older have multiple conditions, as do 50 percent of those ages 45–64 and 18 percent of those ages 18–44.

Researchers examined data on more than 20,000 adults who were tracked for an average of 8 years.

(Continued)



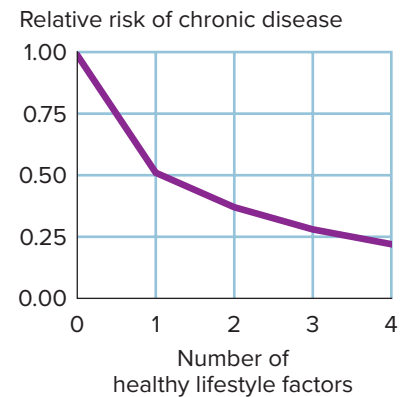
(Continued)

They looked at healthy lifestyle factors in relation to the study participants' risk of developing a major chronic disease (diabetes, heart attack, stroke, cancer). In the analysis, participants were awarded one point for each of four healthy lifestyle factors:

- Never having smoked
- Engaging in physical activity for 3.5 or more hours per week
- Having a healthy dietary pattern (high intake of fruits, vegetables, and whole grains, and low meat consumption)
- Having a body mass index (BMI) below 30 (BMI is a single number representing weight-to-height ratio; a BMI below 30 means that the person is not obese)

Researchers found that the risk of developing a chronic disease decreased progressively as the number of healthy factors increased. People with all four healthy factors had nearly an 80 percent lower risk of developing a chronic disease than participants without a healthy factor. But risk was also reduced for people with one, two, or three healthy factors. The risk reduction was most striking for diabetes, for which having one healthy factor lowered risk by more than 60 percent and having all four healthy factors lowered risk by 93 percent compared to having no healthy

factors. A separate study determined “seniors with fewer behavioral risk factors during middle age have lower disability and improved survival” into older age—an association that can continue into one’s 90s.



Analyze and Apply

- Based on the research, what big conclusion might we draw regarding the impact of a healthy lifestyle on the risk for chronic disease?
- What is one unhealthy behavior that you can start changing *now*?

Sources: Buttorff, C., et al. (2017). *Multiple chronic conditions in the United States*. Santa Monica, CA: RAND Corporation; Centers for Disease Control and Prevention. (2014). Multiple chronic conditions. <http://www.cdc.gov/chronicdisease/about/multiple-chronic.htm>; Chakravarty, E., et al. (2012). Lifestyle risk factors predict disability and death in healthy aging adults. *The American Journal of Medicine*, 125(2), 190–197; Ford, E. S., et al. (2009). Healthy living is the best revenge. *Archives of Internal Medicine*, 169(15), 1355–1362.

BIOLOGY. Your biology includes your genetic makeup, family health history, and any mental or physical problems you may have developed. Certain health habits, such as smoking and drinking, can “change” your biology by altering the functioning of your cells and organs. Your age and sex can also be considered part of your biology—and both have a big effect on your health and wellness. But again, lifestyle choices can help reduce the impact of biology. For example, although bone density inevitably decreases with age, a healthy diet and regular weight-bearing exercise throughout your life help maintain bone density and reduce your risk of falling.

As described earlier, the health differences between the sexes may be due to a mix of biological, behavioral, and cultural factors. Sex differences that have a biological basis include the following:

- Men are taller, have more muscle mass, and are more likely to store excess body fat in the abdomen; women are shorter, have relatively less muscle mass (especially in the upper body), and are more likely to store excess body fat around the hips.
- Men have denser bones than women and have lower rates of osteoporosis (loss of bone mass that can lead to fractures).
- Women have a higher risk of lung cancer than men at a given level of exposure to cigarette smoke, and they

become more intoxicated at a given level of alcohol intake.

- Women have stronger immune systems than men and are less susceptible to infectious diseases, but they have higher rates of autoimmune disorders (conditions in which the immune system attacks healthy cells by mistake).
- Women are more likely than men to be infected with a sexually transmitted infection during intercourse and are more likely to suffer severe effects, including infertility.
- Men are more likely than women to have cardiovascular disease. Men are also more likely to have classic heart attack symptoms like chest pain, whereas women are more likely to have atypical symptoms such as difficulty breathing and extreme fatigue.

What about race or ethnicity? The United States has become increasingly diverse in the past century. According to the most recent census, 36 percent of the population belongs to a racial or ethnic minority group.²³ As with sex and gender, health differences among population groups usually stem from a mixture of factors—some biological/genetic and some based on lifestyle, culture, or socioeconomic factors. For example, Latinos have higher rates of diabetes than African Americans and Caucasians, and African Americans

have above-average rates of high blood pressure. Just like knowing your family's health history, you should be aware of any health conditions for which you may be at elevated risk due to your ethnicity; in some cases, earlier or more frequent screening may be advisable. For more information, visit the Web site for the CDC Office of Health Equity (<https://www.cdc.gov/healthequity/index.html>).

SOCIAL AND ECONOMIC FACTORS. Your social environment includes all your interactions with people in your community. It also includes social institutions such as schools and law enforcement as well as factors such as the quality of housing, the availability of good food and public transportation, and the level of violence.

The economic resources available to a community has a significant impact on its citizens' health. Research shows enormous health disparities between high- and low-income communities, and the nation's poorest are at the greatest risk for poor health. Residents of higher-income communities have better access to higher-quality health care than do people in lower-income communities. In lower-income communities, health care services may be very limited, and people may not be insured at all, or even if they are, they may not be able to afford options that require high out-of-pocket expenses. This disparity was revealed in early COVID-19 research. As one example, findings showed that although U.S. counties with higher total populations and higher levels of education and income had higher risk of infection, counties with higher poverty and disability rates had higher levels of associated mortalities.²⁴

Lower-income communities also often lack resources that those in other neighborhoods may take for granted, such as easy access to parks and walking trails and bicycle lanes or even grocery stores that carry fresh fruit and vegetables. Additionally, such communities rarely have the political clout needed to keep pollutants and other environmental hazards out of their neighborhoods. Moreover, the schools in lower-income communities tend to have fewer resources and poorer facilities. And with higher school drop-out rates, people in poorer communities find it more difficult to land the higher-paying jobs that would improve their economic prospects, while the jobs they do find are associated with an increased likelihood of on-the-job injuries. In short, health disparities and income disparities are inextricably linked and must be addressed in tandem.

PUBLIC POLICIES AND INTERVENTIONS. Health promotion campaigns and disease prevention services can affect health positively. Laws mandating child safety seats have increased safety for infants and children. Restrictions on smoking have had a positive effect on the health of nonsmokers and also encouraged smokers to quit. Think about it: How might you help promote positive changes to public policy that would improve people's health in your community?



Residents of higher-income communities typically have access to higher-quality health care facilities than residents of lower-income communities.

First: Ted S Warren/AP/Shutterstock; Second: Shutterstock

Wellness: What Do You Want for Yourself—Now and in the Future?

Q What does it feel like to be well?

It feels great! Wellness is characterized by energy, vitality, curiosity, empowerment, and enjoyment—a high quality of life. It also means that you are consciously engaged in achieving your full potential in all the wellness dimensions.

How do you rate your own levels of health and wellness today? Are you optimally healthy and living to your full potential? Have you genuinely achieved a high level for each dimension of wellness? How does your lifestyle compare to the healthy lifestyle described in this chapter?

You probably have room for improvement, in terms of both your lifestyle behaviors and the degree to which you've developed all the dimensions of wellness. The good news is that you can decide what kind of future you want. Wellness is something everyone can work on and improve. It comes from the choices you make every day. Any improvements to your wellness behaviors will bring immediate benefits, as well as a feeling of empowerment.

Do you want to make changes but aren't sure how to get started? In Chapter 2, you'll review principles of behavior change and examine strategies for making positive changes in your own life. You can apply the model of behavior change to any health-related behavior; keep the principles in mind as you work your way through subsequent chapters, each of which examines a specific area of health or health behavior.

And remember, you can start from anywhere. Don't worry if you feel like others are ahead of you or do some things better than you. This book and the next chapters are about you and your wellness choices—and even small steps will move you forward!

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Summary

Health is a condition with multiple dimensions that falls on a continuum from negative health, characterized by illness and premature death, to optimal health, characterized by the capacity to enjoy life and to withstand life's challenges. Wellness is an active process of adopting patterns of behavior that can improve health and perceptions of well-being and quality of life in terms of multiple, intertwined dimensions. The dimensions of wellness—physical, emotional, intellectual, social, spiritual, and environmental—are closely connected and must be developed in a balanced way for overall wellness.

Health status can be assessed through life expectancy, days and years of healthy life, and a review of the leading and underlying causes of death. Healthy lifestyle behaviors include the following:

- Be physically active.
- Choose a healthy diet.

- Maintain a healthy weight.
- Avoid tobacco in all forms.
- Manage stress and get adequate sleep.
- Limit alcohol consumption.
- Avoid risky behaviors.
- Limit exposure to radiation and toxins.
- Practice good self-care.
- Seek appropriate medical care.
- Apply critical thinking skills as a health consumer.
- Cultivate relationships and social support.
- Take time to nourish your spiritual side.
- Have fun.

Other factors include family history, income and educational attainment, the environment, access to health care, and public policies.

Test Your Understanding

1. Explain the ways in which obesity contributes to reduced life expectancy.
2. Select two risk factors from the following list, and compare and contrast their influence on the overall health of young adults: violence, depression, accidents, assault.
3. Describe two common health issues facing college students. How do these health issues affect overall wellness?
4. Discuss two risky behaviors to avoid in order to decrease the risk of injury or illness.
5. Describe how one behavior or activity can affect or be affected by multiple components of wellness.

More to Explore

American Academy of Family Physicians (FamilyDoctor.org)

<http://familydoctor.org>

Centers for Disease Control and Prevention: Healthy Living

<http://www.cdc.gov/HealthyLiving>

Healthy People Initiative

<http://www.healthypeople.gov>

MedlinePlus

<http://www.medlineplus.gov>

National Institutes of Health: Health Information

<https://www.nih.gov/health-information>

National Wellness Institute

<http://www.nationalwellness.org>

Centers for Disease Control and Prevention: Family Health History

<http://www.hhs.gov/familyhistory>

U.S. Department of Health and Human Services: Prevention & Wellness

<http://www.hhs.gov/programs/prevention-and-wellness/index.html>

LAB ACTIVITY 1-1 Wellness Lifestyle Assessment

NAME	DATE	SECTION

This lab activity will help you identify your positive and negative wellness lifestyle behaviors.

Equipment: None

Preparation: None

Instructions

For each wellness behavior listed below, place a check in the column with the answer that best describes your behavior.

	A	B	C
	ALMOST ALWAYS	SOME TIMES	ALMOST NEVER
1. I engage in at least 150 minutes per week of moderate-intensity aerobic exercise or 75 minutes of vigorous-intensity exercise or an equivalent combination of the two.			
2. I perform muscular strengthening activities of moderate intensity that involve all major muscle groups at least 2 times per week.			
3. I perform stretching and or balance exercises.			
4. I spend some leisure time each week engaged in physical activity.			
5. I eat at least 7 servings of fruits and vegetables a day.			
6. I avoid skipping meals.			
7. I limit my intake of foods high in saturated and trans fats.			
8. I limit the amount of added sugars I consume from sweetened beverages, desserts, and similar products.			
9. I limit the amount of salt I consume.			
10. For breads, cereals, and other grain-based products, I choose whole-grain foods at least half the time.			
11. I check food labels, ingredient lists, and nutrition information at restaurants in order to make informed choices.			
12. I maintain a healthy weight, avoiding overweight or underweight.			
13. I get 7–8 hours of sleep each night.			
14. I don't smoke cigarettes, cigars, or any other form of tobacco.			
15. I don't use smokeless (spit) tobacco.			
16. I avoid exposure to secondhand smoke.			
17. I use alcohol in moderation (1 drink or less per day for women; 2 drinks or less per day for men) or not at all.			
18. I do not use alcohol or any substance to the point of intoxication.			
19. I use over-the-counter medications as directed.			
20. I use prescription drugs as prescribed.			
21. I avoid unproven, dangerous, and illegal substances, including steroids, as well as unproven health remedies.			
22. I practice good dental care by brushing my teeth 2 or more times a day, flossing at least once per day, and having a dental checkup at least once a year.			
23. I have medical checkups annually or as suggested by my physician in order to obtain all recommended screening tests.			

			A	B	C
			ALMOST ALWAYS	SOME TIMES	ALMOST NEVER
24. I get recommended immunizations.					
25. I obtain only medically necessary X-rays.					
26. I manage any chronic medical conditions (e.g., asthma, migraines, allergies, diabetes, seizure disorder) according to the advice of my health care practitioner.					
27. I abstain from sex or engage in safe-sex practices.					
28. I wash my hands frequently over the course of the day.					
29. I use sunscreen as directed and use protective clothing (e.g., a wide-brimmed hat) as needed when working or playing outside.					
30. I don't try to tan, either from exposure to the sun or through use of tanning lamps or salons.					
31. I keep my computer desk or other workspace set up in a way that allows me to maintain good posture and minimize stress on my body.					
32. I use appropriate protective equipment when participating in recreational activities that require such equipment.					
33. I use appropriate protective equipment for occupational activities that require such equipment.					
34. I am actively responsible for my personal safety by being aware of my surroundings, avoiding being alone in unprotected areas, locking doors and windows when appropriate, and so on.					
35. If I have access to a firearm, I store it securely and use it safely.					
36. I do not talk on the phone, send text messages, or engage in other distracting activities while driving.					
37. I wear a seat belt when driving or riding in a car.					
38. I avoid driving while under the influence of alcohol or other drugs or riding with others who are under the influence.					
39. I obey the rules of the road by not speeding or tailgating, by always signaling before I turn or change lanes, and by adjusting my speed and driving to road and weather conditions.					
40. I recycle paper, plastic, and other appropriate items, and I reuse items such as shopping bags.					
41. I take steps to conserve energy and water (e.g., turning off lights and faucets, carpooling).					
42. I avoid environmental toxins and areas or times of day with high pollution levels.					
43. I manage stress in positive ways (e.g., physical activity, time management, deep breathing).					
44. I have sought or would seek help for depression or another mental health concern.					
45. I maintain a group of close friends I can confide in and ask for help or support.					
46. I manage my anger in ways that are not harmful to myself or others.					
47. I resolve conflicts with family, friends, coworkers, and fellow students in positive, respectful ways.					

LAB ACTIVITY 1-1

			A	B	C
			ALMOST ALWAYS	SOME TIMES	ALMOST NEVER
48. I feel a sense of connectedness with others.					
49. I accept responsibility for my own feelings.					
50. I accept responsibility for my own actions.					
51. I engage in activities that are consistent with my beliefs and values.					
52. I spend time each day in prayer, meditation, or personal reflection.					
53. I participate in university and/or community events, or I volunteer.					
54. I like my job.					
55. I take at least a little time each day to relax and engage in a hobby or other activity I enjoy.					
56. I make a budget, track my spending, and keep my finances under control.					
57. I manage my time well through strategies such as setting priorities, creating to-do lists, and managing my schedule using a planner.					
58. I am motivated to learn new information and skills, and I actively seek ways to challenge my mind and seek intellectual growth.					
59. I gather and evaluate information in order to make sound decisions about health and wellness.					
60. I am able to set realistic goals for myself and work toward them.					
TOTAL NUMBER OF RESPONSES IN EACH COLUMN					

Results

To calculate your score, add up the total number of responses in each column and copy them onto the appropriate lines below. Multiply the total for column A by 2, the total for column B by 1, and the total for column C by 0. Add the final three numbers together for your total score, and then find your rating on the table.

Total for column A	<input type="text"/>	× 2 points =	<input type="text"/>	Rating	Total score
Total for column B	<input type="text"/>	× 1 points =	<input type="text"/>	Excellent	110–120
Total for column C	<input type="text"/>	× 0 points =	<input type="text"/>	Good	90–109
			<input type="text"/>	Fair	60–89
		Total Score	<input type="text"/>	Needs attention	Less than 60

Reflecting on Your Results

How did you score? Were you surprised by number of wellness lifestyle behaviors you currently engage in—or don't engage in? Do your results give you encouragement or cause concern?

Select two behaviors of concern for you—something for which you checked “Almost never” or something for which you checked “Sometimes” but which you know is a problem for you (for example, smoking, drinking until intoxicated, never exercising). For each behavior, make a list of the ways in which it affects the different dimensions of wellness—positively as well as negatively. For example, smoking is physically and environmentally harmful, but it may make you feel better physically and emotionally in the short term; you may enjoy smoking with certain friends, but you may miss out on other social activities due to your habit.

Behavior 1: _____
How it impacts the dimensions of wellness:

Behavior 2: _____
How it impacts the dimensions of wellness:

Planning Your Next Steps

Any behavior for which you didn’t check “Almost always” is a possible candidate for change and improvement. Choose five behaviors from the assessment that you are most interested in changing and list them below. For each, give one reason you’d like to change the behavior.

Behavior 1: _____
Reason to change:

Behavior 2: _____
Reason to change:

Behavior 3: _____
Reason to change:

Behavior 4: _____
Reason to change:

Behavior 5: _____
Reason to change: