

TOTAL FITNESS | AND | WELLNESS

The MasteringHealth Edition



SCOTT K. POWERS | STEPHEN L. DODD

SO MANY OPTIONS FOR YOUR STUDENTS

Students today want options when it comes to their learning and especially their textbooks. *Total Fitness and Wellness* gives students the flexibility they desire, offering a wide range of formats for the book and a large array of online learning resources. Let your students find a version that works best for them!

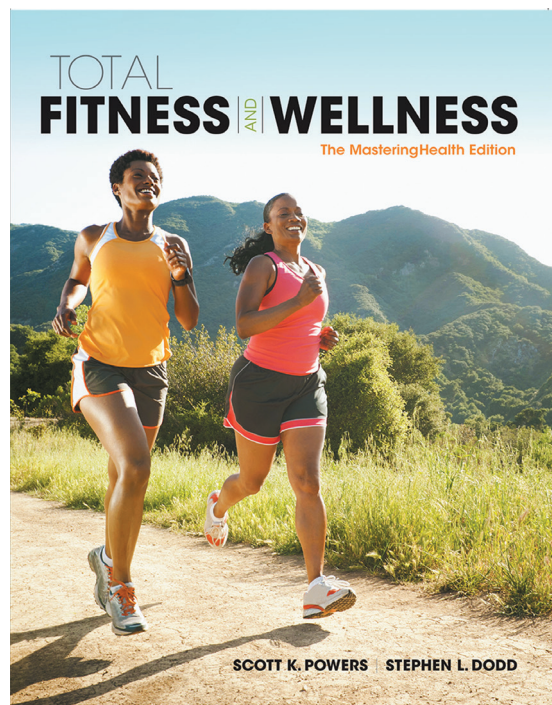


Table of Contents for *Total Fitness and Wellness 7e*

Chapter 1	Understanding Fitness and Wellness
Chapter 2	General Principles of Exercise for Health and Fitness
Chapter 3	Cardiorespiratory Endurance: Assessment and Prescription
Chapter 4	Improving Muscular Strength and Endurance
Chapter 5	Improving Flexibility
Chapter 6	Body Composition
Chapter 7	Creating Your Total Fitness and Wellness Plan
Chapter 8	Nutrition, Health, and Fitness
Chapter 9	Exercise, Diet, and Weight Control
Chapter 10	Preventing Cardiovascular Disease
Chapter 11	Stress Management
Chapter 12	Special Considerations Related to Exercise and Injury Prevention
Chapter 13	Cancer
Chapter 14	Sexually Transmitted Infections
Chapter 15	Addiction and Substance Abuse

Total Fitness and Wellness Seventh Edition

0-134-16760-0 / 978-0-134-16760-2

Total Fitness and Wellness Pearson eText 2.0

Available at no charge within MasteringHealth, the Pearson eText 2.0 version of *Total Fitness and Wellness* gives students access to the text whenever and wherever they have access to the Internet. Features of the eText now include:

- Now available on smartphones and tablets.
- Seamlessly integrated videos and other rich media.
- Accessible (screen-reader ready).
- Configurable reading settings, including resizable type and night reading mode.
- Instructor and student note-taking, highlighting, bookmarking, and search.
- Ask your instructor how you can gain access to eText 2.0.

No matter the format, with each new copy of the text students will receive full access to the Study Area in MasteringHealth, providing a wealth of videos, MP3 study podcasts and case studies, mobile apps, and interactive online worksheets. Give your students all the learning options with *Total Fitness and Wellness*.

Whether it's on a laptop, tablet, or cell phone, *Total Fitness and Wellness* lets students access media and other tools about health.

Total Fitness and Wellness Books a La Carte

0-134-37917-9 / 978-0-134-37917-3

Books a la Carte features the same exact content as *Total Fitness and Wellness* in a convenient, three-hole-punched, loose-leaf version. Books a la Carte offers a great value for your students—this format costs 35% less than a new textbook package.

Pearson Custom Library: You Create Your Perfect Text

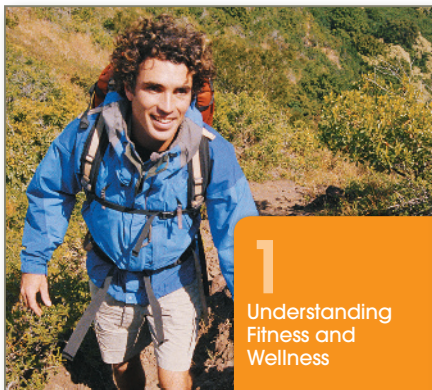
www.pearsonlearningsolutions.com/custom-library

Total Fitness and Wellness is available on the Pearson Custom Library, allowing instructors to create the perfect text for their course. Select the chapters you need, in the sequence you want. Delete chapters you don't use: Your students pay only for the materials you choose.

PROVIDING YOUR STUDENTS
with **INTERACTIVE TOOLS** to SUCCEED
in **FITNESS** and **WELLNESS**



STEP BY STEP TO STUDENT SUCCESS



1 Understanding Fitness and Wellness

LEARNING OUTCOMES

- 1 Define *wellness* and explain the eight components that are essential for wellness.
- 2 Describe the wellness goals of the Healthier People 2020 initiative.
- 3 Explain the nature of exercise and physical activity and the health benefits of exercise.
- 4 Identify and discuss the two major components of fitness-related physical fitness.
- 5 Explain how lifestyle plays a role in overall wellness and why it is important to assess your current health habits.
- 6 Explain the process of behavior change and name and describe the six phases that are part of the stages of change model.
- 7 Discuss the strategies and tactics that are effective in maintaining motivation for change and identifying barriers to change.
- 8 Explain the necessity of SMART goals and create a behavior change action plan that addresses at least one health-related target behavior.

18 Total Fitness and Wellness

Break: Increase steps by 250 per day to reach the target goal of 10,000 steps per day, and increase general physical activity. The number of weeks to reach the goal of total 10,000 steps per day will vary depending on your starting point.

Week	Activity	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	Study Break	1 set of 25 push-ups, 1 set of 15 sit-ups, 1 set of 15 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 1 set of 15 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 1 set of 15 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 1 set of 15 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 1 set of 15 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 1 set of 15 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 1 set of 15 dips
Week 2	Lunch Break	15 min walk	15 min walk	15 min walk	15 min walk	15 min walk	15 min walk	15 min walk
Week 3	Study Break	1 set of 25 push-ups, 1 set of 15 sit-ups, 2 sets of 10 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 2 sets of 10 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 2 sets of 10 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 2 sets of 10 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 2 sets of 10 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 2 sets of 10 dips	1 set of 25 push-ups, 1 set of 15 sit-ups, 2 sets of 10 dips
Week 4	Lunch Break	15 min walk	15 min walk	15 min walk	15 min walk	15 min walk	15 min walk	15 min walk
Week 5	Study Break	2 sets of 25 push-ups, 2 sets of 15 sit-ups, 2 sets of 10 dips	2 sets of 25 push-ups, 2 sets of 15 sit-ups, 2 sets of 10 dips	2 sets of 25 push-ups, 2 sets of 15 sit-ups, 2 sets of 10 dips	2 sets of 25 push-ups, 2 sets of 15 sit-ups, 2 sets of 10 dips	2 sets of 25 push-ups, 2 sets of 15 sit-ups, 2 sets of 10 dips	2 sets of 25 push-ups, 2 sets of 15 sit-ups, 2 sets of 10 dips	2 sets of 25 push-ups, 2 sets of 15 sit-ups, 2 sets of 10 dips

study plan Customize your study plan—and master your health!—in the Study Area of MasteringHealth.

summary

hear it! STUDY REVIEW To hear an MP3 Chapter Summary, scan here or visit the Study Area's "MasteringHealth."

These goals include attaining high-quality, longer lives, reducing the risk of injury and premature death, achieving health equity, eliminating disparities, and supporting the health of all people within the population.

- 1 U.S. life expectancy is expected to decrease. Cardiovascular disease is the leading cause of death, followed by cancer and respiratory diseases. Lifestyle has the greatest impact on our risk of disease.
- 2 Wellness is defined as optimal health. It is achieved by practicing healthy lifestyle, which includes regular physical activity, proper nutrition, eliminating unhealthy behaviors, avoiding high-risk activities, and managing stress.
- 3 Total wellness can be achieved only by a balance of physical, emotional, intellectual, spiritual, social, environmental, occupational, and financial wellness. The components of wellness interact and influence each other.
- 4 Healthy People 2020 is a U.S. government initiative that established wellness goals for the nation.
- 5 Regular exercise offers many health benefits, including reducing the risk of cardiovascular disease, diabetes, and certain types of cancer. It also increases bone mass, maintains physical working capacity as one ages, increases longevity, and improves psychological well-being and quality of life.
- 6 The five major components of health-related physical fitness are cardiovascular endurance, muscular strength, muscular endurance, flexibility, and body composition.
- 7 Optimal wellness can be achieved by reducing or eliminating unhealthy behaviors and making healthy lifestyle choices.
- 8 A behavior change can only occur when a person first develops the understanding that a behavior is unhealthy and has the desire to make a change.
- 9 According to the stages of change model, there are six stages of behavior change: precontemplation, contemplation, preparation, action, maintenance, and termination.

CHAPTER 1 Understanding Fitness and Wellness 19

precontemplation, contemplation, preparation, action, maintenance, and termination.

- 1 Assessing your current lifestyle is the first step in planning to improve health-related habits.
- 2 Successful behavior change requires motivation. Strategies shown to be effective in maintaining motivation include thinking about the benefits of change, increasing self-efficacy, visualizing how one's life will be better as a result of the change, using positive self-talk, seeking out positive role models, and obtaining support and encouragement from others.
- 3 Common barriers to change include lack of knowledge, lack of motivation, denial, perceived inevitability, low self-efficacy, and lack of social support. Accomplishing change requires identifying and overcoming barriers.
- 4 SMART goals are Specific, Measurable, Attainable, Realistic, and associated with a specific Time frame.
- 5 A written behavior change contract provides accountability.
- 6 A well-designed action plan is based on SMART goals and includes strategies for dealing with the setbacks that will inevitably occur.
- 7 It is advisable to track your progress and use meaningful, healthy rewards to recognize your success in reaching your goal.
- 8 muscular strength
- 9 body composition
- 10 agility
- 11 flexibility
- 12 Let and describe the five components of health-related fitness.
- 13 Provide at least five examples of lifestyle choices that contribute to wellness.
- 14 A person in the _____ stage of change has been fully participating in the new health behaviors for less than six months.
 - a. maintenance
 - b. contemplation
 - c. action
 - d. new activity
- 15 Which of the following should be considered when you are planning to make a behavior change?
 - a. number of behaviors you want to change and effort involved
 - b. motivation for behavior change
 - c. current behavior patterns
 - d. all of the above
- 16 Identify four major barriers to behavior change and explain how they could be eliminated.
 - a. specific, manageable, accountability, realistic, time-sensitive
 - b. sensitive, multiple, action-oriented, measurable, time-stamped
 - c. specific, measurable, attainable, realistic, time frame
 - d. short-term, measurable, accountability, realistic, tough
- 17 Outline the steps involved in launching a plan for behavior change.
 - a. assess your current lifestyle
 - b. set SMART goals
 - c. identify barriers to change
 - d. create a behavior change contract
 - e. track your progress
 - f. use meaningful rewards
 - g. seek support
 - h. evaluate your progress
 - i. adjust your plan as needed
 - j. celebrate your success

review it! QUESTIONS Find more review questions online at MasteringHealth™.

- 1 _____ is not a component of wellness.
 - a. Exercise
 - b. Spiritual health
 - c. Social health
 - d. Emotional health
- 2 List and describe the eight components of wellness.
- 3 Which of the following is not a Healthy People 2020 objective?
 - a. Increase the proportion of adults who get sufficient sleep
 - b. Reduce the proportion of persons engaging in binge drinking of alcoholic beverages
 - c. Increase the proportion of physician office visits that include counseling in education related to nutrition or weight
 - d. All of the choices are Healthy People 2020 objectives.
- 4 _____ is any body movement produced by skeletal muscles that results in energy expenditure.
 - a. Exercise
 - b. Physical fitness
 - c. Health-related fitness
- 5 Which of the following is a health benefit of regular physical activity?
 - a. reduced risk of osteoporosis
 - b. reduced risk for heart disease
 - c. improved psychological well-being
 - d. all of the above
- 6 Which of the following is not a component of health-related fitness?
 - a. cardiovascular endurance
 - b. muscular strength
 - c. muscular endurance
 - d. flexibility
 - e. body composition

NEW! Study Plan tied to Learning Outcomes

Numbered learning outcomes now introduce every chapter, giving students a roadmap for their reading. Each chapter concludes with a Study Plan, which summarizes key points of the chapter and provides review questions to check understanding, all tied to the chapter's learning outcomes and assignable in MasteringHealth.

exercises

Some Exercises for Increasing Muscular Strength

EXERCISE 4.1 BICEPS CURL

PURPOSE To strengthen the elbow flexor muscles (biceps, brachialis, brachioradialis)



POSITION Hold the grips with elbows and arms extended.

MOVEMENT Curl the bar up as possible and slowly return to the starting position.

EXERCISE 4.2 TRICEPS EXTENSION

PURPOSE To strengthen the muscles on the back of the upper arm (triceps)



POSITION Sit upright with elbows bent.

MOVEMENT With the little finger side of the hand against the pad, fully extend the arms and then slowly return to the original position.

156 Total Fitness and Wellness

MANY PEOPLE WORRY about their body weight, but how much you weigh is not always a good index of whether your body composition is healthy. In fact, based on height and weight charts, some athletes appear to be 25 pounds overweight but really have very little body fat. How is this possible? Read more to find out! We will discuss how to assess your level of body fat, consider how much body fat is healthy, and examine the health problems associated with having too much body fat.

What Is Body Composition and What Does It Tell Us?

- 1 Define body composition and explain how this measurement relates to body weight.

Body composition refers to the relative amounts of fat and fat-free tissues (e.g., bone, muscle, and internal organs) in the body. Body composition is typically expressed as a percentage of fat in the body. So if a person has 20% body fat, 20% of her body weight is fat mass, and the remaining 80% of her body weight is fat-free or lean body mass. Having a high percentage of body fat is associated with an increased risk of heart disease, diabetes, and other diseases, but having too low a percentage can also be linked to health problems, such as osteoporosis.

Measuring percentage of body fat can help determine whether a person is at a healthy weight, **overweight**, or **obese**. Someone who is "overweight" has a body fat percentage above the level that is considered to be "healthy," based on research examining the relationship between body fatness and rates of disease. A person classified as obese has a very high percentage of body fat, generally over 25% for men and over 35% for women (1-5).

MAKE SURE YOU KNOW...

- Body composition refers to the relative amounts of fat and fat-free mass in the body and is generally reported in terms of the percentage of fat in the body.
- Measuring body fat percentage can help determine whether someone is overweight or obese.

MasteringHealth™

How Is Body Composition Related to Health?

- 1 Explain why excess body fat increases health risks, list five chronic conditions associated with obesity, and explain why too little body fat is also a health risk.

Maintaining a healthy body composition is an important goal to achieve a lifetime of wellness. To determine a healthy body weight, you need to consider the percentage of body fat.

The human body contains two major types of fat: essential fat and storage fat. **Essential fat** is necessary for body functions such as facilitating nerve impulses. Locations of this fat include nerves and cell membranes. Men have approximately 3% of their body weight as essential fat, and women—who carry more fat in their breasts, uterus, and other key sites—have approximately 12%.

The second type of body fat is called **storage fat**, which is contained within **adipose tissue** (i.e., fat cells) in the body. This fat may be **visceral fat**, which is located around internal organs, or **subcutaneous fat**, located on the body's surface.

body composition The relative amounts of fat and fat-free mass in the body.

overweight A weight above the recommended level for health.

obese An excessive amount of fat in the body, typically above 25% for men and 35% for women.

essential fat Body fat that is necessary for physiological functioning.

storage fat Fat that is stored in the body's adipose tissue.

adipose tissue Tissue where fat is stored in the body.

visceral fat Fat stored around the internal organs.

subcutaneous fat Fat stored just beneath the skin.

NEW! New book design makes student navigation of the text simple

The book's design and layout have been thoroughly revitalized for today's students. In addition to new photos and figures, the end-of-chapter labs and sample exercise prescription programs have been redesigned to make them easier to use. In addition, the book's table of contents has been streamlined, with information on fitness considerations for special populations (formerly Chapter 12) covered in the relevant sections of the book.



NEW! Chapter reorganization and revision makes planning a fitness program easy

Chapter 7, Creating Your Total Fitness and Wellness Plan, has been thoroughly revised and reorganized to help students develop plans that work for them. The chapter now includes information on fitness apps, a new figure applying the FITT principle to each component of health-related physical fitness, sample training logs, a new lab on writing SMART goals, and more.

EXAMINING THE EVIDENCE

Continuous vs. Interval Training: Benefit vs. Safety?


For many years, it was assumed that higher-intensity levels of training meant a higher probability for injuries. Thus, most professionals have guided fitness enthusiasts away from high-intensity workouts. It was also thought that high-intensity work resulted in a shorter total workout time and, therefore, less benefit than long, slow, distance workouts.

However, an accumulation of recent evidence suggests that we need to reexamine that concept. One study (19) concluded that high-intensity interval training (HIIT) results in cardiovascular adaptations that equal or exceed those found with continuous training. It was also shown that skeletal muscle aerobic adaptations to HIIT are equal to those seen with continuous training.

One of the most controversial aspects of the differences in these training methods has been the metabolic adaptations. While it has long been known that continuous training results in an increased ability to metabolize fats during exercise, it was thought that HIIT primarily worked to increase anaerobic energy stores. Over the last decade, with more studies done on interval training, we now realize that HIIT also results in aerobic metabolic changes similar to those seen with continuous training (20). In fact, it has been shown that metabolism is significantly increased for a prolonged period after HIIT!

Although there is the continued concern for increased possibility of injury with more intense exercise, if integrated slowly into your continuous, endurance exercise routine, it appears that it can be done with no increase in injury rate. Kuzy and Zielinski (19) also examined sprinters and long-distance runners and found no difference in injury to Achilles and patellar tendons between the groups. Thus, it appears that HIIT can be safely incorporated into the exercise routine of most individuals.

Interestingly, according to a recent survey of fitness professionals (21), the #1 exercise trend in the United States in 2014 was the use of HIIT as a substitute for or complement to continuous/endurance training.

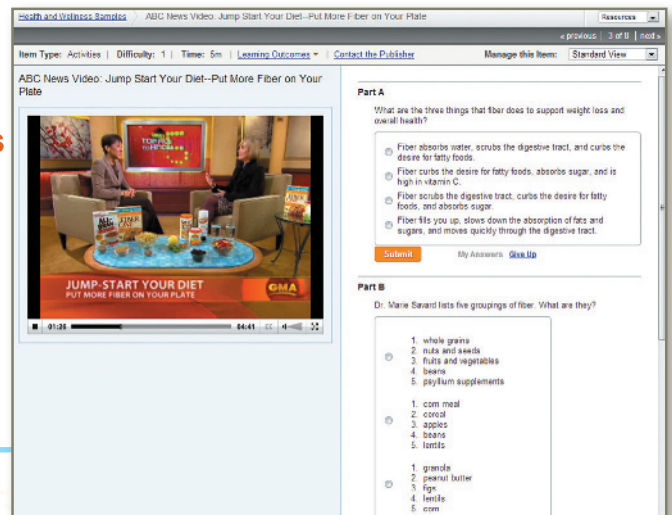


NEW! Examining the Evidence feature boxes

This new research-based feature presents findings from recent studies on various health and fitness topics, such as health hazards of prolonged sitting, the effectiveness of CrossFit training, the effect of yoga on fitness levels, and a comparison of organic and conventional foods.

NEW! ABC News Lecture Launchers

New videos from ABC News bring health and fitness to life and spark discussion with up-to-date hot topics such as stress among millennials, hate crimes, and rates of heroin use. Assignable multiple-choice questions available in MasteringHealth provide wrong-answer feedback to redirect students to the correct answer.



The screenshot shows a video player for "ABC News Video: Jump Start Your Diet--Put More Fiber on Your Plate". Below the video, there are two parts of a multiple-choice question:

Part A: What are the three things that fiber does to support weight loss and overall health?

- Fiber absorbs water, scrubs the digestive tract, and curbs the desire for fatty foods.
- Fiber curbs the desire for fatty foods, absorbs sugar, and is high in vitamin C.
- Fiber scrubs the digestive tract, curbs the desire for fatty foods, and absorbs sugar.
- Fiber fills you up, slows down the absorption of fats and sugars, and moves quickly through the digestive tract.

Part B: Marie Swartz lists five groupings of fiber. What are they?

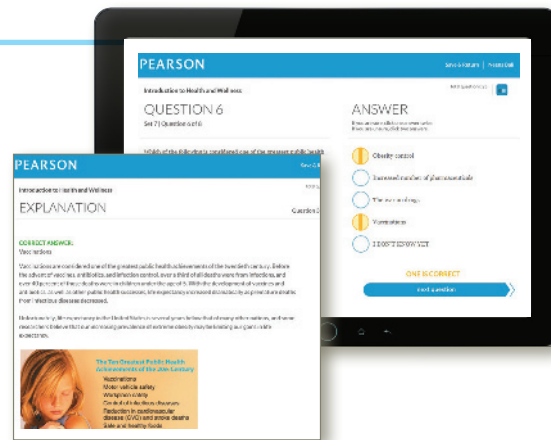
- 1. whole grains
2. nuts and seeds
3. fruits and vegetables
4. beans
5. psyllium supplements
- 1. corn meal
2. cereal
3. apples
4. beans
5. lentils
- 1. granola
2. peanut butter
3. figs
4. lentils
5. corn

GET YOUR STUDENTS GOING WITH MasteringHealth™

Mastering is the most effective and widely used online homework, tutorial and assessment system for the sciences and now includes content specifically for fitness and wellness courses. Mastering delivers self-paced tutorials that focus on your course objectives, provides individualized coaching, and responds to each student's progress.

BEFORE CLASS **Dynamic Study Modules and eText 2.0 provide students with a preview of what's to come.**

NEW! **Dynamic Study Modules** help students study effectively on their own by continuously assessing their activity and performance in real time. Students complete a set of questions with a unique answer format that also asks them to indicate their confidence level. Questions repeat until the student can answer them all correctly and confidently. Once completed, Dynamic Study Modules explain the concept using materials from the text.



NEW! **Interactive eText 2.0**, complete with embedded media, is mobile friendly and ADA accessible.

- Now available on smartphones and tablets.
- Seamlessly integrated videos and other rich media.
- Accessible (screen-reader ready).
- Configurable reading settings, including resizable type and night reading mode.
- Instructor and student note-taking, highlighting, bookmarking, and search.

DURING CLASS **Engage students with Learning Catalytics**

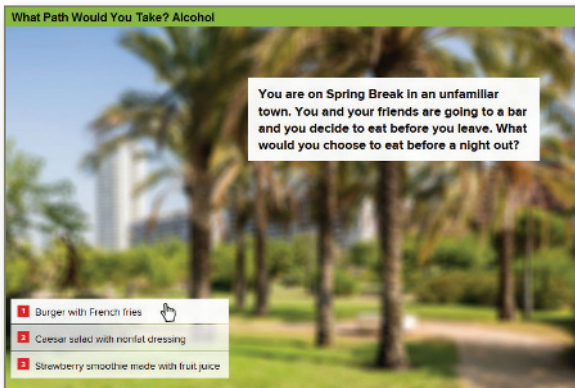


Learning Catalytics, a “bring your own device” student engagement, assessment, and classroom intelligence system, allows students to use their smartphone, tablet, or laptop to respond to questions in class.

AFTER CLASS

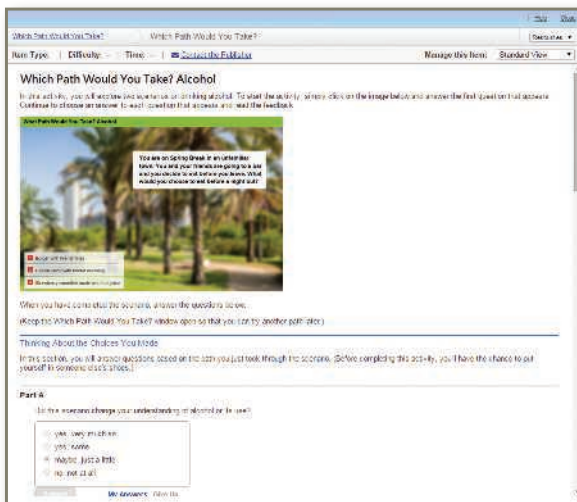
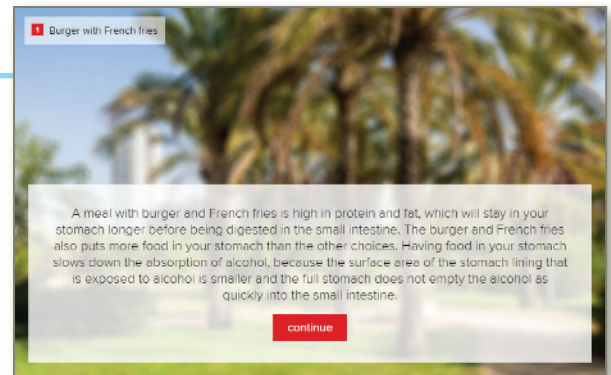
Easy-to-Assign, Customizable, and Automatically Graded Assignments

The breadth and depth of content available to you to assign in MasteringHealth is unparalleled, allowing you to quickly and easily assign homework to reinforce key concepts.



NEW! Interactive Behavior Change Activities—Which Path Would You Take? allow students to explore various health choices through an engaging, interactive, low-stakes, and anonymous experience.

In activities covering topics such as nutrition, fitness, and alcohol, students receive specific feedback on the choices they make today and the possible consequences on their future health.



These activities are available in MasteringHealth and made assignable in Mastering with follow-up questions.

AFTER CLASS

Other Automatically Graded Health and Fitness Activities Include . . .

Laboratory 3.1A: Measuring Cardiorespiratory Fitness: The 1.5-Mile Run

The objective of this test is to complete the 1.5-mile distance as quickly as possible. You can complete the run on an oval track or on any properly measured course. If the run will take place outside, the test is best conducted in moderate weather conditions; avoid running it on very hot or very cold days. A good strategy is to try to keep a steady pace over the entire distance. Performing a practice test is a good way to get familiar with the distance and determine the ideal pace you can maintain. You should use a stopwatch to get an accurate time. You should attempt this test only if you have met the medical clearance criteria (discussed in Chapter 1).

After you complete the test, cool down and record your time and fitness category from the table below. Locate your time range according to your sex and age group. The fitness categories are along the top of the table.

Table: Fitness Categories for Cooper's 1.5-Mile Run Test

Sex	Estimated Run Time Ranges			
	Excellent	Good	Fair	Poor
Men				
20-29 yrs	<10:10	10:10-11:29	11:30-12:38	>12:38
30-39 yrs	<10:47	10:47-11:54	11:55-12:58	>12:58
40-49 yrs	<11:16	11:16-12:24	12:25-13:00	>13:00
50-59 yrs	<12:06	12:06-13:35	13:36-15:05	>15:05
60-69 yrs	<13:24	13:24-15:04	15:05-16:48	>16:48
Women				
20-29 yrs	<11:50	11:50-13:24	13:25-14:50	>14:50
30-39 yrs	<12:26	12:26-14:08	14:09-15:43	>15:43
40-49 yrs	<13:34	13:34-14:53	14:54-16:43	>16:43
50-59 yrs	<14:35	14:35-16:35	16:36-18:15	>18:15
60-69 yrs	<16:34	16:34-18:27	18:28-20:16	>20:16

Source: Reproduced with permission from The Cooper Institute. Cited: "Test: From a basic color Physical Fitness Assessments and Forms for Adults and Law Enforcement. Available online at www.CooperInstitute.org.

Part A

Record the test date and your finish time in the essay box below.

Essay answers are limited to about 500 words (3000 characters maximum, including spaces).
3800 Characters remaining

NEW! Assignable Labs
25 of the most popularly assigned labs are now available as auto-graded, assignable labs within MasteringHealth.

NEW! Study Plans tie all end-of-chapter material (including chapter summary and review 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.

Study Plan for Chapter 6: Improving Your Physical Fitness

Customize your study size—and master your health!

Part A: 11.1 Describe the Health Benefits of Being Physically Active

Physical activity is being planned for a lifetime, requiring the least amount of preparation.

Select all that apply:

- Moderate exercise can lower cholesterol.
- Exercise can improve blood pressure.
- Exercise can help improve sleep.
- Exercise can help lower blood sugar in diabetes.
- Exercise can lower the risk of stroke.

Part B: 11.2 Understand the Relationship Between Physical Activity, Muscular Fitness, and Performance

Physical activity is any body movement that results in muscular fitness, which is the strength, endurance, and speed of movement or the ability to complete a physical task.

Customize your study size—and master your health!

Select all that apply:

- Endurance
- Power
- Speed

NEW! Coaching activities guide students through key health and fitness concepts with interactive mini-lessons that provide hints and feedback.

Coaching Activity: Maintaining Flexibility and Back Health

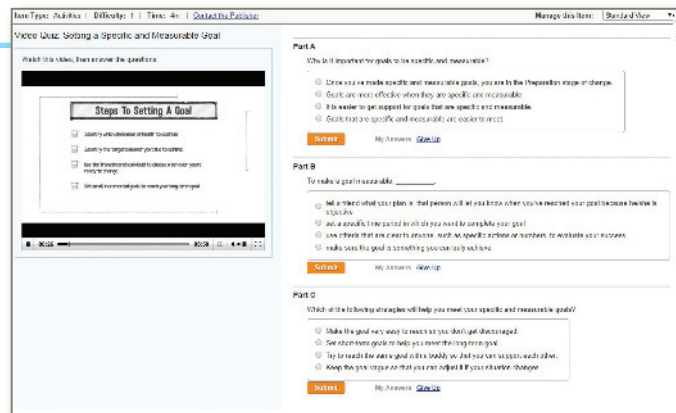
Adopting an understanding of back health can benefit your overall health and well-being. Taking the time to learn a few simple ways to maintain back health can help you avoid back pain.

Part B: Practice Maintaining Flexibility

There are several ways to maintain flexibility. Identify at least three stretches and describe the recommended form for each. Include how often you should stretch and how long you should hold each stretch.

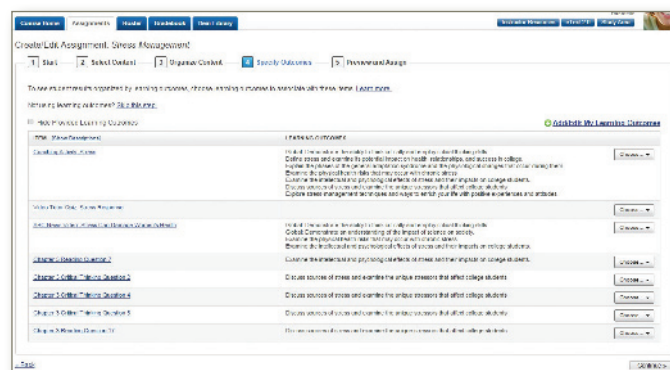
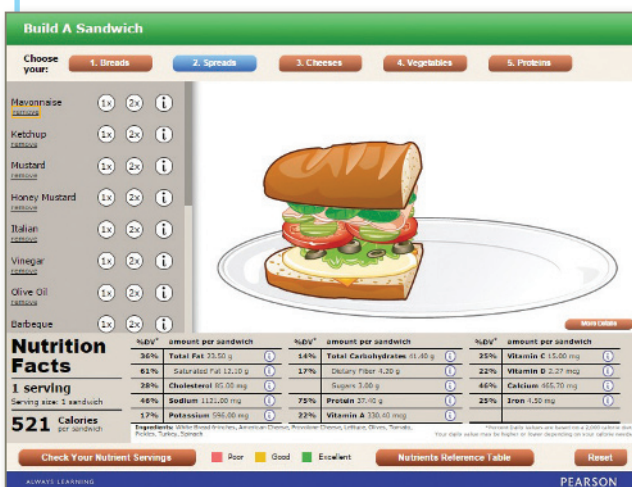
Match each item to the appropriate answer. Make sure all answers are used.

NEW! 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 MasteringHealth.



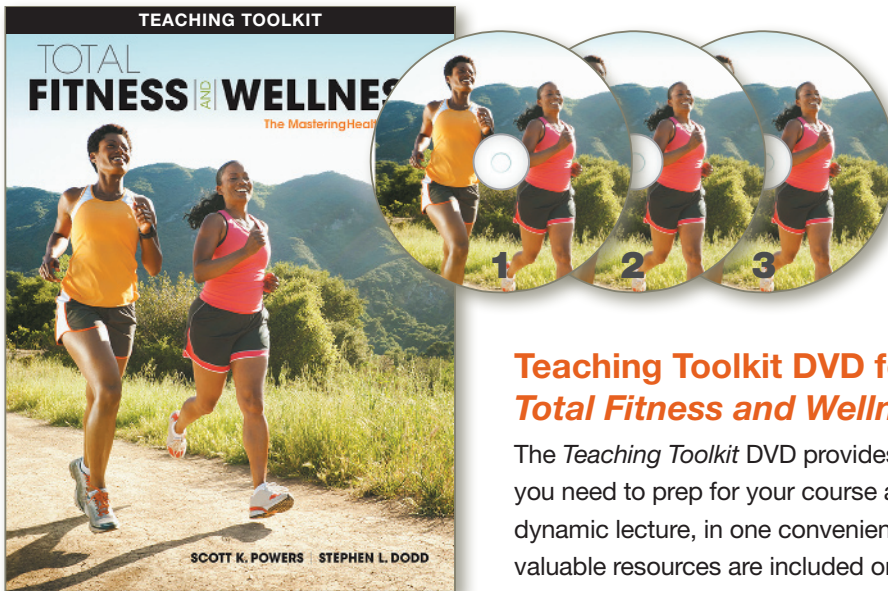
NEW! ABC News Lecture Launcher videos bring health and fitness to life and spark discussion with up-to-date hot topics such as do's and don'ts of stretching, potential workout mistakes, low carb and low fat diets, and stress among millennials. Activities tied to the videos include multiple choice questions that provide wrong-answer feedback to redirect students to the correct answer.

UPDATED! NutriTools Coaching Activities in the nutrition chapter allow students to combine and experiment with different food options and learn firsthand how to build healthier meals.



NEW! Learning Outcomes All of the MasteringHealth assignable content is tagged to book content and to Bloom's Taxonomy. You also have the ability to add your own 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.

EVERYTHING YOU NEED TO TEACH **IN ONE PLACE**



Teaching Toolkit DVD for *Total Fitness and Wellness*

The *Teaching Toolkit* DVD provides everything that you need to prep for your course and deliver a dynamic lecture, in one convenient place. These valuable resources are included on three disks:

DISK 1 Robust Media Assets for Each Chapter

- ABC News Lecture Launcher videos
- Behavior Change 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

DISK 2 Comprehensive 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

DISK 3 Additional Innovative Supplements for Instructors and Students

For Instructors

- Instructor Resource and Support Manual in Microsoft Word and PDF formats
- Step-by-step MasteringHealth tutorials
- Video introduction to Learning Catalytics™
- *Great Ideas in Teaching Health & Wellness*
- *Teaching with Student Learning Outcomes*
- *Teaching with Web 2.0*

For Students

- *Behavior Change Log Book and Wellness Journal*
- *Live Right! Beating Stress in College and Beyond*
- *Eat Right! Healthy Eating in College and Beyond*
- *Food Composition Table*

User's Quick Guide for *Total Fitness and Wellness*

This easy-to-use printed supplement accompanies the Teaching Toolkit and offers easy instructions for both experienced and new faculty members to get started with the rich Toolkit content and MasteringHealth.

Name: _____ Date(s): _____

As you complete the key fitness/wellness lab assessments in this course, record your results in the “Pre-Course Assessment” column. At the end of the course, re-do the labs, record your results in the “Post-Course Assessment” column, and see the progress you have made!

Lab	Pre-Course Assessment	Post-Course Assessment
Lab 2.3: Using a Pedometer to Count Your Steps	Average steps taken per day: _____	Average steps taken per day: _____
Lab 2.4: Identifying Barriers to Physical Activity	Barrier 1. Lack of time: _____ Barrier 2. Social and environmental influences: _____ Barrier 3. Lack of resources: _____ Barrier 4. Lack of motivation: _____	Barrier 1. Lack of time: _____ Barrier 2. Social and environmental influences: _____ Barrier 3. Lack of resources: _____ Barrier 4. Lack of motivation: _____
Lab 3.1: Measuring Cardiorespiratory Fitness	1.5-mile run test Finish time: _____ Fitness category: _____ 1-mile walk test Finish time: _____ Fitness category: _____ Submaximal cycle test Heart rate: _____ Fitness category: _____ Step test 1 minute recovery HR: _____ (bpm) Fitness category: _____	1.5-mile run test Finish time: _____ Fitness category: _____ 1-mile walk test Finish time: _____ Fitness category: _____ Submaximal cycle test Heart rate: _____ Fitness category: _____ Step test 1 minute recovery HR: _____ (bpm) Fitness category: _____
Lab 4.1: Evaluating Muscular Strength	Chest press 1 RM/BW ratio: _____ Fitness category: _____ Leg press 1 RM/BW ratio: _____ Fitness category: _____	Chest press 1 RM/BW ratio: _____ Fitness category: _____ Leg press 1 RM/BW ratio: _____ Fitness category: _____
Lab 4.4: Measuring Muscular Endurance	Push-up assessment Repetitions: _____ Category: _____ Curl-up assessment Repetitions: _____ Category: _____	Push-up assessment Repetitions: _____ Category: _____ Curl-up assessment Repetitions: _____ Category: _____
Lab 5.2: Assessing Flexibility	Sit-and-reach test Reach distance (centimeters): _____ Fitness category: _____ Shoulder flexibility test Left side reach distance (inches): _____ Fitness category: _____ Right side reach distance (inches): _____ Fitness category: _____	Sit-and-reach test Reach distance (centimeters): _____ Fitness category: _____ Shoulder flexibility test Left side reach distance (inches): _____ Fitness category: _____ Right side reach distance (inches): _____ Fitness category: _____
Lab 6.1: Assessing Body Composition	Skinfold test Sum of 3 skinfolds: _____ Percent body fat estimate: _____ Classification: _____ Waist-to-hip ratio Waist: _____ Hip: _____ Waist-to-hip ratio: _____ Disease risk classification: _____ BMI BMI: _____ kg/m ² Weight classification: _____	Skinfold test Sum of 3 skinfolds: _____ Percent body fat estimate: _____ Classification: _____ Waist-to-hip ratio Waist: _____ Hip: _____ Waist-to-hip ratio: _____ Disease risk classification: _____ BMI BMI: _____ kg/m ² Weight classification: _____
Lab 8.1: Analyzing Your Diet (Three-day nutrient summary from SuperTracker on ChooseMyPlate.gov)	Average total calories: _____ kcal Average calories from fat: _____ kcal Average protein intake: _____ gm Average carbohydrate intake: _____ gm Average fiber intake: _____ gm Average fat intake: _____ gm Average cholesterol intake: _____ mg Average sodium intake: _____ mg	Average total calories: _____ kcal Average calories from fat: _____ kcal Average protein intake: _____ gm Average carbohydrate intake: _____ gm Average fiber intake: _____ gm Average fat intake: _____ gm Average cholesterol intake: _____ mg Average sodium intake: _____ mg
Lab 9.1: Determining Ideal Body Weight	% body fat: _____ Weight: _____ lb BMI: _____ kg/m ² Ideal weight: _____ kg	% body fat: _____ Weight: _____ lb BMI: _____ kg/m ² Ideal weight: _____ kg
Lab 9.2: Estimating Daily Caloric Expenditure	Estimated calorie intake: _____ Estimated daily caloric expenditure: _____	Estimated calorie intake: _____ Estimated daily caloric expenditure: _____
Lab 10.2: Understanding Your Risk for Cardiovascular Disease	Family risk for CVD, total points: _____ Lifestyle risk for CVD, total points: _____ Additional risks for CVD, total points: _____	Family risk for CVD, total points: _____ Lifestyle risk for CVD, total points: _____ Additional risks for CVD, total points: _____
Lab 11.2: Stress Index Questionnaire	Number of Yes answers: _____ Stress category: _____	Number of Yes answers: _____ Stress category: _____
Lab 13.1: Determining Your Cancer Risk	Number of Yes answers: _____	Number of Yes answers: _____
Lab 14.1: Inventory of Attitudes and Behaviors toward Sexually Transmitted Infections	Number of True answers: _____ Number of False answers: _____ Risk level: _____	Number of True answers: _____ Number of False answers: _____ Risk level: _____
Lab 15.1: Alcohol Abuse Inventory	Number of Yes answers: _____ How risky is your alcohol use? _____	Number of Yes answers: _____ How risky is your alcohol use? _____

Behavior Change

Contract

Choose a health behavior that you would like to change, starting this quarter or semester. Sign the contract at the bottom to affirm your commitment to making a healthy change and ask a friend to witness it.

My behavior change will be:

My long-term goal for this behavior change is:

Barriers that I must overcome to make this behavior change are (things that I am currently doing or situations that contribute to this behavior or make it hard to change):

1. _____

2. _____

3. _____

The strategies I will use to overcome these barriers are:

1. _____

2. _____

3. _____

Resources I will use to help me change this behavior include:

A friend/partner/relative _____

A school-based resource _____

A community-based resource _____

A book or reputable website _____

In order to make my goal more attainable, I have devised these short-term goals:

Short-term goal _____ Target date _____ Reward _____

Short-term goal _____ Target date _____ Reward _____

Short-term goal _____ Target date _____ Reward _____

When I make the long-term behavior change described above, my reward will be:

_____ Target date _____

I intend to make the behavior change described above. I will use the strategies and rewards to achieve the goals that will contribute to a healthy behavior change.

Signed _____ Date _____

Witness _____ Date _____

TOTAL
FITNESS
AND **WELLNESS**

The MasteringHealth Edition

Seventh Edition

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University of Florida

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—**Stephen L. Dodd**

To my wife Lou and to my mother, who encouraged me to pursue academic endeavors.

—**Scott K. Powers**

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brief contents

1	Understanding Fitness and Wellness	1
2	General Principles of Exercise for Health and Fitness	35
3	Cardiorespiratory Endurance: Assessment and Prescription	53
4	Improving Muscular Strength and Endurance	85
5	Improving Flexibility	125
6	Body Composition	155
7	Creating Your Total Fitness and Wellness Plan	181
8	Nutrition, Health, and Fitness	211
9	Achieving Optimal Body Weight	251
10	Preventing Cardiovascular Disease	275
11	Stress Management	295
12	Special Considerations Related to Exercise and Injury Prevention	319
13	Cancer	349
14	Sexually Transmitted Infections	371
15	Addiction and Substance Abuse	389
	Answers to Study Questions	A-1
	Nutritive Value of Selected Foods and Fast Foods	B-1
	References	R-1
	Photo Credits	C-1
	Glossary	G-1
	Index	I-1

This page intentionally left blank

contents

1 Understanding Fitness and Wellness 1

Life Expectancy and Wellness 2

- What Is Wellness? 2
- Eight Components of Wellness 2
- Interaction of Wellness Components and the Wellness Continuum 4

Wellness Goals for the Nation 5

What Is Exercise and Why Should I Do It? 5

- Exercise Is One Type of Physical Activity 6
- Health Benefits of Exercise and Physical Activity 6

Exercise and Activity for Health-Related Fitness 9

- Cardiorespiratory Endurance 9
- Muscular Strength 9
- Muscular Endurance 10
- Flexibility 10
- Body Composition 11

Lifestyle Management Is the Key to Wellness 11

How Does Behavior Change Occur? 11

- Assessing Your Current Health Habits 13

Staying Motivated and Eliminating Barriers to Change 13

- Evaluating the Benefits of Behavior Change 13
- Increasing Self-Efficacy 13
- Identifying and Eliminating Barriers to Change 14

Your Plan for Behavior Change 15

- Goal Setting 15
- Behavior Change Contract 15
- Plan of Action 15
- Monitoring Your Progress 16
- Dealing with Challenges and Relapses 16
- Rewards for Achieving Your Goals 16

Sample Program for Increasing Physical Activity 17

Study Plan 18

- Summary 18
- Study Questions 19
- Suggested Reading 20
- Helpful Weblinks 20

laboratory 1.1 Wellness Evaluation 21

laboratory 1.2 Lifestyle Assessment Inventory 27

laboratory 1.3 Changing Your Behavior 31

laboratory 1.4 Medical History Check 32

laboratory 1.5 Par-Q and You 33

laboratory 1.6 Evaluating Fitness and Health Products 34



2 General Principles of Exercise for Health and Fitness 35

Principles of Exercise Training to Improve Physical Fitness 36

- Overload Principle 36
- Principle of Progression 36
- Principle of Specificity 37
- Principle of Recuperation 38
- Principle of Reversibility 39

Designing Your Exercise Program 40

- Setting Goals 40
- The Importance of a Warm-Up 40
- The Workout 42
- The Importance of the Cool-Down 42
- Personalizing Your Workout 42

Health Benefits of Exercise: How Much Is Enough? 43

Removing Barriers to Physical Activity 45

Study Plan 46

- Summary 46
- Study Questions 46
- Suggested Reading 47
- Helpful Weblinks 47

laboratory 2.1 Warming Up 48

laboratory 2.2 Which Physical Activities Work Best for You? 49

laboratory 2.3 Using a Pedometer to Count Your Steps 50

laboratory 2.4 Identifying Barriers to Physical Activity 51



3 Cardiorespiratory Endurance: Assessment and Prescription 53

What Is Cardiorespiratory Endurance? 54

The Cardiorespiratory System 54

- The Cardiovascular System 54
- The Respiratory System 56

How Do We Get Energy for Exercise? 56

- Anaerobic Energy Production 56
- Aerobic Energy Production 57
- The Energy Continuum 57

What Happens to the Cardiorespiratory System with Exercise and Training? 58

- Responses to Exercise 58
- Adaptations to Exercise 59
- Body Composition 60

What Are the Health Benefits of Cardiorespiratory Endurance? 60

Evaluation of Cardiorespiratory Endurance 60

Designing Your Aerobic Exercise Program 62

- The Warm-Up 62
- The Workout 62
- The Cool-Down 65

Developing an Individualized Exercise Prescription 66

- Initial Conditioning Phase 66
- Improvement Phase 67
- Maintenance Phase 67

Training Techniques 68

- Cross Training 68
- Interval Training 68

How Can You Get Motivated to Be Active? 69**Sample Exercise Prescriptions for Cardiorespiratory Training 70****Study Plan 73**

- Summary 73
- Study Questions 74
- Suggested Reading 75
- Helpful Weblinks 75

- laboratory 3.1A** Measuring Cardiorespiratory Fitness: The 1.5-Mile Run Test 76
- laboratory 3.1B** Measuring Cardiorespiratory Fitness: The 1-Mile Walk Test 77
- laboratory 3.1C** Measuring Cardiorespiratory Fitness: Submaximal Cycle Test 78
- laboratory 3.1D** Measuring Cardiorespiratory Fitness: Step Test 80
- laboratory 3.2** Assessing Cardiorespiratory Fitness for Individuals with Disabilities 81
- laboratory 3.3** Determining Target Heart Rate 82
- laboratory 3.4** Developing Your Personal Exercise Prescription 84

4**Improving Muscular Strength and Endurance 85****The Need for Muscular Strength and Endurance in Daily Living 86****How Muscles Work: Structure and Function 86**

- Muscle Structure 87
- Muscle Function 87
- Muscle Exercise and Muscle Action 87
- Types of Muscle Fibers 89
- Individual Variations in Fiber Type 90
- Recruitment of Muscle Fibers during Exercise 91
- Muscular Strength 91

Evaluation of Muscular Strength and Endurance 92**Principles for Designing a Strength and Endurance Program 93**

- Progressive Overload 93
- Specificity of Training 93



Strength Training: How the Body Adapts 94

- Physiological Changes Due to Weight Training 94
- Rate of Strength Improvement with Weight Training 94
- Gender Differences in Response to Weight Training 94

Designing a Training Program for Increasing Muscular Strength 94

- Safety Concerns 94
- Types of Weight-Training Programs 95

Exercise Prescription for Weight Training 96

Starting and Maintaining a Weight-Training Program 98

- Developing an Individualized Exercise Prescription 98
- Supine Exercises 99
- Seated or Standing Exercises 99

Motivation to Maintain Strength Fitness 99

Sample Exercise Prescriptions for Weight Training 100

Study Plan 110

- Summary 110
- Study Questions 111
- Suggested Reading 112
- Helpful Weblinks 113

- laboratory 4.1 Evaluating Muscular Strength: The 1 RM Test 114
- laboratory 4.2 Evaluating Muscular Strength: The Estimated 1 RM Test 117
- laboratory 4.3 Tracking Your Progress 120
- laboratory 4.4 Measuring Muscular Endurance: The Push-Up and Curl-Up Tests 121
- laboratory 4.5 Measuring Core Strength and Stability 124

5 Improving Flexibility 125

How Flexibility Works 126

- Structural Limitations to Movement 126

Stretching and the Stretch Reflex 127

Benefits of Flexibility 127

- Keeping Joints Healthy 128
- Preventing Lower Back Pain 128

Preventing Poor Posture 129

Evaluating Flexibility 129

Designing a Flexibility Training Program 131

- Static Stretching 132
- Proprioceptive Neuromuscular Facilitation 132
- Passive and Active Stretching 133

Sample Exercise Prescriptions for Flexibility 135

Study Plan 146

- Summary 146
- Study Questions 146



Suggested Reading 147

Helpful Weblinks 147

laboratory 5.1 Assessing Your Posture 148

laboratory 5.2 Assessing Flexibility: Trunk Flexion (Sit-and-Reach) Test and Shoulder Flexibility Test 150

laboratory 5.3 Flexibility Progression Log 152

laboratory 5.4 Stretching to Prevent or Reduce Lower Back Pain 153

6 Body Composition 155

What Is Body Composition and What Does It Tell Us? 156

How Is Body Composition Related to Health? 156

Overweight and Obesity in the United States 158

Chronic Conditions Associated with Overweight and Obesity 161

Mental and Physical Benefits of a Healthy Weight 161

Health Effects of Too Little Body Fat 162

Assessing Body Composition 164

Field Methods 164

Laboratory Measures 166

Using Body Composition to Determine Your Ideal Weight 168

Behavior Change: Set Goals and Get Regular Assessments 170

Study Plan 170

Summary 170

Study Questions 171

Suggested Reading 172

Helpful Weblinks 172

laboratory 6.1 Assessing Body Composition 173

laboratory 6.2 Determining a Healthy Body Weight 179



7 Creating Your Total Fitness and Wellness Plan 181

Steps to Develop a Personal Fitness Plan 182

Step 1. Set Your Goals 182

Step 2. Select Exercises for Your Fitness Program 184

Step 3. Plan Your Weekly Fitness Routine 184

Step 4. Monitor Your Progress 185

Combining Fitness Training Components 185

Putting Your Plan into Action 187

Fitness Is a Lifelong Process 188

Changes in Physical Activity Levels 189

Fitness During Pregnancy 190

Fitness for People with Disabilities 191

Fitness for Older Adults 192

- Physical and Mental Changes of Aging 192
- Exercise Prescription for Older Adults 193

Steps for Developing and Implementing a Wellness Plan 194

- Step 1. Establish Your Goals 194
- Step 2. Select Wellness Concepts that Are Appropriate for You 194
- Step 3. Plan Your Behavior Changes 194
- Step 4. Monitor Your Progress 195
- Tips for Success 195

Sample Programs for Fitness 197

Study Plan 201

- Summary 201
- Study Questions 201
- Suggested Reading 202
- Helpful Weblinks 203

laboratory 7.1 Developing SMART Goals 204

laboratory 7.2 Personal Fitness Program Contract and Short-Term Fitness Goals 206

laboratory 7.3 Personal Fitness Program Contract and Intermediate/Long-Term Fitness Goals 207

laboratory 7.4 Planning a Personal Fitness Program 209

8 Nutrition, Health, and Fitness 211

What Is Nutrition and Why Is It Important? 212

Macronutrients 212

- Carbohydrates 213
- Fats and Lipids 214
- Proteins 216
- Water 217

Micronutrients 218

- Vitamins 218
- Minerals 219
- Micronutrients in the Diet 219

What Are the Guidelines for a Healthy Diet? 219

- Eat More Fruits, Vegetables, and Whole Grains 222
- Manage Your Intake of Calories, Sugar, Alcohol, Fat, and Sodium 223

Use Available Resources to Plan Healthy Meals 224

- MyPlate 224
- Food Labels 224
- Sample Meal Plan 225

Special Dietary Considerations 228

- Vitamins: B₁₂, D, and Folate 228
- Minerals: Iron and Calcium 229
- Vegetarian Diet 230
- Food Allergies and Intolerances 230



Does Exercise Alter Your Nutrition Requirements? 231

- Nutrition for Exercise 231
- Does Exercise Increase Your Need for Carbohydrates and Fat? 231
- Protein Needs Can Be Met Through Diet 233
- Water and Micronutrients 234
- High Vitamin Intake Does Not Improve Performance 236
- Antioxidants 236

Do Supplements Provide Improved Health or Performance? 236

- Regulation of Supplement Products 236
- Should You Use Supplements? 237

Food Safety and Food Technology 237

- Foodborne Illness 237
- Food Additives 239
- Organically Grown Foods 239
- Irradiated and Bioengineered Foods 241

Sample Program for Changing Daily Caloric Intake 242**Study Plan 244**

- Summary 244
- Study Questions 245
- Suggested Readings 246
- Helpful Weblinks 246

laboratory 8.1 Analyzing Your Diet 248**laboratory 8.2 Setting Goals for a Healthy Diet 248****laboratory 8.3 Planning a New Diet 249****laboratory 8.4 Assessing Nutritional Habits 250****9 Achieving Optimal Body Weight 251****What Is Your Body Composition? 252****Energy Balance in the Body 252**

- Daily Energy Expenditure 253

Factors that Influence Weight Management 254

- Hormonal Control of Appetite 254
- Heredity 254
- Lifestyle and Environment 254
- Physical Activity and Exercise 255

Designing a Successful Weight-Loss Program 255

- Lifetime Weight Management 257

Exercise and Diet Programs to Gain Weight 262**Extreme Measures for Weight Loss 263**

- Surgery 263
- Prescription Medications 263

What Is Disordered Eating? 263

- Anorexia Nervosa 263
- Bulimia Nervosa 264
- Binge Eating Disorder 264



Study Plan 265

- Summary 265
- Study Questions 265
- Suggested Reading 266
- Helpful Weblinks 266

- laboratory 9.1** Determining Ideal Body Weight Using Percent Body Fat and the Body Mass Index 267
- laboratory 9.2** Estimating Daily Caloric Expenditure and the Caloric Deficit Required to Lose 1 Pound of Fat per Week 268
- laboratory 9.3** Weight-Loss Goals and Progress Report 269
- laboratory 9.4** Assessing Body Image 270
- laboratory 9.5** What Triggers Your Eating? 272

10 Preventing Cardiovascular Disease 275

What Is Cardiovascular Disease and How Prevalent Is It? 276

- Cardiovascular Disease in the United States 276
- Types of Cardiovascular Disease 276

What Risk Factors Are Associated with Coronary Heart Disease? 279

- Major Risk Factors 279
- Contributory Risk Factors 283

How Can You Reduce Your Risk of Heart Disease? 284

- Don't Smoke 284
- Lower Your Blood Pressure 284
- Reduce Blood Cholesterol Levels 285
- Be Physically Active 285
- Reduce Your Stress Level 285

Study Plan 287

- Summary 287
- Study Questions 287
- Suggested Reading 288
- Helpful Weblinks 288

- laboratory 10.1** Assessing Your Risk 289
- laboratory 10.2** Understanding Your Risk for Cardiovascular Disease 292
- laboratory 10.3** Assessing Your Genetic Predisposition for Cardiovascular Disease 294

11 Stress Management 295

What Is Stress and the Stress Response? 296

- Physiological Changes Caused by the Stress Response 296
- The Fight-or-Flight Response 297

What Factors Affect Your Stress Level? 298

- Personality Behavior Patterns 298
- Past Experiences 299
- Gender 299
- Common Causes of Stress 299



Stress and Health 300**How Can You Manage Stress? 302**

- Rest and Sleep 304
- Exercise 305
- Use Relaxation Techniques 306
- Develop Spiritual Wellness 308
- Develop a Support Network 308
- Avoid Counterproductive Behaviors 308

Sample Program for Stress Management 309**Study Plan 311**

- Summary 311
- Study Questions 311
- Suggested Reading 312
- Helpful Weblinks 312

laboratory 11.1 Assessing Your Personality Behavior Pattern 313**laboratory 11.2 Stress Index Questionnaire 314****laboratory 11.3 Managing Time and Establishing Priorities 315****12****Special Considerations
Related to Exercise
and Injury Prevention 319****Exercising in Hot or Cold Environments 320**

- Heat Loss During Exercise 320
- Exercise Attire for Hot Environments 322
- Heat Acclimatization 322
- Maintaining Body Temperature in a Cold Environment 323
- Exercise Attire for Cold Environments 324

Exercising at High Altitudes 326**Exercise and Air Pollution 327**

- Major Forms of Air Pollution 327
- Coping with Air Pollution 327

Risks Associated with Increased Physical Activity 328**Common Conditions and Injuries 329**

- Back Pain 329
- Acute Muscle Soreness 330
- Delayed-Onset Muscle Soreness 330
- Muscle Strains 330
- Tendonitis 331
- Ligament Sprains 332
- Torn Cartilage 332
- Patellofemoral Pain Syndrome 333
- Shin Splints 333
- Stress Fractures 334



Managing Injuries 334

Initial Treatment of Exercise-Related Injuries 335
Rehabilitation 335

Unintentional Injuries 336

Risk Factors for Unintentional Injury 336
Choking 337
Poisoning 337
Bleeding 339
Stopped Breathing or Heartbeat 339

Study Plan 340

Summary 340
Study Questions 341
Suggested Reading 342
Helpful Weblinks 342

laboratory 12.1 Exercising in Harsh Environments 343

laboratory 12.2 Assessing Flexibility and Back Pain Risk 345

laboratory 12.3 Preventing Injuries during Exercise 347

13 Cancer 349

What Is Cancer? 350

How Do Normal Cells Become Cancerous? 351

Common Types of Cancer 352

Lung Cancer 353
Colon and Rectal Cancer 354
Breast Cancer 355
Prostate Cancer 357
Testicular Cancer 357
Skin Cancer 357
Uterine, Ovarian, and Cervical Cancers 358
Oral and Pancreatic Cancers and Leukemia 360

What Are the Risk Factors for Cancer, and How Can You Reduce Your Risk? 360

Factors You Cannot Control 360
Factors You Can Control 361

Study Plan 366

Summary 366
Study Questions 366
Suggested Reading 367
Helpful Weblinks 367

laboratory 13.1 Determining Your Cancer Risk 368

laboratory 13.2 Early Detection 369



14 Sexually Transmitted Infections 371

What Are Sexually Transmitted Infections? 372

HIV/AIDS 372

- Incidence of HIV/AIDS 373
- Stages of HIV Infection 374
- How HIV Is Transmitted 375
- Myths about HIV Transmission 375
- Diagnosis and Treatment 375

Hepatitis B 376

- Symptoms 377
- Diagnosis and Treatment 377

Human Papillomavirus 377

- Symptoms 377
- Diagnosis and Treatment 378

Genital Herpes 378

- Symptoms 378
- Treatment 378

Chlamydia 378

- Symptoms 379
- Diagnosis and Treatment 379

Gonorrhea 380

- Symptoms 380
- Diagnosis and Treatment 380

Syphilis 380

- Symptoms 380
- Diagnosis and Treatment 381

Other Sexually Transmitted Infections 381

- Trichomoniasis 381
- Pubic Lice 382
- Scabies 382
- Candidiasis 382

Reducing Your Risk for Sexually Transmitted Infections 382

- Abstinence 382
- Limiting the Number of Sexual Partners 383
- Using Male Latex Condoms 383
- Using Female Condoms 383
- Discussing Sexually Transmitted Infections with Sexual Partners 383
- Avoiding Drugs and Alcohol 383
- Other Protective Measures 384

Study Plan 386

- Summary 386
- Study Questions 386
- Suggested Reading 387
- Helpful Weblinks 387

laboratory 14.1 Inventory of Attitudes and Behaviors toward Sexually Transmitted Infections 388



15 Addiction and Substance Abuse 389

What Is Addiction? 390

- Addiction Can Involve a Substance or Behavior 390
- Addiction Can Be Physical and/or Psychological 390
- Causes of Addiction 391
- Substance Use versus Substance Abuse 392

What Substances Are Commonly Abused? 393

- Psychoactive Drugs 393
- Alcohol 396
- Tobacco 401
- Caffeine 403
- Anabolic Steroids 403



Strategies to Prevent Drug Abuse 404

Study Plan 405

- Summary 405
- Study Questions 406
- Suggested Reading 407
- Helpful Weblinks 407

laboratory 15.1 Alcohol Abuse Inventory 408

laboratory 15.2 Tobacco Usage Inventory 409

Answers to Study Questions A-1

Nutritive Value of Selected Foods and Fast Foods B-1

References R-1

Photo Credits C-1

Glossary G-1

Index I-1

feature boxes

STEPS FOR BEHAVIOR CHANGE

- Do you have trouble making healthy behavior changes? 17
- Are you a couch potato? 45
- How good is your level of cardiorespiratory fitness? 67
- Are you reluctant to strength train? 96
- Are you too stiff? 131
- Are you at risk for developing diabetes? 162
- Are you making the best choices when you eat out? 232
- What triggers your eating? 256
- What's your risk for cardiovascular disease? 286
- How well do you manage your time? 303
- Are you getting enough sleep? 306
- Does your behavior increase your likelihood of an unintentional injury? 338
- Do you protect your skin from ultraviolet light? 365
- Are you at increased risk for a sexually transmitted infection? 385
- Do you regularly abuse alcohol? 400

APPRECIATING DIVERSITY

- Wellness Issues Across the Population 5
- Don't Let a Disability Stop You! 68
- Strength Training for Older Adults 100
- The Search for Obesity-Related Genes 160
- Who Is at Greatest Risk for Cardiovascular Disease? 280
- Race, Ethnicity, and Cancer Risk in the United States 362
- Sexually Transmitted Infections Are a Worldwide Problem 376

EXAMINING THE EVIDENCE

- Understanding *Healthy People 2020* 6
- Health Hazards of Prolonged Sitting 12
- Too Much Exercise Increases Your Risk of Illness 41
- Continuous vs. Interval Training: Benefit vs. Safety? 64
- What Is CrossFit and Does It Work? 66
- Anabolic Steroid Use Increases Muscle Size But Has Serious Side Effects 92
- Does Creatine Supplementation Increase Muscle Size and Strength? 97
- Can Yoga Improve Your Fitness Levels? 130
- When Muscles Cramp 132
- Can You Be Fit and Fat? 163
- How to Avoid Backsliding 188
- Glossary of Medical Specialists 195
- Communicating Effectively with Your Health-Care Provider 196
- What Is the Glycemic Index and When Is it Helpful? 229
- The Truth about Gluten 230
- Are Organic Foods Healthier than Conventional Foods? 240
- Focus on Fructose and Weight-Loss Supplements 257
- Popular Diet Plans 259
- What Additional Factors Contribute to Atherosclerosis and Heart Attacks? 281
- Blood Cholesterol Guidelines from the National Institutes of Health 282
- Are Some People at Risk for Sudden Cardiac Death During Exercise? 285
- Bullying on College Campuses 301
- How Many "Friends" Do You Have? 305
- Progressive Relaxation Training 307

Guidelines for Managing Dehydration
and Fluid Intake during Exercise
in a Hot Environment 323

New Cancer Screening Tests on the Horizon 354

Breast Self-Examination 356

Testicular Self-Examination 358

Early Detection of Skin Cancer 359

The Search for a Cure for AIDS 377

Frequently Asked Questions About STIs 384

Behavior Addictions 392

Is Marijuana Medicine? 395

Are E-Cigarettes Safe? 402

The Effects of Caffeine 405

CONSUMER CORNER

Finding Credible Health Information 16

Choosing the Right Exercise Shoe 39

Choose Your Best Method for Determining
Body Composition 169

How Do You Choose the Best and Safest
Fish? 215

Detecting Supplement Fraud 238

Keep Hot Foods Hot and Cold Foods Cold to
Avoid Foodborne illness 239

Can Nutritional Supplements Reduce Emotional
Stress? 309

Advances in Cold-Weather Clothing 324

labs and programs

LABS

- Lab 1.1** Wellness Evaluation 21
- Lab 1.2** Lifestyle Assessment Inventory 27
- Lab 1.3** Changing Your Behavior 31
- Lab 1.4** Medical History Check 32
- Lab 1.5** Par-Q and You 33
- Lab 1.6** Evaluating Fitness and Health Products 34
- Lab 2.1** Warming Up 48
- Lab 2.2** Which Physical Activities Work Best for You? 49
- Lab 2.3** Using a Pedometer to Count Your Steps 50
- Lab 2.4** Identifying Barriers to Physical Activity 51
- Lab 3.1A** Measuring Cardiorespiratory Fitness: The 1.5-Mile Run Test 76
- Lab 3.1B** Measuring Cardiorespiratory Fitness: The 1-Mile Walk Test 77
- Lab 3.1C** Measuring Cardiorespiratory Fitness: Submaximal Cycle Test 78
- Lab 3.1D** Measuring Cardiorespiratory Fitness: Step Test 80
- Lab 3.2** Assessing Cardiorespiratory Fitness for Individuals with Disabilities 81
- Lab 3.3** Determining Target Heart Rate 82
- Lab 3.4** Developing Your Personal Exercise Prescription 84
- Lab 4.1** Evaluating Muscular Strength: The 1 RM Test 114
- Lab 4.2** Evaluating Muscular Strength: The Estimated 1 RM Test 117
- Lab 4.3** Tracking Your Progress 120
- Lab 4.4** Measuring Muscular Endurance: The Push-Up and Curl-Up Tests 121
- Lab 4.5** Measuring Core Strength and Stability 124
- Lab 5.1** Assessing Your Posture 148
- Lab 5.2** Assessing Flexibility: Trunk Flexion (Sit-and-Reach) Test and Shoulder Flexibility Test 150
- Lab 5.3** Flexibility Progression Log 152
- Lab 5.4** Stretching to Prevent or Reduce Lower Back Pain 153
- Lab 6.1** Assessing Body Composition 173
- Lab 6.2** Determining a Healthy Body Weight 179
- Lab 7.1** Developing SMART Goals 204
- Lab 7.2** Personal Fitness Program Contract and Short-Term Fitness Goals 206
- Lab 7.3** Personal Fitness Program Contract and Intermediate/Long-Term Fitness Goals 207
- Lab 7.4** Planning a Personal Fitness Program 209
- Lab 8.1** Analyzing Your Diet 248
- Lab 8.2** Setting Goals for a Healthy Diet 248
- Lab 8.3** Planning a New Diet 249
- Lab 8.4** Assessing Nutritional Habits 250
- Lab 9.1** Determining Ideal Body Weight Using Percent Body Fat and the Body Mass Index 267
- Lab 9.2** Estimating Daily Caloric Expenditure and the Caloric Deficit Required to Lose 1 Pound of Fat per Week 268
- Lab 9.3** Weight-Loss Goals and Progress Report 269
- Lab 9.4** Assessing Body Image 270
- Lab 9.5** What Triggers Your Eating? 272
- Lab 10.1** Assessing Your Risk 289
- Lab 10.2** Understanding Your Risk for Cardiovascular Disease 292
- Lab 10.3** Assessing Your Genetic Predisposition for Cardiovascular Disease 294
- Lab 11.1** Assessing Your Personality Behavior Pattern 313
- Lab 11.2** Stress Index Questionnaire 314

- Lab 11.3** Managing Time and Establishing Priorities 315
- Lab 12.1** Exercising in Harsh Environments 343
- Lab 12.2** Assessing Flexibility and Back Pain Risk 345
- Lab 12.3** Preventing Injuries during Exercise 347
- Lab 13.1** Determining Your Cancer Risk 368
- Lab 13.2** Early Detection 369
- Lab 14.1** Inventory of Attitudes and Behaviors toward Sexually Transmitted Infections 388
- Lab 15.1** Alcohol Abuse Inventory 408
- Lab 15.2** Tobacco Usage Inventory 409

SAMPLE PROGRAMS

Sample Program for Increasing Physical Activity 17

Sample Exercise Prescriptions for Cardiorespiratory Training 70

- Beginner Cardiorespiratory Training Program 71
- Intermediate Cardiorespiratory Training Program 72
- Advanced Cardiorespiratory Training Program 73

Sample Exercise Prescriptions for Weight Training 100

- Starter Phase (For Beginner-Level Lifters Using Isotonic Strength-Training Exercises) 101
- Slow Progression Phase (For Intermediate-Level Lifters Using Isotonic Strength-Training Exercises) 102
- Maintenance Phase (For Advanced-Level Lifters Using Isotonic Strength-Training Exercises) 103

Sample Exercise Prescriptions for Flexibility 135

- Starter Phase (Beginner Flexibility Training Program) 135
- Slow Progression Phase (Intermediate Flexibility Training Program) 136
- Maintenance Phase (Advanced Flexibility Training Program) 136

Sample Programs for Fitness 197

- Beginner Exercise Program (1–5 weeks of training) 197
- Intermediate Exercise Program (6–20 weeks of training) 198
- Advanced Exercise Program (20+ weeks of training) 199
- Exercise Program for Healthy Older Adults 199

Sample Program for Changing Daily Caloric Intake 242

Sample Program for Stress Management 309

videos with QR codes

EXERCISE AND ASSESSMENT VIDEOS WITH QR CODES

Chapter 2

Calf Stretch 48
Hamstring Stretch 48
Hip Flexor Stretch 48
Knee-To-Chest Stretch 48
Side Stretch 48

Chapter 3

Step Test 80
Radial Pulse 82
Carotid Pulse 82

Chapter 4

Biceps Curl 104
Triceps Extension 104
Dumbbell Fly 105
Upright Row 105
Lunge 106
Leg Extension 106
Hamstring Curl 107
Abdominal Curl 107
Back Extension 108
Bench Press 108
Dip 109
Toe Raise 110
Chest Press 114
Leg Press 114
Push-Up Test 121

Standard Push-Up 121
Modified Push-Up 121
Curl-Up Test 122
Basic Press-Up 124

Chapter 5

Calf Stretch 137
Shin Stretch 137
Thigh Stretch 138
Modified Hurdler's
Stretch 139
Inner Thigh Stretch 139
Hip And Gluteal Stretch 140
Lower Back Stretch 140
Side Stretch 141
Trunk Twister 141
Chest Stretch 142
Neck Stretch 142
Sitting Hamstring Stretch 144
Posture Test 148
Sit-And-Reach Test 150
Shoulder Flexibility Test 150
Back Extension Stretch 153
Cat Stretch 153
Pelvic Tilt 153

Chapter 6

Skinfold Measurement Of Percent
Body Fat 173
Waist And Hip Circumference
Measurements 177

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preface

Good health is our most precious possession. Although we tend to appreciate it only in times of illness or injury, more and more of us are realizing that good health is not simply the absence of disease. Indeed, there are degrees of health, or wellness, and lifestyle can have a major impact on many of its components.

Intended for an introductory college course, *Total Fitness and Wellness* focuses on helping students effect positive changes in their lifestyles, most notably in exercise and diet. The interaction of exercise and diet and the essential role of regular exercise and good nutrition in achieving total fitness and wellness are major themes of the text.

Total Fitness and Wellness, the MasteringHealth Edition, was built on a strong foundation of both exercise physiology and nutrition. The text provides clear, objective, research-based information to college students during their first course in physical fitness and wellness. By offering a research-based text, we hope to dispel many myths associated with exercise, nutrition, weight loss, and wellness. In particular, we show students how to evaluate their own wellness level with respect to various wellness components, such as fitness level and nutritional status. Indeed, the title of the book reflects our goals.

Numerous physical fitness and wellness texts are available today. Our motivation in writing *Total Fitness and Wellness* was to create a unique, well-balanced physical fitness and wellness text that covers primary concepts of physical fitness and wellness and also addresses other important issues such as behavior change, exercise-related injuries, exercise and the environment, and prevention of cardiovascular disease.

New to This Edition

Total Fitness and Wellness, the MasteringHealth Edition, maintains many features that the text has become known for, while incorporating several major revisions, exciting new features, and a more explicit connection between the text and multimedia resources in MasteringHealth. **MasteringHealth** is an online homework, tutorial, and assessment product designed to improve results by helping students quickly master concepts. Students benefit from self-paced tutorials that feature immediate wrong-answer feedback and hints that emulate the office-hour experience to help keep students on track. With a wide range of interactive, engaging, and assignable activities, students are encouraged to actively learn and retain tough course concepts.

The multimedia created for the MasteringHealth Edition is more innovative and interactive than ever and a tighter text/MasteringHealth integration provides students the opportunity to master course content using a variety of resources on and off the page, reflecting the manner in which students study today.

The most noteworthy changes to the text and multimedia as a whole include the following:

- **Numbered learning outcomes** now introduce every chapter, giving students a roadmap for their reading. Each chapter concludes with a **Study Plan**, which summarizes key points of the chapter and provides review questions to check understanding, all tied to the chapter's learning outcomes and assignable in MasteringHealth.
- **Streamlined organization** presents material in 15 chapters (versus 16 in the last edition) by incorporating coverage of environmental factors and special populations (formerly Chapter 12) into the chapters on creating a fitness and wellness plan (Chapter 7) and preventing injuries (Chapter 12).
- **Examining the Evidence** feature boxes give the reader insight into special topics such as the effects of caffeine, the search for a cure for AIDS, road rage, muscle cramps, and anabolic steroid use.
- **Creating Your Total Fitness and Wellness Plan (Chapter 7)** provides students with practical, step-by-step instructions on developing and putting fitness and wellness plans into action. This chapter includes new information, sample exercise programs, and new labs.
- **MP3 Chapter Reviews** are now accessible via QR codes in the book, and are assignable in Mastering.
- **The book's design and layout** have been thoroughly revitalized for today's students. In addition to new photos and figures, the end-of-chapter labs and sample exercise prescription programs have been redesigned to make them easier to use.
- **Suggested Readings** have been moved from the back of book and integrated into the end-of-chapter content to be more visible and useful for students.
- **ABC News Videos**, all referenced in the book with See It! callouts, bring fitness and wellness to life and spark discussion with up-to-date hot topics from 2012–2015. MasteringHealth activities tied to the videos include multiple choice questions that provide wrong-answer feedback to redirect students to the correct answer.
- **eText 2.0** complete with embedded ABC News videos, is mobile friendly and ADA accessible.
 - Now available on smartphones and tablets.
 - Seamlessly integrated videos.
 - Accessible (screen-reader ready).
 - Configurable reading settings, including resizable type and night reading mode.
 - Instructor and student note-taking, highlighting, bookmarking, and search.

Chapter-by-Chapter Revisions

The MasteringHealth Edition has been thoroughly updated to provide students with the most current information and references for further exploration and includes a tighter integration between the text and multimedia resources in MasteringHealth. Learning outcomes are now explicitly tied to chapter sections and the end of chapter Study Plan to create a clear learning path for students. Portions of chapters have been reorganized to improve the flow of topics, and figures, tables, feature boxes, and photos have all been added, improved on, and updated. Throughout the text, all data, statistics, and references have been updated to the most recent possible. The following is a chapter-by-chapter listing of some of the most noteworthy changes, updates, and additions.

Chapter 1:

- This chapter underwent major revision to improve both content and student understanding.
- Includes expanded coverage of wellness to incorporate eight components: physical, intellectual, emotional, spiritual, social, environmental, occupational, and financial.
- Includes new content on life expectancy and how health-related lifestyle choices affect longevity.
- Contains new content on the wellness continuum and lifestyle management for wellness.
- Expanded coverage of behavior change includes effective methods, maintaining motivation, and identifying and eliminating barriers to change.
- New feature: Examining the Evidence: Health Hazards of Prolonged Sitting.
- New lab: Laboratory 1.1: Wellness Evaluation (encompassing all 8 components of wellness).

Chapter 2:

- New and improved figures illustrating the FITT Principle and the physical activity pyramid
- New information added on the negative impact of prolonged sitting on health

Chapter 3:

- New Coaching Corner feature on how smartphone use affects fitness levels.
- New Coaching Corner feature on bodyweight training.
- New feature: Examining the Evidence: Continuous vs. Interval Training: Benefit vs. Safety?
- New feature: Examining the Evidence: What is CrossFit and Does It Work?

Chapter 4:

- Updated with clearer explanations of muscle fiber types and updated Table 4.1 on properties of skeletal muscle fiber types.

- New feature: Examining the Evidence: Does Creatine Supplementation Increase Muscle Size and Strength?
- New Coaching Corner feature on using the 5-point contact principle for injury prevention.

Chapter 5:

- New feature: Examining the Evidence: Can Yoga Improve Your Fitness Levels?
- Updated Coaching Corner feature on effective stretching.

Chapter 6:

- Includes expanded information on creeping obesity.
- New Consumer Corner feature compares various methods of determining body composition.
- Updated Figure 6.3 on U.S. obesity rates.

Chapter 7:

- New table provides overview of selected fitness apps.
- New sections added on lifelong fitness and fitness for special populations (pregnant women, people with disabilities, and older adults).
- Sample fitness programs include plans for beginner, intermediate, and advanced levels plus a plan for healthy older adults.
- New lab: Laboratory 7.1: Developing SMART Goals.

Chapter 8:

- This chapter underwent major revision to improve both content and student learning.
- New and expanded coverage of macro- and micronutrients.
- Updated coverage of healthy diet guidelines.
- New Consumer Corner feature on choosing safe seafood.
- New section on food allergies and intolerances.
- New Examining the Evidence feature on gluten in the diet.
- New sections on specific nutritional needs of athletes and others who exercise.
- New section on protein requirements for active individuals.
- New discussion of the importance of fluid intake to maintain body water balance.
- New table on carbohydrate needs in relation to level of exercise training.
- Updated coverage of dietary supplements and their regulation and labeling.
- New feature: Examining the Evidence: Are Organic Foods Healthier than Conventional Foods?

Chapter 9:

- New and expanded coverage of energy balance.
- New and state-of-the-art coverage of how and why we gain fat.
- New and expanded discussion of how to design a successful weight-loss program to achieve lifetime weight management includes new Coaching Corner feature.
- Addition of up-to-date discussion of popular diet plans.
- Includes 4 new figures to illustrate important concepts.

Chapter 10:

- New feature: Examining the Evidence: What additional factors contribute to atherosclerosis and heart attacks?
- New and updated information on how you can reduce your risk of heart disease.
- New Coaching Corner feature on exercising to reduce risk for CV disease.

Chapter 11:

- New feature: Examining the Evidence: Bullying on College Campuses.
- New table provides overview of selected stress management apps (sleep and meditation aids).
- New multifaceted sample program for stress management.

Chapter 12:

- This chapter, Special Considerations Related to Exercise and Injury Prevention, presents a comprehensive discussion of injury prevention, including environmental concerns related to exercise, other types of exercise-related injuries, and unintentional injuries.
- Includes updated table on leading causes of death of young adults.

Chapter 13:

- New feature: Examining the Evidence: New Cancer Screening Tests on the Horizon.
- Updated coverage of skin cancer.
- New section on obesity and cancer risk.
- Expanded discussion of how to reduce your risk for cancer.
- Includes new figures on major risk factors for cancer and on race and cancer risk.

Chapter 14:

- Includes new figures on the incidence of new cases of sexually transmitted infections.
- New Examining the Evidence feature on the search for a cure for AIDS.

Chapter 15:

- New and expanded discussion of addictive behavior and the awareness that addiction can involve a substance or behavior.
- New feature: Examining the Evidence: Is Marijuana Medicine?
- New feature: Examining the Evidence: Are E-Cigarettes Safe?
- New discussion on strategies to prevent drug abuse.

Text Features and Learning Aids

In addition to the new and revised features described above, continuing features and learning aids in the book that contribute to student success include:

- **Lab exercises** allow students to apply textual information to practical issues, encouraging the immediate development of healthy lifestyle choices and a core fitness plan.
- **Sample fitness and wellness programs** offer easy-to-follow instructions for implementing successful fitness and wellness programs.
- **Coaching Corner** boxes represent the “teacher’s voice” throughout the text, offering helpful hints and strategies to overcome fitness and wellness obstacles.
- **Examining the Evidence** boxes give the reader insight into special topics such as the effects of caffeine, the search for a cure for AIDS, road rage, muscle cramps, and anabolic steroid use.
- **Consumer Corner** boxes teach students to be informed and discerning health and fitness consumers, guiding them to make the best fitness and wellness decisions in a market full of fads, gimmicks, and gadgets.
- **Appreciating Diversity** boxes present current health research, covering issues such as how the risk of cancer varies across the United States and how the incidence of drug abuse varies across populations.
- **Steps for Behavior Change** boxes focus students on evaluating their own behaviors (e.g., Are you a fast food junkie? Are you reluctant to strength train? Do you protect your skin from UV light?). New timelines present students with practical steps they can take to make meaningful behavior change.
- **Consider This!** grabs students’ attention with surprising statistics and information, prompting them to pause and consider the long-term consequences of specific health behaviors.

Instructor Supplements

A full resource package accompanies *Total Fitness and Wellness* to assist the instructor with classroom preparation and presentation.

- **MasteringHealth** (www.masteringhealthandnutrition.com or www.pearsonmastering.com). MasteringHealth coaches students through the toughest fitness and wellness topics. Instructors can assign engaging tools to help students visualize, practice, and understand crucial content, from the basics of fitness to the fundamentals of behavior change. **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 students have completed the assigned reading before class. **ABC News Videos** stimulate classroom discussions and include multiple-choice questions with feedback for students. **NutriTools Coaching Activities** in the nutrition chapter allow students to combine and experiment with different food options and learn firsthand how to build healthier meals. **MP3s** relate to chapter content and come with multiple-choice questions that provide wrong-answer feedback. **Learning Catalytics** provides open-ended questions students can answer in real time. Through targeted assessments, Learning Catalytics helps students develop the critical thinking skills they need for lasting behavior change. For students, the **Study Area** is broken down into learning areas and includes videos, MP3s, practice quizzing, and much more.
- **Teaching Toolkit DVD.** The Teaching Toolkit DVD includes everything an instructor needs to prepare for their course and deliver a dynamic lecture in one convenient place. Resources include: *ABC News* videos, exercise 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*, PDF, RTF, 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 Video Tutors.** New *ABC News* videos, each 3 to 8 minutes long, help instructors stimulate critical discussion in the classroom. Videos are embedded within PowerPoint lectures and are also available separately in large-screen format with optional closed captioning on the Teaching Toolkit DVD and through MasteringHealth.
- **Instructor Resource and Support Manual.** This teaching tool provides chapter summaries, outlines, integrated *ABC News* video discussion questions, in-class discussion questions, and more.
- **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, rather than simply to regurgitate information. Test Bank questions are tagged to global and book-specific student learning outcomes.
- **User's Quick Guide.** Newly redesigned to be even more useful, this valuable supplement acts as your road map to the Teaching Toolkit DVD.
- **Teaching with Student Learning Outcomes.** This publication contains essays from 11 instructors who are teaching using student learning outcomes. They share their goals in using outcomes, the processes that they follow to develop and refine the outcomes, and provide many useful suggestions and examples for successfully incorporating outcomes into a personal health course.
- **Teaching with Web 2.0.** From Facebook to Twitter to blogs, students are using and interacting with Web 2.0 technologies. This handbook provides an introduction to these popular online tools and offers ideas for incorporating them into your personal health course. Written by personal health and health education instructors, each chapter examines the basics about each technology and ways to make it work for you and your students.
- **Great Ideas! Active Ways to Teach Health & Wellness.** This manual provides ideas for classroom activities related to specific health and wellness topics, as well as suggestions for activities that can be adapted to various topics and class sizes.
- **Behavior Change Log Book and Wellness Journal.** This assessment tool helps students track daily exercise and nutritional intake and create a long-term nutritional and fitness prescription plan. It also includes a Behavior Change Contract and topics for journal-based activities.

Student Supplements

MasteringHealth

The Study Area of MasteringHealth is organized by learning areas. The *Read It* section contains the Learning Outcomes and up-to-date health news. *See It* includes *ABC News* videos on important health topics and

the Behavior Change videos. More than 100 exercise videos demonstrate strength training and flexibility exercises with resistance bands, stability balls, free weights, and gym machines. The exercise videos are also available for download onto iPods or media players. *Hear It* contains MP3 Study Tutor files and audio case studies. *Do It* contains the choose-your-own-adventure-style Interactive Behavior Change Activities—Which Path Would You Take?, interactive NutriTools activities, and Web links. Also here is a pre-course/post-course assessment lets students evaluate their own fitness and wellness status both before and after taking the course. New interactive labs are also available online to students, allowing them to assess their levels of fitness and wellness, learn core skills, and develop behavior change plans to track their progress. Students can easily complete the labs and e-mail them to you directly—eliminating the need for paper entirely.

Review It contains Practice Quizzes for each chapter, Flashcards, and Glossary. *Live It* will help jump-start students' behavior-change projects with interactive Assess Yourself Worksheets and resources to plan change; students can fill out a Behavior Change Contract, journal and log behaviors, and prepare a reflection piece.

eText 2.0, included within MasteringHealth, contains embedded *ABC News* videos and other rich media, is mobile friendly and ADA accessible, available on smartphones and tablets, and includes instructor and student note-taking, highlighting, bookmarking, and search functions.

Behavior Change Log Book and Wellness Journal, found within the Live It section in MasteringHealth, helps students track daily exercise and nutritional intake and create a long-term nutrition and fitness prescription plan. It includes Behavior Change Contracts and topics for journal-based activities.

Additional Student Supplements

- **Digital 5-Step Pedometer** Take strides to better health with this pedometer, which measures steps, distance (miles), activity time, and calories, and provides a time clock.
- **MyDietAnalysis** (www.mydietanalysis.com). Powered by ESHA Research, Inc., MyDietAnalysis 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

First and foremost, this edition of *Total Fitness and Wellness* reflects the valuable feedback provided by many people throughout the country. As always, this edition could not have been completed without the work of an enormous number of people at Pearson. From the campus sales representatives to the president of the company, they are truly first rate, and our interaction with them is always delightful.

There were several key people in the process. Our Acquisitions Editor, Michelle Cadden, has been the primary force behind assembling the team and directing the process, and her input has been invaluable. Several new additions to the team have been important in both the revisions of the text and the production process. In particular, the authors would like to thank Laura Perry for significant contributions to this seventh edition. Moreover, special thanks go to Susan Malloy, who offered valuable input during the revision process, to Tanya Martin, for her careful developmental editing, and to Nancy Tabor, who served as the Project Team Leader. Other specific duties were expertly handled by the following professionals; we offer them our utmost appreciation for their efforts: Neena Bali, Executive Product Marketing Manager; Aimee Pavy, Senior Content Producer; Heidi Arndt, Editorial Assistant; William Opulach, Rights and Permissions Project Manager. Denise Wright (Southern Editorial), Tanya Martin, and Aaron Morton (University of Florida) have made major contributions to the ancillaries, and Aaron Morton also made major contributions to the book content.

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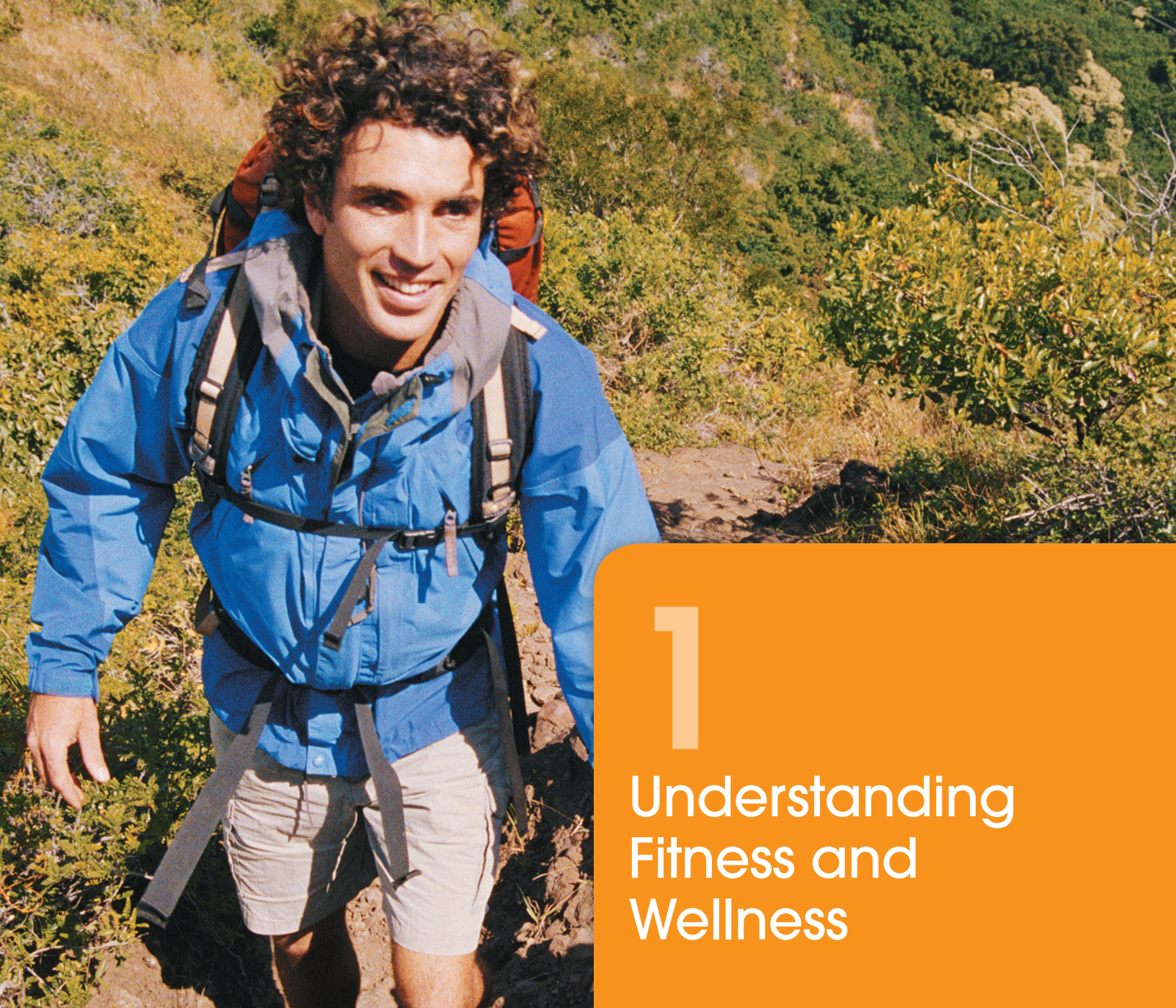
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TOTAL
FITNESS
AND **WELLNESS**

The MasteringHealth Edition

Seventh Edition

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1

Understanding Fitness and Wellness

LEARNING OUTCOMES

- 1 Define *wellness* and explain the eight components that are essential for wellness.
- 2 Describe the wellness goals of the United States as established by the *Healthy People 2020* initiative.
- 3 Explain the nature of exercise and physical activity and the health benefits of exercise.
- 4 Identify and discuss the five major components of health-related physical fitness.
- 5 Explain how lifestyle plays a role in overall wellness and why it is important to assess your current health habits.
- 6 Explain the process of behavior change and name and describe the six phases that are part of the stages of change model.
- 7 Discuss the strategies and tactics that are effective in maintaining motivation for change and eliminating barriers to change.
- 8 Explain the necessity of SMART goals and create a behavior change action plan that addresses at least one health-related target behavior.

LIFESTYLE DECISIONS HAVE a major impact on your overall health and well-being. In this book, you will learn about lifestyle factors (behaviors) that can reduce your risk of disease and put you on the path to physical fitness and optimal wellness.

Life Expectancy and Wellness

LO **1** Define *wellness* and explain the eight components that are essential for wellness.

The current average life expectancy in the United States is 77.4 years for men and 82.2 years for women. Life expectancy for Americans has increased over the past 20 years, but our nation ranks 36th in the world. Experts now predict that life expectancy in the United States will actually *decrease* during the next decade due to the burden caused by several major diseases.

In the United States, cardiovascular disease remains the number 1 cause of death, followed by cancer and respiratory diseases. Deaths due to diabetes are on the rise, as well. A healthy lifestyle can reduce your risk of disease; for example, eating a nutritionally balanced diet, exercising regularly, and maintaining a healthy body weight reduce your risk of cardiovascular disease, diabetes, and several types of cancer. Not smoking and avoiding secondhand cigarette smoke reduce your risk of developing both cardiovascular and respiratory diseases.

According to the Surgeon General, the four major factors that influence health and longevity are lifestyle, the environment, genetics, and health care. Of these factors, *lifestyle has the greatest impact on disease risk*, as 53% of all diseases are lifestyle-related. Approximately 21% of diseases are related to the environment, and only 16% are linked to genetics. Failure to receive adequate health care contributes to approximately 10% of diseases (**FIGURE 1.1**). These statistics reveal that we control as much as 84% of our vulnerability to disease, so the actions we take to safeguard our health and create wellness can have a huge impact.

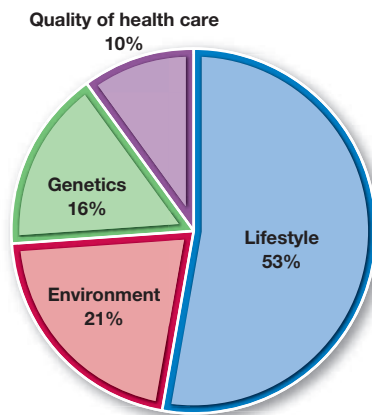


FIGURE 1.1 The four major factors that contribute to health and longevity.

What Is Wellness?

Good health was once defined as the absence of disease. In the 1970s, many exercise scientists and health educators became dissatisfied with this limited definition. These visionary health professionals believed that health includes physical fitness and emotional and spiritual health as well. Their revised concept of good health is called **wellness** (1). Wellness can be defined as *optimal health*, which encompasses all the dimensions of well-being. You can achieve a state of wellness by practicing a healthy lifestyle that includes regular physical activity, proper nutrition, emotional/spiritual balance, and eliminating unhealthy behaviors. Wellness involves a number of components that we will explore in more depth.

Eight Components of Wellness

Wellness consists of eight interrelated components (**FIGURE 1.2**):

- Physical wellness
- Emotional wellness
- Intellectual wellness
- Spiritual wellness
- Social wellness
- Environmental wellness
- Occupational wellness
- Financial wellness

Physical Wellness Physical wellness refers to all the behaviors that keep your body healthy. Two key aspects are maintaining a healthy body weight and achieving physical fitness. Maintaining a healthy body weight is important because a high percentage of body fat increases your risk of developing type 2 diabetes and heart disease. Physical fitness can have a positive effect on your health by reducing your risk of disease and improving your

consider this! ////////////////

In a given year, approximately one in four adults between the ages of 18 and 44 has a diagnosable mental disorder.



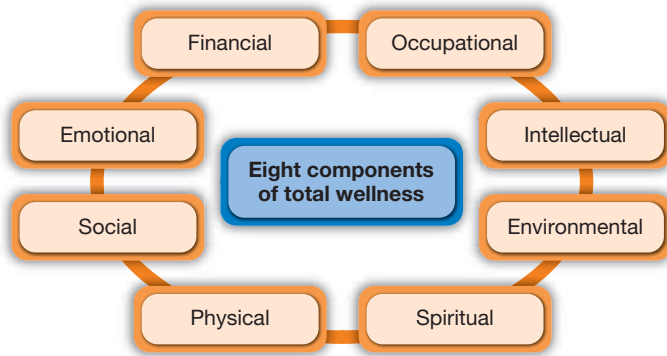


FIGURE 1.2 Total wellness consists of eight interrelated components. Optimal well-being occurs when all components of wellness are working together toward holistic health.

quality of life. Eating a healthy diet, obtaining regular medical exams, and practicing personal safety are other important physical health behaviors.

Emotional Wellness Emotions play an important role in how you feel about yourself and others. Emotional wellness (mental health) includes your social skills and interpersonal relationships. Your level of self-esteem and your ability to cope with the routine stress of daily living are also aspects of emotional wellness.

Emotional stability refers to how well you deal with day-to-day stressors. Most people are well equipped to handle life's ups and downs, but inability to handle everyday situations can lead to poor emotional health or conditions such as depression and anxiety disorders. In fact, mental disorders are the leading cause of disability for people between the ages of 15–44 years (2). Emotional wellness means being able to respond to life situations in an appropriate manner, therefore avoiding prolonged periods of an extremely high or low emotional state.

Intellectual Wellness You can maintain intellectual wellness by keeping your mind active through life-long learning. College life is ideal for developing this component. Attending lectures, reading, and engaging in thoughtful discussions with friends and teachers all promote intellectual health. Your ability to define and solve problems continues to grow, and continuous learning can provide you with a sense of fulfillment. Take advantage of opportunities to broaden your mind. Listen to audio books, keep up with current events, and engage in thoughtful discussions with others.

Spiritual Wellness The term *spiritual* means different things to different people. Most definitions of spiritual wellness include having a sense of meaning and purpose. Many people define spiritual wellness based on religious beliefs, but it is not limited to religion. People find meaning in helping others, being altruistic, enjoying the beauty of nature, or through prayer. However you

define spiritual health, it is an important aspect of wellness because it is closely linked to emotional health (3).

Optimal spiritual wellness includes the ability to understand your basic purpose in life; to experience love, joy, pain, peace, and sorrow; and to care for and respect all living things. Anyone who has experienced a beautiful sunset or smelled the first scents of spring can appreciate the pleasure of maintaining optimal spiritual health.

Social Wellness Social wellness is the development and maintenance of meaningful interpersonal relationships; this results in a support network of friends and family. Good social health helps you feel confident in social interactions and provides you with emotional security. It is not necessarily the number of people in your support network, but the quality of those relationships that is important. Developing good communication skills is crucial for maintaining a strong social network.



Meditating or spending time outdoors can help you improve spiritual health.

wellness A state of optimal health that encompasses all the dimensions of well-being. Consists of eight major components: physical, emotional, intellectual, spiritual, social, environmental, occupational, and financial wellness.

Environmental Wellness Environmental wellness includes the influence of the environment on your health, as well as your behaviors that affect the environment. Our environment can have a positive or negative impact on our total wellness. For example, air pollution and water contamination are environmental factors that can harm physical health. Breathing polluted air can lead to a variety of respiratory disorders. Drinking water contaminated with harmful bacteria can lead to infection, and drinking water that contains carcinogens increases the risk of certain types of cancers.

Your environment can also have a positive influence on wellness. For example, a safe environment evokes feelings of comfort and security, enhancing your emotional health. If your environment is safe, you are more likely to spend time outside being active and improving your physical health.

Our relationship with our environment is a two-way street. How do our behaviors influence the environment? Do you recycle regularly, or does much of your trash end up in a landfill? Do you carpool or take public transportation when you can? Achieving total wellness requires learning about the environment, protecting yourself against environmental hazards, and being responsible in regard to your impact on the environment.

Occupational Wellness Occupational wellness is achieved by a high level of satisfaction in your job or chosen career. This stems from work that provides personal fulfillment, mental stimulation, and good relationships with coworkers, clients, and others in your professional life. While a high income may be desirable, it does not guarantee occupational wellness. Occupational wellness is most often achieved when people enjoy their work and receive recognition for their skills and performance. Like the other components, occupational wellness is not an independent element but an important contributor to emotional, intellectual, and social wellness.

To achieve occupational wellness, establish career goals that are consistent with your interests, skills, and personal values. For instance, a career in health care or military service can be a good choice for

people who value service to others. In contrast, those who place a high value on financial security may find a higher-paying career essential for their occupational wellness.

Financial Wellness Financial wellness refers to the ability to live comfortably on your income and have the means to save for financial emergencies and goals such as education and retirement. Financial wellness involves your ability to manage your money in a responsible way. It can provide you with peace of mind and contribute to your emotional, social, and occupational wellness.

hear it!

CASE STUDY

How can Omar connect his physical, mental, and spiritual health? Listen to the online case study at [MasteringHealth™](#).

Interaction of Wellness Components and the Wellness Continuum

None of the components of wellness works in isolation; all eight work closely together. For example, people with an anxiety or depressive disorder who also have a chronic physical illness report more physical symptoms than those who do not have a mental health disorder (4). Strong spirituality is associated with lower rates of mental disorders, better immune function, and greater participation in health-promoting behaviors (3, 5). Total wellness is achieved through a balance of all aspects of wellness . . .

It is clear that wellness is a dynamic process. The choices you make each day move you along a *continuum* of wellness. At one end of the continuum is total well-being, which is realized by achieving all eight components of wellness simultaneously (FIGURE 1.3). At the opposite end of the continuum is a low level of well-being, which results

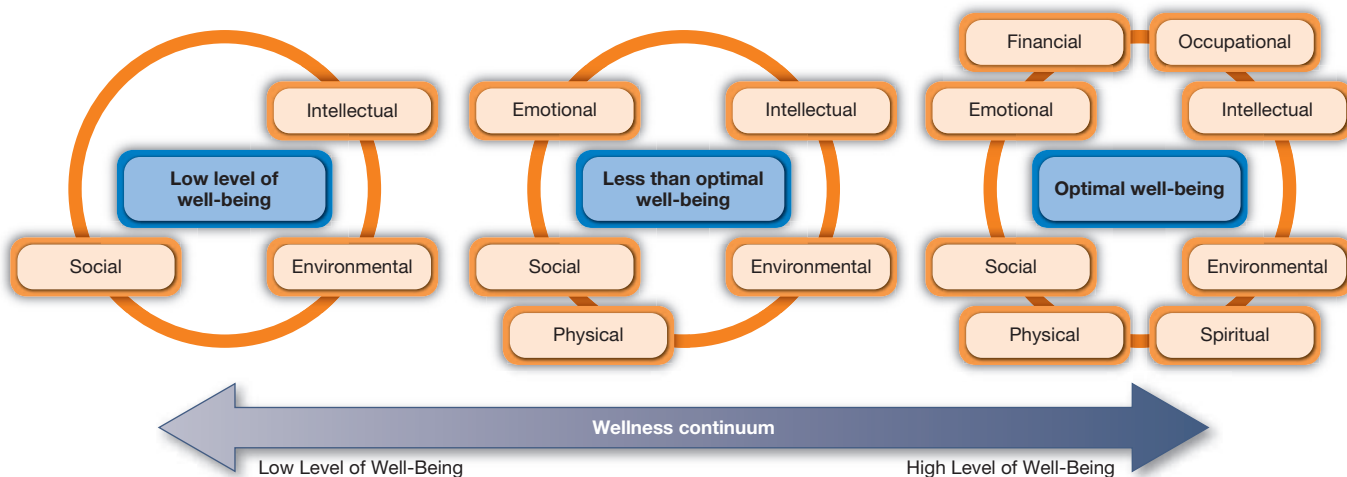


FIGURE 1.3 A person’s state of wellness moves along a continuum. Accomplishing optimal well-being (right) requires realizing all eight components of wellness. A low level of well-being (left) results when an individual has successfully addressed only a limited number of wellness components.

APPRECIATING DIVERSITY

Wellness Issues Across the Population

While your behaviors have a significant impact on your health, other factors also influence your risk for certain chronic diseases. Ethnicity, sex, age, family history, and socioeconomic status affect your risk of developing diabetes, cancer, cardiovascular disease, obesity, and other conditions.

For example, black Americans have a higher risk of hypertension (high blood pressure) compared to the U.S. population as a whole. Similarly, diabetes is more common in Native Americans and Latinos than in people from other ethnic backgrounds. Men and women differ in their risk for heart disease, osteoporosis, and certain types of cancer.

Aging also plays a role. The risk of chronic diseases such as heart disease and cancer increases with age. And people of low socioeconomic status often have less access to quality health care and experience higher

rates of obesity, heart disease, and drug abuse. Our goal is to achieve optimal wellness, but individual and demographic differences can present special challenges.



live it!

ASSESS YOURSELF

Assess your behavior with the *Health Behavior Self-Assessment* Take Charge Of Your Health! Worksheet online at [MasteringHealth™](#).

from achieving only a few wellness components. You can move toward optimal well-being by eliminating unhealthy behaviors and making healthy habits part of your regular routine. Complete Laboratory 1.1 to determine your overall wellness level.

revised every 10 years based on progress toward meeting the objectives. *Healthy People 2020* is the current set of goals aimed at attaining high-quality, longer lives and reducing the risk of injury and premature death. Other goals are to achieve health equity, eliminate disparities, and improve the health of all groups. For more details, see the Examining the Evidence box on the next page and visit www.healthypeople.gov.

live it!

ASSESS YOURSELF

Assess your health with the *Multidimensional Health Locus of Control* Take Charge Of Your Health! Worksheet online at [MasteringHealth™](#).

MAKE SURE YOU KNOW...

- *Wellness* is defined as optimal health, which encompasses all dimensions of well-being. It is a dynamic process that moves along a continuum.
- There are eight interacting components of wellness: physical, emotional, intellectual, spiritual, social, environmental, occupational, and financial wellness.

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MAKE SURE YOU KNOW...

- *Healthy People 2020* is a set of wellness goals established by the U.S. government. Goals include attaining high-quality, longer lives, reducing the risk of injury and premature death, achieving health equity, eliminating disparities, and improving the health of all groups.

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Wellness Goals for the Nation

- LO 2 Describe the wellness goals of the United States as established by the *Healthy People 2020* initiative.

A nation of unhealthy people drains resources by reducing worker productivity and increasing government spending on health care. To improve the overall well-being of Americans, the U.S. government established a set of wellness goals known as the *Healthy People* initiative. These goals were first presented in 1980 and have since been

What Is Exercise and Why Should I Do It?

- LO 3 Explain the nature of exercise and physical activity and the health benefits of exercise.

When you hear the word *exercise*, do you picture someone running on a treadmill? Or do you imagine hiking up a scenic mountain with a group of friends? Actually, both

EXAMINING THE EVIDENCE

Understanding *Healthy People 2020*

Government agencies and public health professionals developed the *Healthy People 2020* goals. The overall vision of this initiative is to achieve a society in which all people live long and healthy lives. Specific objectives include:

- Reduce the proportion of adults who engage in no leisure-time activity.
- Reduce the death rates due to breast cancer, prostate cancer, and melanoma.
- Increase the proportion of physician office visits that include counseling or education related to nutrition or weight.
- Increase the number of states with nutrition standards for foods and beverages provided to preschool-age children in child care.

- Increase the proportion of adolescents who are connected to a parent or other positive adult caregiver.
- Reduce the proportion of adolescents who engage in disordered eating behaviors in an attempt to control their weight.
- Reduce the proportion of persons engaging in binge drinking of alcoholic beverages.
- Increase the proportion of older adults who are up to date on a core set of clinical preventive services.
- Increase the proportion of adults who get sufficient sleep.

Source: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, www.healthypeople.gov.

activities are forms of exercise that are good for your health. There are numerous fun and interesting ways to exercise, so if going to the gym is not your thing, there are many other ways to be active. One part of designing your personal fitness program is to find out what works best for *you*.

Exercise Is One Type of Physical Activity

Physical activity and *exercise* do not mean the same thing. **Physical activity** includes all physical movement, regardless of the level of energy expenditure or the reason you do it (6). Physical activity can be occupational (done as part of your job), lifestyle, or leisure time. Lifestyle activity includes housework, walking to class, and climbing stairs. Leisure-time physical activity is any activity you choose to do in your free time.

Exercise is a type of leisure-time physical activity (6). Virtually all fitness/conditioning activities and sports are considered exercise because they are planned and help maintain or improve physical fitness. Exercise often involves relatively high-intensity activities (such as running or swimming) and is performed with the goal of achieving health and fitness. Although you can gain health benefits from all types of physical activity, exercise produces the greatest benefits.

Health Benefits of Exercise and Physical Activity

A recent report from the U.S. Centers for Disease Control and Prevention (CDC) reveals that fewer than half of American adults engage in the recommended amount

of exercise to promote health. Most of us are aware that there are many health benefits gained from regular exercise and physical activity. In addition to improving muscle tone and reducing body fat, regular exercise improves our fitness levels and ability to perform everyday tasks. Perhaps even more important, it can help you achieve total wellness (2, 7–15).

The importance of regular exercise and physical activity is emphasized in the U.S. Surgeon General's report on physical activity and health (16). This report concludes that lack of physical activity is a major public health problem and that all Americans can improve their health by engaging in as little as 30 minutes of light-to moderate-intensity physical activity most days of the week. This report recognizes numerous health benefits of physical activity and exercise (**FIGURE 1.4**). Keep in mind that different levels of physical activity or exercise are needed for different health benefits.

Reduced Risk of Heart Disease Cardiovascular disease (CVD) (disease of the heart and blood vessels) is a major cause of death in the United States. In fact, one in three Americans dies of CVD (17). Regular physical activity and exercise can significantly reduce your risk of developing CVD (1, 7, 8, 10, 11, 17–21), and strong evidence suggests that regular physical activity reduces the risk of dying during a heart attack (**FIGURE 1.5**) (22–25). Note from Figure 1.5 that exercise training can reduce the magnitude of cardiac injury during a heart attack by more than 60% (23, 24). Many preventive medicine specialists argue that these facts alone are reason enough for engaging in regular physical activity and exercise (7, 18, 26).

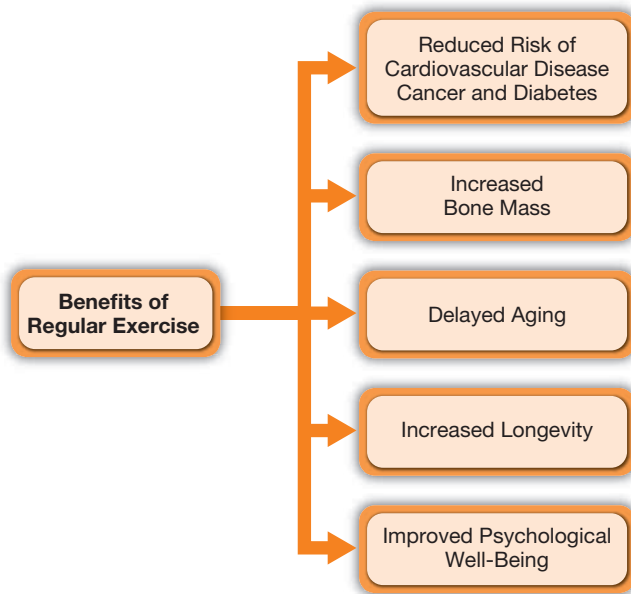


FIGURE 1.4 Regular exercise can produce numerous health benefits.

Reduced Risk of Diabetes **Diabetes** is a disease characterized by high blood sugar (glucose) levels. Poorly managed diabetes can result in numerous health problems, including blindness, heart disease, and kidney dysfunction. Regular physical activity and exercise can reduce the risk of type 2 diabetes by improving skeletal muscle health and the regulation of blood glucose (9, 27, 28).

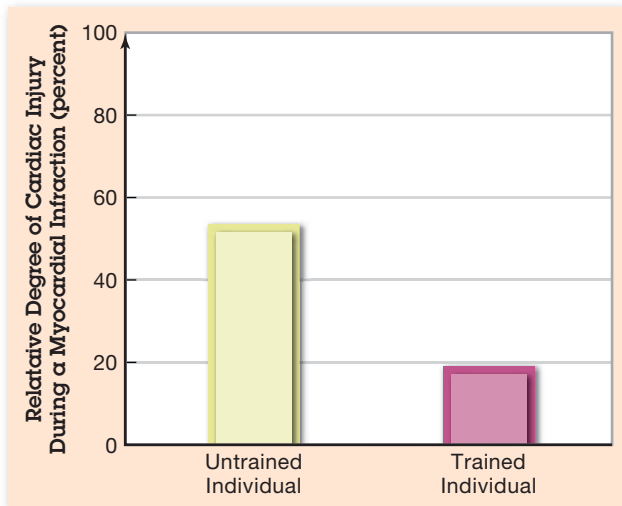


FIGURE 1.5 Regular endurance exercise protects the heart against injury during heart attack. During a myocardial infarction (heart attack), exercise-trained individuals suffer less cardiac injury compared to untrained individuals.

Source: Borges J.P., et al., Delta Opioid Receptors: The Link between Exercise and Cardio protection. PLoS ONE 9(11): e113541. doi:10.1371/journal.pone.0113541, 2014.

coaching corner

What is my wellness level?

Take time to notice how your levels of wellness change from day to day. Revisit this activity throughout the semester for a better understanding of how your well-being changes.

- On a scale of 1 to 10 (10 being completely well), how do you rank yourself in regard to each wellness component?
- Identify people, tasks, obligations, and desires that affect your wellness.
- Create a list of things that add to your stress level and another list of things that motivate you to adopt a healthy lifestyle.
- Identify actions you take each day that positively affect your well-being.

Lower Risk of Cancer Cancer is a major cause of disease and death worldwide. The primary risk factors for cancer are environmental (exposure to cancer-causing agents) and lifestyle (45). One lifestyle factor associated with increased cancer risk is inactivity. Convincing evidence indicates that a sedentary lifestyle increases the risk of colon cancer (45), and growing evidence suggests that regular exercise can reduce the risk of breast and endometrial cancer in women (45). At present, it is unclear if regular exercise can reduce the risk of other forms of cancer.

Increased Bone Mass The bones of the skeleton provide a mechanical lever system to permit movement and protect internal organs. Loss of bone mass and strength is called **osteoporosis**, and it increases the risk

physical activity Movement of the body produced by a skeletal muscle that results in energy expenditure, especially through movement of large muscle groups (i.e., legs).

exercise Planned, structured, and repetitive bodily movement done to improve or maintain one or more components of fitness.

cardiovascular disease (CVD) Disease of the heart and blood vessels.

diabetes Metabolic disorder characterized by high blood glucose levels.

osteoporosis Condition that involves the loss of bone mass.

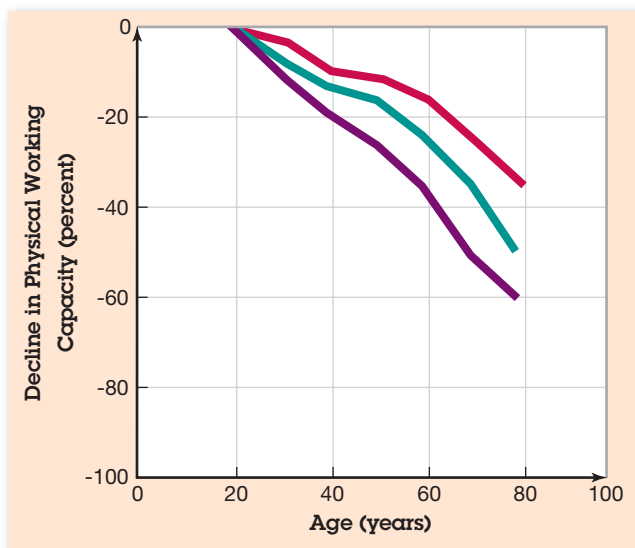
of bone fractures. Therefore, it is important to maintain strong, healthy bones. Although osteoporosis can occur in men and women of all ages, it is most common in older women.

Exercise can improve bone health by strengthening your bones. Mechanical force applied by muscular activity is a key factor in regulating bone mass and strength. Numerous studies have demonstrated that regular exercise increases bone mass, density, and strength in young adults (29–31). In particular, weight-bearing activities, such as running, walking, and resistance training, are important for bone health. Research on osteoporosis suggests that regular exercise can prevent bone loss in older adults and is also useful in treating osteoporosis (29).

Delayed Aging As we age, we gradually lose our physical capacity to do work, and therefore our ability to perform strenuous activities progressively declines. Although this decline may begin as early as the 20s, the most dramatic changes occur after about age 60 (32–34). Importantly, regular exercise can delay the age-related decline in physical working capacity (32, 35, 36). Indeed, note the differences in physical working capacity among highly trained, moderately trained, and inactive individuals in **FIGURE 1.6**. Although physical working capacity declines with age, regular exercise can maintain your ability to perform various types of physical activities,



Regular weight-bearing exercise can prevent loss of bone mass.



Key

- Highly Trained (60 min of exercise a day)
- Moderately Trained (30 min of exercise a day)
- Untrained (sedentary)

FIGURE 1.6 Regular exercise can reduce the natural decline in working capacity that occurs as we age.

increasing your ability to enjoy a lifetime of physical recreation and an improved quality of life.

Increased Longevity Abundant research reveals that regular physical activity and exercise (combined with a healthy lifestyle) can increase longevity (7, 8, 25, 37–39). A classic study of Harvard alumni concluded that men with a sedentary lifestyle have a 31% greater risk of death from all causes than men who engage in regular physical activity (8). Similarly, compared to physically active women, sedentary women also have a higher risk of death (40, 41). These findings translate into a longer life span for people who exercise and have more active lifestyles. The primary factor for this increased longevity is that regular exercise lowers the risk of both heart attack and cancer (7, 8).

Improved Psychological Well-Being Strong evidence indicates that regular exercise improves psychological well-being in people of all ages. The mental health benefits of regular exercise include reduced risk for anxiety disorders and depression (42). Also, people report feeling less anxious and stressed after exercise, even up to 8 hours afterward. These benefits lead to an improved sense of well-being in the physically active individual.

see it!

ABC VIDEO

Exercise May Build Brain Power! Watch an ABC Video at [MasteringHealth™](#).



Regular physical activity can help you live longer.

MAKE SURE YOU KNOW...

- Regular physical activity and exercise reduce the risk of heart disease, diabetes, and certain types of cancer.
- Exercise increases bone mass in young people and strengthens bone in older adults.
- Regular exercise maintains physical working capacity as a person ages, increases longevity, and improves quality of life.
- Exercise promotes psychological well-being and reduces risk of depressive and anxiety disorders.

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Exercise and Activity for Health-Related Fitness

- LO 4 Identify and discuss the five major components of health-related physical fitness.

Exercise training programs can be divided into two broad categories: *health-related physical fitness* and *skill-related physical fitness*. This book focuses on health-related fitness. The overall goal of a health-related physical fitness

program is to optimize the quality of life (1, 42). The specific goals of this type of fitness program are to reduce the risk of disease and to improve total physical fitness. In contrast, the goal of sport- and skill-related fitness is to improve physical performance in a specific sport or activity.

Most fitness experts agree that there are five major components of health-related physical fitness:

- Cardiorespiratory endurance
- Muscular strength
- Muscular endurance
- Flexibility
- Body composition

Some fitness experts include motor skill performance as a sixth component. Motor skills are movement qualities such as agility and coordination. Although motor skills are important for sport performance, they are not directly linked to improving health in young adults and are therefore not considered a major component of health-related physical fitness. However, these motor skills may increase in importance as people age, because good balance, coordination, and agility help reduce the risk of falls in older adults.

Cardiorespiratory Endurance

Cardiorespiratory endurance (sometimes called *aerobic fitness* or *cardiorespiratory fitness*) is often considered the key component of health-related physical fitness. It is a measure of the heart's ability to pump oxygen-rich blood to the working muscles during exercise and of the muscles' ability to take up and use the oxygen. Oxygen delivered to the muscles is used to produce the energy needed for prolonged exercise. In practical terms, cardiorespiratory endurance is the ability to perform exercises such as distance running, cycling, and swimming. Someone who has achieved a high level of cardiorespiratory endurance is generally capable of performing 30–60 minutes of vigorous exercise without undue fatigue.

Muscular Strength

Muscular strength is evaluated by how much force a muscle or muscle group can generate during a single

cardiorespiratory endurance Measure of the heart's ability to pump oxygen-rich blood to the working muscles during exercise and of the muscles' ability to take up and use the oxygen.

muscular strength Maximal ability of a muscle to generate force.
