2004 UPDATE

BRIEF

NINTH EDITION

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Core Concepts in Health

PAUL M. INSEL • WALTON T. ROTH

2004 UPDATE
BRIEF NINTH EDITION

Core Concepts in Health

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Preface

Core Concepts in Health has maintained its leadership in the field of health education for more than 25 years. Since we pioneered the concept of self-responsibility for personal health in 1976, hundreds of thousands of students have used our book to become active, informed participants in their own health care. Each edition of *Core Concepts* has brought improvements and refinements, but the principles underlying the book have remained the same. Our commitment to these principles has never been stronger than it is today, and it is reflected as fully in this Brief Edition as in the Ninth Edition of *Core Concepts* on which this edition is based. We have prepared the Brief Edition to accommodate instructors whose courses—sometimes carrying only one hour of credit—afford too little time for the complete range of topics and the level of detail of the larger edition.

OUR GOALS

Our goals in writing this book can be stated simply:

- To present scientifically based, accurate, up-to-date information in an accessible format.
- To involve students in taking responsibility for their health and well-being.
- To instill a sense of competence and personal power in students.

The first of these goals means making expert knowledge about health and health care available to the individual. *Core Concepts* brings scientifically based, accurate, up-to-date information to students about topics and issues that concern them—exercise, stress, nutrition, weight management, contraception, intimate relationships, HIV infection, drugs, alcohol, and a multitude of others. Current, complete, and straightforward coverage is balanced with "user-friendly" features designed to make the text appealing. Written in an engaging, easy-to-read style and presented in a colorful, open format, *Core Concepts* invites the student to read, learn, and remember. Boxes, tables, artwork, photographs, and many other features highlight areas of special interest throughout the book.

The second of our goals is to involve students in taking responsibility for their health. *Core Concepts* uses innovative pedagogy and unique interactive features to get students thinking about how the material they're reading relates to their own lives. We invite them to examine their emotions about the issues under discussion, to consider their personal values and beliefs, and to analyze their health-related behaviors. Beyond this, for students who want to change behaviors that detract from a healthy lifestyle, we offer guidelines and tools, ranging from samples of health journals and personal contracts to detailed assessments and behavior change strategies.

Perhaps our third goal in writing *Core Concepts in Health* is the most important: to instill a sense of competence and personal power in the students who read the book. Everyone has the ability to monitor, understand, and affect his or her own health. Although medical and health professionals possess impressive skills and have access to a huge body of knowledge that benefits everyone in our society, people can help to minimize the amount of professional care they actually require in their lifetime by taking care of themselves—taking charge of their health—from an early age. Our hope is that *Core Concepts* will continue to help young people make this exciting discovery—that they have the power to shape their own futures.

ABOUT THE 2004 UPDATE

Because changes in health-related information occur so rapidly, and because we are committed to providing comprehensive, accurate information on the most pressing current issues, we have prepared this updated version of the Brief Ninth Edition of *Core Concepts in Health.* The overall content, organization, and features of the Ninth Edition remain in place, but within this framework, key topics and issues have been updated with the most recent information available.

For the 2004 Update, all chapters were carefully reviewed and updated. The latest information from scientific and health-related research is incorporated into the text, and newly emerging topics and issues are discussed. Coverage has been updated in two general ways:

- Where important new issues or topics have arisen, or where new information has become available in key areas, we have incorporated this information into the text or highlight boxes. Examples of new and updated topics include recommendations for diet and physical activity, newly approved contraceptive methods, club drugs, college binge drinking, stem cells, post-traumatic stress disorder, bioterrorism, diabetes and pre-diabetes, emerging infections, global violence, dietary supplements, alternative medicine, and popular approaches to weight loss.

- Wherever more recent statistics have become available, we have replaced older figures with newer ones. For example, we have updated statistics on the incidence of various diseases, including CVD, cancer, and HIV infection; on rates of use of tobacco, alcohol, and other drugs; on leading causes of death; on health care spending in the United States; and on worldwide population growth.

These and other updates to the text and supplementary materials are described in further detail below. For a complete list of changes to the 2004 Update, contact your McGraw-Hill sales representative.

ORGANIZATION AND CONTENT OF THE 2004 UPDATE

The Brief Edition of *Core Concepts* focuses on the health issues and concerns of greatest importance to students. The general content of this edition remains the same as the Ninth Edition, with coverage of stress, psychological health, intimate relationships and communication, sexuality, substance use and abuse, nutrition, exercise, weight management, cardiovascular disease, cancer, infectious diseases, aging, and environmental health.

Many areas of special concern to students have been expanded and updated in the 2004 Update. Chapters 2 and 3 include new information on how to cope after terrorism or mass violence and how to recognize and deal with post-traumatic stress disorder. The recently approved contraceptive methods—the contraceptive patch and the vaginal ring—are described in detail in Chapter 6, along with updated information on all available methods. The coverage of drugs in Chapter 7 includes updated material on club drugs, oxycodone, and ephedrine. The latest guidelines for healthy nutrient intakes and recommended patterns of physical activity are described in Chapters 9–11, along with expanded coverage of fast food and popular diets. Chapters 11 and 12 examine the health risks associated with diabetes and pre-diabetes, along with strategies for prevention and treatment. Key issues relating to the U.S. health care system are highlighted in Chapter 15, including the use of complementary and alternative medicine, and a new section in Chapter 16 looks at terrorism and the magnitude and impact of interpersonal and collective violence worldwide.

The 2004 Update continues to emphasize the development of total wellness, with expanded coverage of spiritual wellness and the close connections between mind and body. Key topics include paths to spiritual wellness; global religious views on tobacco use; the effects of stress on the brain and the immune system; and the benefits of close connections with others. Chapter 4 includes information on the benefits of intimate relationships and strategies for building and maintaining healthy interpersonal relationships. Suggested journal writing activities throughout the book help students to further explore their feelings and values.

Of course, the health field is dynamic, with new discoveries, advances, trends, and theories reported every week. Ongoing research—on the role of diet in cancer prevention, for example, or on new treatments for HIV infection—continually changes our understanding of the human body and how it works in health and disease. For this reason, no health book can claim to have the final word on every topic. Yet within these limits, *Core Concepts* does present the latest available information and scientific thinking on innumerable topics.

To help students keep up with rapidly advancing knowledge about health issues, the 2004 Update also includes coverage of a key source of up-to-date information—the Internet. Each chapter includes an annotated list of World Wide Web sites that students can use as a launching point for further exploration of important topics. Chapter 1 also includes guidelines for evaluating health information from the Web.

Each chapter in the 2004 Update is also closely tied to the Web site developed as a companion to the text. Elements marked with the special new World Wide Web icon have corresponding links and activities on the *Core Concepts in Health* Online Learning Center (http://www.mhhe.com/inselbrief9e). The Web site and other online supplements are described below in greater detail.

FEATURES OF THE 2004 UPDATE

As a concise version of *Core Concepts in Health,* this Brief Edition builds on the features that attracted and held our readers' interest in the previous editions. One of the most popular features has always been the **boxes,** which allow us to explore a wide range of current topics in greater detail than is possible in the text itself. The boxes are divided into six categories, each marked with a unique icon and label.

In the News boxes focus on current health issues that have recently been highlighted in the media. More than half the In the News boxes are new to the 2004 Update; new topics include post-traumatic stress disorder, cohabitation, college binge drinking, the effects of fast-food and other environmental factors on U.S. eating habits, popular diet plans, bioterrorism agents, and stem cells. Each In the News box is accompanied by the new World Wide Web icon, indicating that the *Core Concepts* Online Learning Center has links to Internet resources students can use to learn more about the topic of the box.

Mind/Body/Spirit boxes focus on spiritual wellness and the close connections between people's feelings and states of mind and their physical

health. Included in Mind/Body/Spirit boxes are topics such as paths to spiritual wellness, religious views of tobacco use, sexual decision making and personal values, expressive writing and chronic conditions, how exercise fosters emotional wellness, and how stress affects the brain and the immune system. These boxes emphasize that all the dimensions of wellness must be developed in order for an individual to achieve optimal health and well-being.

Take Charge boxes distill from each chapter the practical advice students need in order to apply information to their own lives. By referring to these boxes, students can easily find ways to foster friendships, for example; to become more physically active; to enhance support in their relationships; to increase the amount of whole grains in their diets; and to help a friend who has a problem with tobacco, alcohol, or other drugs or has an eating disorder.

Critical Consumer boxes emphasize the key theme of critical thinking by helping students develop and apply critical thinking skills, thereby allowing them to make sound choices related to health and well-being. Critical Consumer boxes provide specific guidelines for evaluating health news and Web sites, using food labels to make dietary choices, selecting exercise footwear, evaluating dietary supplements, and so on.

Dimensions of Diversity boxes are part of our commitment to reflect and respond to the diversity of the student population. These boxes give students the opportunity to identify any special health risks that affect them because of who they are as individuals or as members of a group. They also broaden students' perspectives by exposing them to a wide variety of viewpoints on health-related issues. The different dimensions reflected include gender, ethnicity, socioeconomic status, and age. The principles embodied by these boxes are described in Chapter 1; topics covered in later chapters include special cardiovascular disease risks for women and African Americans, exercise for people with disabilities, drug use in rural areas and links between poverty and poor environmental health.

In addition, some Dimensions of Diversity boxes highlight health issues and practices in other parts of the world, allowing students to see what Americans share with people in other societies and how they differ. Students have the opportunity to learn about attitudes toward death in other countries, the pattern of HIV infection around the world, global patterns of violence, and other topics of interest.

In Focus boxes highlight current wellness topics of particular interest. Topics include bicycle helmets, shyness, Alzheimer's disease, headaches, diabetes, and carpal tunnel syndrome.

In addition to the box program, many carefully refined features are included in the 2004 Update of *Core Concepts.*

Vital Statistics tables and figures highlight important facts and figures in a memorable format that often reveals surprising contrasts and connections. From tables and figures marked with the Vital Statistics label, students can learn about drinking and drug use among college students, world population growth, trends in public opinion about abortion, leading causes of death and disability in the United States, the relationship between victims and offenders in violent crime, and a wealth of other information. For students who grasp a subject best when it is displayed graphically, numerically, or in a table, the Vital Statistics feature provides alternative ways of approaching and understanding the text. In addition, for each Vital Statistics table and figure, the *Core Concepts* Online Learning Center has links to sites where students can find the latest statistics and information.

Core Concepts features a wealth of attractive and helpful **illustrations.** The anatomical art, which has been prepared by medical illustrators, is both visually appealing and highly informative. These illustrations help students understand such important information as how blood flows through the heart, how alcohol affects the body, and how to use a condom. Other topics illustrated in the 2004 Update include diabetes, types of stroke, alcohol consumption by college students, and the vegetarian food pyramid. These lively and abundant illustrations will particularly benefit those students who learn best from visual images.

Communicate! exercises suggest strategies and activities for improving communication skills in ways that will enhance wellness. Communicate! covers all aspects of communication, from interpersonal communication and communication with oneself to mass communication, from assertive speaking to empathic listening, and from methods of persuasion to critical evaluation of public messages. These exercises appear at appropriate points throughout each chapter.

Chapter-ending **Tips for Today** sections provide a very brief distillation of the major message of each chapter, followed by suggestions for a few simple things that students can try right away. Tips for Today are designed to encourage students and to build their confidence by giving them easy steps they can take immediately to improve their wellness.

Take Action, appearing at the end of every chapter, suggests hands-on exercises and projects that students can undertake to extend and deepen their grasp of the material. Suggested projects include interviews, investigations of campus or community resources, and experimentation with some of the behavior change techniques suggested in the text. Special care has been taken to ensure that the projects are both feasible and worthwhile.

Journal Entry also appears at the end of each chapter. These entries suggest ways for students to use their Health Journal (which we recommend they keep while using *Core Concepts*) to think about topics and issues, explore their own views, and express their thoughts in written form.

They are designed to help students deepen their awareness and understanding of their own health-related behaviors. (Journal Entry questions also appear on the *Core Concepts* Online Learning Center in a format that enables students to e-mail their responses to their instructors.)

Making wise choices about health requires students to sort through and evaluate health information. To help students become skilled evaluators, each chapter contains at least one **Critical Thinking Journal Entry.** These entries help students develop their critical thinking skills, including finding relevant information, separating fact from opinion, recognizing faulty reasoning, evaluating information, and assessing the credibility of sources. Critical Thinking Journal Entry questions do not have right or wrong answers; rather, they ask students to analyze, evaluate, or take a stand on a particular issue.

The **Behavior Change Strategies** that conclude many chapters offer specific behavior management/modification plans relating to the chapter's topic. Based on the principles of behavior management that are carefully explained in Chapter 1, these strategies will help students change unhealthy or counterproductive behaviors. Included are strategies for dealing with test anxiety, quitting smoking, planning a personal exercise program, phasing in a healthier diet, and many other practical plans for change.

Designed for quick reference is the **Appendix,** "Nutritional Content of Popular Items from Fast-Food Restaurants." It provides a handy guide to the nutritional content of commonly ordered items at popular fast-food restaurants. Students can use the information to make healthier fast-food choices and to plan their daily food intake. "Steps for Choking Emergencies" from the Red Cross appears inside the back cover of the text, providing information that can save lives. These guides offer students the kind of information they can keep and use for years to come.

An innovative **built-in Study Guide** is included in the back of the book. Printed on perforated pages for easy removal, the study guide provides sample test questions for each chapter to help students prepare for examinations. Also included are 17 Wellness Worksheets, which provide additional opportunities for self-assessment.

LEARNING AIDS

Although all the features of *Core Concepts in Health* are designed to facilitate learning, several specific learning aids have also been incorporated in the text. Learning objectives labeled **Looking Ahead** appear on the opening page of each chapter, identifying major concepts and helping to guide students in their reading and review of the text. Important terms appear in boldface type in the text and are defined in a **running glossary,** helping students handle a large and complex new vocabulary.

Chapter summaries offer students a concise review and a way to make sure they have grasped the most important concepts in the chapter. Also found at the end of every chapter are **Selected Bibliographies** and sections called **For More Information** that contain annotated lists of books, newsletters, hotlines, organizations, and Web sites that students can use to extend and broaden their knowledge or pursue subjects of interest to them. A complete **Index** at the end of the book includes references to glossary terms in boldface type.

TEACHING TOOLS

Available with the 2004 Update of the Brief Ninth Edition of *Core Concepts in Health is* a comprehensive package of supplementary materials designed to enhance teaching and learning.

Instructor's Resource Binder (ISBN 0-07-255933-0)

The **Instructor's Resource Binder** contains a variety of helpful teaching materials in an easy-to-use form:

- The **Course Integrator Guide** (ISBN 0-07-255932-2), includes learning objectives, extended chapter outlines, classroom activities, Internet resources, and many other teaching tools. It also describes all the print and electronic supplements available with the text and shows how to integrate them into lectures and assignments for each chapter. The Course Integrator Guide is also available on the special Interactive Instructor CD-ROM described below.
- **Transparency masters and handouts**—more than 150 in all—are provided as additional lecture resources. The transparency masters feature tables showing key statistics and data, illustrations from the text and many other sources, and key points from the text. The student handouts provide additional information and can be used to extend student knowledge on topics such as pre-diabetes, glycemic index, tattooing and body piercing, yoga for relaxation, and dealing with alcohol emergencies. Illustrations of many body systems are also provided.
- The printed **Test Bank** (ISBN 0-07-255937-3) includes more than 2000 true-false and multiple choice questions. The test bank for the 2004 Update, prepared by Kathy McGinnis at San Diego City College, has been expanded to include short essay questions and two 100-question multiple choice tests that cover the content of the entire text. The answer key lists the page number in the text where each answer is found.
- A complete set of **Wellness Worksheets** (ISBN 0-07-284316-0), a student learning aid described below, is also included in the Instructor's Resource Binder.

Computerized Test Bank CD-ROM (ISBN 0-07-255935-7)

The Computerized Test Bank CD-ROM from Brownstone provides a powerful, easy-to-use test maker to create a print version, a computer lab version, or an Internet version of each test. The CD-ROM includes the Diploma program for Windows users and Exam VI for Macintosh users. The Diploma program also includes a built-in gradebook.

Interactive Instructor CD-ROM (ISBN 0-07-255936-5)

The special Interactive Instructor CD-ROM combines all the elements of the Course Integrator Guide with the electronic instructor resources offered with the 2004 Update of *Core Concepts in Health*. The resources on the CD-ROM include PowerPoint slides, Image Set, Digital Transparencies, Wellness Worksheets, live Web links, and the Computerized Test Bank. Interactive outlines in the electronic Course Integrator Guide bring together all the resources for each chapter in a user-friendly format.

Visual Resources: PowerPoint Slides, Acetates, and Videos

A variety of visual resources is available for use with the 2004 Update of *Core Concepts in Health:*

- The **Interactive Instructor CD-ROM** described above includes an electronic library of visual resources, including PowerPoint presentations, Digital Transparencies, and images from the text. Many of these resources can also be downloaded from the *Core Concepts in Health* Online Learning Center (www.mhhe.com/inselbrief9e).
- A set of 80 color **Transparency Acetates** (ISBN 0-07-255927-6) is available as a lecture resource. The acetates do not duplicate the transparency masters in the Instructor's Resource Binder, and many are from sources other than the text.
- The **McGraw-Hill Custom Video for Health** (ISBN 0-7674-2567-7) includes brief video segments with additional information on wellness topics such as nutrition, exercise, and heart disease.
- **Students on Health Custom Video** (ISBN 0-7674-0022-4) features students from college campuses across the country discussing how their daily lives are affected by their choices in such wellness areas as exercise, nutrition, tobacco and alcohol use, and stress.
- The **Healthy Living Video Clips CD-ROM** (ISBN 0-07-238808-0) contains a collection of brief, digitized video clips that can be used to introduce a lecture or to spark classroom discussion. The segments are 2–4 minutes long, and links provide brief descriptions of each clip.

Videos from Films for Humanities and from the award-winning series *Healthy Living: Road to Wellness* are also available.

Digital Solutions

The ***Core Concepts in Health*** **Online Learning Center (www.mhhe.com/inselbrief9e)** provides many additional resources for both instructors and students. Instructor tools include downloadable versions of the Course Integrator Guide and all the PowerPoint slides, links to professional resources, and a guide to using the Internet. For students, there are learning objectives, self-quizzes and glossary flashcards for review, interactive Internet activities, and extensive links. The Online Learning Center also includes many tools for wellness behavior change, including interactive versions of the Wellness Worksheets and a workbook for behavior change. Through the Online Learning Center, students can also access **PowerWeb (www.dushkin.com/online)** resources, including articles on key health topics, self-scoring quizzes, interactive exercises, study tips, and a daily news feed.

The **Health and Human Performance Web Site (www.mhhe.com/hhp)** provides articles about current issues, downloadable supplements for instructors, a "how-to" technology guide, self-assessments, study tips, exam-preparation materials, and a wealth of other tools and resources for instructors and students. It also includes information about professional organizations, scholarship opportunities, conventions, and careers.

PageOut (www.pageout.net) is a free, easy-to-use program that enables instructors to quickly develop Web sites for their courses. PageOut can be used to create a course home page, an instructor home page, an interactive syllabus that can be linked to elements in the Online Learning Center, Web links, online discussion areas, an online grade book, and much more. The Online Learning Center can also be customized to work with products like WebCT and Blackboard.

For more information about McGraw-Hill's digital resources, including how to obtain passwords for PageOut and PowerWeb, contact your local representative and visit McGraw-Hill on the Internet (www.mhhe.com/solutions).

Student Resources Available with the 2004 Update of *Core Concepts in Health*

Student who purchase a new copy of *Core Concepts in Health* receive free access to the following learning tools:

- **Health*Quest* 4.2 CD-ROM** (ISBN 0-07-286019-7): This interactive CD-ROM helps students explore and change their wellness behavior. It includes tutorials, assessments, and behavior change guidelines in such key areas as stress, fitness, nutrition, infectious diseases, cardiovascular disease, cancer, tobacco, alcohol, and other drugs. Suggested Health*Quest* activities are included on the Online Learning Center.

- ***Learning to Go: Health!*** This Internet-based reinforcement system delivers interactive lessons directly to a personal computer. It provides bite-sized lessons with overviews, tips, questions, readings, and other resources that reinforce the main themes of the course and help students act on key health information. You can choose to have your students complete the full set of *Learning to Go* lessons or tailor the selection and order of the lessons to fit your course.
- **Premium Resources from the *Core Concepts in Health* Online Learning Center:** As described above, these resources include interactive self-assessments and many study aids and behavior change tools.

Students with a used copy of the text can purchase access to these learning resources separately by contacting their bookstore and visiting the *Core Concepts in Health* Online Learning Center (www.mhhe.com/inselbrief9e).

Other student supplements available with the 2004 Update of *Core Concepts in Health* include the following:

- More than 100 **Wellness Worksheets** (ISBN 0-07-284316-0) are available to help students become more involved in their own wellness and better prepared to implement successful behavior change. The worksheets include assessment tools, Internet activities, and knowledge-based reviews of key concepts. They are available shrink-wrapped with the text in an easy-to-use pad and in the premium resources section of the Online Learning Center.
- **The Daily Fitness and Nutrition Journal** (ISBN 0-07-253055-3) is a handy booklet that guides students in planning and tracking a fitness program. It also helps students assess their current diet and make appropriate changes.
- **NutritionCalc Plus** (0-07-292084-X) is a dietary analysis program with an easy-to-use interface that allows users to track their nutrient and food group intakes, energy expenditures, and weight control goals. It generates a variety of reports and graphs for analysis, including comparisons with the Food Guide Pyramid and the latest Dietary Reference Intakes (DRIs). The ESHA database includes thousands of ethnic foods, supplements, fast foods, and convenience foods, and users can add their own foods to the food list. NutritionCalc Plus is available on CD-ROM (Windows only) or in an online version.
- The **Quick View Guide to the Internet for Students of Health, Physical Education, and Exercise Science, Version 2.0** (ISBN 0-7674-2062-4) provides step-by-step instructions on how to access the Internet; how to find, evaluate, and use online information about fitness and wellness; and many other topics.

Additional supplements and many packaging options are available; check with your McGraw-Hill sales representative.

A NOTE OF THANKS

The efforts of innumerable people have gone into producing this 2004 Update of the Brief Ninth Edition of *Core Concepts in Health*. The book has benefited immensely from their thoughtful commentaries, expert knowledge and opinions, and many helpful suggestions. We are deeply grateful for their participation in the project.

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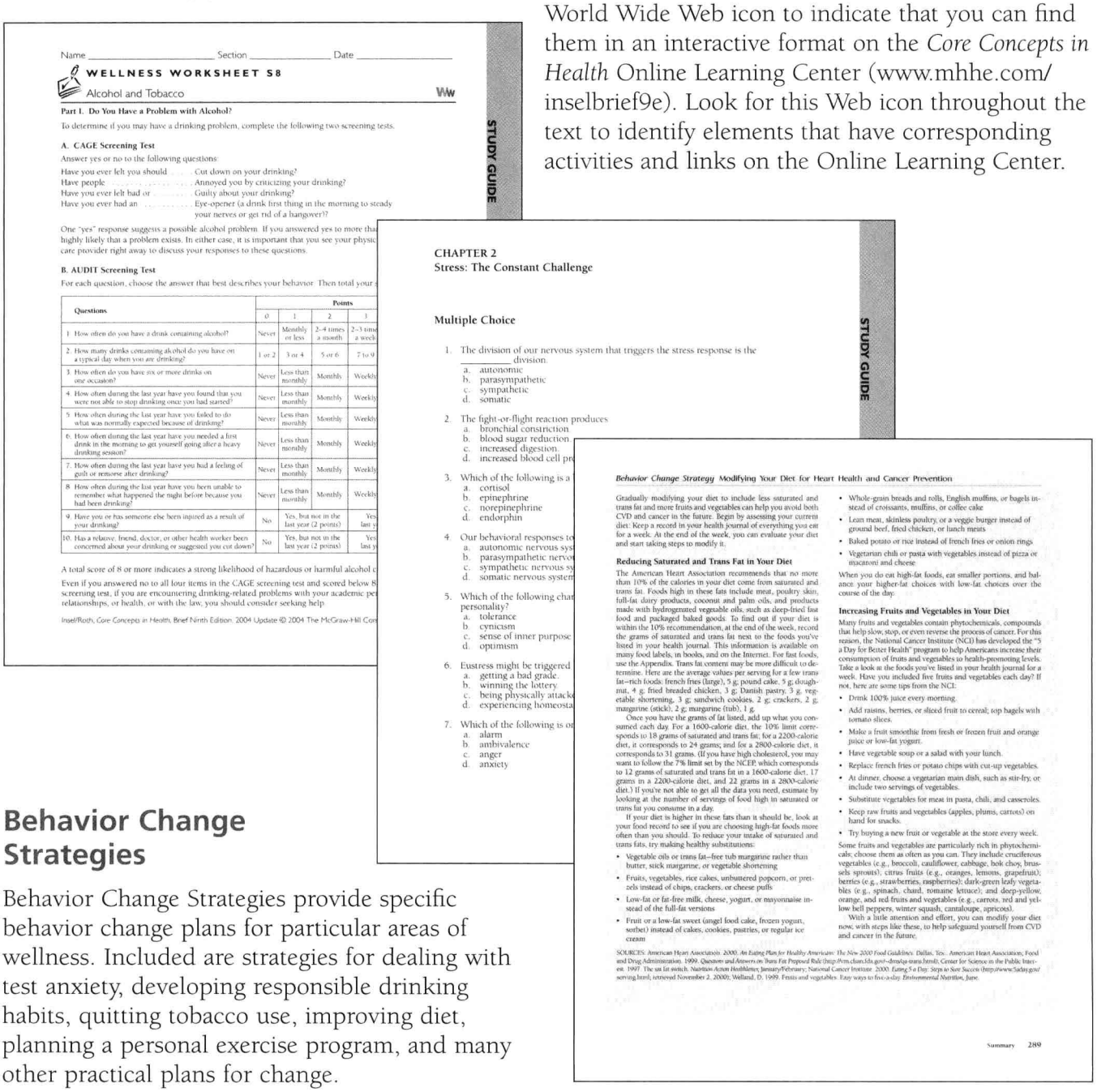
Paul M. Insel
Walton T. Roth

A Guided Tour of *Core Concepts in Health*

Are you looking for ways to improve your health behaviors and quality of life? Do you need help finding reliable wellness resources online? Would you like to boost your grade? *Core Concepts in Health* can help you do all this and much more!

Built-in Study Guide

The built-in Study Guide includes sample test questions to help you prepare for exams and Wellness Worksheets to help you assess your current level of wellness. The Worksheets are marked with a special World Wide Web icon to indicate that you can find them in an interactive format on the *Core Concepts in Health* Online Learning Center (www.mhhe.com/inselbrief9e). Look for this Web icon throughout the text to identify elements that have corresponding activities and links on the Online Learning Center.



Name _____ Section _____ Date _____

WELLNESS WORKSHEET S8

Alcohol and Tobacco

Part 1. Do You Have a Problem with Alcohol?

To determine if you may have a drinking problem, complete the following two screening tests.

A. CAGE Screening Test

Answer yes or no to the following questions:

Have you ever felt you should . . . . Cut down on your drinking?
Have people . . . . Annoyed you by criticizing your drinking?
Have you ever felt bad or . . . . Guilty about your drinking?
Have you ever had an . . . . Eye-opener (a drink first thing in the morning to steady your nerves or get rid of a hangover)?

One "yes" response suggests a possible alcohol problem. If you answered yes to more tha highly likely that a problem exists. In either case, it is important that you see your physic care provider right away to discuss your responses to these questions.

B. AUDIT Screening Test

For each question, choose the answer that best describes your behavior. Then total your

Questions	Points			
	0	1	2	3
1. How often do you have a drink containing alcohol?	Never	Monthly or less	2–4 times a month	2–3 time a week
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9
3. How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly
4. How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly
5. How often during the last year have you failed to do what was normally expected because of drinking?	Never	Less than monthly	Monthly	Weekly
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly
7. How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?	Never	Less than monthly	Monthly	Weekly
9. Have you or has someone else been injured as a result of your drinking?	No	Yes, but not in the last year (2 points)		Yes, last y
10. Has a relative, friend, doctor, or other health worker been concerned about your drinking or suggested you cut down?	No	Yes, but not in the last year (2 points)		Yes, last y

A total score of 8 or more indicates a strong likelihood of hazardous or harmful alcohol c

Even if you answered no to all four items in the CAGE screening test and scored below 8 screening test, if you are encountering drinking-related problems with your academic pe relationships, or health, or with the law, you should consider seeking help.

Insel/Roth, *Core Concepts in Health*, Brief Ninth Edition: 2004 Update © 2004 The McGraw-Hill Cor

STUDY GUIDE

CHAPTER 2
Stress: The Constant Challenge

Multiple Choice

1. The division of our nervous system that triggers the stress response is the _____ division.
   a. autonomic
   b. parasympathetic
   c. sympathetic
   d. somatic
2. The fight-or-flight reaction produces
   a. bronchial constriction.
   b. blood sugar reduction.
   c. increased digestion.
   d. increased blood cell pr
3. Which of the following is a
   a. cortisol
   b. epinephrine
   c. norepinephrine
   d. endorphin
4. Our behavioral responses to
   a. autonomic nervous sys
   b. parasympathetic nervo
   c. sympathetic nervous sy
   d. somatic nervous syster
5. Which of the following char personality?
   a. tolerance
   b. cynicism
   c. sense of inner purpose
   d. optimism
6. Eustress might be triggered
   a. getting a bad grade.
   b. winning the lottery.
   c. being physically attack
   d. experiencing homeosta
7. Which of the following is o
   a. alarm
   b. ambivalence
   c. anger
   d. anxiety

STUDY GUIDE

Behavior Change Strategy Modifying Your Diet for Heart Health and Cancer Prevention

Gradually modifying your diet to include less saturated and trans fat and more fruits and vegetables can help you avoid both CVD and cancer in the future. Begin by assessing your current diet: Keep a record in your health journal of everything you eat for a week. At the end of the week, you can evaluate your diet and start taking steps to modify it.

Reducing Saturated and Trans Fat in Your Diet

The American Heart Association recommends that no more than 10% of the calories in your diet come from saturated and trans fat. Foods high in these fats include meat, poultry skin, full-fat dairy products, coconut and palm oils, and products made with hydrogenated vegetable oils, such as deep-fried fast food and packaged baked goods. To find out if your diet is within the 10% recommendation, at the end of the week, record the grams of saturated and trans fat next to the foods you've listed in your health journal. This information is available on many food labels, in books, and on the Internet. For fast foods, use the Appendix. Trans fat content may be more difficult to determine. Here are the average values per serving for a few trans fat–rich foods: french fries (large), 5 g; pound cake, 5 g; doughnut, 4 g; fried breaded chicken, 3 g; Danish pastry, 3 g; vegetable shortening, 3 g; sandwich cookies, 2 g; crackers, 2 g; margarine (stick), 2 g; margarine (tub), 1 g.

Once you have the grams of fat listed, add up what you consumed each day. For a 1600-calorie diet, the 10% limit corresponds to 18 grams of saturated and trans fat; for a 2200-calorie diet, it corresponds to 24 grams; and for a 2800-calorie diet, it corresponds to 31 grams. (If you have high cholesterol, you may want to follow the 7% limit set by the NCEP, which corresponds to 12 grams of saturated and trans fat in a 1600-calorie diet, 17 grams in a 2200-calorie diet, and 22 grams in a 2800-calorie diet.) If you're not able to get all the data you need, estimate by looking at the number of servings of food high in saturated or trans fat you consume in a day.

If your diet is higher in these fats than it should be, look at your food record to see if you are choosing high-fat foods more often than you should. To reduce your intake of saturated and trans fats, try making healthy substitutions:

- Vegetable oils or trans fat–free tub margarine rather than butter, stick margarine, or vegetable shortening
- Fruits, vegetables, rice cakes, unbuttered popcorn, or pretzels instead of chips, crackers, or cheese puffs
- Low-fat or fat-free milk, cheese, yogurt, or mayonnaise instead of the full-fat versions
- Fruit or a low-fat sweet (angel food cake, frozen yogurt, sorbet) instead of cakes, cookies, pastries, or regular ice cream
- Whole-grain breads and rolls, English muffins, or bagels instead of croissants, muffins, or coffee cake
- Lean meat, skinless poultry, or a veggie burger instead of ground beef, fried chicken, or lunch meats
- Baked potato or rice instead of french fries or onion rings
- Vegetarian chili or pasta with vegetables instead of pizza or macaroni and cheese

When you do eat high-fat foods, eat smaller portions, and balance your higher-fat choices with low-fat choices over the course of the day.

Increasing Fruits and Vegetables in Your Diet

Many fruits and vegetables contain phytochemicals, compounds that help slow, stop, or even reverse the process of cancer. For this reason, the National Cancer Institute (NCI) has developed the "5 a Day for Better Health" program to help Americans increase their consumption of fruits and vegetables to health-promoting levels. Take a look at the foods you've listed in your health journal for a week. Have you included five fruits and vegetables each day? If not, here are some tips from the NCI:

- Drink 100% juice every morning.
- Add raisins, berries, or sliced fruit to cereal; top bagels with tomato slices.
- Make a fruit smoothie from fresh or frozen fruit and orange juice or low-fat yogurt.
- Have vegetable soup or a salad with your lunch.
- Replace french fries or potato chips with cut-up vegetables.
- At dinner, choose a vegetarian main dish, such as stir-fry, or include two servings of vegetables.
- Substitute vegetables for meat in pasta, chili, and casseroles.
- Keep raw fruits and vegetables (apples, plums, carrots) on hand for snacks.
- Try buying a new fruit or vegetable at the store every week.

Some fruits and vegetables are particularly rich in phytochemicals; choose them as often as you can. They include cruciferous vegetables (e.g., broccoli, cauliflower, cabbage, bok choy, brussels sprouts), citrus fruits (e.g., oranges, lemons, grapefruit), berries (e.g., strawberries, raspberries); dark-green leafy vegetables (e.g., spinach, chard, romaine lettuce); and deep-yellow, orange, and red fruits and vegetables (e.g., carrots, red and yellow bell peppers, winter squash, cantaloupe, apricots).

With a little attention and effort, you can modify your diet now, with steps like these, to help safeguard yourself from CVD and cancer in the future.

SOURCES: American Heart Association. 2000. *An Eating Plan for Healthy Americans: The New 2000 Food Guidelines*. Dallas, Tex.: American Heart Association; Food and Drug Administration. 1999. *Questions and Answers on Trans Fat Proposed Rule* (http://vm.cfsan.fda.gov/~dms/qa-trans.html); Center for Science in the Public Interest. 1997. The sat fat switch. *Nutrition Action Healthletter*, January/February; National Cancer Institute. 2000. *Eating 5 a Day: Steps to Sure Success* (http://www.5aday.gov/serving.html; retrieved November 2, 2000); Welland, D. 1999. Fruits and vegetables: Easy ways to five-a-day. *Environmental Nutrition*, June.

Summary 289

Behavior Change Strategies

Behavior Change Strategies provide specific behavior change plans for particular areas of wellness. Included are strategies for dealing with test anxiety, developing responsible drinking habits, quitting tobacco use, improving diet, planning a personal exercise program, and many other practical plans for change.

TAKE CHARGE Becoming More Active

"Too little time" is a common excuse for not being physically active. Learning to manage your time successfully is crucial if you are to maintain a wellness lifestyle. You can begin by keeping a record of how you are currently spending your time; in your health journal, use a grid broken into blocks of 15, 20, or 30 minutes to track your daily activities. Then analyze your record: List each type of activity and the total time you engaged in it on a given day—for example, sleeping, 7 hours; eating, 1.5 hours; studying, 3 hours; and so on. Next, prioritize your activities according to how important they are to you, from essential to somewhat important to not important at all.

Based on the priorities you set, make changes in your daily schedule by subtracting time from some activities in order to make time for physical activity. Look particularly carefully at your leisure time activities and your methods of transportation; these are areas where it is easy to build in physical activity. Make changes using a system of tradeoffs. For example, you may decide to watch television for 10 minutes less in the morning in order to change your 3-minute drive to class into a 15-minute walk.

The following are just a few ways to become more active:

- Take the stairs instead of the elevator or escalator.
- Walk to the mailbox, bank, or library whenever possible.
- Park your car a mile or even just a few blocks from your destination, and walk briskly.
- Do at least one chore every day that requires physical activity: wash the windows or your car, clean your room or house, mow the lawn, rake the leaves.
- Take study or work breaks to avoid sitting for more than 30 minutes at a time. Get up and walk around the library, your office, or your home; go up and down a flight of stairs.
- Stretch when you stand in line or watch TV.
- When you take public transportation, get off one stop early and walk to your destination.
- Go dancing instead of to a movie.
- Walk to visit a neighbor or friend rather than calling him or her on the phone. Go for a walk while you chat.
- Put your remote controls in storage; when you want to change TV or radio stations, get up and do it by hand.

How Much Physical Activity Is Enough? Some experts feel that people get most of the health benefits of a formal exercise program simply by becoming more active over the course of the day. Others feel that the lifestyle approach sets too low an activity goal and that people should exercise long and intensely enough to improve physical fitness. Debate is likely to continue. In 2002, the Institute of Medicine (IOM) recommended that to maintain maximal cardiovascular health, adults and children should spend at least 60 minutes each day in moderately intense physical activity, double the daily minimum goal set by the Surgeon General's report. The IOM recommendation is controversial but is based on calculations of how much activity is necessary to maintain a healthy body weight as well as obtain all the health benefits of physical activity. (The latest WHO guidelines also recommend 60 minutes per day.)

Where does this leave you? Most experts agree that some physical activity is better than none, but that more—as long as it does not result in injury—is probably better than some. Regular physical activity, regardless of intensity, makes you healthier and can help protect you from many chronic diseases, but you obtain even more benefits when you are physically fit.

A physical activity pyramid to guide you in meeting these goals for physical activity is shown in Figure 10-2. If you are sedentary, start at the bottom of the pyramid and gradually increase the amount of moderate-intensity physical activity in your daily life. You don't have to exercise vigorously, but you should experience a moderate increase in your heart and breathing rates. For even greater benefits, move up to the next two levels of the pyramid, which illustrate parts of a formal exercise program. The American College of Sports Medicine has established guidelines for creating an exercise program that includes **cardiorespiratory endurance (aerobic) exercise**, strength training, and flexibility training (Table 10-1 on p. 224). Such a program will develop all the health-related components of physical fitness. For a summary of the health and fitness benefits of different levels of physical activity, refer to Figure 10-3 on p. 225.

Terms

cardiorespiratory endurance (aerobic) exercise Rhythmical, large-muscle exercise for a prolonged period of time, partially dependent on the ability of the cardiovascular system to deliver oxygen to tissues.

electrocardiogram (ECG or EKG) A recording of the changes in electrical activity of the heart.

maximal oxygen consumption (MOC) The body's maximum ability to transport and use oxygen.

target heart rate The heart rate at which exercise yields cardiorespiratory benefits.

Medical Clearance

Previously inactive men over 40 and women over 50 should get a medical examination before beginning an exercise program. Diabetes, asthma, heart disease, and extreme obesity are conditions that may call for a modified program. If you have risk factors for heart disease, you should have a physical checkup, including an **electrocardiogram (ECG or**

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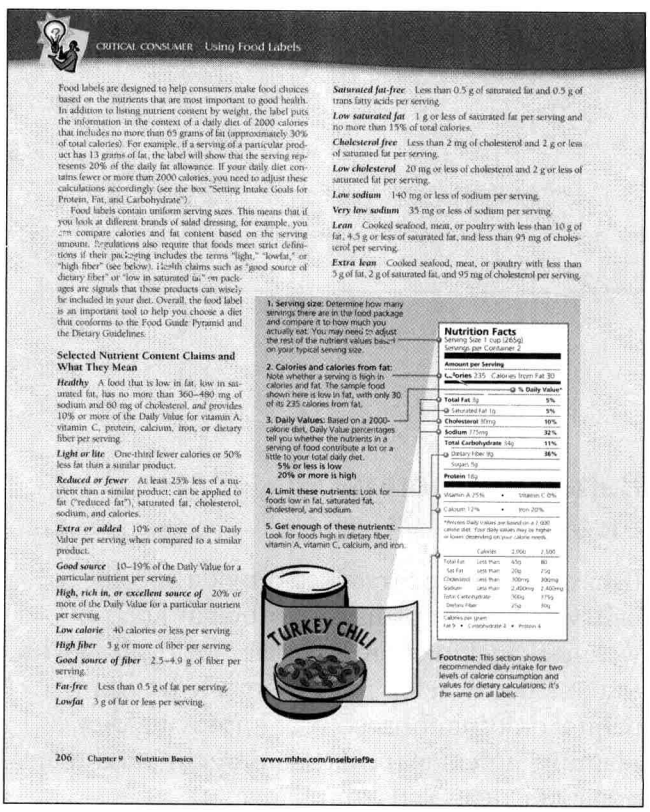
Take Charge Boxes

Take Charge boxes present the practical advice you need to apply information from the text to your own life and take charge of your health.

Critical Consumer Boxes

Critical Consumer boxes are designed to help you develop and apply critical thinking skills so you can make sound choices related to wellness.



CRITICAL CONSUMER Using Food Labels

Food labels are designed to help consumers make food choices based on the nutrients that are most important to good health. In addition to listing nutrient content by weight, the label puts the information in the context of a daily diet of 2000 calories that includes no more than 65 grams of fat (approximately 30% of total calories). For example, if a serving of a particular product has 13 grams of fat, the label will show that the serving represents 20% of the daily fat allowance. If your daily diet contains fewer or more than 2000 calories, you need to adjust these calculations accordingly (see the box "Setting Intake Goals for Protein, Fat, and Carbohydrate").

Food labels contain uniform serving sizes. This means that if you look at different brands of salad dressing, for example, you can compare calories and fat content based on the serving amount. Regulations also require that foods meet strict definitions if their packaging includes the terms "light," "lowfat," or "high fiber" (see below). Health claims such as "good source of dietary fiber" or "low in saturated fat" on packages are signals that those products can wisely be included in your diet. Overall, the food label is an important tool to help you choose a diet that conforms to the Food Guide Pyramid and the Dietary Guidelines.

Selected Nutrient Content Claims and What They Mean

Healthy A food that is low in fat, low in saturated fat, has no more than 360–480 mg of sodium and 60 mg of cholesterol, *and* provides 10% or more of the Daily Value for vitamin A, vitamin C, protein, calcium, iron, or dietary fiber per serving.

Light or lite One-third fewer calories or 50% less fat than a similar product.

Reduced or fewer At least 25% less of a nutrient than a similar product; can be applied to fat ("reduced fat"), saturated fat, cholesterol, sodium, and calories.

Extra or added 10% or more of the Daily Value per serving when compared to a similar product.

Good source 10–19% of the Daily Value for a particular nutrient per serving.

High, rich in, or excellent source of 20% or more of the Daily Value for a particular nutrient per serving.

Low calorie 40 calories or less per serving.

High fiber 3 g or more of fiber per serving.

Good source of fiber 2.5–4.9 g of fiber per serving.

Fat-free Less than 0.5 g of fat per serving.

Lowfat 3 g of fat or less per serving.

Saturated fat-free Less than 0.5 g of saturated fat and 0.5 g of trans fatty acids per serving.

Low saturated fat 1 g or less of saturated fat per serving and no more than 15% of total calories.

Cholesterol free Less than 2 mg of cholesterol and 2 g or less of saturated fat per serving.

Low cholesterol 20 mg or less of cholesterol and 2 g or less of saturated fat per serving.

Low sodium 140 mg or less of sodium per serving.

Very low sodium 35 mg or less of sodium per serving.

Lean Cooked seafood, meat, or poultry with less than 10 g of fat, 4.5 g or less of saturated fat, and less than 95 mg of cholesterol per serving.

Extra lean Cooked seafood, meat, or poultry with less than 5 g of fat, 2 g of saturated fat, and 95 mg of cholesterol per serving.

1. **Serving size:** Determine how many servings there are in the food package and compare it to how much you actually eat. You may need to adjust the rest of the nutrient values based on your typical serving size.
2. **Calories and calories from fat:** Note whether a serving is high in calories and fat. The sample food shown here is low in fat, with only 30 of its 235 calories from fat.
3. **Daily Values:** Based on a 2000-calorie diet, Daily Value percentages tell you whether the nutrients in a serving of food contribute a lot or a little to your total daily diet.
   5% or less is low
   20% or more is high
4. **Limit these nutrients:** Look for foods low in fat, saturated fat, cholesterol, and sodium.
5. **Get enough of these nutrients:** Look for foods high in dietary fiber, vitamin A, vitamin C, calcium, and iron.

Nutrition Facts
Serving Size 1 cup (265g)
Servings per Container 2

Amount per Serving	
Calories 235	Calories from Fat 30
	% Daily Value*
Total Fat 3g	5%
Saturated Fat 1g	5%
Cholesterol 30mg	10%
Sodium 770mg	32%
Total Carbohydrate 34g	11%
Dietary Fiber 9g	36%
Sugars 5g	
Protein 18g	
Vitamin A 25% •	Vitamin C 0%
Calcium 12% •	Iron 20%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower, depending on your calorie needs.

	Calories	2,000	2,500
Total Fat	Less than	65g	80
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram:
Fat 9 • Carbohydrate 4 • Protein 4

Footnote: This section shows recommended daily intake for two levels of calorie consumption and values for dietary calculations; it's the same on all labels.

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Mind/Body/Spirit Boxes

Mind/Body/Spirit boxes focus on the close connections among people's feelings, states of mind, and physical health. Topics include religious views of tobacco use, effects of stress on the brain, sexual decision making and personal values, and expressive writing.

MIND/BODY/SPIRIT Help Yourself by Helping Others

Choosing to help others—whether as a volunteer for a community organization or through spontaneous acts of kindness—can enhance emotional, social, spiritual, and physical wellness. In a national survey of volunteers from all fields, helpers reported the following benefits:

- "Helper's high"—physical and emotional sensations such as sudden warmth, a surge of energy, and a feeling of euphoria that occur immediately after helping.
- Feelings of increased self-worth, calm, and relaxation
- A perception of greater physical health
- Fewer colds and headaches, improved eating and sleeping habits, and some relief from the pain of chronic diseases such as asthma and arthritis.

Just how might helping benefit the health of the helper? By helping others, we focus on things other than our own problems. Helping others can be effective at banishing a bad mood or a case of the blues. Helping may block physical pain because we can pay attention only to a limited number of things at a given time. Helping others can also expand our perspective and enhance our appreciation for our own lives. Helping may benefit physical health by providing a temporary boost to the immune system and by combating stress and hostile feelings linked to the development of chronic diseases.

Helping others doesn't require a huge time commitment or a change of career. To get the most out of helping, keep the following guidelines in mind:

- *Make contact.* Choose an activity that involves personal contact.
- *Help as often as possible.*
- *Volunteer with others.* Working with a group enables you to form bonds with other helpers who can support your interests and efforts.
- *Focus on the process, not the outcome.* We can't always measure or know the results of our actions.
- *Practice random acts of kindness.* Smile, let people go ahead of you in line, pick up litter, and so on.
- *Adopt a pet.* Several studies suggest that pet owners enjoy better health, perhaps by feeling needed or by having a source of unconditional love and affection.
- *Avoid burnout.* Recognize your own limits, pace yourself, and try not to feel guilty or discouraged.

In addition to the benefits for you, volunteering has the added bonus of having a positive impact on the wellness of others. It fosters a sense of community and can provide some practical help for many of the problems facing our society today.

SOURCE: Musick, M. A., A. R. Herzog, and J. S. House. 1999. Volunteering and mortality among older adults: Findings from a national sample. *Journal of Gerontology: Social Sciences* 54B(3): 5173. Adapted with permission from Sobel, D. S., M.D., and R. Ornstein, Ph.D. 1996. *The Healthy Mind, Healthy Body Handbook* (Los Altos, Calif.: DRx).

in Chapter 2. If you contract a disease, consider it your body's attempt to interrupt your life pattern; reevaluate your lifestyle, and perhaps slow down.

CONFRONTING THE CHANGES OF AGING

The changes that occur with aging have repercussions that must be grappled with and resolved. Just as you can act now to limit the physical changes of aging, you can also begin preparing yourself psychologically, socially, and financially for changes that may occur later in life.

Planning for Social Changes

Retirement marks a major change in the second half of life. As the longevity of Americans has increased, people spend a larger proportion of their lives in retirement.

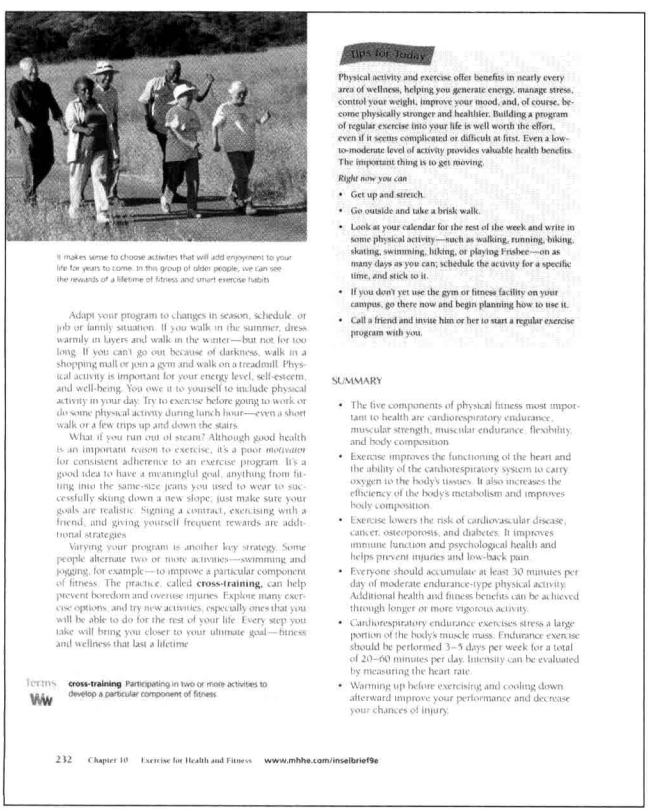
Changing Roles and Relationships Changes in social roles are a major feature of middle age. Children become young adults and leave home, putting an end to daily parenting. Parents experiencing this "empty nest syndrome" must adapt to changes in their customary responsibilities and personal identities. And while retirement may be a desirable milestone for most people, it may also be viewed as a threat to prestige, purpose, and self-respect—the loss of a valued or customary role—and will probably require a period of adjustment.

Retirement and the end of child rearing also bring about changes in the relationship between marriage partners. The amount of time a couple spend together will increase and activities will change. Couples may need a period of adjustment, in which they get to know each other as individuals again. Discussing what types of activities each partner enjoys can help couples set up a mutually satisfying routine of shared and independent activities.

Increased Leisure Time Planning ahead for retirement is crucial. What kinds of things do you enjoy doing? How will you spend your days? If you have developed diverse interests, retirement can be a joyful and fulfilling period of your life. It can provide opportunities for expanding your horizons by giving you the chance to try new activities, take classes, and meet new people. Volunteering in your community can enhance self-esteem and allow you to be a contributing member of society.

The Economics of Retirement Financial planning for retirement should begin early in life. People in their twenties and thirties should estimate how much money they

Confronting the Changes of Aging 327



It makes sense to choose activities that will add enjoyment to your life for years to come. In this group of older people, we can see the rewards of a lifetime of fitness and smart exercise habits.

Adapt your program to changes in season, schedule, or job or family situation. If you walk in the summer, dress warmly in layers and walk in the winter—but not for too long. If you can't go out because of darkness, walk in a shopping mall or join a gym and walk on a treadmill. Physical activity is important for your energy level, self-esteem, and well-being. You owe it to yourself to include physical activity in your day. Try to exercise before going to work or do some physical activity during lunch hour—even a short walk or a few trips up and down the stairs.

What if you run out of steam? Although good health is an important *reason* to exercise, it's a poor *motivator* for consistent adherence to an exercise program. It's a good idea to have a meaningful goal, anything from fitting into the same-size jeans you used to wear to successfully skiing down a new slope; just make sure your goals are realistic. Signing a contract, exercising with a friend, and giving yourself frequent rewards are additional strategies.

Varying your program is another key strategy. Some people alternate two or more activities—swimming and jogging, for example—to improve a particular component of fitness. The practice, called **cross-training**, can help prevent boredom and overuse injuries. Explore many exercise options, and try new activities, especially ones that you will be able to do for the rest of your life. Every step you take will bring you closer to your ultimate goal—fitness and wellness that last a lifetime.

Terms to Know
cross-training Participating in two or more activities to develop a particular component of fitness.

Tips for Today

Physical activity and exercise offer benefits in nearly every area of wellness, helping you generate energy, manage stress, control your weight, improve your mood, and, of course, become physically stronger and healthier. Building a program of regular exercise into your life is well worth the effort, even if it seems complicated or difficult at first. Even a low- to-moderate level of activity provides valuable health benefits. The important thing is to get moving.

Right now you can

- Get up and stretch.
- Go outside and take a brisk walk.
- Look at your calendar for the rest of the week and write in some physical activity—such as walking, running, biking, skating, swimming, hiking, or playing Frisbee—on as many days as you can; schedule the activity for a specific time, and stick to it.
- If you don't yet use the gym or fitness facility on your campus, go there now and begin planning how to use it.
- Call a friend and invite him or her to start a regular exercise program with you.

SUMMARY

- The five components of physical fitness most important to health are cardiorespiratory endurance, muscular strength, muscular endurance, flexibility, and body composition.
- Exercise improves the functioning of the heart and the ability of the cardiorespiratory system to carry oxygen to the body's tissues. It also increases the efficiency of the body's metabolism and improves body composition.
- Exercise lowers the risk of cardiovascular disease, cancer, osteoporosis, and diabetes. It improves immune function and psychological health and helps prevent injuries and low-back pain.
- Everyone should accumulate at least 30 minutes per day of moderate endurance-type physical activity. Additional health and fitness benefits can be achieved through longer or more vigorous activity.
- Cardiorespiratory endurance exercises stress a large portion of the body's muscle mass. Endurance exercise should be performed 3–5 days per week for a total of 20–60 minutes per day. Intensity can be evaluated by measuring the heart rate.
- Warming up before exercising and cooling down afterward improve your performance and decrease your chances of injury.

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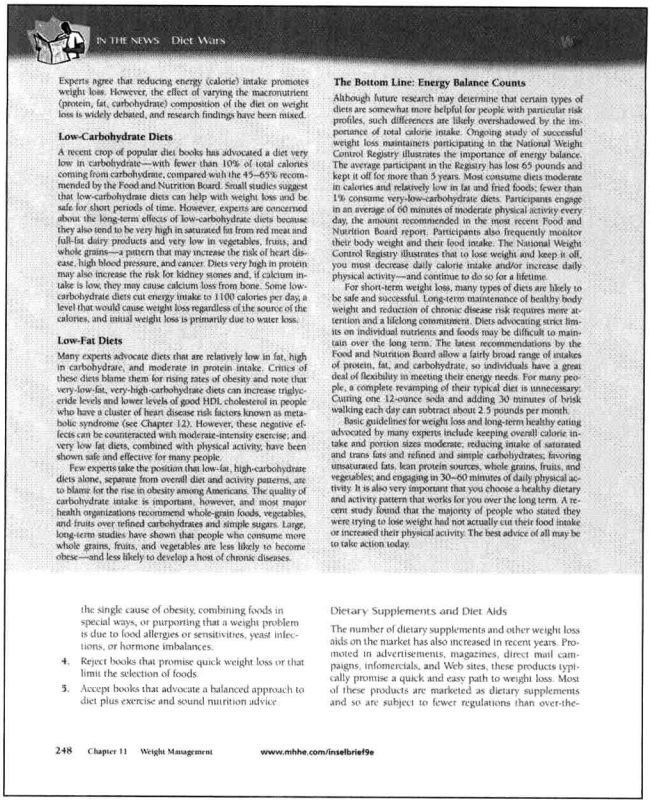
Tips For Today

Tips for Today sections provide a brief distillation of the major message of each chapter, followed by suggestions for a few simple things you can try right away to quickly build your confidence and improve wellness.

In the News Boxes

In the News boxes focus on current health issues that have recently been highlighted in the media, including such topics as post-traumatic stress disorder, bioterrorism agents, stem cells, reasons behind poor eating habits among Americans, and club drugs. In the News boxes are marked with the special Web icon to indicate that the Online Learning Center has links to Web sites you can use to learn more about In the News topics.



IN THE NEWS Diet Wars

Experts agree that reducing energy (calorie) intake promotes weight loss. However, the effect of varying the macronutrient (protein, fat, carbohydrate) composition of the diet on weight loss is widely debated, and research findings have been mixed.

Low-Carbohydrate Diets

A recent crop of popular diet books has advocated a diet very low in carbohydrate—with fewer than 10% of total calories coming from carbohydrate, compared with the 45–65% recommended by the Food and Nutrition Board. Small studies suggest that low-carbohydrate diets can help with weight loss and be safe for short periods of time. However, experts are concerned about the long-term effects of low-carbohydrate diets because they also tend to be very high in saturated fat from red meat and full-fat dairy products and very low in vegetables, fruits, and whole grains—a pattern that may increase the risk of heart disease, high blood pressure, and cancer. Diets very high in protein may also increase the risk for kidney stones and, if calcium intake is low, they may cause calcium loss from bone. Some low-carbohydrate diets cut energy intake to 1100 calories per day, a level that would cause weight loss regardless of the source of the calories, and initial weight loss is primarily due to water loss.

Low-Fat Diets

Many experts advocate diets that are relatively low in fat, high in carbohydrate, and moderate in protein intake. Critics of these diets blame them for rising rates of obesity and note that very-low-fat, very-high-carbohydrate diets can increase triglyceride levels and lower levels of good HDL cholesterol in people who have a cluster of heart disease risk factors known as metabolic syndrome (see Chapter 12). However, these negative effects can be counteracted with moderate-intensity exercise, and very low fat diets, combined with physical activity, have been shown safe and effective for many people.

Few experts take the position that low-fat, high-carbohydrate diets alone, separate from overall diet and activity patterns, are to blame for the rise in obesity among Americans. The quality of carbohydrate intake is important, however, and most major health organizations recommend whole-grain foods, vegetables, and fruits over refined carbohydrates and simple sugars. Large, long-term studies have shown that people who consume more whole grains, fruits, and vegetables are less likely to become obese—and less likely to develop a host of chronic diseases.

The Bottom Line: Energy Balance Counts

Although future research may determine that certain types of diets are somewhat more helpful for people with particular risk profiles, such differences are likely overshadowed by the importance of total calorie intake. Ongoing study of successful weight loss maintainers participating in the National Weight Control Registry illustrates the importance of energy balance. The average participant in the Registry has lost 65 pounds and kept it off for more than 5 years. Most consume diets moderate in calories and relatively low in fat and fried foods; fewer than 1% consume very-low-carbohydrate diets. Participants engage in an average of 60 minutes of moderate physical activity every day, the amount recommended in the most recent Food and Nutrition Board report. Participants also frequently monitor their body weight and their food intake. The National Weight Control Registry illustrates that to lose weight and keep it off, you must decrease daily calorie intake and/or increase daily physical activity—and continue to do so for a lifetime.

For short-term weight loss, many types of diets are likely to be safe and successful. Long-term maintenance of healthy body weight and reduction of chronic disease risk requires more attention and a lifelong commitment. Diets advocating strict limits on individual nutrients and foods may be difficult to maintain over the long term. The latest recommendations by the Food and Nutrition Board allow a fairly broad range of intakes of protein, fat, and carbohydrate, so individuals have a great deal of flexibility in meeting their energy needs. For many people, a complete revamping of their typical diet is unnecessary. Cutting one 12-ounce soda and adding 30 minutes of brisk walking each day can subtract about 2.5 pounds per month.

Basic guidelines for weight loss and long-term healthy eating advocated by many experts include keeping overall caloric intake and portion sizes moderate; reducing intake of saturated and trans fats and refined and simple carbohydrates; favoring unsaturated fats, lean protein sources, whole grains, fruits, and vegetables; and engaging in 30–60 minutes of daily physical activity. It is also very important that you choose a healthy dietary and activity pattern that works for you over the long term. A recent study found that the majority of people who stated they were trying to lose weight had not actually cut their food intake or increased their physical activity. The best advice of all may be to take action today.

the single cause of obesity, combining foods in special ways, or purporting that a weight problem is due to food allergies or sensitivities, yeast infections, or hormone imbalances.

4. Reject books that promise quick weight loss or that limit the selection of foods.
5. Accept books that advocate a balanced approach to diet plus exercise and sound nutrition advice.

Dietary Supplements and Diet Aids

The number of dietary supplements and other weight loss aids on the market has also increased in recent years. Promoted in advertisements, magazines, direct mail campaigns, infomercials, and Web sites, these products typically promise a quick and easy path to weight loss. Most of these products are marketed as dietary supplements and so are subject to fewer regulations than over-the-

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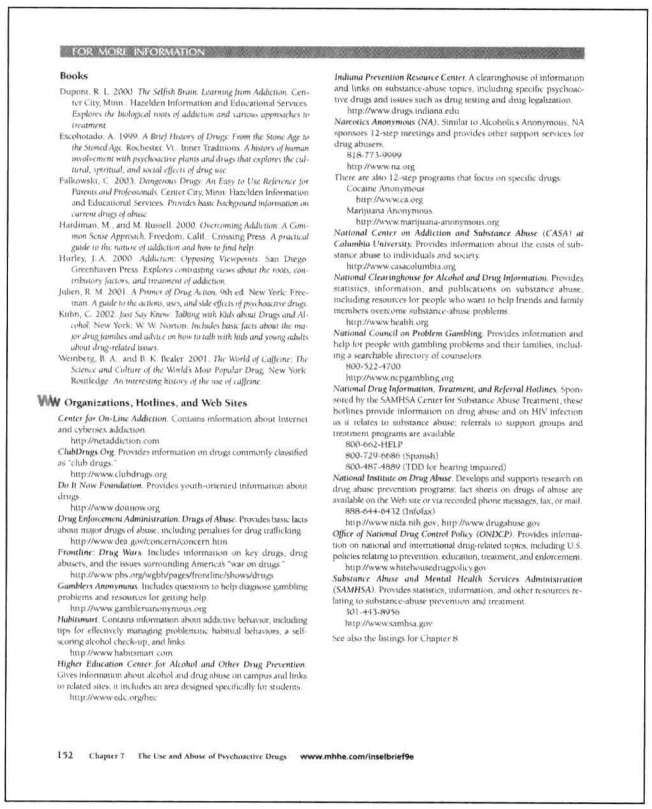

FOR MORE INFORMATION

Books

Dupont, R. L. 2000. *The Selfish Brain: Learning from Addiction.* Center City, Minn.: Hazelden Information and Educational Services. *Explores the biological roots of addiction and various approaches to treatment.*

Escohotado, A. 1999. *A Brief History of Drugs: From the Stone Age to the Stoned Age.* Rochester, Vt.: Inner Traditions. *A history of human involvement with psychoactive plants and drugs that explores the cultural, spiritual, and social effects of drug use.*

Falkowski, C. 2003. *Dangerous Drugs: An Easy to Use Reference for Parents and Professionals.* Center City, Minn.: Hazelden Information and Educational Services. *Provides basic background information on current drugs of abuse.*

Hardiman, M., and M. Russell. 2000. *Overcoming Addiction: A Common Sense Approach.* Freedom, Calif.: Crossing Press. *A practical guide to the nature of addiction and how to find help.*

Hurley, J. A. 2000. *Addiction: Opposing Viewpoints.* San Diego: Greenhaven Press. *Explores contrasting views about the roots, contributory factors, and treatment of addiction.*

Julien, R. M. 2001. *A Primer of Drug Action,* 9th ed. New York: Freeman. *A guide to the actions, uses, and side effects of psychoactive drugs.*

Kuhn, C. 2002. *Just Say Know: Talking with Kids about Drugs and Alcohol.* New York: W. W. Norton. *Includes basic facts about the major drug families and advice on how to talk with kids and young adults about drug-related issues.*

Weinberg, B. A., and B. K. Bealer. 2001. *The World of Caffeine: The Science and Culture of the World's Most Popular Drug.* New York: Routledge. *An interesting history of the use of caffeine.*

Organizations, Hotlines, and Web Sites

Center for On-Line Addiction. Contains information about Internet and cybersex addiction.
http://netaddiction.com

ClubDrugs.Org. Provides information on drugs commonly classified as "club drugs."
http://www.clubdrugs.org

Do It Now Foundation. Provides youth-oriented information about drugs.
http://www.doitnow.org

Drug Enforcement Administration: Drugs of Abuse. Provides basic facts about major drugs of abuse, including penalties for drug trafficking.
http://www.dea.gov/concern/concern.htm

Frontline: Drug Wars. Includes information on key drugs, drug abusers, and the issues surrounding America's "war on drugs."
http://www.pbs.org/wgbh/pages/frontline/shows/drugs

Gamblers Anonymous. Includes questions to help diagnose gambling problems and resources for getting help.
http://www.gamblersanonymous.org

Habitsmart. Contains information about addictive behavior, including tips for effectively managing problematic habitual behaviors, a self-scoring alcohol check-up, and links.
http://www.habitsmart.com

Higher Education Center for Alcohol and Other Drug Prevention. Gives information about alcohol and drug abuse on campus and links to related sites. It includes an area designed specifically for students.
http://www.edc.org/hec

Indiana Prevention Resource Center. A clearinghouse of information and links on substance-abuse topics, including specific psychoactive drugs and issues such as drug testing and drug legalization.
http://www.drugs.indiana.edu

Narcotics Anonymous (NA). Similar to Alcoholics Anonymous, NA sponsors 12-step meetings and provides other support services for drug abusers.
818-773-9999
http://www.na.org
There are also 12-step programs that focus on specific drugs.
Cocaine Anonymous
http://www.ca.org
Marijuana Anonymous
http://www.marijuana-anonymous.org

National Center on Addiction and Substance Abuse (CASA) at Columbia University. Provides information about the costs of substance abuse to individuals and society.
http://www.casacolumbia.org

National Clearinghouse for Alcohol and Drug Information. Provides statistics, information, and publications on substance abuse, including resources for people who want to help friends and family members overcome substance-abuse problems.
http://www.health.org

National Council on Problem Gambling. Provides information and help for people with gambling problems and their families, including a searchable directory of counselors.
800-522-4700
http://www.ncpgambling.org

National Drug Information, Treatment, and Referral Hotlines. Sponsored by the SAMHSA Center for Substance Abuse Treatment, these hotlines provide information on drug abuse and on HIV infection as it relates to substance abuse; referrals to support groups and treatment programs are available.
800-662-HELP
800-729-6686 (Spanish)
800-487-4889 (TDD for hearing impaired)

National Institute on Drug Abuse. Develops and supports research on drug abuse prevention programs; fact sheets on drugs of abuse are available on the Web site or via recorded phone messages, fax, or mail.
888-644-6432 (Infofax)
http://www.nida.nih.gov; http://www.drugabuse.gov

Office of National Drug Control Policy (ONDCP). Provides information on national and international drug-related topics, including U.S. policies relating to prevention, education, treatment, and enforcement.
http://www.whitehousedrugpolicy.gov

Substance Abuse and Mental Health Services Administration (SAMHSA). Provides statistics, information, and other resources relating to substance-abuse prevention and treatment.
301-443-8956
http://www.samhsa.gov

See also the listings for Chapter 8.

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For More Information

For More Information sections describe books, newsletters, organizations, hotlines, and Web sites that you can turn to for reliable additional advice and information. Live links to all the listed Web sites are included on the Online Learning Center.

Core Concepts in Health Online Learning Center (www.mhhe.com/inselbrief9e)

Don't forget to visit the *Core Concepts in Health* Online Learning Center for additional study aids and wellness tools.

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