

mindfulness edition



Health

THIRTEENTH
EDITION

THE
BASICS

Rebecca J. Donatelle



BRIEF CONTENTS

PART ONE

Finding the Right Balance

- 1** Accessing Your Health 1

FOCUS ON

DIFFERENCE, DISPARITY, AND HEALTH:
ACHIEVING HEALTH EQUITY 26

- 2** Promoting and Preserving Your
Psychosocial Health 38

FOCUS ON

CULTIVATING YOUR SPIRITUAL HEALTH 61

- 3** Managing Stress and Coping with
Life's Challenges 72

- 4** Improving Your Sleep 99

- 5** Preventing Violence and Injury 118

PART TWO

Creating Healthy and Caring Relationships

- 6** Building Healthy Relationships 142

FOCUS ON

UNDERSTANDING YOUR SEXUALITY 163

- 7** Considering Your Reproductive
Choices 178

PART THREE

Avoiding Risks from Harmful Habits

- 8** Recognizing and Avoiding Addiction
and Drug Abuse 209

- 9** Drinking Alcohol Responsibly and Ending
Tobacco Use 238

PART FOUR

Building Healthy Lifestyles

- 10** Eating for a Healthier You 270

- 11** Reaching and Maintaining a Healthy
Weight 300

FOCUS ON

ENHANCING YOUR BODY IMAGE 325

- 12** Improving Your Physical Fitness 337

PART FIVE

Preventing and Fighting Disease

- 13** Reducing Your Risk of Cardiovascular
Disease and Cancer 364

FOCUS ON

MINIMIZING YOUR RISK FOR DIABETES 397

- 14** Protecting Against Infectious Diseases
and Sexually Transmitted Infections 409

FOCUS ON

REDUCING RISKS AND COPING WITH
CHRONIC DISEASES AND CONDITIONS 441

PART SIX

Facing Life's Changes

- 15** Making Smart Health
Care Choices 452

FOCUS ON

UNDERSTANDING COMPLEMENTARY
AND INTEGRATIVE HEALTH 470

FOCUS ON

AGING, DEATH, AND DYING 480

- 16** Promoting Environmental Health 494

ANSWERS TO POP QUIZ QUESTIONS A-1

GLOSSARY G-1

REFERENCES R-1

PHOTO CREDITS C-1

INDEX I-1

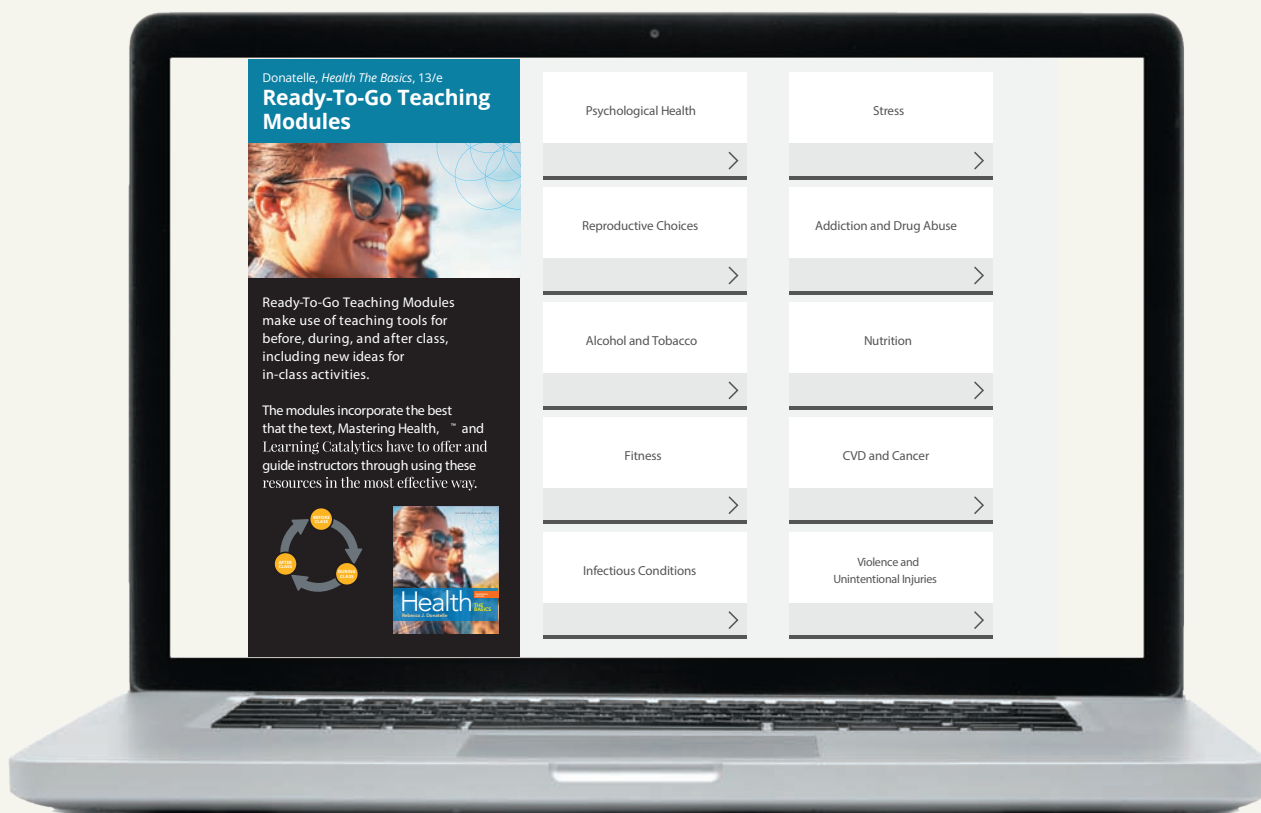
This section
was reorganized
and coverage of
Aging, Death, and
Dying streamlined
into a **FOCUS
ON** chapter.

NEW
Chapter

NEW
Chapter

Get Ready for a Whole New Mastering Health Experience

New! Ready-to-Go Teaching Modules help you find the best assets to use before, during, and after class to teach the toughest topics in Personal Health. These curated sets of teaching tools save you time by highlighting the most effective and engaging videos, quizzing, coaching, self-assessment, and behavior change activities to assign within **Mastering™ Health**.



Connecting Cutting Edge Content to Enact

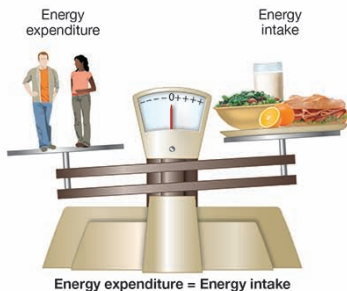


FIGURE 11.5 The Concept of Energy Balance If you consume more calories than you burn, you gain weight. If you burn more calories than you consume, you lose weight. If your consumption and burning of calories are equal, your weight will not change.

consume 140 calories (the amount in one can of regular soda) more than you need every single day and make no other changes in diet or activity, you would gain 1 pound in 25 days ($3,500 \text{ calories} \div 140 \text{ calories per day} = 25 \text{ days}$). Conversely, if you walk for 30 minutes each day at a pace of 15 minutes per mile (172 calories burned) in addition to your regular activities, you would lose 1 pound in 20 days ($3,500 \text{ calories} \div 172 \text{ calories per day} = 20.3 \text{ days}$). **FIGURE 11.5** illustrates the concept of energy balance.

Diet and Eating Behaviors

Successful weight loss requires shifting your energy balance. The first part of the equation is to reduce calorie intake through modifying eating behaviors using a variety of strategies.

Being Mindful of Your Eating Triggers

When you sit down to eat, is your mind actually “out to lunch”? If you are like the 66 percent of American adults who eat in front of the TV or computer, it should be no surprise that you are eating faster and eating more, with more awareness of the TV than of your food.⁵⁴ *Mindless eating*, or putting food in your mouth that you don’t really taste or notice while consuming more than you should, may be a key contributor to excess calorie consumption and weight gain. When we eat mindlessly, we may miss feelings of satiety and ignore tendencies we might have to use restraint in shoving potato chips into our mouths.

SEE IT! VIDEOS

Do you snack like crazy when you’re watching an exciting movie? Watch *Fast-Paced Movies, Television Shows May Lead to More Snacking* in the Study Area of Mastering Health.

SKILLS FOR BEHAVIOR CHANGE

Tips for Sensible Snacking

- 1. **Keep healthy munchies around.** Buy 100 percent whole wheat breads, and if you need something to spice that up, use low-fat or soy cheese, low-fat cream cheese, peanut butter, hummus, or other high-protein healthy favorites. Some baked or popped crackers are low in fat and calories and high in fiber.
- 2. **Keep “crunchies” on hand.** Apples, pears, carrots, green or red pepper sticks, popcorn, snap peas, and celery all are good choices. Wash the fruits and vegetables, and cut them up to carry with you; eat them when a snack attack comes on. Don’t put butter on the popcorn, and go light on the salt.
- 3. **Choose natural beverages.** Drink plain water, 100 percent juice in small quantities, or other low-sugar choices to satisfy your thirst. Hot tea, black coffee, or soup broths are also good choices.
- 4. **Eat nuts instead of candy.** Although relatively high in calories, nuts (particularly almonds and walnuts) are also loaded with healthy fats and are healthy when consumed in moderation.
- 5. **If you must have a piece of chocolate, keep it small and dark.** Dark chocolate has more antioxidants.
- 6. **Avoid high-calorie energy bars.** Eat these only if you are exercising hard and don’t have an opportunity to eat a regular meal. Select ones with a good mixture of fiber and protein and that are low in fat, sugar, and calories.

WHAT DO YOU THINK?

If you wanted to lose weight, what strategies would you most likely choose?

- Which strategies, if any, have worked for you before?
- What factors might serve to help or hinder your weight-loss efforts?

Eating mindfully means eating with awareness—awareness of *why* we are eating (was it a trigger, or are we really hungry?), *what* we are eating (should we really be eating this?), and *how much* we are eating (stop! put it down!).

Before you can change an unhealthy eating habit, you must first determine what triggers you to eat.

Keeping a log of eating triggers—when, what, where, and how much you eat—for 2 to 3 days can help you identify what is pushing those “eat everything in sight” buttons for you.

Typically, dietary triggers center on patterns and problems in everyday living rather than real hunger pangs. Many people eat compulsively when stressed; however, for other people, the same circumstances diminish their appetite, causing them to lose weight. When your mind wanders, you may find yourself grazing in the refrigerator or pulling into a fast-food drive-through. Ask yourself: Are you really hungry, or are you eating

NEW! A Mindfulness Theme throughout the book relates mindfulness research and practices to topics ranging from relationships to mindful eating to stress management and more. Mindfulness coverage is flagged by an icon next to all applicable passages in the text.



MINDFULNESS FOR SMOKING CESSATION

NEW! Mindfulness and You feature boxes cover topics such as mindfulness and smoking cessation, technostress, relapse prevention, etc. and are featured throughout the book.

More people are addicted to nicotine than to any other drug in the United States. Research suggests that nicotine maybe as addictive as heroin, cocaine, or alcohol. Successfully quitting smoking is a challenge that often requires more than one attempt. About 70 percent of adult smokers report wanting to quit smoking completely. Fifty-five percent tried to stop smoking for more than one day in the past year.

Recently, mindfulness-based therapies have been found to offer greater chances of success for those attempting to quit smoking. Mindfulness interventions have also been shown to decrease negative affect and craving in smokers.

Dr. Judson Brewer, the Director of Research at the Center for Mindfulness at the University of Massachusetts, has found that people who use mindfulness training

may have better outcomes than those who use standard methods of quitting. Dr. Brewer uses the acronym RAIN to help people manage their nicotine cravings.

- **Recognize** the craving that is occurring, and relax with it.
- **Accept** the moment. Pay attention to how your body is feeling.
- **Investigate** the experience. Ask yourself what is happening to your body in this moment.
- **Note** what is happening. As you acknowledge anxiousness, irritability, and other feelings, realize that they are nothing more than body sensations that will pass.

Using mindfulness techniques in this way will help the body become familiar with the cravings and learn that it can adapt.

Cravings usually last from 90 seconds to 3 minutes. Simply using the acronym above helps many smokers to acknowledge and get through the craving, which should then become weaker over time.

Sources: J. Brewer, “A Randomized Controlled Trial of Smartphone-Based Mindfulness Training for Smoking Cessation: A Study Protocol,” *BMC Psychiatry* 15, no. 83 (2015): 2–7; J. Brewer, “A Simple Way to Break A Habit,” TED TalkMED, November, 2015; Centers for Disease Control and Prevention, “Smoking & Tobacco Use: Quitting Smoking,” February 1, 2017, https://www.cdc.gov/tobacco/data_statistics/fact_sheets/cessation/quitting/; L. Peltz, “Practicing Mindfulness to Help You Break the Habit of Smoking,” Expert Beacon, 2016, <https://expertbeacon.com/practicing-mindfulness-help-you-break-habit-smoking/#.WM2YbhfAISPV>; A. Ruscio et al., “Effect of Brief Mindfulness Practice on Self-Reported Affect, Craving and Smoking: A Pilot Randomized Controlled Trial Using Ecological Momentary Assessment,” *Nicotine Tobacco Research* 18, no. 1 (2016): 64–73.

Positive Change in Students' Lives

NEW! Focus on Difference, Disparity, and Health chapter looks at health equity as a critical issue in 21st century America. Coverage includes specific actions to take to promote health equity on campus, in the community, and individually, and systemic changes needed for the U.S. to progress towards better health for all.

FOCUS ON

Difference, Disparity, and Health: Achieving Health Equity

LEARNING OUTCOMES

- 1 Explain why health equity has become a critical issue in 21st century America, identifying the populations that are most vulnerable to health disparities and the costs to society.
- 2 Identify the social determinants of health that most strongly influence health disparities in the United States.
- 3 Discuss specific actions you can take to promote health equity on campus, in your community, and in your personal life, including how to use mindfulness to examine your biases and increase your respect for difference.
- 4 Describe the systemic changes required to enable the United States to progress toward good health for all, and provide examples of national and community-based initiatives currently underway toward achieving this goal.

WHY SHOULD I CARE?

Health disparities lead to preventable disease and premature death. They cost our economy billions of dollars annually, while depriving us of the full participation of each member of our society. In contrast, working toward health equity challenges your assumptions, hones your interpersonal skills, and generally expands your world. Importantly, moving populations toward improved health and greater opportunity ultimately benefits all of us while helping control health care costs.

The United States is one of the most diverse countries in the world, home to over 325 million unique individuals.

These individuals represent an astonishing complexity of differences in race and ethnicity, socioeconomic status, educational attainment,

sexual orientation, gender identity, age, religious, abilities, and disabilities. They also represent differing attitudes, beliefs, fears, values, goals, and dreams.

STUDENT HEALTH TODAY

CAFFEINE, SLEEP, AND YOUR HEALTH

Caffeine has long been recognized for its ability to increase alertness and decrease sleepiness. Ingest too much caffeine, and you could end up with side effects when you need desperately to sleep.

A recent study indicated that effects of caffeine can last 5.5 to 7.2 hours or more—depending on how potent your coffee or energy drink really is. A double shot of espresso and a cup of your grandparent's old coffee can have powerful, nearly identical effects of caffeine with the potential to supply different results. Many energy drinks are also high in calories and sugar. A nationally representative study of college students' caffeine consumption showed increasing trends in high caffeine consumption on campuses throughout the country and resulting problems with falling asleep and staying asleep. Worse of all, other than young adults are large consumers of caffeine, it's less clear whether they understand the health implications. Caffeine withdrawal, dependence, and addiction are all possible in addition to a significant strain on your finances. However, that's just the beginning. An ever-increasing body of research points to risk of cardiac irregularities, including:

- such as arrhythmia, eggplant, heart, supraventricular, arrhythmias, tachycardia, atrial fibrillation, and other heart rhythm disorders.

but not limited to, arrhythmias, psychological problems such as depression and anxiety, and neurological side effects such as headaches and migraines. A growing concern about excess consumption of caffeine is that it can severely disrupt circadian rhythms, leading to the inability to fall asleep and stay asleep. Consuming caffeinated beverages up to 16 hours before bedtime can have a significant effect on sleep that lasts before consuming that large coffee or double shot espresso as you walk home from class. If you keep you up and past your bedtime, make you only get up and drink, and still another layer of stress to an already stressful day.

Bassareo, V. D. et al., "Caffeine Consumption, Anxiety, and Sleep Disruption: A Study of University Undergraduates." *Journal of Interpersonal Violence*, 2015, 30(12), 1193-1198. doi:10.1177/0886260515578000. © 2015 Sage Publications. All rights reserved. Reproduction of this article is prohibited without the express written permission of Sage Publications. For more information on this article, please visit the journal's website at <http://jiv.sagepub.com>.



ASSESS YOURSELF

Are You Sleeping Well?

Read each statement below, then circle True or False according to whether or not it applies to you in the current school term.

1. I sometimes doze off in my morning classes.	True	False	10. I wake up frequently throughout the night.	True	False
2. I sometimes doze off in my last class of the day.	True	False	11. I have fallen asleep while driving.	True	False
3. I get through most of the day feeling tired.	True	False			
4. I feel drowsy when I'm a passenger in a bus or car.	True	False			
5. I often fall asleep while reading or watching TV.	True	False			
6. I usually take me a long time to fall asleep.	True	False			
7. My roommate tells me I snore.	True	False			

If you answer True more than once, you may be sleep deprived. Try the strategies in this chapter for getting more or better-quality sleep. But if you still experience sleepiness, see your health care provider.

YOUR PLAN FOR CHANGE

Here are some steps you can take to improve your sleep, starting tonight.

TODAY, YOU CAN:

- Identify things in your life that may prevent you from getting a good night's sleep. Develop a plan. What can you do differently starting tonight?
- Write a list of personal Do's and Don'ts. For instance: Do turn off your cell phone after 11 p.m. Don't eat anything containing caffeine after 3 p.m.

WITHIN THE NEXT TWO WEEKS, YOU CAN:

- Keep a sleep diary, noting not only how many hours of sleep you get each night, but also how you feel and function the next day.
- Arrange your room to promote restful sleep. Keep it quiet, cool, dark, and comfortable.
- Visit your campus health center for more information about getting a good night's sleep.

BY THE END OF THE SEMESTER, YOU CAN:

- Establish a regular sleep schedule. Get in the habit of going to bed and waking up at the same time, even on weekends.
- Create a ritual, such as stretching, meditation, reading something light, or listening to music, that you follow each night to help your body ease from the activity of the day into restful sleep.
- If you are still having difficulty sleeping, contact your health care provider.

Avoid Common Sleep Disruptors

Several factors play major roles in whether or not you can fall asleep and stay asleep. Some of the biggest sleep disruptors are common, and you'll recognize them right away. Often, however, they are not what you think they are. Here are some of the most common sleep disruptors you should be watching for. Avoid some of these behaviors and sleep.

- **Go easy on the caffeine.** Long recognized for its ability to increase vigilance and alertness and decrease sleepiness when you need to stay awake, caffeine can be bad news for your sleep, particularly when consumed in the late afternoon or evening. See the [Sleep Disruptors Today!](#) box for more on caffeine and your health.
- **Avoid nicotine, alcohol, and opioids before bed.** Like caffeine, nicotine, alcohol, and opioid—over-the-counter pain relievers—will increase the likelihood of sleep disturbances. Although

alcohol may make you sleep initially, it disrupts other stages of sleep, keeping you from the restorative, deeper levels of sleep you need.¹⁷ Alcohol, particularly binge drinking, has been shown to be a key sleep disruptor.¹⁸ (Preparedness exercises suffer from nocturia, particularly in their first trimester.)

• **Turn off screens.** Watching TV, playing computer games, hanging out on Facebook or other social media sites, watching too many late-night news or crime reporting or reality shows that you find exciting—all of these things can keep your mind alert and expose you to blue light, wakening your chances for a good night's sleep.

• **Turn off cellphones.** Avoid late-night phone calls, texts, or e-mails that can end up in arguments, disagreements, and other emotional scenarios. If something does stir you up before bed, journal about it briefly, then promise yourself that you'll make time the next day to explore your thoughts and feelings more deeply.

17. National Sleep Foundation. *Sleep Disruption and Sleep Deprivation*. Washington, DC: National Sleep Foundation, 2011. 11-12.

UPDATED! Why Should I Care? features open each chapter, engaging students and helping them recognize the relevance of health issues to their own lives.

WHY SHOULD I CARE?

If you think cardiovascular disease and cancer are just things your parents or grandparents develop, think again! Increasing rates of obesity, high-fat diets, high levels of stress and anxiety, as well as a penchant for sitting too much all put younger adults and adolescents at risk.

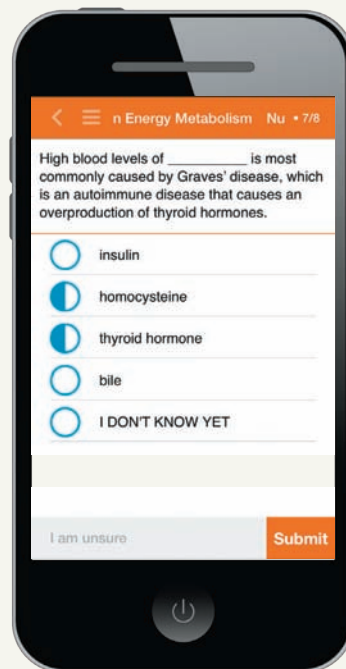
Continuous Learning Before, During, and After Class

BEFORE CLASS

Mobile Media and Reading Assignments Ensure Students Come to Class Prepared

NEW! Interactive Pearson eText gives students access to their text, anytime, anywhere. Pearson eText features include:

- Offline access on smartphones/ tablets
- Seamlessly integrated videos and other rich media.
- Interactive Self-Assessment Worksheets
- Accessible (screen-reader ready).
- Configurable reading settings, including resizable type and night reading mode.
- Instructor and student note-taking, highlighting, bookmarking, and search.



UPDATED! Dynamic Study Modules help students study effectively by continuously assessing student performance and providing practice in areas where students struggle the most. Each Dynamic Study Module, accessed by computer, smartphone or tablet, promotes fast learning and long-term retention.

Pre-Lecture Reading Quizzes are easy to customize and assign

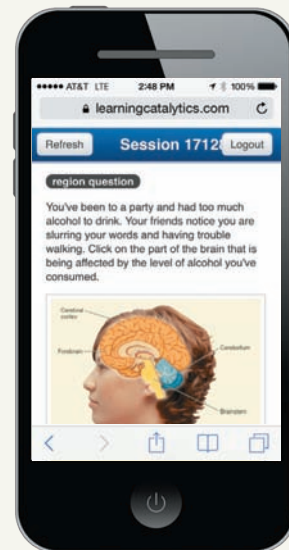
Reading Questions ensure that students complete the assigned reading before class. Reading Questions can be completed by students on any mobile device.

with Mastering Health

DURING CLASS

Engage Students with Learning Catalytics

Learning Catalytics, a “bring your own device” student engagement, assessment, and classroom intelligence system, allows students to use their smartphone, tablet, or laptop to respond to questions in class.



AFTER CLASS

Mastering Health Delivers Automatically Graded Health and Fitness Activities

Interactive Behavior Change Activities—Which Path Would You Take? Have students explore various health choices through an engaging, interactive, low-stakes, and anonymous experience. These activities show students the possible consequences of various choices they make today on their future health and are made assignable in Mastering Health with follow-up questions.

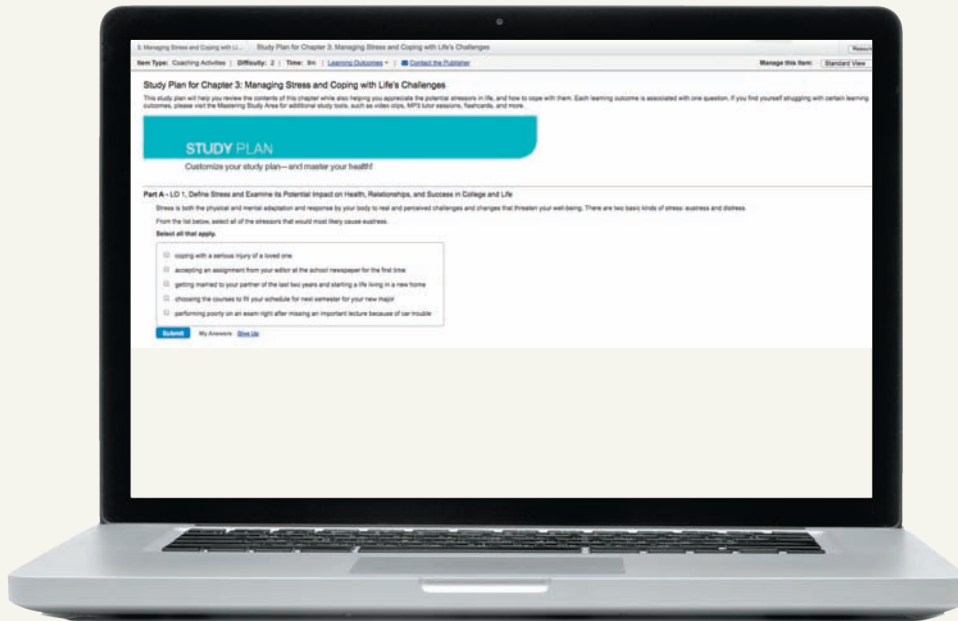


Go to **Mastering Health** to play **Which Path Would You Take?** and see where decisions like these lead you!

Continuous Learning Before, During, and After Class

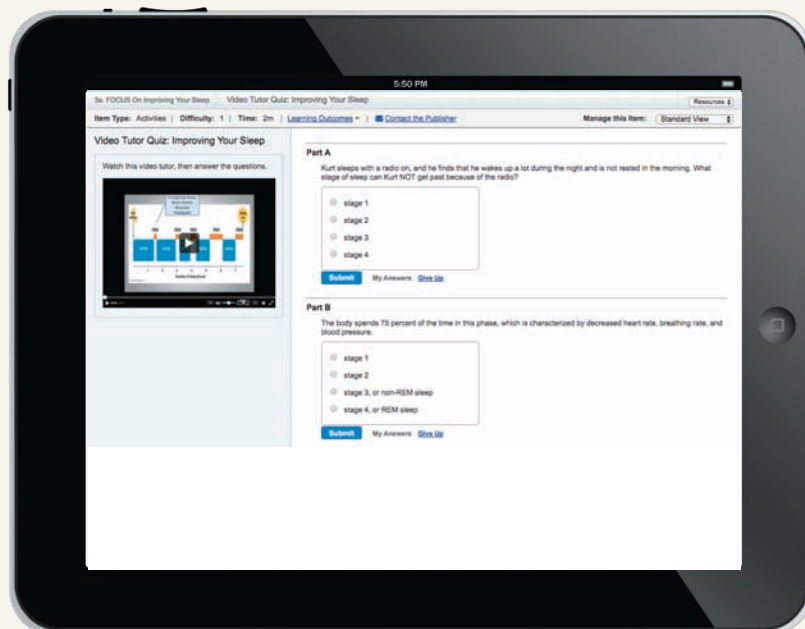
AFTER CLASS

Easy to Assign, Customize, Media-Rich, and Automatically-Graded Assignments

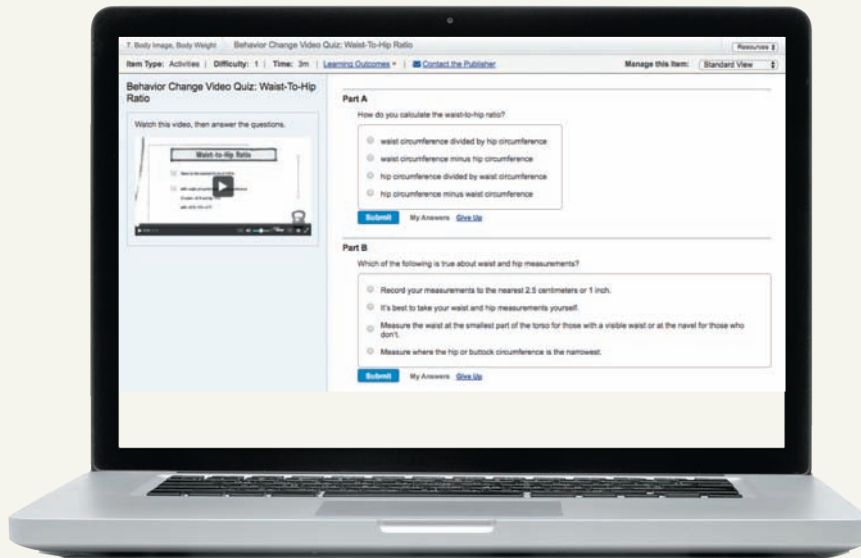


UPDATED! Study Plans tie all end-of-chapter material (including chapter review, pop quiz, and Think About It questions) to specific numbered Learning Outcomes and Mastering assets. Assignable study plan items contain at least one multiple choice question per Learning Outcome and wrong-answer feedback.

Video Tutors highlight a book figure or discussion point in an engaging video, covering key concepts such as how drugs act on the brain, reading food labels, and the benefits of regular exercise. All Video Tutors include assessment activities and are assignable in Mastering Health.

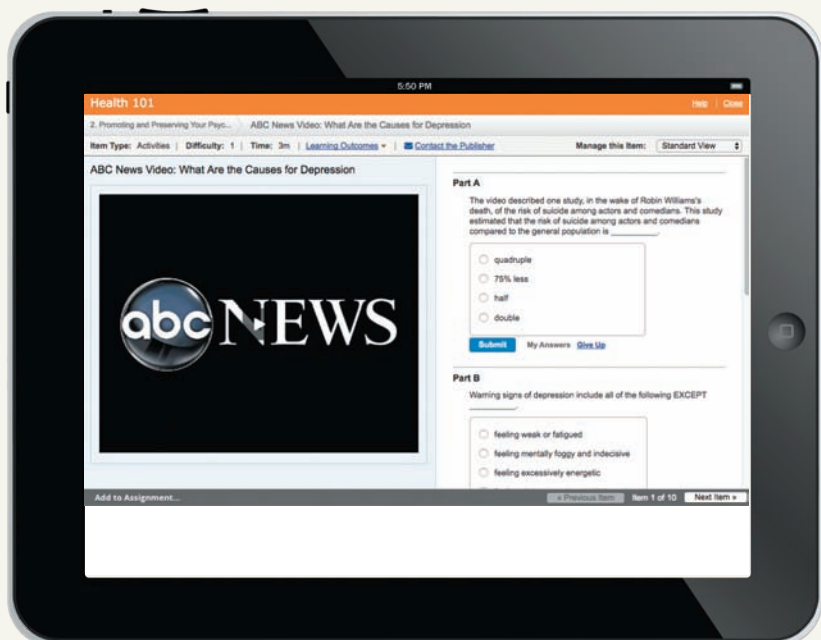


with Mastering Health

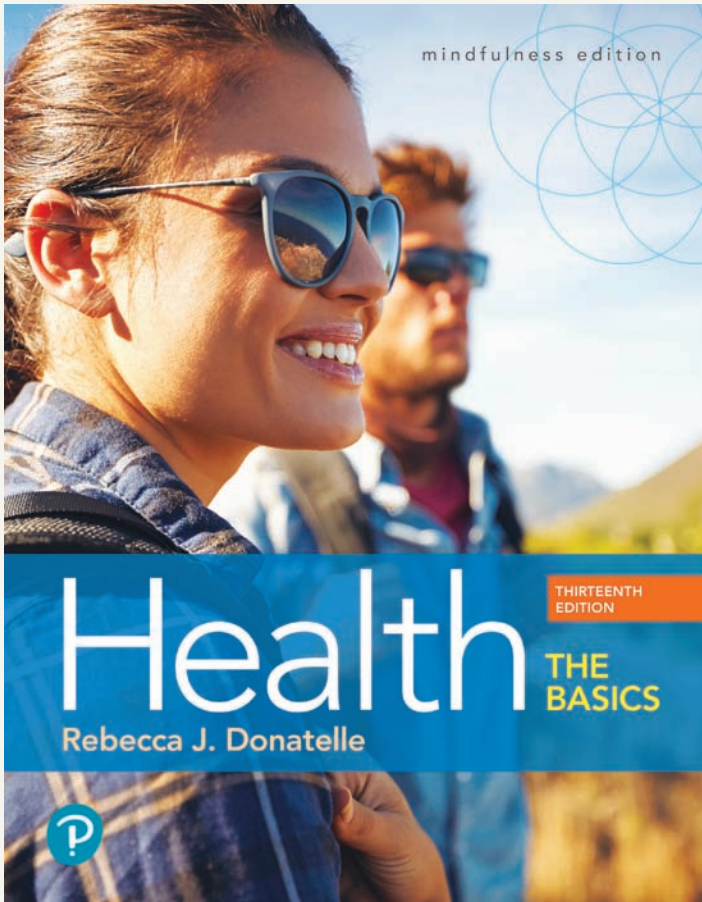


HALLMARK! Behavior Change Videos are concise whiteboard-style videos that help students with the steps of behavior change, covering topics such as setting SMART goals, identifying and overcoming barriers to change, planning realistic timelines, and more. Additional videos review key fitness concepts such as determining target heart rate range for exercise. All videos include assessment activities and are assignable in Mastering Health.

ABC News Videos spark discussions with up-to-date hot topics. The videos can be used to launch lectures or can be assigned in Mastering Health, with multiple choice questions that include wrong-answer feedback.



Resources for YOU, the Instructor



Mastering Health provides you with everything you need to prep for your course and deliver a dynamic lecture, in one convenient place. Resources include:

Media Assets For Each Chapter

- ABC News Lecture Launcher videos
- PowerPoint Lecture Outlines
- PowerPoint clicker questions and Jeopardy-style quiz show questions
- Files for all illustrations and tables and selected photos from the text

Test Bank

- Test Bank in Microsoft, Word, PDF, and RTF formats
- Computerized Test Bank, which includes all the questions from the printed test bank in a format that allows you to easily and intuitively build exams and quizzes.

Teaching Resources

- New! Ready-to-Go Teaching Modules
- Instructor Resource and Support Manual in Microsoft Word and PDF formats
- Learning Catalytics: Getting Started
- Getting Started with Mastering Health

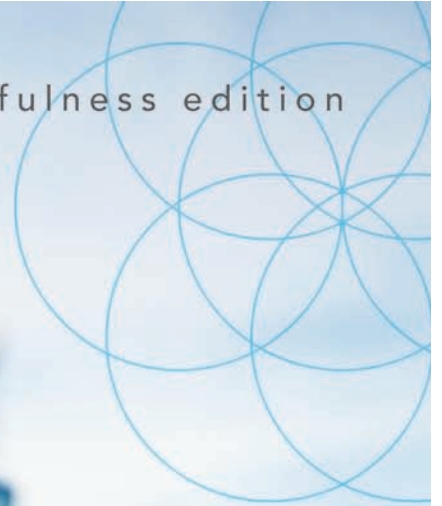
Student Supplements

- Take Charge of Your Health Worksheets
- Behavior Change Log and Wellness Journal
- Eat Right!
- Live Right!
- Food Composition Table

Measuring Student Learning Outcomes?

All of the Mastering Health assignable content is tagged to book content and to Bloom's Taxonomy. You also have the ability to add your own learning outcomes, helping you track student performance against your learning outcomes. You can view class performance against the specified learning outcomes and share those results quickly and easily by exporting to a spreadsheet.

mindfulness edition



Health

THIRTEENTH
EDITION

THE
BASICS

Rebecca J. Donatelle



Pearson

330 Hudson Street, NY NY 10013

Courseware Portfolio Manager: Michelle Yglecias
Content Producer: Deepti Agarwal
Managing Producer: Nancy Tabor
Courseware Director, Content Development: Barbara Yien
Development Editor: Nic Albert
Courseware Editorial Assistants: Nicole Constantine, Crystal Trigueros
Rich Media Content Producers: Timothy Hainley, Lucinda Bingham
Full-Service Vendor: SPi Global
Copyeditor: Barbara Willette
Art Project Manager: Morgan Eawald, Lachina Publishing Services
Design Manager: Mark Ong
Interior Designer: Elise Lansdon
Cover Designer: Elise Lansdon
Rights & Permissions Project Manager: Donna Kalal, Cenveo Publisher Services
Rights & Permissions Management: Ben Ferrini
Photo Researcher: Kathleen Olson
Manufacturing Buyer: Stacey Weinberger, LSC Communications
Product Marketing Manager: Alysun Burns
Field Marketing Manager: Mary Salzman

Cover Photo Credit: Ammentorp Photography/Alamy Stock Photo.

Copyright ©2019, 2017, 2015, 2013 Pearson Education, Inc. All Rights Reserved. Printed in the United States of America. This publication is protected by copyright, and permission should be obtained from the publisher prior to any prohibited reproduction, storage in a retrieval system, or transmission in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise. For information regarding permissions, request forms and the appropriate contacts within the Pearson Education Global Rights & Permissions department, please visit www.pearsoned.com/permissions/.

Acknowledgements of third party content appear on page C-1, which constitutes an extension of this copyright page.

PEARSON, ALWAYS LEARNING and Mastering™ Health are exclusive trademarks in the U.S. and/or other countries owned by Pearson Education, Inc. or its affiliates.

Unless otherwise indicated herein, any third-party trademarks that may appear in this work are the property of their respective owners and any references to third-party trademarks, logos or other trade dress are for demonstrative or descriptive purposes only. Such references are not intended to imply any sponsorship, endorsement, authorization, or promotion of Pearson's products by the owners of such marks, or any relationship between the owner and Pearson Education, Inc. or its affiliates, authors, licensees or distributors.

Library of Congress Cataloging-in-Publication Data

Names: Donatelle, Rebecca J., 1950- author.

Title: Health : the basics / Rebecca J. Donatelle.

Description: 13th edition. | New York: Pearson, [2019] | Includes bibliographical references and index.

Identifiers: LCCN 2017044704 | ISBN 9780134709680 (student edition) | ISBN 9780134842790 (instructor's review copy)

Subjects: | MESH: Hygiene | Health Behavior

Classification: LCC RA776 | NLM QT 180 | DDC 613—dc23 LC record available at <https://lccn.loc.gov/2017044704>

BRIEF CONTENTS

PART ONE

Finding the Right Balance

- 1 Accessing Your Health 1

FOCUS ON

DIFFERENCE, DISPARITY, AND HEALTH: ACHIEVING HEALTH EQUITY 26

- 2 Promoting and Preserving Your Psychological Health 38

FOCUS ON

CULTIVATING YOUR SPIRITUAL HEALTH 61

- 3 Managing Stress and Coping with Life's Challenges 72
- 4 Improving Your Sleep 99
- 5 Preventing Violence and Injury 118

PART TWO

Creating Healthy and Caring Relationships

- 6 Connecting and Communicating in the Modern World 142

FOCUS ON

UNDERSTANDING YOUR SEXUALITY 163

- 7 Considering Your Reproductive Choices 178

PART THREE

Avoiding Risks from Harmful Habits

- 8 Recognizing and Avoiding Addiction and Drug Abuse 209
- 9 Drinking Alcohol Responsibly and Ending Tobacco Use 238

PART FOUR

Building Healthy Lifestyles

- 10 Nutrition: Eating for a Healthier You 270
- 11 Reaching and Maintaining a Healthy Weight 300

FOCUS ON

ENHANCING YOUR BODY IMAGE 325

- 12 Improving Your Personal Fitness 337

PART FIVE

Preventing and Fighting Disease

- 13 Reducing Your Risk of Cardiovascular Disease and Cancer 363

FOCUS ON

MINIMIZING YOUR RISK FOR DIABETES 395

- 14 Protecting Against Infectious Diseases and Sexually Transmitted Infections 407

FOCUS ON

REDUCING RISKS FOR CHRONIC DISEASES AND CONDITIONS 439

PART SIX

Facing Life's Changes

- 15 Making Smart Health Care Choices 450

FOCUS ON

UNDERSTANDING COMPLEMENTARY AND INTEGRATIVE HEALTH 468

FOCUS ON

AGING, DEATH, AND DYING 478

- 16 Promoting Environmental Health 492

APPENDIX A: POP QUIZ ANSWERS A-1

REFERENCES R-0

PHOTO CREDITS C-1

INDEX I-1

CONTENTS

PREFACE xiv

ACKNOWLEDGMENTS xix

PART ONE | FINDING THE RIGHT BALANCE

1 Accessing Your Health 1

Why Health, Why Now? 2

- Choose Health Now for Immediate Benefits 2
- Choose Health Now for Long-Term Rewards 3
- Your Health Is Linked to Societal Health 4

What Is Health? 5

- Models of Health 5
- Wellness and the Dimensions of Health 6

What Influences Your Health? 7

- Individual Behavior 8
- Biology and Genetics 9
- Social Factors 9
- Access to High-Quality Health Services 9
- Policymaking 10

How Does Mindfulness Influence Health? 10

- Definitions of Mindfulness 10
- Health Benefits of Mindfulness 10
- How to Practice Mindfulness 11

How Does Behavior Change Occur? 12

- Health Belief Model 12
- Social Cognitive Model 12
- Transtheoretical Model 13

How Can You Improve Your Health Behaviors? 13

- Step One: Increase Your Awareness 14
- Step Two: Contemplate Change 14
- Step Three: Prepare for Change 16
- Step Four: Take Action to Change 17
- Let's Get Started! 19

ASSESS YOURSELF 20

STUDY PLAN 23

FOCUS ON Difference, Disparity, and Health: Achieving Health Equity 26

Why Has Health Equity Become a Critical Issue in America? 27

- Health Equity Is Attainment of the Highest Level of Health for All 27

America: A Country of Increasing Diversity 27

Our Response to Difference Can Lead to Disparities in Health 28

Certain Population Groups Are More Vulnerable to Health Disparities 28

Health Disparities Incur Enormous Costs 29

How Do the Social Determinants of Health Influence Health Disparities in America? 29

- Economic Stability and Educational Attainment 30
- Social Interactions and Community Context 31
- Neighborhood and Built Environment 32

How Can Your Actions Contribute to Health Equity? 32

- Use Mindfulness to Examine Your Assumptions and Biases 32
- Affirm the Benefits of Diversity 32
- Learn to Communicate across Differences 33
- Advocate for Yourself and Others 33

How Can Systemic Change Lead to Health for All? 33

- Increase Access to Health Care 34
- Reduce the Social Determinants That Contribute to Health Disparities 34
- Examples of Initiatives to Increase Health for All 35

ASSESS YOURSELF 36

STUDY PLAN 37

2 Promoting and Preserving Your Psychological Health 38

What Is Psychological Health? 39

- Mental Health 41
- Emotional Health 41
- Social Health 41
- Spiritual Health 42

Keys To Enhancing Psychological Health 43

- Self-Efficacy and Self-Esteem 43
- Emotional Intelligence 43
- Personality 44
- Lifespan and Maturity 44
- Happiness and the Mind–Body Connection 44

When Psychological Health Deteriorates 45

- Mental Health Threats to College Students 45
- Mood Disorders 46
- Anxiety Disorders 48
- Obsessive–Compulsive Disorder 49
- Posttraumatic Stress Disorder 49

Personality Disorders 50
Schizophrenia 50

Suicide: Giving Up On Life 52

Risk Factors for Suicide 52
Warning Signs of Suicide 53
Preventing Suicide 53

Seeking Professional Help 53

Mental Illness Stigma 53
Getting Evaluated for Treatment 54
Mental Health Professionals 54
What to Expect in Therapy 54
Pharmacological Treatment 55

ASSESS YOURSELF 57

STUDY PLAN 59

**FOCUS ON Cultivating Your
Spiritual Health 61**

What Is Spirituality? 62

Spirituality and Religion 62
Relationships, Values, and Purpose 63
Spiritual Intelligence 64

The Benefits Of Spiritual Health 64

Physical Benefits 64
Psychological Benefits 65

Cultivating Your Spiritual Health 66

Tune in to Yourself and Your Surroundings 66
Train Your Body 68
Reach Out to Other People 69

ASSESS YOURSELF 70

STUDY PLAN 71

**3 Managing Stress and Coping with
Life's Challenges 72**

What Is Stress? 74

Your Body's Stress Response 75

Physiology/Systems Theory: The General Adaptation
Syndrome 75
Psychological Theory: The Transactional Model of
Stress and Coping 77
Minority Stress Perspective 77
Yerkes-Dodson Law of Arousal 77
Do Men and Women Respond Differently to
Stress? 77

Physical Effects of Stress 77

Stress and Cardiovascular Disease 78
Stress and Weight Gain 78
Stress and Hair Loss: A Little Known Fact 78

Stress and Diabetes 78
Stress and Digestive Problems 78
Stress and Impaired Immunity 79

When Overwhelm Strikes: Threats To Mental Health 79

Stress, Memory, and Concentration 79
Psychological Effects of Stress 79

What Causes Stress? 79

College Students: Adjusting to Change 80
Hassles: Little Things That Bug You 80
Stress: The Toll of Relationships 80
Money and Stress 80
Stress, Frustration, and Conflict 81
Overload 81
Stressful Environments 81
Bias and Discrimination 83

Individual Factors That Affect Your Stress Response 83

Appraisal 83
Self-Esteem 83
Self-Efficacy 84
Type A and Type B Personalities 84
Type C and Type D Personalities 85
Shift and Persist 85

Managing Stress in College: Dealing With Overwhelm 85

A Mindful Approach to Stress 86
Developing a Support Network 87
Cultivating Your Spiritual Side 87
Managing Emotional Responses 87
Taking Physical Action 88
Managing Your Time 90
Consider Downshifting 91
Relaxation Techniques for Stress Management 91

ASSESS YOURSELF 94

STUDY PLAN 97

4 Improving Your Sleep 99

Sleepless in America 100

Sleepless on Campus: Tired and Dragged-Out
Students? 101
Why Are We So Sleep Deprived? 101

The Importance of Sleep 102

Sleep and Health 102

The Processes of Sleep 104

Stages and Cycles of Sleep 105
Your Sleep Needs 106

Sleep Disorders 107

Insomnia 107
Sleep Apnea 109
Restless Legs Syndrome 109
Narcolepsy 110
Other Parasomnias 110

- Getting a Good Night's Sleep 111**
 - Create a Sleep-Promoting Environment 111
 - Adjust Your Daytime Habits 113
 - Avoid Common Sleep Disruptors 114

ASSESS YOURSELF 115

STUDY PLAN 116

5 Preventing Violence and Injury 118

What is Violence? 119

- Violence Overview 119
- Violence on U.S. Campuses 120

Factors Contributing to Violence 121

- What Makes Some Individuals Prone to Violence? 121
- How Much Impact Do the Media Have? 122

Interpersonal and Collective Violence 123

- Homicide 123
- Hate Crimes and Bias-Motivated Crimes 123
- Gang Violence 125
- Cybercrime 125
- Terrorism 126
- Intimate Partner and Domestic Violence 126
- Child Abuse and Neglect 127
- Elder Abuse 128

Sexual Victimization 128

- Sexual Assault and Rape 128
- Sexual Harassment 131
- Traditional and Tech-Facilitated Stalking 131
- Child Sexual Abuse 132

Preventing Violence 132

- Self-Defense against Personal Assault and Rape 132
- Campus-Wide Responses to Violence 133
- Community Strategies for Preventing Violence 134

Unintentional Injuries 134

- Motor Vehicle Safety 134
- Cycling Safety 136
- Stay Safe in the Water 136
- Safety at Home 137

ASSESS YOURSELF 138

STUDY PLAN 140

PART TWO | CREATING HEALTHY AND CARING RELATIONSHIPS

6 Connecting and Communicating in the Modern World 142

The Value of Relationships 143

Intimate Relationships: When Connecting Gets Personal 144

- Caring for Yourself 144
- Family Relationships 145

- Friendships 145
- Romantic Relationships 145

Building Communication Skills 147

- Learning Appropriate Self-Disclosure 147
- Becoming a Better Listener 148
- Using Nonverbal Communication 149
- Connecting Digitally 149
- Managing Conflict through Communication 152

Relationships: For Better and Worse 152

- Characteristics of Healthy and Unhealthy Relationships 152
- Confronting Couples Issues 153
- When and Why Relationships End 155
- Coping with Failed Relationships 155

Partnering and Singlehood 156

- Marriage 156
- Cohabitation 157
- Gay and Lesbian Marriage and Partnerships 158
- Staying Single 158

ASSESS YOURSELF 159

STUDY PLAN 160

FOCUS ON Understanding Your Sexuality 163

Your Sexual Identity 164

- Sexual Orientation 164

Sexual and Reproductive Anatomy and Physiology 165

- Female Sexual and Reproductive Anatomy and Physiology 165
- Male Sexual and Reproductive Anatomy and Physiology 168

Human Sexual Response 169

- Sexual Dysfunction 170

Sexual Expression and Behavior 171

- Options for Sexual Expression 171
- Variant Sexual Behavior 173
- Drugs and Sex 173
- Responsible and Satisfying Sexual Behavior 174

ASSESS YOURSELF 175

STUDY PLAN 177

7 Considering Your Reproductive Choices 178

Basic Principles of Contraception 179

Contraceptive Methods 180

- Barrier Methods 180
- Hormonal Methods 186
- Intrauterine Contraceptives 189

- Behavioral Methods 189
- Emergency Contraception 191
- Permanent Methods of Birth Control 191

Choosing a Method of Contraception 192

Abortion 194

- The Abortion Debate 194
- Emotional Aspects of Abortion 194
- Methods of Abortion 195

Pregnancy 196

- Planning for Pregnancy and Parenthood 196
- The Process of Pregnancy 197
- Prenatal Care 199

Childbirth 201

- Labor and Delivery 201
- Complications of Pregnancy and Childbirth 202
- The Postpartum Period 202

Infertility 204

- Causes in Women 204
- Causes in Men 204
- Infertility Treatments 204
- Surrogate Motherhood 205
- Adoption 205

ASSESS YOURSELF 206

STUDY PLAN 207

PART THREE | AVOIDING RISKS FROM HARMFUL HABITS

8 Recognizing and Avoiding Addiction and Drug Abuse 209

What is Addiction? 210

- Common Characteristics of Addiction 211
- Addiction Affects Family and Friends 211

Addictive Behaviors 211

- Gambling Disorder 211
- Compulsive Buying Disorder 212
- Exercise Addiction 212
- Technology Addictions 213
- Work Addiction 213
- Compulsive Sexual Behavior 214

What is a Drug? 214

- How Drugs Affect the Brain 215
- Routes of Drug Administration 216
- Drug Interactions 216

Drug Misuse and Abuse 216

- Abuse of Over-the-Counter Drugs 216
- Nonmedical Use or Abuse of Prescription Drugs 217
- Use and Abuse of Illicit Drugs 218
- Why Do Some College Students Use Drugs? 219

Common Drugs of Abuse 219

- Stimulants 219
- Marijuana and Other Cannabinoids 224
- Depressants 225
- Opioids (Narcotics) 227
- Hallucinogens 228
- Inhalants 230
- Anabolic Steroids 230

Treating and Reducing Drug Abuse 231

- Treatment Approaches 232
- Drug Treatment and Recovery for College Students 234
- Addressing Drug Misuse and Abuse in the United States 234

ASSESS YOURSELF 235

STUDY PLAN 236

9 Drinking Alcohol Responsibly and Ending Tobacco Use 238

Alcohol: An Overview 239

- The Chemistry and Potency of Alcohol 239
- Absorption and Metabolism 240
- Blood Alcohol Concentration 241

Alcohol and Your Health 242

- Short-Term Effects of Alcohol Use 242
- Drinking and Driving 244
- Long-Term Effects of Alcohol 245
- Alcohol and Pregnancy 246

Alcohol Use in College 247

- High-Risk Drinking and College Students 248
- Efforts to Reduce Student Drinking 249

Alcohol Abuse and Dependence 249

- Identifying an Alcoholic 249
- The Causes of Alcohol Use Disorder 250
- Alcohol Use Disorder in Women 251
- Alcohol and Prescription Drug Abuse 251
- Costs to Society 251
- Treatment and Recovery 252

Tobacco Use in the United States 253

- Tobacco and Social Issues 254
- College Students and Tobacco Use 255
- Tobacco Use and Prevention Policies 255

Tobacco and its Effects 257

- Nicotine 257
- Tar and Carbon Monoxide 257
- Tobacco Use Disorder 258
- Tobacco Products 258

Health Hazards of Tobacco Products 259

- Cancer 260
- Cardiovascular Disease 261

Respiratory Disorders 261
Sexual Dysfunction and Fertility Problems 261
Other Health Effects 261
Environmental Tobacco Smoke 261

Quitting Smoking 262

Benefits of Quitting 262
How Can You Quit? 263
Breaking the Nicotine Addiction 263

ASSESS YOURSELF 265

STUDY PLAN 267

PART FOUR | BUILDING HEALTHY LIFESTYLES

10 Nutrition: Eating for a Healthier You 270

Essential Nutrients for Health 271

Recommended Intakes for Nutrients 271
Calories 271
Water: A Crucial Nutrient 272
Proteins 272
Carbohydrates 273
Fats 275
Vitamins 278
Minerals 279
Beneficial Non-Nutrient Components of Foods 280

Nutritional Guidelines 281

Dietary Guidelines for Americans 281
MyPlate Food Guidance System 283

How Can I Eat More Mindfully and Healthfully? 284

Read Food Labels 284
Understand Serving Sizes 285
Vegetarianism: A Healthy Diet? 285
Supplements: Research on the Daily Dose 287
Eating Well in College 288

Food Safety: A Growing Concern 289

Choosing Organic or Locally Grown Foods 290
Foodborne Illnesses 291
Avoiding Risks in the Home 292
Food Sensitivities, Allergies, and Intolerances 293
Genetically Modified Food Crops 293

ASSESS YOURSELF 296

STUDY PLAN 298

11 Reaching and Maintaining a Healthy Weight 300

Overweight and Obesity: A Growing Health Threat 301

Overweight and Obesity in the United States 301
An Obesogenic World 302
Health Risks of Excess Weight 302

Factors Contributing to Overweight and Obesity 303

Physiological, Genetic, and Hormonal Factors 303
Environmental Factors 306
Psychosocial and Socioeconomic Factors 307
Emerging Theories on Obesity Risks 307

Assessing Body Weight and Body Composition 308

Body Mass Index (BMI) 308
Waist Circumference and Ratio Measurements 310
Measures of Body Fat 310

Managing Your Weight: Individual Roles 311

Understanding Calories and Energy Balance 311
Diet and Eating Behaviors 312
Including Exercise 315
Keeping Weight Control in Perspective 315
Considering Drastic Weight-Loss Measures? 315
Trying to Gain Weight 319

ASSESS YOURSELF 320

STUDY PLAN 323

FOCUS ON Enhancing Your Body Image 325

What is Body Image? 326

Many Factors Influence Body Image 326
Building a Positive Body Image 328
Body Dysmorphic Disorder 329

Disordered Eating and Eating Disorders 330

Anorexia Nervosa 331
Bulimia Nervosa 331
Binge-Eating Disorder 332
Other Specified Feeding or Eating Disorder 332
Orthorexia Nervosa 333
Treatment for Eating Disorders 333
Helping Someone with Disordered Eating 333

Can Too Much Exercise be Unhealthy? 334

Compulsive Exercise 334
Muscle Dysmorphia 334
The Female Athlete Triad 334
Health at Every Size 334

ASSESS YOURSELF 335

STUDY PLAN 336

12 Improving Your Personal Fitness 337

Physical Activity for Health 338

Reduced Risk of Cardiovascular Diseases 340
Reduced Risk of Metabolic Syndrome and Type 2 Diabetes 340
Reduced Cancer Risk 341

Improved Bone Mass and Reduced Risk of Osteoporosis 341
Improved Weight Management 341
Improved Immunity 341
Improved Mental Health and Stress Management 342
Longer Lifespan 342

Physical Activity for Fitness and Performance 343

Health-Related Components of Physical Fitness 343
Skill-Related Components of Physical Fitness 344

Committing to Physical Fitness 344

What If I Have Been Inactive for a While? 344
Overcoming Common Obstacles to Physical Activity 345
Incorporating Physical Activity in Your Life, Mindfully 345

Creating Your Own Fitness Program 346

Set SMART Goals 347
Use the FITT Principle 347
The FITT Principle for Cardiorespiratory Fitness 347
The FITT Principle for Muscular Strength and Endurance 349
The FITT Principle for Flexibility 351

Implementing Your Fitness Program 353

Develop a Progressive Plan 353
Design Your Exercise Session 353
Explore Activities That Develop Multiple Components of Fitness 354
Assess Your Social Environment 354

Taking in Proper Nutrition for Exercise 355

Foods for Exercise and Recovery 355
Fluids for Exercise and Recovery 355

Preventing and Treating Fitness-Related Injuries 356

Preventing Injuries 356
Treating Injuries 358

ASSESS YOURSELF 359

STUDY PLAN 361

13 Reducing Your Risk of Cardiovascular Disease and Cancer 363

Cardiovascular Disease in the United States 364

Understanding the Cardiovascular System 365

The Heart: A Mighty Machine 365

The Major Cardiovascular Diseases 367

Hypertension 367
Atherosclerosis 368
Peripheral Artery Disease 369
Coronary Heart Disease 369
Arrhythmias 369

Angina Pectoris 370
Cardiomyopathy and Heart Failure 370
Stroke 370

Reducing Your Risks 371

Metabolic Syndrome: Quick Risk Profile 371
Modifiable Risks for CVD 372
Nonmodifiable Risks 375
Other Risk Factors Being Studied 376

Diagnosing and Treating Cardiovascular Disease 376

Techniques for Diagnosing Cardiovascular Disease 377
Surgical Options: Bypass Surgery, Angioplasty, and Stents 377
Changing Aspirin Recommendations and Other Treatments 377

An Overview of Cancer 377

How Does Cancer Develop? 378
How Is Cancer Classified? 379

What Causes Cancer? 379

Lifestyle Risks 379
Genetic and Physiological Risks 380
Occupational and Environmental Risks 381
Infectious Diseases and Cancer 381

Types of Cancers 382

Lung Cancer 383
Breast Cancer 383
Colon and Rectal Cancers 384
Skin Cancer 384
Prostate Cancer 386
Ovarian Cancer 386
Cervical and Endometrial (Uterine Corpus) Cancer 386
Testicular Cancer 387
Pancreatic Cancer: Deadly and on the Rise 387

Facing Cancer 387

Cancer Treatments 388

ASSESS YOURSELF 390

STUDY PLAN 393

FOCUS ON Minimizing Your Risk for Diabetes 395

What is Diabetes? 396

Type 1 Diabetes 396
Type 2 Diabetes 397
Prediabetes 399
Gestational Diabetes 399

What are the Symptoms of Diabetes? 400

Complications of Diabetes 400
Diagnosing Diabetes 401

Preventing and Treating Diabetes 402

Medical Interventions 403

ASSESS YOURSELF 405

STUDY PLAN 406

14 Protecting Against Infectious Diseases and Sexually Transmitted Infections 407

The Process of Infection 408

Routes of Transmission: How Do Pathogens Gain Entry? 409

Risk Factors You Can Control 409

Hard to Control Risk Factors 410

Your Body's Defenses Against Infection 410

Physical and Chemical Defenses 410

The Immune System: Your 24/7 Protector 410

When the Immune System Misfires: Autoimmune Diseases 412

Inflammatory Response, Pain, and Fever 413

Vaccines Bolster Immunity 413

Types of Pathogens and the Diseases they Cause 414

Bacteria 415

Viruses 419

Other Pathogens 421

Emerging and Resurgent Diseases 421

Mindfulness: A New Ally in Bolstering Defenses? 422

Sexually Transmitted Infections 424

What's Your Risk? 424

Routes of Transmission 425

Common Types of Sexually Transmitted Infections 425

Chlamydia 425

Gonorrhea 426

Syphilis 426

Herpes 427

Human Papillomavirus (HPV) and Genital Warts 428

Candidiasis (Moniliasis) 429

Trichomoniasis 429

Pubic Lice 430

HIV/AIDS 431

How HIV is Transmitted 431

Signs and Symptoms of HIV/AIDS 432

Testing for HIV: Newer Options 432

New Hope and Treatments 434

Preventing HIV Infection 434

ASSESS YOURSELF 435

STUDY PLAN 437

FOCUS ON Reducing Risks for Chronic Diseases and Conditions 439

Chronic Lower Respiratory (Lung) Diseases 440

Chronic Obstructive Pulmonary Disease 440

Asthma 441

Coping with Allergies 442

Hay Fever 443

Coping with Neurological Disorders 443

Headaches 444

Seizure Disorders 444

Coping with Digestion-Related Disorders and Diseases 445

Irritable Bowel Syndrome 445

Inflammatory Bowel Disease 445

Coping with Musculoskeletal Diseases 445

Arthritis 446

Low Back Pain 446

Repetitive Strain/Motion Injuries 447

ASSESS YOURSELF 448

STUDY PLAN 449

PART SIX | FACING LIFE'S CHANGES

15 Making Smart Health Care Choices 450

Taking Responsibility For Your Health Care 451

Self-Care 451

When to Seek Help 452

Assessing Health Professionals 452

Your Rights as a Patient 453

Conventional Health Care 455

Conventional Health Care Practitioners 455

Conventional Medication 456

Health Insurance 457

Private Health Insurance 457

Managed Care 458

Government-Funded Programs 459

Insurance Coverage by the Numbers 460

Issues Facing Today's Health Care System 461

Access 461

Cost 461

Quality 462

ASSESS YOURSELF 464

STUDY PLAN 466

FOCUS ON Understanding Complementary and Integrative Health 468

What are Complementary, Alternative, and Integrative Health Approaches? 469

- Complementary Medical Systems** 470
 - Traditional Chinese Medicine 470
 - Ayurveda 470
 - Homeopathy 470
 - Naturopathy 471

- Mind and Body Practices** 471
 - Manipulative Therapies 471
 - Movement Therapies 472
 - Energy Therapies 473

Natural Products 474

ASSESS YOURSELF 476

STUDY PLAN 477

FOCUS ON Aging, Death, and Dying 478

- Aging** 478
 - Older Adults: A Growing Population 479
 - Health Issues for an Aging Society 479
 - Physical and Mental Changes of Aging 480

- Strategies for Healthy Aging** 483
 - Improve Fitness 483
 - Eat for Longevity 483
 - Develop and Maintain Healthy Relationships 483
 - Enrich the Spiritual Side of Life 483

- Understanding the Final Transitions: Dying and Death** 484
 - Defining Death 484
 - The Process of Dying 484
 - Coping with Loss 485
 - What Is “Typical” Grief? 486
 - Worden’s Model of Grieving Tasks 486

- Life-And-Death Decision Making** 486
 - The Right to Die 486
 - Rational Suicide and Euthanasia 487

- Making Final Arrangements** 488
 - Hospice Care: Positive Alternatives 488
 - Making Funeral Arrangements 488
 - Wills 488
 - Organ Donation 488

ASSESS YOURSELF 489

STUDY PLAN 491

16 Promoting Environmental Health 492

- Overpopulation: The Planet’s Greatest Threat** 493
 - Global Population Growth 493
 - Measuring the Impact of People 494

- Air Pollution** 495
 - Components of Air Pollution 495
 - Photochemical Smog 495
 - Air Quality Index 495
 - Acid Deposition 497
 - Indoor Air Pollution 497
 - Ozone Layer Depletion 497

- Climate Change** 498
 - Scientific Evidence of Climate Change and Human-Caused Global Warming 499
 - Reducing the Threat of Global Warming 499

- Water Pollution And Shortages** 500
 - Water Contamination 501

- Land Pollution** 501
 - Solid Waste 502
 - Hazardous Waste 502

- Radiation** 503
 - Nonionizing Radiation 503
 - Ionizing Radiation 503
 - Nuclear Power Plants 504

ASSESS YOURSELF 505

STUDY PLAN 507

APPENDIX A: POP QUIZ ANSWERS A-1

REFERENCES R-0

PHOTO CREDITS C-1

INDEX I-1

FEATURE BOXES



MINDFULNESS AND YOU

- Mindfulness as Mental Health Treatment 56
- Beating Technostress Through Mindfulness 82
- Evoking the Relaxation Response 112
- When Anger Flares 122
- Mindful Listening 149
- Meditation Before Medication 171
- Mindfulness, Not Medication 203
- Mindfulness-Based Relapse Prevention for Addiction Recovery 232
- Mindfulness for Smoking Cessation 264
- Mindful Eating 289
- Coping With Cancer 389
- Putting a Little “Zen” Into Preventing and Controlling TD2 402
- Relieving Pain With Mindfulness? 447
- The Surprising Academic Benefits of Mindfulness Meditation 472
- Environmental Mindfulness 496

WHICH PATH WOULD YOU TAKE?

- Chapter 1: Accessing Your Health 4
- Chapter 3: Managing Stress and Coping with Life’s Challenges 80
- Chapter 9: Drinking Alcohol Responsibly and Ending Tobacco Use 249, 254
- Chapter 10: Nutrition: Eating for a Healthier You 282
- Chapter 12: Improving Your Personal Fitness 347

Chapter 13: Reducing Your Risk of Cardiovascular Disease and Cancer 373

Focus On: Minimizing Your Risk for Diabetes 403

Chapter 14: Protecting Against Infectious Diseases and Sexually Transmitted Infections 421



TECH & HEALTH

- Surfing for the Latest In Health 15
- Apps for the Relaxation Response 91
- Technology’s Toll on Our Sleep 103
- Love In the Time of Twitter 151
- Consensual Texts 173
- Mobile Devices, Media, and the Internet 213
- Tracking Your Diet or Weight Loss? 316

SKILLS FOR BEHAVIOR CHANGE

- Challenge the Thoughts that Sabotage Change 19
- Becoming Your Own Advocate 33
- Using Perma to Enhance Your Happiness 45
- Finding Your Spiritual Side Through Service 69
- Overcoming Test-Taking Anxiety 85
- A Mindful Rethinking of Your Thinking Habits 87
- Reducing Your Risk of Dating Violence: Tips For Women and Men 130
- Stay Safe On All Fronts 133

- Social Media Meanness 150
- Responding to an Offer of Drugs 219
- Tips for Drinking Responsibly 248
- Cut Down On Your Drinking 251
- Tips for Quitting Smoking 263
- Bulk Up Your Fiber Intake! 275
- Reduce Your Risk for Foodborne Illness 292
- Tips for Sensible Snacking 312
- Keys to Successful Weight Management 315
- Ten Steps to a Positive Body Image 329
- Plan It, Start It, Stick With It! 353
- What to Do When a Heart Attack Hits 369
- A Simple Test for Stroke 371
- Reducing Your Risk for Diabetes 400
- Reduce Your Risk of Infectious Disease 409
- Safe is Sexy 425
- Preventing Asthma Attacks 442
- Be Proactive in Your Health Care 452
- Complementary Health Approaches and Self-Care 474
- Talking to Loved Ones When Someone Dies 486
- Avoiding Mold 497
- Waste Less Water! 500



STUDENT HEALTH TODAY

- Cutting Through the Pain 51
- Feng Shui for Stress Relief 90
- Sleeping Pills 111
- Caffeine, Sleep and Your Health 114
- Hooking Up 146
- Tech Between Us 154
- How Can Men Be More Involved in Birth Control? 193

Alcohol and Energy Drinks 241
 Nutrition Rating Systems 286
 Beware of Portion Inflation at
 Restaurants 307
 Who Wins in Losing? 311
 Thinspiration and the Online World of
 Anorexia 328
 Is High Intensity Interval Training Right
 for You? 349
 Emerging Concern is Gut Bacteria in
 CVD a Risk? 372
 Q&A on HPV Vaccines 430
 Tattoos and Body Piercings 433
 The Placebo Effect Mind over
 Matter? 454
 Are You a Food Waster? 503

**HEALTH
 IN A DIVERSE WORLD**



Childless by Choice 197
 Global Health and Alcohol Use 252

**POINTS
 OF VIEW**

Marijuana 226
 Smoking on College and University
 Campuses 256
 Genetically Modified Foods 294
 Obesity 318
 National Health Care 463



Are Fruits and Veggies Beyond your
 Budget? 290
 “Living Large” Can be Increasingly
 Costly 304
 All Certifications are Not Created
 Equal 352
 Diabetes 397
 Health Care Spending Accounts 459


**@ HEALTH
 HEADLINES**

Shorter Lives, Poorer Health 4
 College Success with
 Learning Disabilities
 and Neurodevelopmental
 Disorders 47
 An Epidemic of Fear in America 89
 Bringing the Gun Debate to
 Campus 124
 Coconut Oil 277
 Health Claims of Superfoods 282
 Gluten-Free Diets 295
 Transport Yourself! 346
 Heart-Healthy Superfoods 375
 Antimicrobial Resistance 411
 Vaccine Controversy 423
 Be Eco Clean and Allergen Free 440
 E-concerns 504

PREFACE

Today, threats to our health and the health of our planet dominate the media and affect our lives on a daily basis. Water shortages, polluted air, food safety concerns, violence and the threat of terrorism, diseases, and other concerns have us wondering about our ability to survive and thrive. The issues often seem so overwhelming, that you might wonder whether there is anything you can do to make a difference—to ensure your health, and a planet that is preserved for future generations. You are not alone! The good news is that you can do things to improve your health while being an agent for change with your loved ones and the greater community. It can start now, and it can start with you!

After years of teaching and working with students of all ages and stages of life and careers, I am encouraged by the fact that so many people, particularly younger adults, are “tuned in” to health. The problem is that with so much talk about health on so many platforms, sifting through the “junk information” and making the right choices based on good science and good sense can be difficult.

My goals in writing *Health: The Basics, the Mindfulness Edition*, were to build on the strengths of past editions; to utilize the most current, scientifically valid research; and to examine key issues and potential solutions. We face increasing levels of stress, mental and emotional health problems, and real and perceived threats. As such, I have taken an exciting new Mindfulness approach to this edition. Mindfulness strategies are found in new “mindfulness and you” feature boxes and throughout the chapter text, flagged by a new icon. 

Another ground-breaking and essential area of focus is our new chapter on *difference, disparity, and health equity*. Clearly, we face challenges in adapting to large and growing demographic shifts in the United States, complete with lingering stereotypes, distrust, anger, misperceptions, and other potentially destructive consequences. I challenge students to think about these issues and to explore actions that can be taken as individuals and as a society to begin to remove barriers and promote health equity for all.

As part of the process, I have worked hard to provide students with essential tools and resources to empower them to examine their behaviors and the factors that contribute to those behaviors, and to prioritize health now rather than next week or in some distant future. My other goal is to challenge students to also think globally as they consider health risks and seek creative solutions, both large and small, to address complex health problems. There is no one-size-fits-all recipe for health. You can do it your way, whether that means starting slowly with “baby steps” designed to change deeply engrained behaviors or gearing up for major changes that all happen at once. Remember, you didn’t develop your behaviors overnight. Being patient but persistent with yourself is often part of the process. This book is designed to help

students quickly grasp the information, focusing on key objectives that have relevance to their own lives. Importantly, encourage students to think about the issues, and help students answer these questions: What is the issue and why should I care? What are my options for action? When and how do I get started?

With each new edition of *Health: The Basics*, I have been gratified by the overwhelming success that this book has enjoyed. I am excited about making this edition the best yet—more timely, more relevant, and more interesting for students. Let’s be real: Our world faces unprecedented challenges to individual and community health. Understanding these challenges and having a personal plan to preserve, protect, and promote health will help to ensure our healthful future!

NEW TO THIS EDITION

Chapter 1: Accessing Your Health

- Updated research linking poor diet to poor health
- Additional coverage of rising rates of prescription and illegal drug abuse, particularly opioids
- New stats on American insurance status
- A new focus on mindfulness, including an entire section on why mindfulness is so important to health, how to practice mindfulness, and potential current and long-range benefits of mindfulness.

Focus On: Difference, Disparity, and Health: Achieving Health Equity

This exciting new chapter, “Focus On: Difference, Disparity, and Health: Achieving Health Equity,” looks at:

- What we mean by the terms *difference, disparity, and health equity* and why these are critical issue in America today
- The populations that are most vulnerable to health disparities as well as societal costs
- The social determinants of health that most strongly influence health disparities in the United States.
- Specific actions to take to promote health equity on campus, in community, and individually
- Systemic changes needed for the United States to progress toward better health for all, as well as examples of national and community-based initiatives focused on this goal

Chapter 2: Promoting and Preserving Your Psychological Health

- Updated research on all mental health issues with comprehensive research on contributors to these issues
- An enhanced section on self-esteem that addresses growing concerns about people who seem to be overdosing on self-esteem. Can you have too much of a good thing?

- A new section on defense mechanisms and how they can work to protect you or hold you back
- A new section on lifespan, maturity and health
- Updated and expanded information about the growing mental health crisis among young adults today and college students are particularly vulnerable to problems such as depression and anxiety
- A new **Mindfulness and You** box on potential positive effects of mindfulness practice and mental health problems

Focus On: Cultivating Your Spiritual Health

- Enhanced discussion of what it means to be spiritually healthy, the difference between being spiritual and being religious, and trends in spirituality based on age, with an emphasis on college students and Millennials
- Updated information on the physical, social, and psychological benefits of spiritual health
- New information on mindfulness as it relates to spiritual health, particularly environmental mindfulness

Chapter 3: Managing Stress and Coping with Life's Challenges

- A revised figure focusing on stress levels by age
- New coverage of the transactional model of stress and coping
- Expanded coverage of stress, immunity, and susceptibility to infectious diseases
- New minority-stress theory and its importance.
- New coverage of the Yerkes-Dodson Law of arousal
- A new **Mindfulness and You** box on technostress and what you can do about it
- Updated coverage of stress related to relationships and money
- New coverage of stress-induced cardiomyopathy and new research on broken heart syndrome
- New coverage of dispositional mindfulness and ways to mindfully assess your stressors

Chapter 4: Improving Your Sleep

- New information on the growing recognition of how sleep affects health, sleep in the U.S., and reasons why so many people are sleep deprived.
- Updated information on the role of sleep in coping with life's challenges, maintaining your immune system, reducing your risks for CVD and Alzheimer's, and contributing to cognitive functioning
- New coverage of the "short sleeper" who needs less sleep
- A new **Mindfulness and You** box on how mindfulness strategies can improve your sleep
- New information on technology's effect on sleep and how to reduce risks

Chapter 5: Preventing Violence and Injury

- Expanded coverage of trends in violence in the United States and whether we are experiencing an epidemic of meanness?
- New trends and statistics on violent crimes in the United States
- Updated statistics on campus violence, new definitions on sexual assault, and enhanced coverage of new legal implications related to sexual assault and rape on campus.

- Updated information on factors contributing to various forms of violence
- A new section on the growing problem of cybercrime and what you can do to protect yourself
- An expanded section on reducing rape on campus, with coverage of the "It's on Us" program
- New information on tech-facilitated stalking
- Updated information on the prevalence of unintentional injuries, particularly distracted driving crashes.
- A new **Mindfulness and You** box on anger, reactivity, and mindful cooling-off strategies

Chapter 6: Connecting and Communicating in the Modern World

- Updated statistics and information on the various types of relationships, how they are changing, and how they may differ on the basis of selected variables.
- Enhanced information on the criteria for healthy versus unhealthy relationships and the impact of each on overall health
- Updated information on the benefits of intimate relationships, friendships, social capital, and family relationships and how each is important to overall health
- Updated and expanded information about social media and how social media interactions can be stressful
- A new **Mindfulness and You** box covering how mindfully listening can improve your relationships

Focus On: Understanding Your Sexuality

- Updated information on trends in hormone replacement therapy and potential risks versus benefits.
- A new **Mindfulness and You** box on mindfulness as a way to manage some forms of sexual dysfunction
- Updated information on the correlation between drinking and unprotected sex among college students
- Updated coverage of gender identity, including transgender and cisgender individuals

Chapter 7: Considering Your Reproductive Choices

- Updated statistics on contraceptive usage rates and effectiveness among American college students
- Updated statistics on percentages of Americans who consider themselves pro-choice or pro-life.
- Updated information on lack of abortion availability for low-income populations
- A new **Mindfulness and You** box on coping with depression during pregnancy

Chapter 8: Recognizing and Avoiding Addiction and Drug Abuse

- Expanded coverage of addictions, psychological dependence, and health risks
- Expanded coverage of gambling disorder, particularly the four common phases individuals pass through
- Expanded coverage of compulsive buying disorder, particularly as it relates to the impact of the Internet
- Updated information on illicit drug use on campus and overall in the United States, including the growing threat of heroin addiction in many areas.

- Updated information on the status of legalized marijuana, the impact of legalization, and the pros and cons of a legal marijuana society
- A new **Mindfulness and You** box on mindfulness-based relapse prevention methods and the effectiveness of selected intervention strategies
- A new section on recovery coaching and its effectiveness

Chapter 9: Drinking Alcohol Responsibly and Ending Tobacco Use

- Updated and enhanced statistics on drinking prevalence, at-risk individuals, abstinence, and overall trends in alcohol use and abuse in America.
- Updated information on the long-term effects of alcohol use, particularly the possible correlation with cancer and other health risks
- Updated information on alcohol use in college, particularly high-risk drinking behaviors such as pregameing, binge drinking, and calorie “saving”
- New sections on alcohol inhalation
- Updated data on the social, health care, employee, and safety costs of alcohol misuse and abuse
- Updated statistics on trends in tobacco use and economic, health, and social costs to society
- Expanded coverage of e-cigarettes and their use
- Expanded coverage of drugs that play a role in tobacco cessation and reduction
- A new **Mindfulness and You** box on how mindfulness can help in quitting smoking

Chapter 10: Nutrition: Eating for a Healthier You

- New and expanded coverage of dietary trends in consumption in the United States and how these changes are related to changes in health status, particularly trends in obesity
- Updated information on the benefits and risks of fiber, protein, fats, carbohydrates, and other nutrients
- Updated information on the risks of *trans* fats and partially hydrogenated oils. Is butter better?
- Updated information on dietary fats, changes in recommendations for eggs and other products, and their potential roles in health and disease
- Overview of the New Dietary Guidelines for Americans
- A new **Mindfulness and You** box on mindful eating

Chapter 11: Reaching and Maintaining a Healthy Weight

- New statistics and trends in overweight, obesity, and super obesity in the United States and globally and the importance of these changes in overall risks to health
- New research on the potential role of genetics, hormones, and other factors in appetite
- Expanded discussion of psychosocial and socioeconomic factors in weight problems
- A new section on emerging theories on obesity risk, including discussions of pathogens and environmental toxins, drugs, and sleep deprivation
- A new section on mindful eating and eating triggers
- Updated coverage of weight loss interventions and treatments, including drugs and new surgical techniques

Focus On: Enhancing Your Body Image

- Updated tips for helping a friend with disordered eating
- Updated research throughout

Chapter 12: Improving Your Personal Fitness

- New material on how mindfulness strategies can help you make better use of your physical and social environments and enhance your activity levels
- New information on green exercise as a way to get physical and mental health benefits
- New information on assessing your social environment

Chapter 13: Reducing Your Risk of Cardiovascular Disease and Cancer

- Complete revision of trends, statistics, and risk factors for cardiovascular disease and cancer in the United States.
- New and updated information on the prevalence of coronary heart disease and hypertension and increased risks among young adults
- New information on pre-ventricular contractions and other arrhythmias among young, apparently healthy adults
- New trends and statistics on smoking prevalence, at-risk populations, and long-term consequences
- A new section on *Helicobacter pylori* and stomach cancer
- A new **Mindfulness and You** box on ways of coping with the emotional side effects of cancer diagnoses

Focus On: Minimizing Your Risk for Diabetes

- New **Mindfulness and You** box on mindfulness-based interventions for controlling Type 2 Diabetes
- Updated information around global prevalence of Diabetes
- New information on diabetic neuropathy

Chapter 14: Protecting Against Infectious Diseases and Sexually Transmitted Infections

- New statistics and information on infectious diseases and the threat of strains of bacteria that are resistant to antibiotics and antimicrobials
- New information on a new tuberculosis vaccine
- A new and expanded section on the rising threats of tick-borne diseases, including coverage of the Powassan virus in the upper Midwest and northeastern United States
- Updated information on flu vaccination rates and the importance of vaccination for high-risk groups
- Expanded coverage of the Zika virus and continuing efforts to diagnose and treat the disease and prevent its spread.
- A new section on the potential role of mindfulness in reduced infectious disease risk
- Updated information on the latest HIV/AIDS trends and new diagnostic tests, treatments, and prevention methods

Focus On: Reducing Risks for Chronic Diseases and Conditions

- New **Mindfulness and You** box on using mindfulness and manage chronic pain
- New coverage of new guidelines surrounding LBP and treatment
- Update research throughout

Chapter 15: Making Smart Health Care Choices

- Updated information on current trends, issues, and concerns regarding consumer use of health care system and prescription drug use problems
- An updated and expanded section on various health care systems and services, the Affordable Care Act, and current Medicaid and Medicare concerns
- Updated information on the costs of the U.S. health care system, uninsured and underinsured populations, and potential health care changes that will affect young and old in the United States

Focus On: Understanding Complementary and Integrative Health

- New and expanded information on the increasing role of complementary and integrative medicine in the United States and the potential risks and benefits of selected treatments
- Added information on how mindfulness-based meditation has been shown to increase patients' sense of control over their symptoms and treatment
- A new **Mindfulness and You** box on the unexpected academic benefits of mindfulness
- Updated information on the benefits of acupuncture
- Added information on recalls of certain natural products

Focus On: Aging, Death, and Dying

- Updated data and information on U.S. aging
- Updated information on the prevalence of hospice facilities in the United States
- Updated figure on living arrangements of Americans age 65 and older
- Updated exercise recommendations for adults over age 65

Chapter 16: Promoting Environmental Health

- New and expanded coverage of the threats and challenges to the environment caused by human populations, including key contributors and potential risks of too little action to intervene
- New information and a new figure illustrating how we typically use water each day in our homes, with suggestions for reduction
- New information and trends on species extinction, natural resource depletion, and accelerations in both resulting from human activity and climate change
- New dire predictions involving unchecked population growth, depletion of resources, and the need for more planets to supply life in the future at current rates of use
- Updated information on energy consumption
- A new **Mindfulness and You** environmental mindfulness box
- Updated information and strategies for preserving and protecting our environment and all living creatures
- Updated information on food waste and strategies to preserve resources

TEXT FEATURES AND LEARNING AIDS

Health: The Basics includes the following special features, all of which have been revised and improved for this edition:

- **Chapter Learning Outcomes** summarize the main competencies students will gain from each chapter and alert students to the key concepts and are now explicitly tied to chapter sections. Focus On mini-chapters now also include learning outcomes.
- **Study Plans** tie all end-of-chapter material (including Chapter Review, Pop Quiz, and Think About It questions) to specific numbered Learning Outcomes and Mastering Health assets.
- **What Do You Think?** critical-thinking questions appear throughout the text, encouraging students to pause and reflect on material they have read.
- A **Why Should I Care?** feature now opens each chapter, presenting students with information about the effects poor health habits have on students in the here and now, engaging them at the onset of the chapter and encouraging them to learn more.
- **Assess Yourself** boxes help students evaluate their health behaviors. The **Your Plan for Change** section within each box provides students with targeted suggestions for ways to implement change.
- **Skills for Behavior Change** boxes focus on practical strategies that students can use to improve health or reduce their risks from negative health behaviors.
- **Mindfulness and You** boxes focus on mindfulness research and applications in relation to high-interest topics such as sleep, technostress, mental health, and sexual dysfunction.
- **Tech & Health** boxes cover the new technology innovations that can help students stay healthy.
- **Money & Health** boxes cover health topics from the financial perspective.
- **Points of View** boxes present viewpoints on a controversial health issue and ask students *Where Do You Stand?* questions, encouraging them to critically evaluate the information and consider their own opinions.
- **Health Headlines** boxes highlight new discoveries and research, as well as interesting trends in the health field.
- **Student Health Today** boxes focus attention on specific health and wellness issues that affect today's college students.
- **Health in a Diverse World** boxes expand discussion of health topics to diverse groups within the United States and around the world.
- A **running glossary** in the margins defines terms where students first encounter them, emphasizing and supporting understanding of material.
- A **Behavior Change Contract** for students to fill out is included at the back of the book.

SUPPLEMENTARY MATERIALS

Instructor Supplements

- **Mastering Health** (www.masteringhealthandnutrition.com or www.pearsonmastering.com). Mastering Health coaches students through the toughest health topics. A variety of **Coaching Activities** guide students through key health concepts with interactive mini-lessons, complete with hints and wrong-answer feedback. **Reading Quizzes** (20 questions per chapter) ensure that students have completed the assigned reading before class. **ABC News videos** stimulate classroom discussions and include multiple-choice questions with feedback for students. Assignable **Behavior Change Video Quiz** and **Which Path Would You Take?** activities ensure that students complete and reflect on behavior change and health choices. **NutriTools** in the nutrition chapter allow students to combine and experiment with different food options and learn firsthand how to build healthier meals. **MP3 Tutor Sessions** relate to chapter content and come with multiple-choice questions that provide wrong-answer feedback. **Learning Catalytics** provides open-ended questions that students can answer in real time. **Dynamic Study Modules** enable students to study effectively in an adaptive format. Instructors can also assign these for completion as a graded assignment before class.
- **Ready to Go Teaching Modules** are a new tool designed to save instructors valuable course preparation time. These ten online modules are much like a visual Instructor's Resource Manual in which each module includes recommendations for materials, activities, and resources instructors can use to prepare for their course and deliver a dynamic lecture in one convenient place. Each module has paired student assignments in Mastering Health that instructors can deploy before, during, and after lecture.
- **Digital Instructional Resources: Download Only.** All book- and course-specific teaching resources are downloadable from the Instructor Resources tab in Mastering Health as well as from Pearson's Instructor Resource Center (www.pearson.com). Resources include *ABC News* videos; Health Video Tutor videos; clicker questions; Quiz Show questions; PowerPoint lecture outlines; all figures and tables from the text; PDF and Microsoft Word files of the *Instructor Resource and Support Manual*; and PDF, RTE, and Microsoft Word files of the Test Bank, the Computerized Test Bank, the User's Quick Guide, *Teaching with Student Learning Outcomes*, *Teaching with Web 2.0*, *Great Ideas! Active Ways to Teach Health and Wellness*, *Behavior Change Log Book and Wellness Journal*, *Eat Right!*, *Live Right!*, and *Take Charge of Your Health* worksheets.
- **ABC News Videos** and **Health Video Tutors.** New *ABC News* videos, each 3 to 8 minutes long, and 26 Health Video Tutors flagged by the play icon in the text help instructors

to stimulate critical discussion in the classroom. Videos are embedded within PowerPoint lectures and are assignable through Mastering Health.

- **Instructor Resource and Support Manual.** This teaching tool provides chapter summaries, outlines, integrated *ABC News* video discussion questions, tips and strategies for managing large classrooms, ideas for in-class activities, and suggestions for integrating Mastering Health into your course.
- **Test Bank.** The Test Bank incorporates Bloom's Taxonomy, or the higher order of learning, to help instructors create exams that encourage students to think analytically and critically. Test Bank questions are tagged to global and book-specific student learning outcomes.

Student Supplements

- **The Study Area of Mastering Health** is organized by learning areas. *Read It* houses the Pearson eText as well as the Chapter Objectives and up-to-date health news. *See It* includes *ABC News* videos and the Behavior Change videos. *Hear It* contains MP3 Tutor Session files and audio-based case studies. *Do It* contains the choose-your-own-adventure-style Interactive Behavior Change Activities—Which Path Would You Take?, interactive NutriTools activities, critical-thinking Points of View questions, and Web links. *Review It* contains Practice Quizzes for each chapter, Flashcards, and Glossary. *Live It* will help to jump-start students' behavior change projects with interactive Assess Yourself Worksheets and resources to plan change.
- **Pearson eText** comes complete with embedded *ABC News* videos and Health Video Tutors. The Pearson eText is mobile friendly and ADA accessible, is available on smartphones and tablets, and includes instructor and student note-taking, highlighting, bookmarking, and search functions.
- **Behavior Change Log Book and Wellness Journal.** This assessment tool helps students track daily exercise and nutritional intake and suggests topics for journal-based activities.
- **Eat Right! Healthy Eating in College and Beyond.** This booklet provides students with practical nutrition guidelines, shopper's guides, and recipes.
- **Live Right! Beating Stress in College and Beyond.** This booklet gives students tips for coping with stress during college and for the rest of their lives.
- **Digital 5-Step Pedometer.** This pedometer measures steps, distance (miles), activity time, and calories and provides a time clock.
- **MyDietAnalysis** (www.mydietanalysis.com). Powered by ESHA Research, Inc., this tool features a database of nearly 20,000 foods and multiple reports. It allows students to track their diet and activity using up to three profiles and to generate and submit reports electronically.

ACKNOWLEDGMENTS

It is hard for me to believe that *Health: The Basics* is in its 13th edition! Who could have envisioned the evolution of health texts even a decade ago? With the nearly limitless resources of the Internet, social networking sites and national databases, finding the most appropriate information for today's students is challenging. Each step in planning, developing, and translating that information to students and instructors requires a tremendous amount of work from many dedicated people, and I cannot help but think how fortunate I have been to work with the gifted publishing professionals at Pearson. Through time constraints, decision making, and computer meltdowns, this group handled every issue, every obstacle with patience, professionalism, and painstaking attention to detail.

Some key individuals who have made this 13th edition have moved on to other positions; however, I would be remiss in not acknowledging Susan Malloy and Kari Hopperstead, who were the internal “life blood” of my texts for many years and were instrumental in their successes. Their efforts and the efforts of Sandy Lindelof as editor and Neena Bali as marketing manager for previous editions are also noteworthy. These two individuals helped to promote my books and keep them vibrant and ahead of the competition in a field of outstanding personal health books.

Many others have been key to each of my book successes. One person in particular is Courseware Portfolio Director Barbara Yien. Regardless of her roles and responsibilities, she has been the glue that holds these books together. She is hard-working and highly skilled, “gets it” when it comes to the health marketplace, is a skilled problem solver, and worries the details in producing high-quality products. Importantly, she is also fun and has a wonderful approach to working with those of us who can sometimes be challenging. In short, she is the managerial, development, and editorial expert/leader who any author dreams of having on their books. THANK you, Barbara!

Another person I'd like to acknowledge in particular is Nic Albert, developmental editor, writer, and contributor. Nic did a fantastic job of providing guidance and editorial assistance streamlining page length, and fine-tuning the many aspects of each chapter to maximize impact in a relatively short space. Thank you, Nic!

I would also like to provide a special thank you to Deepti Agarwal, who has worked tirelessly and efficiently on both *Access to Health*, 15th edition, and *Health: The Basics*, 13th edition. Not only is Deepti a creative, highly skilled, hard-working, and well-organized content producer; she also has the temperament and professionalism to help move a project through time constraints, deadlines, and challenges and to make sure that all of the great work from so many people comes to fruition in a top-notch product. Her skills in navigating production pitfalls, keeping the author and contributors on task, and meeting production deadlines are truly exemplary.

Further praise and thanks go to the highly skilled and hard-working, creative, and charismatic Courseware Portfolio Manager Michelle Yglecias, who has helped to catapult this book into the competitive twenty-first century. Michelle's fresh approach and enthusiasm for the work are much appreciated, and Pearson is fortunate to have someone with her experience and competence at the helm. Michelle has consistently been a key figure in moving the college/university health text to the next level. When I first proposed adding a new chapter on difference, disparity, and health and taking a mindfulness approach to this edition, she listened, made suggestions, did a market analysis, and enthusiastically took on this project to help bring it to fruition.

Although these individuals were key contributors to the finished work, there were many other people who worked on this revision of *Health: The Basics*. At every level, I was extremely impressed by the work of key individuals. Thanks also to Michelle Gardner and the hard-working staff at SPi Global, who put everything together to make a polished finished product. The talented artists at Lachina deserve many thanks for making an innovative art program a reality. Timothy Hainley, Senior Rich Media Content Producer, and Lucinda Bingham, Rich Media Content Producer, put together our most innovative and comprehensive media package yet. Additional thanks go to the rest of the team at Pearson.

The editorial and production teams are critical to a book's success, but I would be remiss if I didn't thank another key group who ultimately helps to determine a book's success: the textbook representative and sales group and their hard-working, top-notch marketers Executive Product Marketing Manager Allison Rona and Product Marketer Alysun Burns. From directing an outstanding marketing campaign to the everyday tasks of being responsive to instructor needs, Allison, Alysun, and Field Marketing Manager Mary Salzman do a superb job of making sure that *Health: The Basics* gets into instructors' hands and that adopters receive the service they deserve. In keeping with my overall experiences with Pearson, the marketing and sales staffs are among the best of the best. I am very lucky to have them working with me on this project, and I want to extend a special thanks to all of them!

CONTRIBUTORS TO THE 13TH EDITION

Many colleagues, students, and staff members have provided the feedback, reviews, extra time, assistance, and encouragement that have helped me meet the rigorous demands of publishing this book over the years. Whether acting as reviewers, generating new ideas, providing expert commentary, or revising chapters, each of these professionals has added his or her skills to our collective endeavor.

To make a book like this happen on a relatively short timeline, the talents of many specialists in the field must be combined. Whether contributing creative skills in writing, envisioning areas

that will be critical to the current and future health needs of students, using their experiences to make topics come alive for students, or utilizing their professional expertise to ensure scientifically valid information, each of these individuals was carefully selected to help make this text the best that it can be. I couldn't do it without their help! As always, I would like to give particular thanks to Dr. Patricia Ketcham of Western Oregon University and past president of the American College Health Association, who has helped with the *Health: The Basics* series since its earliest beginnings. As the former associate director of health promotion at Oregon State University and current role at WOU, Dr. Ketcham has excellent background and experience with the myriad of health issues and the key challenges facing today's students. She contributed to revisions of Chapter 8, "Recognizing and Avoiding Addiction and Drug Abuse"; Chapter 9, "Drinking Alcohol Responsibly and Ending Tobacco Use"; Chapter 15, "Making Smart Health Care Choices"; and "Focus On: Aging, Death, and Dying." Dr. Susan Dobie, associate professor in the School of Health, Physical Education, and Leisure Services at University of Northern Iowa, used her background in health promotion and health behavior and in teaching a diverse range of students to provide a fresh approach to revisions of Chapter 6, "Connecting and Communicating in the Modern World"; "Focus On: Understanding Your Sexuality"; and Chapter 7, "Considering Your Reproductive Choices." Dr. Erica Jackson, associate professor in the Department of Public & Allied Health Sciences at Delaware State University, applied her wealth of fitness knowledge to update and enhance "Focus On: Enhancing Your Body Image" and Chapter 12, "Improving Your Personal Fitness." Amber Emanuel utilized her extensive background in counseling, relationships, and spirituality to provide a fresh and engaging update to Chapter 2, "Promoting and Preserving Your Psychological Health." Dr. Disa Cornish at the University of Northern Iowa has used her considerable knowledge and expertise to revise "Focus On: Cultivating Your Spiritual Health." With her outstanding background in nutrition science and applied dietary behavior, Dr. Kathy Munoz, professor in the Department of Kinesiology and Recreation Administration at Humboldt State University, provided an extensive revision and updating of Chapter 10, "Nutrition: Eating for a Healthier You." Laura Bonazzoli, who has been a key part of developing and refining many aspects of this book over the last editions, used her considerable knowledge and skills in providing major revisions of Chapter 1, "Accessing Your Health"; "Focus On: Difference, Disparity, and Health: Achieving Health Equity"; and "Focus On: Understanding Complementary and Integrative Health." Although Laura has done a tremendous job in providing high-quality, scientifically accurate and

thoughtful revisions to several chapters over the years, her development and authorship on the new, much needed chapter on difference, diversity and health exemplifies her excellent writing ability and intellectual creativity. Laura does an outstanding job and is a pleasure to work with!

REVIEWERS FOR THE 13TH EDITION

With each new edition of *Health: The Basics*, we have built on the combined expertise of many colleagues throughout the country who are dedicated to the education and behavioral changes of students. We thank the many reviewers who have made such valuable contributions to the past 12 editions of *Health: The Basics*. For the 13th edition, reviewers who have helped us continue this tradition of excellence include the following:

Natascha Romeo, Wake Forest University
Dina Hayduk, Kutztown University
Julie Kuykendall, Georgia Southern University
Amber Emanuel, University of Florida
Patricia Hardin, William Paterson University
Dara Vanzin, Cal State Fullerton
Sharon Woodard, Wake Forest University
Timothy Garcia, Butte College
Holly Moses, University of Florida
Paul Greer, San Diego Mesa College
Holly Aguila, Arizona State University

REVIEWERS FOR MASTERING HEALTH

We continue to thank the following members of the Faculty Advisory Board, who offered us valuable insights that helped develop Mastering Health in previous editions: Steve Hartman (Citrus College), William Huber (County College of Morris), Kris Jankovitz (Cal Poly), Stasi Kasaianchuk (Oregon State University), Lynn Long (University of North Carolina Wilmington), Ayanna Lyles (California University of Pennsylvania), Steven Namanny (Utah Valley University), Karla Rues (Ozarks Technical Community College), Debra Smith (Ohio University), Sheila Stepp (SUNY Orange), and Mary Winfrey-Kovell (Ball State University). For the 13th edition, the following people contributed content to Mastering Health:

Timothy Garcia, Butte College
Jen Henderson, West Los Angeles Community College
Sharon Woodard, Wake Forest University

Many thanks to all!
Rebecca J. Donatelle, PhD

1

Accessing Your Health



LEARNING OUTCOMES

- LO 1 Describe the immediate and long-term rewards of healthy behaviors and the effects that your health choices may have on others.
- LO 2 Compare and contrast the medical model of health and the public health model, and discuss the six dimensions of health.
- LO 3 Classify factors that influence your health status into one of five broad categories identified by *Healthy People 2020* as determinants of health.
- LO 4 Describe mindfulness, identifying its health benefits and ways to incorporate it into your life.
- LO 5 Compare and contrast the health belief model, the social cognitive model, and the transtheoretical model of behavior change, and explain how you might use them in making a specific behavior change.
- LO 6 Identify your own current risk behaviors, the factors that influence those behaviors, and the strategies you can use to change them.

WHY SHOULD I CARE?

By being a savvy health consumer and improving and maintaining your health, you will reap many benefits. Academic and career success, healthy relationships, a zest for living, and reduced risks for disease and disability can help you maximize your healthy years. Much of who you are and what you will become is in *your* hands!

Got health? That might sound like a simple question, but it isn't. Health is a process, not something we just "get." People who are healthy in their fifties, sixties, and beyond aren't just lucky or the beneficiaries of hardy genes. In most cases, those who are healthy and thriving in their later years set the stage for good health by making it a priority in their early years. Whether your coming decades are filled with good health, a productive career, strong relationships, and fulfillment of your life goals is influenced by the health choices you make—beginning right now.

LO 1 | WHY HEALTH, WHY NOW?

Describe the immediate and long-term rewards of healthy behaviors and the effects that your health choices may have on others.

Every day, the media remind us of health challenges facing the world, the nation—maybe even your campus or community. You might want to ignore these issues, but you can't. In the twenty-first century, your health is connected to the health of people with whom you directly interact as well as to that of people you've never met and the well-being of your local environment and of the entire planet. Let's take a look at how.

Choose Health Now for Immediate Benefits

Almost everyone knows that overeating leads to weight gain and that driving after drinking increases the risk of motor vehicle accidents. But other choices you make every day may influence your well-being in ways you're not aware of. For instance, did you know that the amount of sleep you get each night could affect your body weight, your ability to ward off colds, your mood, your interactions with others, and your driving? What's more, inadequate sleep is one of the

most commonly reported impediments to academic success (FIGURE 1.1). Similarly, drinking alcohol impairs your immediate health and your academic performance. It also sharply increases your risk of unintentional injuries—not only from motor vehicle accidents, but also from falls, drowning, and burns. This is especially significant because for people between the ages of 15 and 44, unintentional injury—whether related to drowsiness, alcohol use, or any other factor—is the leading cause of death (TABLE 1.1).

It isn't an exaggeration to say that healthy choices have immediate benefits. When you're well nourished, fit, rested, and free from the influence of nicotine, alcohol, and other drugs, you're more likely to avoid illness, succeed in school, maintain supportive relationships, participate in meaningful work and community activities, and enjoy your leisure time.

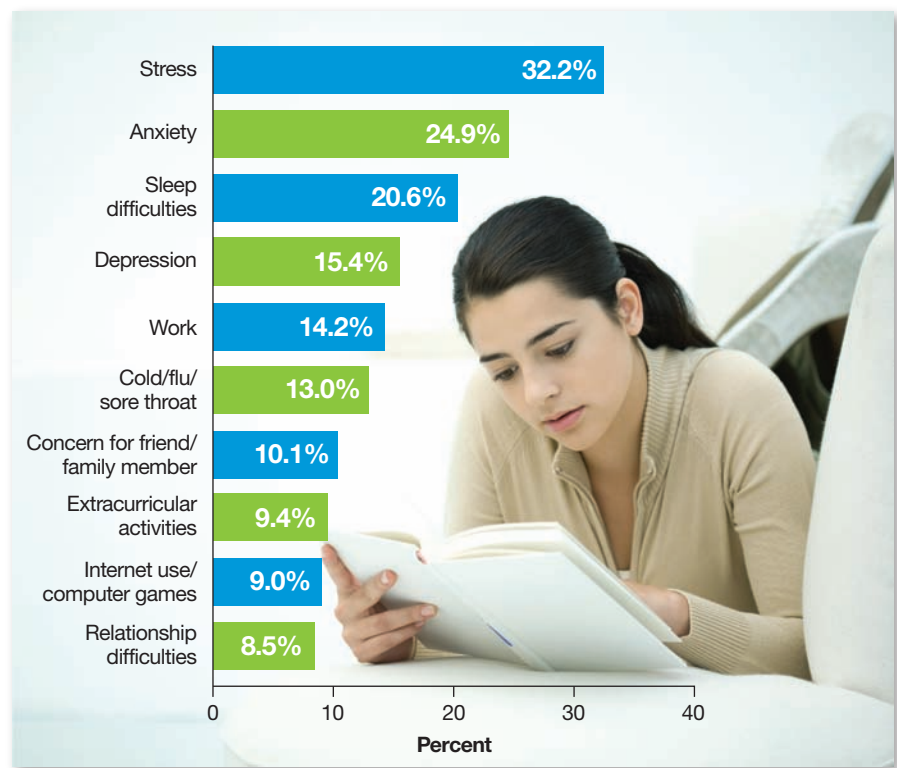


FIGURE 1.1 Top Ten Reported Impediments to Academic Performance—Past 12 Months In a recent survey by the National College Health Association, students indicated that stress, anxiety, poor sleep, and other factors had prevented them from performing at their academic best.

Source: Data are from American College Health Association, *American College Health Association—National College Health Assessment II (ACHA-NCHA II) Reference Group Data Report, Fall 2016* (Baltimore, MD: ACHA, 2017).

TABLE 1.1 | Leading Causes of Death in the United States in 2014, Overall and by Age Group (15 and older)

All Ages	Number of Deaths
Diseases of the heart	614,348
Malignant neoplasms (cancer)	591,699
Chronic lower respiratory diseases	147,101
Accidents (unintentional injuries)	136,053
Cerebrovascular diseases (stroke)	133,103
Aged 15–24	
Accidents (unintentional injuries)	11,836
Suicide	5,079
Assault (homicide)	4,144
Malignant neoplasms (cancer)	1,569
Diseases of the heart	953
Aged 25–44	
Accidents (unintentional injuries)	63,225
Malignant neoplasms (cancer)	14,891
Diseases of the heart	13,709
Suicide	13,275
Assault (homicide)	6,747
Aged 45–64	
Malignant neoplasms (cancer)	160,116
Diseases of the heart	109,264
Accidents (unintentional injuries)	38,640
Chronic liver disease and cirrhosis	21,419
Chronic lower respiratory diseases	20,894
Aged 65+	
Diseases of the heart	489,722
Malignant neoplasms (cancer)	413,885
Chronic lower respiratory diseases	124,693
Cerebrovascular diseases	113,308
Alzheimer’s disease	92,604

Source: Data from M. Heron, “Deaths: Leading Causes for 2014, Table 1,” *National Vital Statistics Reports* 65, no. 5 (June 2016), www.cdc.gov/nchs/data/nvsr/nvsr65/nvsr65_05.pdf.

Choose Health Now for Long-Term Rewards

Successful aging starts now. The choices you make today are like seeds: If you plant good seeds and tend them well, you’re more likely to enjoy the fruits of a longer and healthier life. In contrast, failure to plant the seeds or to nurture them will increase the likelihood of a shorter life as well as persistent illness, addiction, and other limitations on quality and quantity of life.

Personal Choices Influence Life Expectancy According to current **mortality** rates—the proportion of deaths within a population—the average **life expectancy** at birth in the United States is projected to be 78.8 years for a child born in 2015.¹ In other words, we can expect that Americans born today will live much longer than people born in the early 1900s, whose average life expectancy was 47 years. But life expectancy a century ago was determined largely by our susceptibility to infectious disease. In 1900, over 30 percent of all deaths occurred among children younger than 5 years old, and the number one cause of death was infection.² Even among adults, infectious diseases such as tuberculosis and pneumonia were the leading causes of death, and widespread epidemics of infectious diseases such as influenza crossed national boundaries, killing millions.

With the development of vaccines and antibiotics, life expectancy increased dramatically as premature deaths from infectious diseases decreased. As a result, **chronic diseases** such as heart disease, cerebrovascular disease (which leads to strokes), cancer, and chronic lower respiratory diseases became leading causes of death. Advances in diagnostic technologies, heart and brain surgery, radiation and other cancer treatments, and new medications have continued the trend of increasing life expectancy into the twenty-first century.

78.8 YEARS

is the **LIFE EXPECTANCY** in the United States.

Unfortunately, life expectancy in the United States is several years below that of many other nations. Factors contributing to premature mortality and thus limiting U.S. life expectancy include obesity, tobacco and alcohol abuse, and drug overdose, which is now the leading cause of accidental death.³ Our highly fragmented system of health care and lower quality of care for chronic disease are also part of the complex, multifactorial influences on our lower life expectancy.⁴ For more, see the **Health Headlines** box.

Personal Choices Influence Healthy Life Expectancy Healthful choices increase your **healthy life expectancy**—the number of years of full health you enjoy without disability, chronic pain, or significant illness. One aspect of healthy life expectancy is **health-related quality of life (HRQoL)**, a concept

mortality The proportion of deaths to population.

life expectancy The expected number of years of life remaining at a given age, such as at birth.

chronic disease A disease that typically begins slowly, progresses, and persists, with a variety of signs and symptoms that can be treated but not cured by medication.

healthy life expectancy The expected number of years of full health remaining at a given age, such as at birth.

health-related quality of life (HRQoL) Assessment of impact of health status—including elements of physical, mental, emotional, and social function—on overall quality of life.

SHORTER LIVES, POORER HEALTH

In 2013, the Institute of Medicine (now the National Academy of Medicine) published a report comparing health and longevity in the United States to that of 16 peer countries—high-income democracies including Canada, Australia, Japan, and 13 countries in Western Europe. Its sobering finding was that, for decades, Americans have been dying at earlier ages than people in peer countries and experiencing poorer health at all life stages, from birth through older adulthood.

An intriguing aspect of the findings is that Americans' reduced longevity reverses after age 75; that is, an American who reaches age 75 can actually expect to live longer than a 75-year-old from a peer country. This advantage is thought to be due to lower cancer death rates as well as better management of blood pressure and blood lipids, two factors in heart disease. Our reduced longevity overall, therefore, must be due to factors affecting us earlier in life. For example, the

United States has a higher infant mortality rate than that of the peer countries. We also have a higher rate of homicides and accidental injury deaths, especially drug-related deaths, which are more common in young or middle adulthood. Americans also have higher rates of HIV/AIDS, obesity, and diabetes, conditions that reduce the likelihood that people will reach age 75.

The Institute of Medicine report identified four general factors for our high rates of life-threatening diseases and injuries:

- **Our troubled health care system.** Americans are more likely to be uninsured and underinsured
- **Our unequal society.** The United States has a high level of poverty and income inequality as well as lower levels of social services.
- **Our car culture.** The infrastructure in communities throughout the United

States tends to be designed for driving rather than for walking or cycling, discouraging physical activity.

- **Our poor behaviors.** Although our rates of smoking are lower, we're more likely to abuse drugs, use firearms, drive while intoxicated, and fail to wear a safety belt. We also consume the most calories per person.

If citizens of 16 peer countries can enjoy better health and longer lives, Americans can as well. Get involved by supporting increased access to health care and social services and pedestrian-friendly community redevelopment. As you learn about health-promoting behaviors in this text, be sure to put them into practice.

Source: Institute of Medicine, "U.S. Health in International Perspective: Shorter Lives, Poorer Health," January 2013, www.iom.edu/~media/Files/Report%20Files/2013/US-Health-International-Perspective/USHealth_Intl_PerspectiveRB.pdf.

well-being An assessment of the positive aspects of a person's life, such as positive emotions and life satisfaction.

that focuses on the impact of health on physical, mental, emotional, and social function. Closely related to this is **well-being**, which assesses the

positive aspects of a person's life, such as positive emotions and life satisfaction.⁵

the public indirectly through reduced tax revenues because of income lost from absenteeism and premature death, increased disability payments because of an inability to remain in the workforce, and increased health insurance rates as claims rise for treatment of obesity and associated diseases.

Your Health Is Linked to Societal Health

Our personal health choices affect the lives of others because they contribute to national health and the global burden of disease. For example, overeating and inadequate physical activity contribute to obesity, but obesity isn't a problem only for the individual. Along with its associated health problems, obesity burdens the U.S. health care system and the overall U.S. economy. According to the U.S. Centers for Disease Control and Prevention, the medical costs of obesity in the United States are nearly \$150 billion each year.⁶ Obesity also costs

SEE IT! VIDEOS

Can simply being kind improve your health? Watch **Helping Others Could Be Good for Your Health** in the Study Area of **Mastering Health**.



Go to **Mastering Health** to see how your actions today affect your future health.



What is meant by *quality of life*? Hawaiian surfer Bethany Hamilton lost her arm in a shark attack while surfing at age 13, but that hasn't prevented her from achieving her goals as a professional surfer.

SEE IT! VIDEOS

What can one person do to fight childhood hunger? Watch **Viola Davis Fights to End Child Hunger**, available on **Mastering Health**.

effects on people who lose their loved ones to these choices. The burden on caregivers who personally sacrifice to take care of people disabled by diseases is another part of this problem.

At the root of concerns about what individual health choices cost society is an ethical question: To what extent should the public bear the brunt of an individual's unhealthy choices? Should we require individuals to pay somehow for their poor choices? In some cases, we already do. We tax cigarettes and alcohol, and several cities now tax sweetened soft drinks, which have been blamed for rising obesity rates. On the other side of the debate are those who argue that smoking, drinking, and overeating are behaviors that require treatment, not punishment. Are seemingly personal choices that influence health always entirely within our control? Before we can explore these questions further, we need to understand what health actually is.

LO 2 | WHAT IS HEALTH?

Compare and contrast the medical model of health and the public health model, and discuss the six dimensions of health.

For some people, the word **health** simply means the antithesis of sickness. For others, it means fitness, wellness, or well-being. As our collective understanding of illness has improved, so has our ability to understand health's many nuances.

Smoking, excessive alcohol consumption, and illegal drug use also place an economic burden on our communities and society. Moreover, these behaviors have social and emotional consequences, such as the

Models of Health

Over the centuries, different ideals—or models—of human health have dominated. Our current model of health has broadened from a focus on the physical body to an understanding of health as a reflection not only of ourselves, but also of our communities.

Medical Model Before the twentieth century, perceptions of health were dominated by the **medical model**, in which health status focused primarily on the individual and his or her tissues and organs. The surest way to improve health was to cure the individual's disease, either with medication to treat the disease-causing agent or through surgery to remove or repair the diseased tissues. Therefore, government resources focused on initiatives that led to treatment, rather than prevention, of disease.

Public Health Model

Not until the early decades of the 1900s did researchers begin to recognize that the health of entire populations of poor people, particularly those living in certain locations, was affected by environmental factors over which the people had little control: polluted water and air, a low-quality diet, poor housing, and unsafe work settings. As a result, researchers began to focus on an **ecological or public health model**, which views diseases and other negative health events as a

health The ever-changing process of achieving individual potential in the physical, social, emotional, mental, spiritual, and environmental dimensions.

medical model A view of health in which health status focuses primarily on the individual and a biological or diseased organ perspective.

ecological or public health model A view of health in which diseases and other negative health events are seen as a result of an individual's interaction with his or her social and physical environment.



Negative health events can be caused by people's interaction with the physical environment. High levels of lead in the tap water in Flint, Michigan, have made water in that city largely undrinkable and put the health and wellness of many children and families at risk.

disease prevention Actions or behaviors designed to keep people from getting sick.

health promotion The combined educational, organizational, procedural, environmental, social, and financial supports that help individuals and groups to reduce negative health behaviors and promote positive change.

risk behaviors Actions that increase susceptibility to negative health outcomes.

wellness The achievement of the highest level of health possible in each of several dimensions.

result of an individual's interaction with his or her social and physical environment.

Recognition of the public health model led health officials to move to control contaminants in water, for example, by building adequate sewers, and to control burning and other forms of air pollution. In the early 1900s, colleges began offering courses in health and hygiene. Over time,

public health officials began to recognize and address many other forces that affect human health, including hazardous work conditions; pollution; negative influences in the home and social environment; abuse of drugs and alcohol; stress; unsafe behavior; diet; sedentary lifestyle; and cost, quality, and access to health care.

By the 1940s, progressive thinkers began calling for policies, programs, and services to improve individual health and that of the population as a whole, shifting the focus from treatment of individual illness to **disease prevention**. For example, childhood vaccination programs reduced the incidence and severity of infectious disease; safety features such as seatbelts and airbags in motor vehicles and helmet laws for cyclists reduced traffic injuries and fatalities; and laws governing occupational safety reduced injuries and deaths among American workers. In 1947, at an international conference focusing on global health issues, the World Health Organization proposed a new definition of health: “Health is the state of complete physical, mental, and social well-being, not just the absence of disease or infirmity.”⁷ This new definition prompted a global movement to expand our concept of health.

The public health model also began to emphasize **health promotion**—policies and programs that promote behaviors known to support good health. Health promotion programs identify people engaging in **risk behaviors** (behaviors that increase susceptibility to negative health outcomes) and motivate them to change their actions by improving their knowledge, attitudes, and skills. Numerous public policies and services, technological advances, and individual actions have worked to improve our overall health status greatly in the past 100 years. **FIGURE 1.2** lists the ten greatest public health achievements of the twentieth century.



The Ten Greatest Public Health Achievements of the 20th Century

- Vaccinations
- Motor vehicle safety
- Workplace safety
- Control of infectious diseases
- Reduction in cardiovascular disease (CVD) and stroke deaths
- Safe and healthy foods
- Maternal and infant care
- Family planning
- Fluoridated drinking water
- Recognition of tobacco as a health hazard

FIGURE 1.2 The Ten Greatest Public Health Achievements of the Twentieth Century

Source: Adapted from Centers for Disease Control and Prevention, “Ten Great Public Health Achievements in the 20th Century,” April 26, 2013, www.cdc.gov/about/history/tengpha.htm.

Pulitzer Prize–winning book *So Human an Animal*, Dubos defined health as “a quality of life, involving social, emotional, mental, spiritual, and biological fitness on the part of the individual, which results from adaptations to the environment.”⁸ This concept of *adaptability*, or the ability to cope successfully with life’s ups and downs, became key to our overall understanding of health.

Later, the concept of **wellness** enlarged Dubos’s definition of health by recognizing levels—or gradations—of health (**FIGURE 1.3**). To achieve *high-level wellness*, a person must move progressively higher on a continuum of positive health indicators. People who fail to achieve these levels may slip into illness, disability, or premature death.

Today, the words *health* and *wellness* are often used interchangeably to describe the dynamic, ever-changing process of trying to achieve one’s potential in each of six interrelated dimensions (**FIGURE 1.4**):

- **Physical health.** This dimension includes features such as the shape and size of your body, how responsive and acute your senses are, and your body’s ability to function at optimum levels with adequate sleep and rest, nutrition, and physical activity. It also includes your ability to avoid, manage, or heal from injury or illness. More recent definitions of physical health encompass a person’s ability to perform

Wellness and the Dimensions of Health

In 1968, biologist, environmentalist, and philosopher René Dubos proposed an even broader definition of health. In his

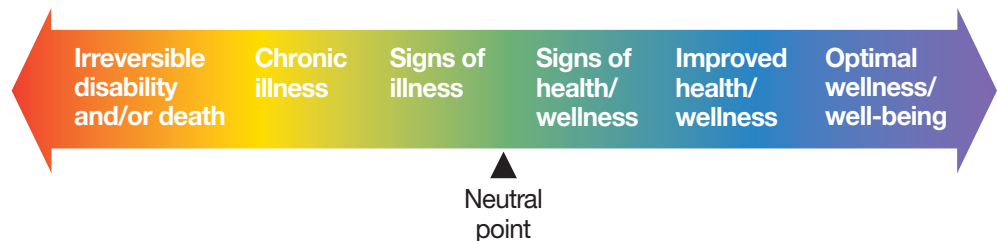


FIGURE 1.3 The Wellness Continuum



FIGURE 1.4 The Dimensions of Health When all dimensions are balanced and well developed, they support an active, thriving lifestyle.



Watch Video Tutor: **Dimensions of Health** in *Mastering Health*.

activities of daily living (ADLs), which are the activities that are essential to function normally in society—including things like getting up out of a chair, bathing and dressing yourself, cooking, toileting, and walking.

- **Social health.** The ability to have a broad social network and maintain satisfying interpersonal relationships with friends, family members, and partners is a key part of overall wellness. Successfully interacting and communicating with others, adapting to various social situations, and being able to give and receive love are all part of social health.
- **Intellectual health.** The ability to think clearly, reason objectively, analyze critically, and use brainpower effectively to meet life’s challenges are all part of this dimension. This includes learning from successes and mistakes, making sound decisions, and having a healthy curiosity about life.
- **Emotional health.** This is the feeling component—being able to express emotions when appropriate and to control them when not. Self-esteem, self-confidence, trust, and love are all part of emotional health.
- **Spiritual health.** This dimension involves creating and expressing meaning and purpose in your life. This may include believing in a supreme being, following a particular religion’s rules and customs, or simply feeling that

you are part of a greater spectrum of existence. The capacities to contemplate life’s experiences and to care about and respect all living things are aspects of spiritual health.

- **Environmental health.** This dimension entails understanding how the health of the environments in which you live, work, and play can affect you; protecting yourself from hazards in your own environment; and working to preserve, protect, and improve environmental conditions for everyone.

Achieving wellness means attaining the optimal level of well-being for your unique limitations and strengths. For example, a physically disabled person may function at his or her optimal level of physical and intellectual performance, enjoy satisfying relationships, and be engaged in environmental concerns. In contrast, someone who spends hours lifting weights but pays little attention to others may lack social or emotional health. The perspective we need is *holistic*, emphasizing the balanced integration of mind, body, and spirit.

LO 3 | WHAT INFLUENCES YOUR HEALTH?

Classify factors that influence your health status into one of five broad categories identified by *Healthy People 2020* as determinants of health.

If you’re lucky, aspects of your world conspire to promote your health: Everyone in your family is fit and has a weight appropriate to age and build; there are fresh vegetables on sale at the neighborhood farmer’s market; and a new bike trail has opened along the river (and you have a bike!). If you’re not so lucky, aspects of your world discourage health: Everyone in your family is overweight and nobody gets much exercise;



Today, health and wellness mean taking a positive, proactive attitude toward life and living it to the fullest.

determinants of health The range of personal, social, economic, and environmental factors that influence health status.

health disparities Differences in the incidence, prevalence, mortality, and burden of diseases and other health conditions among specific population groups.

your peers urge you to keep up with their drinking; the corner market has only cigarettes, alcohol, and junk food for sale; and you wouldn't dare walk or ride alongside the river for fear of being mugged. In short, seemingly personal choices are not always totally within an individual's control.

Public health experts refer to the factors that influence health as **determinants of health**, a term the U.S. Surgeon General defines as "the range of personal, social, economic, and environmental factors that influence health status."⁹ The Surgeon General's health promotion plan, called *Healthy People*, has been published every ten years since 1990 with the goal of improving the quality and years of life for all Americans. The overarching goals set out by the newest version, *Healthy People 2020*, are as follows:

- Attain high-quality, longer lives free of preventable diseases.
- Achieve health equity, eliminate disparities, and improve health of all groups.
- Create social and physical environments that promote good health for all.
- Promote good quality of life, healthy development, and healthy behaviors across all life stages.

Healthy People 2020 classifies health determinants into five categories: individual behavior, biology and genetics, social factors, health services, and policymaking (FIGURE 1.5). It also includes strong language about reducing **health disparities** that exist between populations based on racial or ethnic background, sex and gender, income and education, health insurance status, geographic location, sexual orientation,

and disability.¹⁰ See the Focus On: Difference, Disparity, and Health: Achieving Health Equity for more on health disparities.

Individual Behavior

Individual behaviors can help you attain, maintain, or regain good health, or they can undermine your health and promote disease. Health experts refer to behaviors within your power to change as *modifiable determinants*. Modifiable determinants significantly influence your risk for chronic disease, which is responsible for seven out of ten deaths in the United States.¹¹ Incredibly, just four modifiable determinants are responsible for most chronic disease (FIGURE 1.6):¹²

- **Lack of physical activity.** Low levels of physical activity contribute to over 200,000 deaths in the United States annually.¹³
- **Poor nutrition.** Multiple studies have linked diets low in fruits and vegetables with an increased risk of death by any cause.¹⁴
- **Excessive alcohol consumption.** Alcohol causes 88,000 deaths in adults annually through cardiovascular disease, liver disease, cancer, and other diseases, as well as motor vehicle accidents and violence.¹⁵
- **Tobacco use.** Tobacco smoking and the cancer, high blood pressure, and respiratory disease it causes are responsible for about one in five deaths of American adults.¹⁶

On the flip side, a recent study tracking more than 2,100 young adults (aged 18 to 30 years) found that those who maintained a healthful body weight, ate a nourishing diet, engaged in physical activity, and did not smoke were about twice as likely to maintain normal blood pressure and other indicators of cardiovascular health 25 years later than were those who did not practice these behaviors.¹⁷

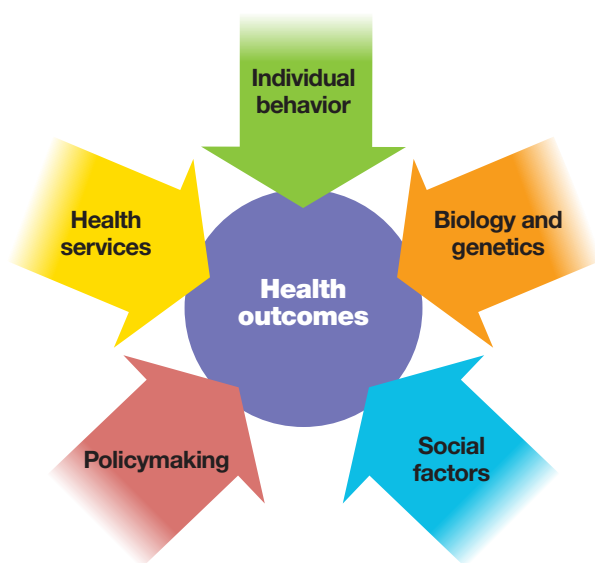


FIGURE 1.5 *Healthy People 2020* Determinants of Health The determinants of health often overlap with one another. Collectively, they affect health of individuals and communities.

7 OUT OF 10

deaths are caused by **CHRONIC DISEASE**.

Another major contributor to disease and mortality among Americans is our rising abuse of prescription and illegal drugs, especially opioid pain relievers and heroin. Between 1999 and 2015, the number of overdose deaths involving these drugs quadrupled. Every day, 142 Americans die from an opioid overdose.¹⁸

Other modifiable determinants include stress levels, exposure to toxic chemicals in the home and work environments, use of over-the-counter medications, sexual behaviors and use of contraceptives, sleep habits, and hand hygiene and other simple infection control measures. In addition, climate change, which has contributed to a rise in emerging infectious diseases, malnutrition, and many other global health problems, is modifiable with individual behavior change and with changes in policies and programs.



FIGURE 1.6 Four Leading Causes of Chronic Disease in the United States Lack of physical activity, poor nutrition, excessive alcohol consumption, and tobacco use—all modifiable health determinants—are the four most significant factors leading to chronic disease among Americans today.

occupational hazards, the quality of air, soil, and water, and even climate are all examples.

Economic Factors Even in affluent nations such as the United States, people in lower socioeconomic brackets have, on average, substantially shorter life expectancies and more illnesses than do people who are wealthy.¹⁹ Economic disadvantages that can impair health include the following:

- Lacking access to high-quality education from early childhood through adulthood
- Living in poor housing with potential exposure to asbestos, lead, dust mites, rodents and other pests, inadequate sanitation, unsafe drinking water, and high levels of crime
- Being unable to pay for nourishing food, warm clothes, and sturdy shoes; heat and other utilities; medications and medical supplies; transportation; and counseling, fitness classes, and other wellness measures.

Biology and Genetics

Biological and genetic determinants are things that typically can't be changed or modified. Health experts frequently refer to these factors as *nonmodifiable determinants*. Genetically inherited traits include genetic disorders such as sickle cell disease, hemophilia, and cystic fibrosis, as well as predispositions to certain conditions—such as allergies and asthma, cardiovascular disease, diabetes, and certain cancers—that are linked to multiple gene variants in combination with environmental factors. Although we cannot influence the structure of our genes, the emerging field of *epigenetics* is increasingly linking aspects of our diet, physical activity, and other behavioral choices to our cells' ability to use our genes to build proteins that influence our health. In the future, research into epigenetics might help us gain more control over our genetic inheritance.

Nonmodifiable determinants also refer to certain innate characteristics, such as your age, race, ethnicity, metabolic rate, and body structure. Your sex is another key biological determinant: As compared to men, women have an increased risk for low bone density and autoimmune diseases (in which the body attacks its own cells), whereas men have an increased risk for heart disease compared to women. Your own history of illness and injury also classifies as biology. For instance, if you had a serious knee injury in high school, it may still cause pain with walking and exercise, which in turn may predispose you to weight gain.

Social Factors

Social factors include both the social and physical conditions in the environment where people are born or live. Disparities in income and education, exposure to crime and violence, the availability of healthful foods, the state of buildings and roads,

The Built Environment As the name implies, the *built environment* includes anything created or modified by human beings, including buildings, roads, recreation areas, transportation systems, electric transmission lines, and communications cables.

Researchers in public health have increasingly been promoting changes to the built environment that can improve the health of community members.²⁰ These include increased construction of parks, sidewalks, pedestrian-only areas, bike paths, and public transit systems to which commuters typically walk or bike. Some communities are enticing supermarkets to open in inner-city neighborhoods to increase residents' access to fresh fruits and vegetables.

Pollutants and Infectious Agents Physical conditions also include the quality of the air we breathe, our land, our water, and our foods. Exposure to toxins, radiation, and infectious agents via the environment can cause widespread harm in a region and, with the rise of global travel and commerce, can affect the health of people around the world. Recent outbreaks of the Ebola and Zika viruses, for example, are grim reminders of the need for a proactive international response for disease prevention and climate change.

Access to High-Quality Health Services

The health of individuals and communities is also determined by whether they have access to high-quality health care, including not only services for physical and mental health, but also accurate and relevant health information and products such as eyeglasses, medical supplies, and medications.