

CORBIN'S Concepts of Fitness and Wellness

A Comprehensive
Lifestyle Approach

— 13e

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Corbin's Concepts of **Fitness and Wellness** *A Comprehensive Lifestyle Approach*

THIRTEENTH EDITION

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CORBIN'S CONCEPTS OF FITNESS AND WELLNESS: A COMPREHENSIVE LIFESTYLE APPROACH,
THIRTEENTH EDITION

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Features

Corbin's Concepts of Fitness and Wellness includes magazine-like features that help students integrate and apply information they may see in the news or read about on the Internet. These features have follow-up activities available in **McGraw Hill Connect®** and can be assigned online.

- **A Closer Look** provides information about new and sometimes controversial topics related to health, wellness, and fitness and encourages critical thinking.
- **Technology Update** describes emerging health and fitness technology, innovations, and research.
- **In the News** highlights late-breaking health, wellness, and fitness events, trends, and information.
- **HELP** personalizes fitness and health issues through brief narratives that relate to the defining elements of the HELP Philosophy (H: Health, E: Everyone, L: Lifetime, P: Personal).



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Health is available to Everyone for a Lifetime, and it's Personal

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Lab Activities

All end-of-chapter Lab Activities are available in **McGraw Hill Connect®** and can be assigned, completed, submitted, and graded online. Lab Resource Materials (extra materials for use in completing Lab Activities) are available for all fitness self-assessments.

connect
ACTIVITY

Lab 10A Evaluating Muscle Strength: 1RM and Grip Strength

Name _____ Section _____ Date _____

Purpose: To evaluate your muscle strength using 1RM and to determine the best amount of resistance to use for various strength exercises.

Procedures: 1RM is the maximum amount of resistance you can lift for a specific exercise. Testing yourself to determine how much you can lift only one time using traditional methods can be fatiguing and even dangerous. The procedure you will perform here allows you to estimate 1RM based on the number of times you can lift a weight that is less than 1RM.

Evaluating Strength Using Estimated 1RM

1. Use a resistance machine for the leg press and arm or bench press for the evaluation part of this lab.
2. Estimate how much weight you can lift 2 or 3 times. Be conservative; it is better to start with too little weight than too much. If you lift a weight more than 10 times, the procedure should be done again on another day when you are rested.
3. Using correct form, perform a leg press with the weight you have chosen. Perform as many times as you can up to 10.
4. Use Chart 1 in Lab Resource Materials to determine your 1RM for the leg press. Find the weight used in the left-hand column and then find the number of repetitions you performed across the top of the chart.
5. Your 1RM score is the value where the weight row and the repetitions column intersect.
6. Repeat this procedure for the arm or bench press using the same technique.
7. Record your 1RM scores for the leg press and bench press in the Results section.
8. Next divide your 1RM scores by your body weight in pounds to get a "strength per pound of body weight" (1RM/body weight) score for each of the two exercises.
9. Determine your strength rating for your upper body strength (arm press) and lower body (leg press) using Chart 2 in Lab Resource Materials. Record in the Results section. If time allows, assess 1RM for other exercises you choose to perform (see Lab 10C).
10. If a grip dynamometer is available, determine your right-hand and left-hand grip strength using the procedures in Lab Resource Materials. Use Chart 3 in Lab Resource Materials to rate your grip (isometric).

Results

Arm press: Wt. selected Reps Estimated 1RM
(or bench press) (Chart 1, Lab Resource Materials, page 175)

Strength per lb body weight Rating
(1RM ÷ body weight) (Chart 2, Lab Resource Materials, page 176)

Leg press: Wt. selected Reps Estimated 1RM
(Chart 1, Lab Resource Materials, page 175)

Strength per lb body weight Rating
(1RM ÷ body weight) (Chart 2, Lab Resource Materials, page 176)

Grip strength: Right grip score Right grip rating
Left grip score Left grip rating
Total score Total rating
(Chart 3, Lab Resource Materials, page 178)

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ACTIVITY

Lab 10A Evaluating Muscle Strength: 1RM and Grip Strength

Seated Press (Arm Press)
This test can be performed using a seated press (see image) or using a bench press machine. When using the seated press, position the seat height so that arm handles are directly in front of the chest. Position backrest so that hands are at comfortable distance away from the chest. Push handles forward to full extension and return to starting position in a slow and controlled manner. Repeat. Note: Machine may have a foot lever to help position, raise, and lower the weight.

Leg Press
To perform this test, use a leg press machine. Typically, the beginning position is with the knees bent at right angles with the feet placed on the press machine pedals or a foot platform. Extend the legs and return to beginning position. Do not lock the knees when the legs are straightened. Typically, handles are provided. Grasp the handles with the hands when performing this test.



Conclusions and Implications: In several sentences, discuss your current strength, whether you believe it is adequate for good health, and whether you think that your "strength per pound of body weight" scores are representative of your true strength.

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Building on 50 Years of Success!

The thirteenth edition ushers in a new era with a new title—*Corbin's Concepts of Fitness and Wellness*—that honors the vision and legacy of Dr. Charles (Chuck) Corbin in developing the Concepts approach over 50 years ago. Our established tradition of innovation in the fitness and wellness field continues with completely updated content, features, and online materials that are designed to support education on healthy lifestyles.

Moving into the Future

The new title also marks strategic authorship changes as Dr. Greg Welk, Professor of Kinesiology and Fellow in the National Academy of Kinesiology, takes over leadership with this new edition and its development. Dr. Welk actively teaches and conducts research in areas of fitness/wellness and health promotion and will ensure that *Corbin's Concepts of Fitness and Wellness* continues to provide instructors and students with the most current, accurate, and useful information. Dr. Chuck Corbin, lead author of all the previous *Concepts* books, continues to actively participate in all facets of authorship as a retired Emeritus Professor. Dr. Will Corbin, a professor of clinical psychology with expertise in health psychology, leads the content related to stress management, alcohol, tobacco, drugs, and sexually transmitted infections. Dr. Karen Welk, an established physical therapist, provides expertise in flexibility, strength and conditioning, back care, and contraindicated exercises. The diverse backgrounds and skills of the authors contribute to the comprehensive coverage of health, fitness, and wellness issues covered in the book. The authors work to reduce the technical jargon and focus on self-management skills and strategies to help students learn to adopt and sustain healthy lifestyles throughout life.



Greg Welk



Charles Corbin



Will Corbin



Karen Welk

Dedication

The authors would like to dedicate this edition to the millions of scientists, health-care workers, educators, and public health leaders who have directly confronted the unique challenges caused by the COVID-19 pandemic. Millions of people throughout the world lost their lives due to COVID-19, but many millions more were saved by the efforts to help people recover as well as by establishing practices to minimize its spread and through vaccine development and delivery.

Thank You

We are always listening to our users and greatly appreciate the feedback provided over the years. The insights have helped us continue to enhance instruction and improve student learning. We want to provide a special thanks to Joel Baum from Gender Spectrum for insights on revised gender terminology throughout the text. We also want to specifically thank the instructors who provided insights regarding the book and their course needs as this feedback also directly enhanced this edition's revisions:

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To list everyone who has had an impact on the *Concepts* texts over the years would take several pages. Nevertheless, we feel that it is important to acknowledge those who have helped us. A list of the many contributors is available at www.corbinconcepts.org, as are additional resources we have provided that support the use of Corbin's *Concepts of Fitness and Wellness* in your course. Thank you all!

Gregory J. Welk
 Charles B. Corbin
 William R. Corbin
 Karen A. Welk
www.corbinconcepts.org

Preface

Corbin's Concepts of Fitness and Wellness provides a comprehensive and evidence-based approach to teaching principles of health living. Foundational elements include an integrated instructional HELP philosophy that focuses on self-management skills for sustained lifestyle change, a concepts-based framework designed for achieving well-defined learning objectives, and an engaging, student-centered format that accommodates various learning preferences and methods.

Paired with **McGraw Hill Connect®**, a digital assignment and assessment platform that strengthens the link between faculty, students, and coursework, instructors and students accomplish more in less time. Connect for Fitness & Wellness is particularly useful for remote and hybrid courses and includes assignable and assessable videos, quizzes, exercises, and labs.

Integrated HELP Philosophy

Health is available to **E**veryone
for a **L**ifetime, and it's **P**ersonal.

The HELP philosophy directs the content in *Corbin's Concepts of Fitness and Wellness*, helping and empowering students to understand the personal responsibility involved in achieving sound health (including fitness and wellness) through the adoption of healthy lifestyles. Although an array of lifestyles are covered, the emphasis is on physical activity, healthy eating, and stress management (*priority lifestyles*) since they strongly impact overall health and well-being and can be obtained and sustained by using personal responsibility. Critical self-management skills, which are introduced and

detailed in Concept 3: Self-Management Skills for Health Behavior Change, are essential for making healthy decisions and lifestyle choices. Each Concept concludes with a **Using Self-Management Skills** section that reinforces key self-management skills and behaviors. Each Concept includes comprehensive **Lab Activities** that are designed to provide opportunities to learn and practice these skills. (The Lab Activities are available for online submission through **McGraw Hill Connect®**.) Ultimately, the goal is for students to learn to prepare personal programs of health behavior change that address their own needs and interests.

Concepts-Based Framework

A unique, defining aspect of *Corbin's Concepts of Fitness and Wellness* is the “concepts-based” approach to education, which begins with concise Concepts rather than lengthy chapters. Specific learning objectives are identified at the beginning of each Concept to help focus and guide students to the most important information. The **Why It Matters!** section introduces the Concept by detailing the main purpose or goal. Content within each Concept is then organized into thematic sections and each includes several more concise “concepts” or principles. Carefully worded statements introduce each of these mini-sections to help students retain the key takeaway messages in the Concept. This modularized approach to learning offers advantages for student learning and retention since the important information is introduced and then directly reinforced.

LEARNING OBJECTIVES

After completing the study of this Concept, you will be able to:

- ▶ Identify the determinants of health, wellness, and fitness, and explain how they each contribute to health, wellness, and fitness.
- ▶ Differentiate between factors over which you have lesser and greater control.
- ▶ Use health behavior change strategies to carry out self-assessments of personal lifestyles and wellness perceptions.

Many factors are important in developing lifetime health, wellness, and fitness, and some are more in your control than others. A factor that significantly affects your health, wellness, and fitness is referred to as a **determinant**. Three major categories of determinants are listed in **Figure 1**. Biological factors, such as heredity, age, and sex, are shown at the bottom of the figure because they are determinants over which we have little or no control.

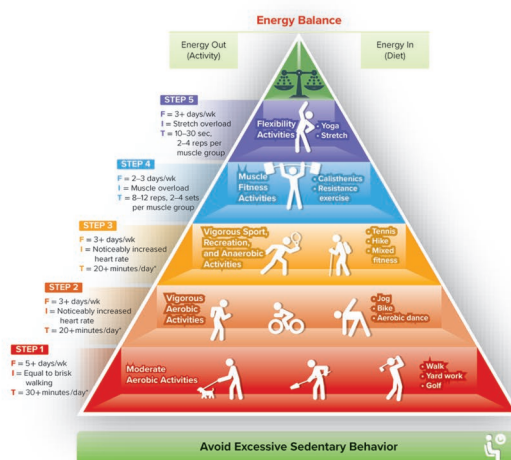


Learning Objectives (left) introduce each concept, and modularized “Concept Statements” (right, in blue) help guide student learning.

Student-Centered Approach to Learning

Students learn using many different types of sensory input. Accordingly, the visuals in *Corbin's Concepts of Fitness and Wellness* include photos with concept-relevant captions, figures that convey conceptual materials in an easy-to-understand format, and hundreds of detailed exercise illustrations that show exactly how to perform exercises for important dimensions of health-related fitness.

Additionally, each Concept includes four feature boxes that delve into current issues in the headlines, introduce students to ongoing research and technology, and ask students to consider how health issues affect them personally. *A Closer Look* provides information about new and sometimes controversial topics related to health, wellness, and fitness and encourages critical-thinking. *Technology Update* describes advances in health and fitness technology and prompts exploration and personal evaluation. *In the News* highlights late-breaking health, wellness, and fitness information and provides opportunities for reflection. The *HELP* feature personalizes fitness and health issues to help students internalize the information. Students have the opportunity to explore many of these topics in more detail by using the *Suggested Resources and Readings* section and additional feature-specific activities and critical thinking exercises that are accessible and assignable within McGraw Hill Connect®.



A CLOSER LOOK

Weathering the Storm

Weathering is a term used to describe health disparities that may result from cumulative socioeconomic disadvantage. Dr. Arline Geronimus first used the term to describe discrepancies in reproductive outcomes of Black versus white females, but the term is now used more broadly to refer to health disparities in Black populations. A contributing factor to this weathering is systemic racism, a topic that has garnered increased attention in the United States following the deaths of George Floyd and other Black Americans. Forms of discrimination and marginalization slowly chip away at a person, causing those who are on the receiving end to have compromised health or premature death. The concept of weathering provides a way to understand a root cause of health disparities in our society.

What steps should individuals take to address systemic racism and unjust weathering?

connect
ACTIVITY

Feature boxes introduce and detail important societal issues, new research and technology, and opportunities for students to consider how health issues affect them personally.

8. Lunge

This exercise develops the thigh and gluteal muscles. Place a barbell (with or without weight) behind your head and support with hands placed slightly wider than shoulder-width apart. In a slow and controlled motion, take a step forward and allow the leading leg to drop so that it is nearly parallel with the ground. The lower part of the leg should be nearly vertical and the back should be maintained in an upright posture. Take stride with opposite leg to return to standing posture. Repeat with other leg, remaining stationary or moving slowly in a straight line with alternating steps.



Engaging graphics, instructional diagrams (such as the unique physical activity pyramid), and detailed exercise illustrations facilitate student learning.

Source: Comstock/Getty Images; Thinkstock Images/Stockbyte/Getty Images; Stockbyte/Getty Images; Shutterstock; Ryan McVay/Getty Images; Tom Grill/Corbis/Getty Images

Highlights of the Thirteenth Edition

Concept Updates

Each revision of *Corbin's Concepts of Fitness and Wellness* incorporates new research and findings about healthy lifestyles, but the thirteenth edition was influenced by many external factors as well. This edition was conceptualized and updated during the height of the COVID-19 pandemic, which challenged all facets of our society and increased attention on the intersections of public health and personal health. While each of us needed to take responsibility for our own health, local and national mandates and laws established policies and practices needed to promote health for all. The pandemic demonstrated the role of science in medicine and health as we witnessed the rapid development of life-saving vaccines as well as the deployment of these vaccines across the world. However, the most tangible impact of COVID-19 is how it influenced our individual health and well-being.

Research conducted during the pandemic provided many new insights about health and wellness. For example, numerous studies documented the importance of healthy lifestyles (and healthy weight) for enhancing immune function and for reducing risks from COVID-19. Other studies documented the impact of the pandemic on our personal behaviors, including how it compounded stress. In this new edition, we reference many studies conducted on COVID-19 issues; however, the focus is on the implications for personal health and healthy living. Research is always evolving in the health and wellness field, but insights from new studies were particularly dramatic in recent years.

Student reflection and exploration of new trends and societal issues are particularly emphasized within the various box features that are included in each of the Concepts (*In the News*, *A Closer Look*, *Technology Update*, and *HELP*). Updated with many new topics, these features are linked to customized application assignments within **McGraw Hill Connect®** to facilitate exploration, reflection, and discussion of these complex issues. A variety of video vignettes are also embedded within the eBook and linked to Connect activities to help explain complex issues and provide opportunities for personal reflection and critical thinking. Current, accessible, and relevant resources and publications are provided in the *Suggested Resources and Readings*, while updated scientific references are provided at the end-of-text *References* section.

This new edition utilizes the most current terminology for gender and gender identity as recommended by the American Psychological Association (APA). Additionally, updates and new content illuminate the importance of *the social determinants of health* and challenges with resolving health

disparities. Although our emphasis is on personal responsibility and focusing on what is within your control, mass movements against systemic racism have exposed health inequities and disparities that need to be collectively addressed by individuals, organizations, and society as a whole.

Guidelines and trends in the fitness and wellness field have also been thoroughly updated in this new edition. For example, the recent revisions from the *American College of Sports Medicine's (ACSM) Guidelines for Exercise Testing and Prescription* prompted changes in exercise recommendations for several health-related fitness areas. Other new research findings and public health updates are woven through each of the Concepts. Some of the updates are highlighted below:

1 Health, Wellness, Fitness, and Healthy Lifestyles: An Introduction

- Updated statistics about health, longevity, and wellness
- Inclusion of *Healthy People 2030* goals
- New depiction of the illness and wellness continuum
- Inclusion of equity and social justice issues within the HELP philosophy

2 Determinants of Lifelong Health, Wellness, and Fitness

- Increased coverage of the social determinants of health
- New categorization and conceptualization of lifestyle determinants
- New illustrations depicting the determinants of health, wellness, and fitness
- Integration of content on habit formation
- Distinctions between sex at birth and gender identity related to health and wellness

3 Self-Management Skills for Health Behavior Change

- Updated descriptions and depictions of social-ecological models
- Updated explanations of the Transtheoretical Model and applications
- New integrative model to explain stages of change
- More personalized explanations of self-management skills

4 Preparing for Physical Activity

- Updated safety considerations based on ACSM exercise guidelines
- New content on shoe and clothing considerations for exercise
- Enhanced coverage of guidelines for heat, cold, and treatment of injuries



5 The Health Benefits of Physical Activity

- Reorganized flow of material based on system-based adaptations
- Improved system-based depiction of the health benefits of physical activity
- Enhanced coverage of mental health
- Updated descriptions and explanations of hypokinetic conditions
- New content on lifestyle medicine and implications for health care

6 How Much Physical Activity Is Enough?

- Updated FIT principles based on ACSM guidelines for exercise testing and prescription
- Revised graphic depiction of the physical activity pyramid
- Incorporation of anaerobic exercise and high-intensity interval training (HIIT)
- Updated statistics on adults meeting the U.S. physical activity guidelines

7 Adopting an Active Lifestyle

- New title and flow to distinguish light, moderate, and vigorous physical activity
- Updated content and guidelines related to sedentary behavior
- New depiction of interactive risks of sedentary behavior and inactivity
- New content on wearable technology and applications for self-monitoring

8 Cardiorespiratory Endurance

- Updated thresholds and target zones for exercise based on new ACSM guidelines
- New calculations based on heart rate reserve and max heart rate methods
- Clarifications based on adaptations related to cardiorespiratory endurance

9 Vigorous Aerobic, Anaerobic, Sport, and Recreational Activities

- Updated title to highlight anaerobic activities
- Clearer distinctions of type of vigorous aerobic activities
- Expanded content on anaerobic activities and HIIT
- Updated data on patterns and trends in behaviors
- Refined content and strategies in self-management section

10 Muscle Fitness and Resistance Exercise

- Revised sections on differences between males and females based on sex at birth

- Clarified terminology and applications of fitness principles for resistance exercise
- New descriptions of the circuit training, plyometrics, and body weight exercises
- Updated content on the risks of supplements that tout strength and fitness enhancement

11 Flexibility and Stretching Activities

- Updated title with greater emphasis on activities promoting flexibility
- New content on injuries and rehabilitation issues
- Revised guidelines for stretching based on new research
- Updates on Pilates, yoga, and tai chi and popularity of stretching activities

12 Advanced Fitness Training

- Updated title with focus on adaptations in different metabolic systems
- Greater specification about training for different sports and activities
- New content on anaerobic capacity and training for speed/power

13 Body Composition and Health

- Updated title with greater focus on health implications of body composition
- New introduction section on societal issues and stigmatization with obesity
- Refined explanations and descriptions of body composition standards
- Updated content on causes and consequences of obesity
- Clarifications about eating disorders and implications

14 Nutrition and Principles of Healthy Eating

- Updated title with focus on principles for healthy eating
- New sections on establishing healthy eating patterns and a “total diet approach”
- Clarification on terminology and explanation of dietary guidelines
- New content on popularity of plant-based protein and vegetarian diets
- Updated content on cholesterol, trans fats, nutraceuticals, functional foods, and organic foods
- Refined section on self-management skills, focusing on self-monitoring skills

15 Principles of Effective Weight Control

- Updated title and focus on self-management skills for weight control

- Enhanced coverage of social-ecological models as related to weight control
- Updates on fad diets and clinical approaches to weight loss

16 Stress and Health

- Greater focus on stress issues unique for college students
- New content on stress associated with COVID-19 and discrimination
- Updated information on stress response and influences from personality types

17 Stress-Management Strategies

- Updated title and focus on self-management skills and strategies for stress management
- Greater coverage on social support influences
- Incorporation of SMART goals for time management

18 The Use and Abuse of Tobacco and Other Nicotine Products

- Updated title and expansion of content to cover other nicotine products
- Expanded coverage of e-cigarettes and trends with vaping
- Updated information on the economic costs to society of tobacco and nicotine use
- Updates on marketing of tobacco to increase awareness

19 The Use and Abuse of Alcohol

- Updated statistics and patterns of alcohol use and abuse
- New information on policies and environmental factors related to alcohol
- Updated data and insights on campus issues and strategies related to alcohol abuse

20 The Use and Abuse of Other Drugs

- Updated statistics and data on the prevalence of drug abuse in society
- New terminology and updates related to cannabis use in society with regard to legalization
- Updates on the independent classification of opioids
- New content on issues with misuse and risks of prescription drugs

21 Preventing Sexually Transmitted Infections

- Updated statistics on the prevalence of different sexually transmitted infections
- Revised organization and flow of content on common sexually transmitted infections
- Updates on HIV issues and treatments

22 Cancer, Diabetes, and Other Health Threats

- Updated statistics on prevalence and death rates from various cancers
- Streamlined presentation and flow of content on cancers with major updates on prostate, colon-rectal, and breast cancer
- Expanded coverage of infectious diseases and details related to COVID-19 risks

23 Body Mechanics and Care of the Back

- Relocated Concept to place it closer to chronic conditions
- Updated title with focus on posture and prevention of back and neck pain
- New graphics and explanations of degenerative disc disease and causes of back issues
- Revised explanations for the role of exercise in back and neck health
- Strategies for planning and assessment in the self-management section

24 Making Informed Consumer Choices

- Updated title with more emphasis on self-management skills and consumerism
- Streamlined recommendations on consumer considerations for exercise machines and clubs
- New information on decision making related to apps and online programs
- Updates on the FDA's efforts and strategies for curtailing fraud and quackery

25 Toward Optimal Health and Wellness: Planning for Healthy Lifestyle Change

- New organization and flow based on new conceptual model of lifestyle and social determinants of health, wellness, and fitness
- Increased emphasis on health care and health consumerism
- Updated content on strategies for healthy living, with a focus on personal responsibility

Innovations for Enhanced Learning

The thirteenth edition of *Corbin's Concepts of Fitness and Wellness* is designed to deliver a flexible and personalized approach to fitness and wellness education. The materials provide an integrated print and digital solution that enables instructors (and students) to explore options for applying the information.

Connect® Is Proven Effective

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

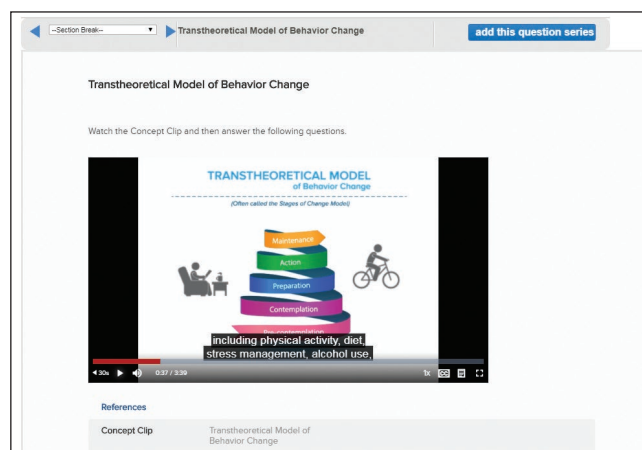
New to this edition, additional Lab Activities and Self-Assessments were redesigned and added as **Application-Based Activities** to offer enhanced accessibility, a privacy option, and aggregated student self-assessment results by section. Appearing in Connect, these activities help your students assess their own health and behavior. New topics include stress and anxiety related to the outbreak of COVID-19 and adapting an exercise program for changing situations.

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

Also new within McGraw Hill Connect®, the **Writing Assignment tool** delivers a learning experience to help students improve their written communication skills and conceptual understanding. As an instructor you can assign, monitor, grade, and provide feedback on writing more efficiently and effectively.

Concept Clips on topics like the cardiorespiratory system and stress response are also new to this edition. Assignable and assessable through Connect, Concept Clips provide step-by-step presentations to promote student comprehension.

NewsFlash activities tie current news stories to key fitness and wellness concepts. After interacting with a contemporary news story, students are assessed on their understanding and



Concept Clips illustrate major topics and provide jumping-off points for class discussion.

their ability to make the connections between real-life events and course content. Examples of NewsFlash topics include addressing racial disparities during the COVID-19 pandemic, providing game-day food safety tips, and pushing the limits of human endurance.

Personalized Learning



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

SmartBook is optimized for smartphones and tablets and is now more accessible for students of all abilities.



Read or study when it's convenient for you with McGraw Hill's free **ReadAnywhere** app. Available for iOS or Android smartphones or tablets, ReadAnywhere gives users access to McGraw Hill tools including the eBook and SmartBook or Adaptive Learning Assignments in Connect. Take notes, highlight, and complete assignments offline—all of your work

will sync when you open the app with WiFi access. Log in with your McGraw Hill Connect username and password to start learning—anytime, anywhere!

Dietary Analysis Tool



NutritionCalc Plus is a powerful dietary analysis tool featuring more than 30,000 foods from the reliable and accurate ESHA Research nutrient database, which is comprised of data from the latest USDA Standard Reference database, manufacturer's data, restaurant data, and data from literature sources. NutritionCalc Plus allows users to track food and activities, and then analyze their choices with a robust selection of intuitive reports. The interface was updated to accommodate ADA requirements and a modern mobile experience native to today's students.

Your Course, Your Way

McGraw Hill Create® is a self-service website that allows you to create customized course materials using McGraw Hill Education's comprehensive, cross-disciplinary content and digital products. You can even access third-party content such as readings, articles, cases, videos, and more.

- Select and arrange content to fit your course scope and sequence.
- Upload your own course materials.
- Select the best format for your students—print or eBook.
- Select and personalize your cover.
- Edit and update your materials as often as you'd like.

Experience how McGraw Hill Education's Create empowers you to teach your students your way:
<http://create.mheducation.com>

Learning Management System Integration

McGraw Hill provides a one-stop teaching and learning experience available to users of any learning management system. This institutional service allows faculty and students to enjoy single sign-on (SSO) access to McGraw Hill materials, including the award-winning **McGraw Hill Connect®** platform, from directly within the institution's website. The program provides faculty with instant access to McGraw Hill teaching materials (e.g., eTextbooks, test banks, PowerPoint slides, animations,

and learning objects), allowing them to browse, search, and use any instructor ancillary content in our vast library at no additional cost to instructors or students. With this program enabled, faculty and students never need to create another account to access McGraw Hill products and services.

Instructor Resources

Instructors can access the following resources through the Library tab in **McGraw Hill Connect®**:

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

Test Bank. Each question has been tagged for level of difficulty, Bloom's taxonomy, and topic coverage. Organized by chapter, the questions are designed to test factual, conceptual, and higher order thinking.

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

Test Builder enables instructors to:

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

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

Remote Proctoring. New remote proctoring and browser-locking capabilities are seamlessly integrated within Connect to offer more control over the integrity of online assessments. Instructors can enable security options that restrict browser activity, monitor student behavior, and verify the identity of each student. Instant and detailed reporting gives instructors an at-a-glance view of potential concerns, thereby avoiding personal bias and supporting evidence-based claims.

Health, Wellness, Fitness, and Healthy Lifestyles: An Introduction

LEARNING OBJECTIVES

After completing the study of this Concept, you will be able to:

- Describe the HELP philosophy and discuss its implications in making personal decisions about health, wellness, and fitness.
- Define the dimensions of health and wellness, and explain how they interact to influence health and wellness.
- Distinguish health-related and skill-related dimensions of physical fitness.
- Identify related national health goals and show how meeting personal goals can contribute to reaching national goals.

Good health, wellness, fitness, and healthy lifestyles are important for all people.

Christopher Futcher/iStock/Getty Images



Why It Matters!

Virtually all American adults say that “being in good health” is very important, often rating it higher than money and other material things. In fact, in a recent survey of people who had taken a college fitness and wellness course 20 years prior, 92 percent considered themselves to be well informed about fitness and physical activity, and more than 50 percent remember and still use information from that class today. *Concepts of Fitness and Wellness* is specifically designed to help you learn the cognitive and behavioral skills needed to help you achieve and maintain good health, wellness, and fitness throughout life. In this first Concept, you will learn about the distinctions among health, wellness, and fitness.



Health and wellness are available to everyone for a lifetime.
javi_indy/Shutterstock

The HELP Philosophy

The HELP philosophy provides a basis for making healthy lifestyle change possible. The acronym *HELP* characterizes an important part of the philosophy: *Health* is available to *Everyone* for a *Lifetime*, and it’s *Personal*. The HELP philosophy aids you as you apply the principles and guidelines that help you adopt and sustain healthy lifestyles. Throughout this edition, you will learn a variety of *self-management skills* that are critical for healthy living. The labs in each Concept provide opportunities to practice and apply these skills so that you can use them throughout your life. An overview of basic self-management skills is provided in a later Concept.

A personal philosophy that emphasizes health can lead to behaviors that promote it. The *H* in *HELP* stands for *health*. While nearly everyone endorses the importance of good health, most people struggle to adopt and sustain healthy lifestyles. Researchers have helped advance theories related to behavior change and to determine strategies and approaches that can be learned and practiced. One theory that has been extensively tested indicates that people who believe in the benefits of healthy lifestyles are more likely to engage in healthy behaviors. The theory also suggests that people who state intentions to put their beliefs into action are likely to adopt behaviors that lead to health, wellness, and fitness.

Everyone can benefit from healthy lifestyles, but a lack of equity creates disparities. The *E* in *HELP* stands for *everyone*. While everyone *can* benefit, limited access and resources make it more challenging for some to achieve these benefits. The opportunity to develop healthy lifestyles should be available to everyone regardless of race, ethnicity, age, disability, culture, socioeconomic status, or gender identity. While it is true that issues of equality and equity are societal

challenges, everyone needs to contribute to the solution by treating all members of society equally and fairly.

Healthy behaviors are most effective when practiced for a lifetime. The *L* in *HELP* stands for *lifetime*. Young people sometimes feel immortal because the harmful effects of unhealthy lifestyles are often not immediate. As we age, however, unhealthy lifestyles have cumulative negative effects. For example, compromised health status was a factor with the COVID-19 pandemic as older adults and those with chronic diseases had greater risks and higher death rates than younger and healthier individuals. Thus, adopting and sustaining healthy habits early in life is important for long-term health, wellness, and fitness.

Healthy lifestyles should be based on personal needs. The *P* in *HELP* stands for *personal*. Each person has unique needs regarding health, wellness, and fitness. People also vary in attitudes, perceptions, and personal characteristics that influence healthy lifestyles. You will be provided with information about a variety of self-management skills, but it is up to each individual to take personal responsibility for learning and using these skills.

You can adopt the HELP philosophy. As you progress through these Concepts, consider ways that you can implement the HELP philosophy. In each Concept, HELP boxes are provided to stimulate your thinking about key health issues.

Health Optimal well-being that contributes to one’s quality of life. It is more than freedom from disease and illness, though freedom from disease is important to good health. Optimal health includes high-level mental, social, emotional, spiritual, and physical wellness within the limits of one’s heredity and personal abilities.

HELP

Health is available to Everyone
for a Lifetime, and it's Personal

COVID-19

The COVID-19 pandemic that swept the globe was caused by a novel type of virus called severe acute respiratory syndrome coronavirus 2, or SARS-CoV-2. It is specifically called a coronavirus (*corona* means “crown”) because of the impression of a crown when viewed under a microscope. The disease it caused became known as COVID-19 (CO stands for “corona,” VI for “virus,” D for “disease,” and 19 as it originated in 2019). Susceptibility, symptomology, and risks associated with COVID-19 have been highly variable, and these factors contributed to the challenges in detection and containment. Whereas one person may be asymptomatic or experience a headache or impaired taste or smell, another may lapse into respiratory failure and die. Mandates and debates on personal responsibility to wear masks, wash hands, and social distance have heightened how individuals play a critical role in containing the spread of the disease.

The HELP philosophy emphasizes that health is highly personal. What did you learn about yourself throughout the COVID-19 pandemic? How will that prepare you for future health issues and challenges?

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ACTIVITY

National Health Goals

Healthy People 2030 is a national public health program that establishes a comprehensive set of health promotion and disease prevention objectives with the primary intent of improving the nation's health. The *Healthy People Initiative* began in 1980 to promote health and wellness in all Americans. The goals are revised every 10 years and, in 2020, goals for the year 2030 were established. They provide national goals for health and health promotion, but the objectives also serve as goals to motivate and guide people in making sound health decisions. A complete list of *Healthy People 2030* objectives (also referred to as goals) that relate to the content in *Concepts of Fitness and Wellness* is included in Table 1. In addition to helping change the health of society at large, the *Healthy People 2030* objectives have implications for personal health behavior change. Societal changes can occur only when individuals adjust personal behaviors and work together to make changes that benefit other people. Not all objectives will have personal implications for each individual, but increased societal awareness of the objectives may lead to future changes in the health of our country.

Table 1 ► *Healthy People 2030: Health Goals and Objectives for the Nation*

The following health goals are from *Healthy People 2030*, which establishes health goals for Americans. The specific goals listed below are those that are covered in *Concepts of Fitness and Wellness*. As you meet your personal goals, you contribute to the achievement of these national health goals.

Overarching Goals

- Attain healthy, thriving lives and well-being free of preventable disease, disability, injury, and premature death.
- Eliminate health disparities, achieve health equity, and attain health literacy to improve the health and well-being of all.
- Create social, physical, and economic environments that promote attaining the full potential for health and well-being for all.
- Promote health development, healthy behaviors, and well-being across all life stages.
- Engage leadership, key constituents, and the public across multiple sectors to take action and design policies that improve the health and well-being of all.

Physical Activity Objectives

- Reduce the proportion of people who do no physical activity in their free time.
- Increase the proportion of people who do enough aerobic physical activity for *substantial* and *extensive* health benefits.
- Increase the proportion of people who do enough muscle-strengthening activity.
- Increase the proportion of people who do both aerobic and muscle-strengthening activity.
- Increase the proportion of people who walk or bike to get places.
- Increase the proportion of youth who play sports.
- Increase the proportion of worksites that offer employee physical activity programs.
- Increase the proportion of older people with physical or cognitive health problems who get physical activity.
- Increase referrals of heart attack and stroke survivors for rehabilitation programs.

Hypokinetic Disease Objectives

- Improve cardiovascular health and reduce coronary heart disease and stroke deaths.
- Reduce the proportion of people with high blood pressure and high cholesterol levels.
- Reduce incidence of and overall death rate from cancer (e.g., breast, colorectal, prostate).
- Reduce incidence of sunburn.

(continued)

Table 1 ► (continued)

- Increase quality of life for cancer survivors.
- Reduce incidence of and death rate from diabetes.
- Reduce the proportion of adults who don't know they have diabetes.
- Increase diabetes screening, eye exams, and blood sugar monitoring.
- Reduce incidence of and screening for osteoporosis.
- Reduce hip fractures from and increase treatment for fractures from osteoporosis.
- Reduce the proportion of hospitalizations from dementia.
- Increase treatment for depression (including postpartum) and serious mental illness.
- Reduce suicide attempts and rate of suicide.
- Reduce the proportion of people with disabilities who experience serious psychological distress.
- Reduce pain and work limitations among those with arthritis.

Nutrition and Healthy Eating Objectives

- Increase consumption of fruits, vegetables (especially dark green, red, orange, and beans and peas), and whole grains.
- Reduce consumption of added sugars, saturated fat, and sodium.
- Increase consumption of calcium, potassium, and vitamin D.
- Reduce sales of less-than-healthy foods and drinks in schools.
- Increase the proportion of females of childbearing age who get adequate folic acid.
- Increase the proportion of worksites that offer employee nutrition programs.

Body Composition and Weight Control Objectives

- Reduce the proportion of people with obesity.
- Reduce the number of health-care visits that include counseling on weight loss, nutrition, and physical activity by people with obesity.
- Increase the proportion of females who had a healthy weight before pregnancy.

Destructive Habits Objectives

- Reduce tobacco use (cigarette, cigar, pipe).
- Increase past-year attempts to quit smoking and successful attempts.
- Increase smoke-free homes and other smoke-free environments (worksites, restaurants, bars).
- Reduce the proportion of people who don't smoke who are exposed to secondhand smoke.
- Reduce e-cigarette, flavored tobacco products, and smokeless tobacco use among youth.
- Reduce the proportion of youth exposed to tobacco marketing.
- Reduce cigarette smoking initiation among youth and young adults.
- Reduce binge drinking and alcohol use disorders.
- Reduce motor vehicle crash deaths involving a drunk driver.
- Reduce drug use over past month, marijuana use (daily or almost daily), misuse of prescription drugs, and heroin use (past year).
- Reduce drug overdoses and overdose deaths (including opioids, heroin, methadone).
- Increase the proportion of people with substance use disorders who get treatment.
- Reduce emergency room visits from prescription and nonprescription drug overdoses.
- Reduce the proportion of LGBTQ youth who use illicit drugs.

Sexually Transmitted Infections Objectives

- Reduce incidence of HPV infections prevented by vaccine in youth.
- Reduce hepatitis A, B, and C, and deaths from hepatitis.
- Increase the proportion of people who know that they have hepatitis.

Safety and Injury Prevention Objectives

- Reduce fatal injuries, unintentional injury deaths, and fatal traumatic brain injuries.
- Reduce emergency room visits for nonfatal injuries.
- Reduce motor vehicle crash deaths, deaths from crashes due to drowsy driving, and deaths of passengers not using seatbelts.
- Reduce work-related injuries and days missed from work because of injury.
- Reduce nonfatal physical assaults and fire-arms-related deaths.
- Reduce falls and fall-related deaths among older people.

Health Information and Service Objectives

- Increase electronic access to health information.
- Increase telehealth services.
- Increase access to broadband Internet.
- Increase communication with health-care providers.
- Increase the proportion of people with health and prescription drug insurance.
- Increase prevention services by community organizations.
- Increase the proportion of people who get health care when they need it.
- Reduce days exposed to unhealthy air and amount of toxic pollutants in the environment.

One overarching goal of *Healthy People 2030* is to attain healthy, thriving lives and well-being, free of preventable disease, injury, and premature death.

This goal makes distinctions between **lifespan** (life expectancy) and **healthspan** (healthy life expectancy). *Lifespan* refers to the number of years you live. *Healthspan* is the number of years in your life during which you experience good health that is free of chronic diseases and debilitating conditions that limit your daily activities and your wellness (quality of life).

Prior to the COVID-19 pandemic, the lifespan (life expectancy) of Americans increased by 60 percent over the last century. During the pandemic, life expectancy in the United States decreased to its lowest level in 15 years (see Concept 2 for more information). The expected lifespan for North American countries prior to the pandemic is shown in Figure 1. The blue bars in Figure 1 depict the relative healthspan in each country and the brown bars show the number of years with poor health and low quality of life. The most recent statistics show that the United States ranks 39th to 54th in world rankings for expected lifespan (depending on the source). Among North American countries, the United States ranks behind Canada (11th to 16th) and ahead of Mexico (78th to 90th). Although unhealthy years occur more often toward the end of the lifespan, they can happen at any time. Consistent with *Healthy People 2030*, a goal of *Concepts of Fitness and Wellness* is to help you personally increase both your lifespan and your healthspan. As you meet your personal goals, you contribute to the achievement of these national health goals.

Eliminating disparities and achieving health equity is another primary goal of *Healthy People 2030*. As defined in the *Healthy People 2030* documents, a health disparity is “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage.” The goal of eliminating disparities was established because health inequities do exist. This was clearly evident

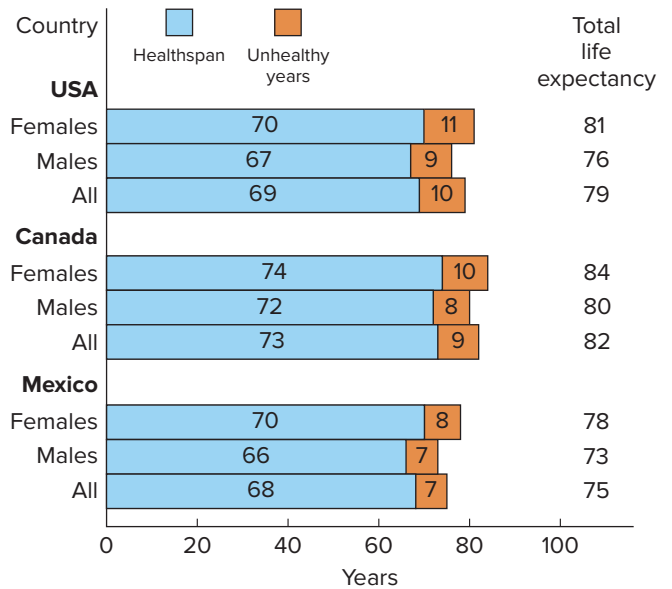


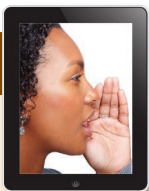
Figure 1 ► Estimated healthspan and lifespan for many North Americans.*

Source: World Health Organization.

during the COVID-19 pandemic as some racial minorities (e.g., Blacks, Hispanics) were two to four times more likely to have confirmed cases than whites and Asian Americans. To reduce health disparities, it is important to address underlying causes.

Lifespan The number of years you live (life expectancy).

Healthspan The number of healthy years in your life. It includes years free of illness and debilitating conditions and years of wellness (years with a good quality of life).



In the News

Healthiest Places to Live

Each year a number of organizations conduct surveys to determine which American cities rate highest in well-being and/or physical fitness. The American Fitness Index from the American College of Sports Medicine (ACSM) is a prominent example, but many other organizations conduct similar surveys. A variety of criteria such as personal health behaviors, chronic health problems, recreational facilities,

and community environmental factors are used in the ratings. Many news agencies also provide similar types of ratings. Search “healthiest places to live” online to find relevant links.

Do healthier people simply seek out healthier environments (and healthier cities) or are there unique attributes that help make an area or city healthier? How does your city rate?



Regular physical activity can improve one's sense of well-being.
Samuel Borges Photography/Shutterstock

Another primary national health goal is to create social, physical, and economic environments that promote good health for all. The environment, both social and physical, has much to do with quality and length of life. Social environment refers to norms and values that influence our behavior, whereas physical environment refers to characteristics or features that may allow the healthier choice to be the easier choice. These features are known as “social determinants of health” and will be discussed in more detail later.

The final primary goal of the Healthy People Initiative is to promote health, wellness, and healthy behaviors across all stages of life. Health and wellness are products of a healthy lifestyle. Young adults generally have good health, but unhealthy lifestyles eventually take a toll and contribute to compromised health and wellness later in life. The subsequent sections will describe important distinctions among (and dimensions of) health, wellness, and fitness.

Health and Wellness

Health is more than freedom from illness and disease.

The definition of health established by the World Health Organization (WHO) over 70 years ago is “a state of complete physical, mental, and social well-being.” As shown in Figure 2, **illness** and **wellness** are at opposite ends of the health continuum. Healthy lifestyles contribute to both reductions in risk of illness as well as enhancements in wellness. Thus, health is much more than freedom from illness, disease, and debilitating conditions.

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VIDEO 1

Wellness is the positive component of optimal health.

Wellness is characterized by a sense of well-being reflected in optimal functioning, health-related **quality of life**, meaningful work, and a contribution to society. The term *health-related quality of life* also reflects a general sense of happiness and satisfaction with life. Wellness is often incorrectly described as something you do rather than something you have. While it is hard to directly quantify, wellness is the product of healthy lifestyles in the same way that fitness is the product of regular physical activity.

Health and wellness are personal. Every individual is unique, and health and wellness are influenced by each person's unique characteristics. Making comparisons to other people on specific characteristics may produce feelings of inadequacy that detract from one's profile of total health and wellness. Each of us has personal limitations and strengths. Focusing on strengths and learning to accommodate weaknesses are essential keys to optimal health and wellness.

connect
VIDEO 2

Health and wellness are multidimensional. The health and wellness dimensions include physical, emotional/mental, intellectual, social, and spiritual (see Figure 3). Each is important to optimal health and wellness.

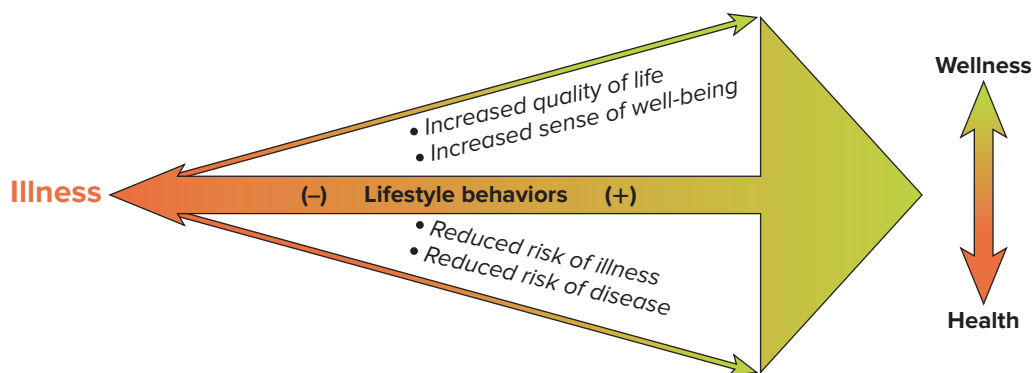


Figure 2 ► Wellness and illness are on opposite ends of the continuum.

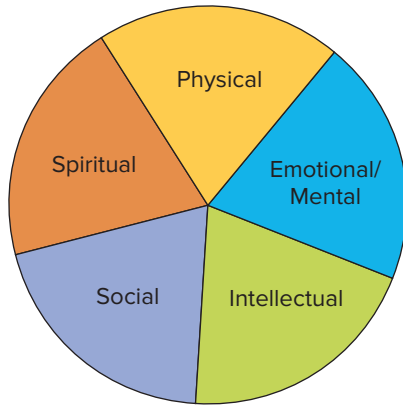


Figure 3 ► The dimensions of health and wellness.

Table 2 describes the various dimensions. Some people include environmental and vocational dimensions in addition to the five shown in Figure 3. Health and wellness are personal factors, so environmental and vocational health and wellness are not included in Table 2. However, the environment (including your work environment) is very important to your overall personal wellness. It is included in the conceptual model capturing determinants of health, wellness, and fitness in Concept 2.

Wellness reflects how one feels about life, as well as one's ability to function effectively. A positive total outlook on life is essential to each of the wellness dimensions. As illustrated in Table 3, a “well” person is satisfied in work, is spiritually fulfilled, enjoys leisure time, is physically fit, is socially involved, and has a positive emotional/mental outlook. The person is happy and fulfilled.

The way one perceives each dimension of wellness affects one's total outlook. Researchers use the term *self-perceptions* to describe these feelings. Many researchers believe that

Illness The ill feeling and/or symptoms associated with a disease or circumstances that upset homeostasis.

Wellness The integration of many different components (physical, emotional/mental, intellectual, social, and spiritual) that expand one's potential to live (quality of life) and work effectively and to make a significant contribution to society. Wellness reflects how one feels (a sense of well-being) about life, as well as one's ability to function effectively. Wellness, as opposed to illness (a negative), is sometimes described as the positive component of good health.

Quality of Life A term used to describe wellness. An individual with quality of life can enjoyably do the activities of life with little or no limitation and can function independently. Individual quality of life requires a pleasant and supportive community.

Table 2 ► Definitions of Health and Wellness Dimensions

Physical health—Freedom from illnesses that affect the physiological systems of the body, such as the heart and the nervous system. A person with physical health possesses an adequate level of physical fitness and physical wellness.

Physical wellness—The ability to function effectively in meeting the demands of the day's work and to use free time effectively. Physical wellness includes good physical fitness and the possession of useful motor skills. A person with physical wellness is generally characterized as fit instead of unfit.

Emotional/mental health—Freedom from emotional/mental illnesses, such as clinical depression, and possession of emotional wellness. The goals for the nation's health refer to mental rather than emotional health and wellness. However, mental health and wellness are conceptually the same as emotional health and wellness.

Emotional/mental wellness—The ability to cope with daily circumstances and to deal with personal feelings in a positive, optimistic, and constructive manner. A person with emotional wellness is generally characterized as happy instead of depressed.

Intellectual health—Freedom from illnesses that invade the brain and other systems that allow learning. A person with intellectual health also possesses intellectual wellness.

Intellectual wellness—The ability to learn and to use information to enhance the quality of daily living and optimal functioning. A person with intellectual wellness is generally characterized as informed instead of ignorant.

Social health—Freedom from illnesses or conditions that severely limit functioning in society, including antisocial pathologies.

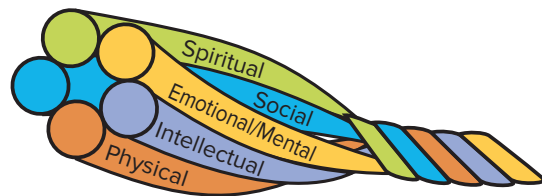
Social wellness—The ability to interact with others successfully and to establish meaningful relationships that enhance the quality of life for all people involved in the interaction (including self). A person with social wellness is generally characterized as involved instead of lonely.

Spiritual health—The one component of health that is totally composed of the wellness dimension; it is synonymous with spiritual wellness.

Spiritual wellness—The ability to establish a values system and act on the system of beliefs, as well as to establish and carry out meaningful and constructive lifetime goals. Spiritual wellness is often based on a belief in a force greater than the individual that helps her or him contribute to an improved quality of life for all people. A person with spiritual wellness is generally characterized as fulfilled instead of unfulfilled.

Table 3 ► The Dimensions of Wellness

Wellness Dimension	Negative	Positive
Physical	Unfit	Fit
Emotional/mental	Depressed	Happy
Intellectual	Ignorant	Informed
Social	Lonely	Involved
Spiritual	Unfulfilled	Fulfilled
Total outlook	Negative	Positive

**Figure 4 ► The integration of wellness dimensions.**

self-perceptions about wellness are more important than actual circumstances or a person's actual state of being. For example, a person who has an important job may find less meaning and job satisfaction than another person with a much less important job. Apparently, one of the important factors for a person who has achieved high-level wellness and a positive outlook on life is the ability to provide self-reward. Some people, however, seem unable to give themselves credit for their successes. The development of a system that allows a person to perceive the self positively is essential, along with the adoption of positive lifestyles that encourage improved self-perceptions. The questionnaire in Lab 1A will help you assess your self-perceptions of the various wellness dimensions. For optimal wellness, aim for positive feelings about each dimension (see Table 3).



Health and wellness are integrated states of being. The segmented pictures of health and wellness shown in Figure 3 and Tables 2 and 3 are used only to illustrate the

multidimensional nature of health and wellness. In reality, health and wellness are integrated states of being that can best be depicted as threads woven together to produce a larger, integrated fabric. Each dimension relates to each of the others and overlaps all the others. The overlap is so frequent and so great that the specific contribution of each thread is almost indistinguishable when looking at the total (Figure 4). The total is clearly greater than the sum of the parts.

It is possible to possess health and wellness while being ill or living with a debilitating condition. Many illnesses are curable and may have only a temporary effect on health. Others, such as Type 1 diabetes, are not curable but can be managed with proper nutrition, physical activity, and sound medical treatment. Those with manageable conditions may, however, be at risk for other health problems. For example, unmanaged diabetes is associated with a high risk for heart disease and other health problems.

Debilitating conditions, such as the loss of a limb or loss of function in a body part, can contribute to a lower level of functioning or an increased risk for illness and thus to poor health. On the other hand, such conditions need not limit wellness. A person with a debilitating condition who has a positive outlook on life may have better overall health (a longer healthspan) than a person with a poor outlook on life but no debilitating condition.



A CLOSER LOOK

Mental Health During a Pandemic

Although dealing with COVID-19 focused much of our attention on the physical risks associated with the virus, it clearly has had a dramatic impact on our mental health. Before COVID-19 impacted the United States, a national poll indicated that 87 percent of Americans were very satisfied or somewhat satisfied with their overall quality of life. However, as time passed, polls and surveys documented the toll of the pandemic on our overall well-being. One poll indicated that over 90 percent of Americans reported experiencing some form of emotional distress. Loss of jobs and

financial distress, changes in schooling and childcare, canceled celebrations and social disruption, panic buying, rising death tolls and loss of loved ones, and fear of contracting the virus are many contributing factors. Living through the pandemic may have increased awareness about the frailty of life or prompted a greater appreciation for the importance of mental health and our lifestyles.

Which dimension of wellness do you think is most important for helping cope with challenges like COVID-19?



Just as wellness is possible among those with illness and disability, evidence is accumulating that people with a positive outlook are better able to resist the progress of disease and illness than are those with a negative outlook. Thinking positive thoughts has been associated with enhanced results from various medical treatments and surgical procedures.

Health and wellness products and promotions can be misleading. Because well-being is a subjective feeling, unscrupulous people can easily make claims of improved wellness for their product or service without facts to back them up. The term *holistic health* is similarly abused. Optimal health includes many dimensions; thus, the term *holistic* (total) is appropriate. In fact, the word *health* originates from a root word meaning “wholeness.” Unfortunately, questionable health practices are sometimes promoted under the guise of holistic health. Care should be used when considering services and products that make claims of wellness and/or holistic health to be sure that they are legitimate.

Physical Fitness

Physical fitness is a multidimensional state of being. Physical fitness is the body’s ability to function efficiently and effectively. It consists of at least six health-related and five skill-related dimensions (Figures 5 and 6), each of which contributes to total quality of life. Physical fitness is associated with a person’s ability to work effectively, enjoy leisure time, be healthy, resist **hypokinetic diseases or conditions**, and meet emergency situations. It is related to, but different from, health and wellness. Although the development of physical fitness is the result of many things, optimal physical fitness is not possible without regular physical activity.

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VIDEO 4



The health-related dimensions of fitness are associated with enhanced health and wellness.

Syda Productions/Shutterstock

The health-related dimensions of physical fitness are directly associated with good health. The six dimensions of health-related physical fitness are body composition, cardiorespiratory endurance, flexibility, muscular endurance, power, and strength (see Figure 5). All health-related fitness dimensions have a direct relationship to good health and reduced risk for hypokinetic diseases. This is why they are emphasized in personal fitness programs.

Possessing a moderate amount of each dimension of health-related fitness is essential to disease prevention and health promotion, but it is not essential to have exceptionally high levels of fitness to achieve health benefits. High levels of health-related fitness relate more to performance than to health benefits. For example, moderate amounts of strength are necessary to prevent back and posture problems, whereas high levels of strength contribute most to improved performance in activities such as football and jobs involving heavy lifting.

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VIDEO 5

The skill-related dimensions of physical fitness are associated more with performance than with good health. The dimensions of skill-related physical fitness are agility, balance, coordination, reaction time, and speed (see Figure 6). They are called skill-related because people who possess them find it easy to achieve high levels of performance in motor skills, such as those required in sports and in specific types of jobs. Power, a dimension that requires both strength and speed, was formerly considered a skill-related dimension of fitness, but new evidence has linked power with good health.

Skill-related fitness has been called “sports fitness” or “motor fitness,” but note that it is multidimensional and highly specific. For example, coordination could be hand-eye coordination, such as batting a ball; foot-eye coordination, such as kicking a ball; or many other possibilities. The five dimensions of skill-related fitness identified here are those commonly associated with successful sports and work performance. Additional information and self-assessments on skill-related fitness are included in later Concepts to help you understand the nature of total physical fitness and make important decisions about lifetime physical activity.

Physical Fitness The body’s ability to function efficiently and effectively. It consists of at least 11 health-related physical fitness and skill-related physical fitness components, each of which contributes to total quality of life. Physical fitness also includes metabolic fitness and bone integrity. Optimal physical fitness is not possible without regular exercise.

Hypokinetic Diseases or Conditions *Hypo-* means “under” or “too little,” and *-kinetic* means “movement” or “activity.” Thus, *hypokinetic* means “too little activity.” A hypokinetic disease or condition is one associated with lack of physical activity or too little regular exercise. Examples include heart disease, low back pain, Type 2 diabetes, and obesity.



Figure 5 ► Dimensions of health-related physical fitness.

(Body Composition): Comstock/Getty Images; (Muscular Endurance): Thinkstock Images/Stockbyte/Getty Images; (Cardiorespiratory Endurance): Stockbyte/Getty Images; (Strength): Monkey Business Images/Shutterstock; (Power): Ryan McVay/Getty Images; (Flexibility): Tom Grill/Corbis/Getty Images



Figure 6 ► Dimensions of skill-related physical fitness.

(Agility): Karl Weatherly/Getty Images; (Reaction Time): John Lund/Drew Kelly/Blend Images LLC; (Coordination): Karl Weatherly/Getty Images; (Speed): CS Productions/Jupiterimages/Brand X/Alamy Stock Photo; (Balance): Mangostar/Shutterstock

Metabolic fitness is a nonperformance dimension of total fitness. Physical activity can provide health benefits that are independent of changes in traditional health-related fitness measures. Physical activity promotes good **metabolic fitness**, a state associated with reduced risk for many chronic diseases. People with a cluster of low metabolic fitness characteristics are said to have metabolic syndrome (also known as Syndrome X). Metabolic syndrome is discussed in more detail in a later Concept.

Bone integrity is often considered to be a nonperformance measure of fitness. Traditional definitions do not include bone integrity as a part of physical fitness, but some experts feel they should. Like metabolic fitness, bone integrity cannot be assessed with performance measures the way most health-related fitness parts can. Regardless of whether bone integrity is considered a part of fitness or a component of health, strong, healthy bones are important to optimal health and are associated with regular physical activity and sound diet.

The many components of physical fitness are specific but are also interrelated. Physical fitness is a combination of several aspects, rather than a single characteristic. A fit person possesses at least adequate levels of each of the health-related, skill-related, and metabolic fitness components. Some relationships exist among various fitness characteristics, but each component of physical fitness is separate and different from the others. For example, people who possess exceptional strength may not have good cardiorespiratory endurance and those who have good coordination do not necessarily possess good flexibility.

Functional fitness is important for people of all ages. **Functional fitness** refers to the ability to perform activities of daily life. For adults, this includes performing work and household tasks as well as leisure activities without undue

fatigue. It also includes having adequate fitness to meet the demands of emergency situations. For youth, functional fitness includes the ability to function in school and leisure activities without undue fatigue. For older adults, functional fitness plays key roles in enabling independence and in minimizing risks of falls.

Good physical fitness is important, but it is not the same as physical health and wellness. Good fitness contributes to the physical dimension of health and wellness by reducing risk for chronic diseases and by reducing the consequences of many debilitating conditions. Good fitness also contributes indirectly to other dimensions by helping us look our best, feel good, perform daily tasks, and enjoy life. However, other physical factors can also influence health and wellness. For example, having good physical skills enhances quality of life by allowing us to participate in enjoyable activities, such as tennis, golf, and bowling. Although fitness can assist us in performing these activities, regular practice is also necessary. Another example is the ability to fight off viral and bacterial infections. Although fitness can promote a strong immune system, other physical factors can influence our susceptibility to illness.

Using Self-Management Skills

Self-assessment is one of many self-management skills that can be learned to enhance lifelong healthy behaviors. Skills refer to the abilities you need in order to perform a specific task. Serving a tennis ball or typing on a computer are examples of physical or motor skills. Solving a math problem is an example of a mental or cognitive skill. A different set of skills—known as self-management skills—helps you adopt behaviors to enhance lifelong health, wellness, and fitness. *Self-assessment* (a specific self-management skill) refers to the ability to collect and evaluate personal information that will help you create a plan for improving your health, wellness, and fitness. You will conduct a variety of self-assessments as you work your way through this edition. For example, you will complete assessments for each dimension of health-related fitness and answer questionnaires to determine your wellness status, risk factors, attitudes, and health behavior patterns. To most effectively use self-assessments, consider the following guidelines:

- **Follow the same procedures each time you self-assess.** Read and follow the instructions to know how to do a self-assessment properly. Having written descriptions of the best way to perform an assessment reminds you of the proper techniques for assessment. Heeding an instructor's advice and following written descriptions of assessments helps ensure that each assessment is done the same way.
- **Use the same equipment or questionnaire each time you self-assess.** For example, when assessing your weight, use the same scale every time. Even if the scale isn't



There are many ways to train to improve functional fitness.
Rido/Shutterstock



Technology Update

Health Websites and Podcasts

The Internet provides a tremendous number of sources of information about health, wellness, and fitness. However, all online sources are not equally credible or useful. The best way to get accurate information is to use reliable sources. Focus on government agencies (.gov), prominent medical and public health associations, and established nonprofit agencies (.org). The first sites that come up in searches may not be the best, so check the source. A brief list of some prominent and credible Internet sites is provided below. Additional organizations and websites are referenced in other sections.

- Academy of Nutrition and Dietetics (AND)
- American College of Sports Medicine (ACSM)
- American Council on Exercise (ACE)
- American Heart Association (AHA)
- American Medical Association (AMA)
- Center for Science in the Public Interest
- Centers for Disease Control and Prevention (CDC)
- Federal Trade Commission (FTC)
- Food and Drug Administration (FDA)
- Institute of Medicine (IOM)
- International Food Information Council (IFIC)
- Johns Hopkins Health
- Mayo Clinic Health Letter
- MedlinePlus
- National Institutes of Health (NIH)
- Pew Research Center—Health
- U.S. Consumer Information Center
- U.S. Department of Agriculture (USDA)
- WebMD
- World Health Organization (WHO)

Searching for websites or podcasts using generic terms (e.g., “health” or “fitness”) will likely reveal many commercial links and sites with inaccurate or fraudulent information. Thus, when searching online, pair your search topic with the name of a credible organization (such as “vaccines and CDC” or “food allergies and International Food Information Council”). This will focus your search and lead to more credible sources.

Do you consider the quality of sources when you access health-related information on the Internet? What features should you look for to ensure credibility?

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completely accurate, using the same scale helps you record fluctuations in weight over time. When assessing wellness with a questionnaire, use the same form each time to achieve consistent comparisons.

- **Practice.** Like all skills, self-assessment skills can be improved with practice. For example, if you regularly assess your fitness, you will get better at it and achieve more consistent results.
- **Be honest with yourself.** Many self-assessments require you to provide personal answers to questions. The results of your self-assessments are for your own use in establishing baseline information so that you can determine if you are improving your health, wellness, and fitness over time. The results will be meaningful only if you provide honest answers.

Use good consumer skills to evaluate information you read and hear about health, wellness, and fitness. The popularity and importance of health-related issues in our society make consumers vulnerable to misinformation, quackery, and fraud. A key to reducing your risk and to advancing your knowledge is to use good sources of information. See Technology Update for information about sound health-related websites.



Strategies for Action: Lab Information

An initial self-assessment of your wellness will provide information for future self-comparison.

In Lab 1A, you will estimate your wellness using a Wellness Self-Perceptions Questionnaire, which assesses the five wellness dimensions. Assessing each dimension will help you see areas of strengths and weaknesses and determine areas of priority as you set goals and make plans for improving. Answering the same questions at a later date can help you see if you have made progress. As each person makes progress toward improving wellness, collectively we move closer to the *Healthy People* goal of living long, high-quality lives.

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Metabolic Fitness A positive state of the physiological systems commonly associated with reduced risk for chronic diseases such as diabetes and heart disease. Metabolic fitness is evidenced by healthy blood fat (lipid) profiles, healthy blood pressure, and healthy blood sugar and insulin levels.

Functional Fitness The ability to perform activities of daily life.

Suggested Resources and Readings

The websites for the following sources can be accessed by searching online for the organization, program, or title listed. Specific scientific references are available at the end of this edition of *Concepts of Fitness and Wellness*.

- American College of Sports Medicine. (2020). *ACSM American Fitness Index: Actively Moving America to Better Health*. (pdf)
- Centers for Disease Control and Prevention. Well-Being Concepts.
- Centers for Disease Control and Prevention. About the National Health Information Survey.
- Central Intelligence Agency. (2020). *The World Factbook*. Washington, DC: Author.
- Johns Hopkins Medicine. (2018). *Reliable Health Information on the Internet*. (pdf)
- National Academies of Sciences, Engineering, and Medicine. (2019). *Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health*. Washington, DC: National Academies Press.
- National Institutes of Health. MedlinePlus.
- Office of Disease Prevention and Health Promotion. Development of Healthy People 2030.
- Sharecare. Well-Being Index.
- Trust for America's Health. "The Impact of Chronic Underfunding on America's Public Health System: Trends, Risks, and Recommendations, 2020."
- U.S. Department of Health and Human Services. MyHealthfinder.
- U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. Health Literacy.
- U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. *Healthy People 2030*. Social Determinants of Health.
- World Health Organization. World Health Statistics 2020.

Design Element: (*magnifying glass*): Siede Preis/Getty Images; (*runners shoes*): Maridav/Getty Images; (*tablet*): McGraw Hill; (*woman*): GlobalStock/Getty Images; (*blue sports shoes*): chictype/Getty Images; (*smartphone*): Alexey Boldin/Shutterstock; (*Why It Matters*): MHHE

Lab 1A Wellness Self-Perceptions

Name

Section

Date

Purpose: To assess self-perceptions of wellness.

Procedures

1. Place an X over the appropriate circle for each question (4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree).
2. Write the number found in that circle in the box to the right.
3. Sum the three boxes for each wellness dimension to get your wellness dimension totals.
4. Sum all wellness dimension totals to get your comprehensive wellness total.
5. Use the rating chart to rate each wellness area.
6. Complete the Results section and the Conclusions and Implications section.

Question	Strongly Agree	Agree	Disagree	Strongly Disagree	Score
1. I am physically fit.	4	3	2	1	
2. I am able to perform the physical tasks of my work.	4	3	2	1	
3. I am physically able to perform leisure activities.	4	3	2	1	
Physical Wellness Total					=
4. I am happy most of the time.	4	3	2	1	
5. I have good self-esteem.	4	3	2	1	
6. I do not generally feel stressed.	4	3	2	1	
Emotional/Mental Wellness Total					=
7. I am well informed about current events.	4	3	2	1	
8. I am comfortable expressing my views and opinions.	4	3	2	1	
9. I am interested in my career development.	4	3	2	1	
Intellectual Wellness Total					=
10. I have many friends and am involved socially.	4	3	2	1	
11. I have close ties with my family.	4	3	2	1	
12. I am confident in social situations.	4	3	2	1	
Social Wellness Total					=
13. I am fulfilled spiritually.	4	3	2	1	
14. I feel connected to the world around me.	4	3	2	1	
15. I have a sense of purpose in my life.	4	3	2	1	
Spiritual Wellness Total					=
Comprehensive Wellness (Sum of five wellness scores)					

Results (Record your scores from the previous page; then determine your ratings from the Wellness Rating Chart).

Wellness Dimension	Score	Rating
Physical		
Emotional/mental		
Intellectual		
Social		
Spiritual		
Comprehensive		

Wellness Rating Chart

Rating	Wellness Dimension Scores	Comprehensive Wellness Scores
High-level wellness	10–12	50–60
Good wellness	8–9	40–49
Marginal wellness	6–7	30–39
Low-level wellness	Below 6	Below 30

Conclusions and Implications: Rank each dimension of wellness. Place a 1 by the dimension you need to work on most and a 2 by the dimension needing the next most work. Rank the others as 3, 4, and 5. Then in the box below, briefly discuss your wellness ratings. Comment on your current level of wellness and dimensions that could use improvement.

☐

Physical

☐

Emotional/mental

☐

Intellectual

☐

Social

☐

Spiritual

Determinants of Lifelong Health, Wellness, and Fitness

LEARNING OBJECTIVES


After completing the study of this Concept, you will be able to:

- ▶ Identify the determinants of health, wellness, and fitness, and explain how they each contribute to health, wellness, and fitness.
- ▶ Differentiate between factors over which you have lesser and greater control.
- ▶ Use health behavior change strategies to carry out self-assessments of personal lifestyles and wellness perceptions.

Many factors contribute to health, wellness, and fitness, and some are more in your control than others.

Michael Reusse/Westend61/Getty Images





Why It Matters!

Your health, wellness, and fitness are influenced by many factors, often referred to as *determinants*. You have more control over some determinants than others. Recent public health efforts have focused attention on underlying “social determinants of health” that contribute to health disparities in society. However, regardless of your situation or environment, there are personal actions that you can take to adopt and sustain healthy lifestyles. Ultimately, you are responsible for the people you interact with, the choices you make, and how you use your time and energies. Fortunately, self-management skills and healthy habits can be learned and practiced. In this Concept, you will learn about the various determinants and how to prioritize them to improve personal health, wellness, and fitness.

Determinants of Health, Wellness, and Fitness

Many factors are important in developing lifetime health, wellness, and fitness, and some are more in your control than others. A factor that significantly affects your health, wellness, and fitness is referred to as a **determinant**. Three major categories of determinants are listed in Figure 1. Biological factors, such as heredity, age, and sex, are shown at the bottom of the figure because they are determinants over which we have little or no control. The Centers for Disease Control and Prevention (CDC) has also emphasized the importance of various social determinants of health in public health guidelines. They are positioned at mid-level in Figure 1 because you may only have limited control over some of them (e.g., health care, education). Lifestyle

connect
VIDEO 1

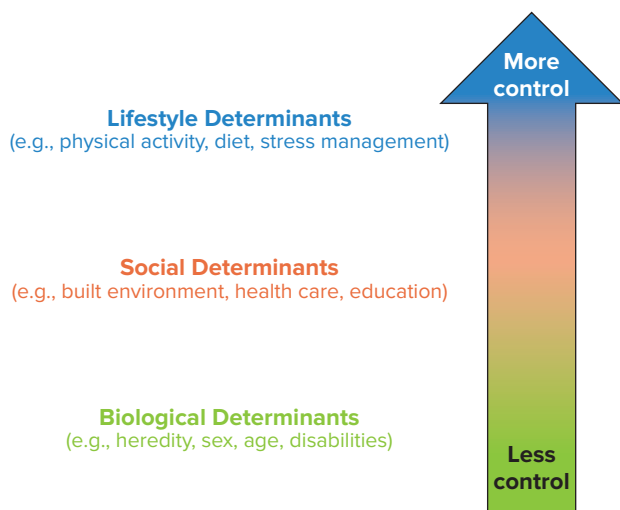


Figure 1 ► Determinants of health, wellness, and fitness.

determinants are listed at the top of Figure 1. These include priority lifestyles such as being physically active, eating well, and managing stress. Lifestyle determinants are shown at the top of the figure because you have the greatest amount of control over these factors. The contributions from each of the determinants are described in subsequent sections along with insights on how they interact to influence health, wellness, and fitness. You can benefit from a knowledge of how biological determinants influence your health. You can also learn to take control over various social and lifestyle determinants by practicing and applying the **self-management skills** covered throughout this edition.

Biological Determinants

Heredity (human biology) is a determinant over which we have little control. Experts estimate that human biology, or heredity, accounts for 16 percent of all health problems, including early death. Heredity influences each dimension of health-related physical fitness, including our tendencies to build muscle and to deposit body fat. Based on their genetics, individuals also respond and adapt differently to healthy lifestyles. Even more important is that predispositions to certain diseases are inherited. Some hereditary conditions are untreatable (e.g., congenital heart defects) while others are manageable with proper medical supervision and appropriate lifestyles (e.g., diabetes). Heredity is clearly a determinant over which you have no control over, but you can take some preventive steps by being aware of your family history and by making efforts to manage factors that you can control.

Health, wellness, and fitness are influenced by your biological sex assignment at birth. Consistent with American Psychological Association (APA) terminology, the



Technology Update

Genetic Testing

The interaction among our genes, environments, and lifestyles is extremely complex and the science is still evolving. While your genes do not directly *cause* you to get a disease, they can influence your risks of developing them. Many companies offer genetic testing to identify potential risks as well as produce ancestral profiles based on DNA. However, some researchers and experts have questioned the validity or utility of the profiles. (See Suggested Resources and Readings.)

Do you see value in DNA testing to identify your potential risks, or would you prefer to just focus on what you can control and not worry about things that can't be changed?

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term *sex* refers to a person's sex assignment at birth. Epidemiological evidence indicates that one's sex and related biological characteristics affect disease and early mortality risk. Thus, age and sex are commonly used for evaluating fitness and health status, including various labs and activities in this edition. The fitness ratings are intended to help you determine the level of fitness necessary to achieve good health and reduce disease risk. Your sex influences how much fitness is needed for good health, but, as the APA indicates, not all people identify with their sex assignment at birth. The APA describes other important terms including *gender* ("the attitudes, feeling, and behaviors that a given culture associates with a person's biological sex") and *gender identity* ("the component of gender that describes a person's sense of their gender"). The APA emphasizes that it is important for people to be free to use the terms of their choice to describe themselves and that care should be taken by all when using pronouns in conversation. The fitness rating charts in this edition use both age and sex assignment at birth (male/female) to aid you in making informed decisions about health fitness status and are not meant to refer to a preferred gender identity.

Health, wellness, and fitness are influenced by age, but healthy lifestyles can delay and moderate the effect. In 2030, when all of the post-World War II baby boomers will be over the age of 65, adults 65 or older will make up 20 percent of the population. The number of people over 85 will triple by 2050. Data also indicate that there are more than 100,000 people over the age of 100 in the United States. The definition of *old* is clearly relative to your personal age, but societal perceptions of what constitutes "old age" are also changing. One survey reported that 25 percent of the population view that old age doesn't begin until a person hits 80 years or more.

Age is clearly a factor over which we have no control and it does directly influence our health status. The major health and wellness concerns of older adults include losing health, losing the ability to care for oneself, losing mental abilities, running out of money, being a burden to family, and being alone. Chronic pain is also a major problem among older adults with nearly 30 percent of adults over 65 experiencing chronic pain, as opposed to 3 percent of those under 30. The important message is that healthy lifestyles can dramatically reduce the effects of aging on health, wellness, and fitness. Thus, it is important to adopt and maintain healthy lifestyles to somewhat counter "normal" aging effects.

Disabilities can affect, but do not necessarily limit, health, wellness, and fitness. Disabilities typically result from factors beyond your control. Many types of disabilities affect health, wellness, and fitness. An objective disability (e.g., loss of a limb, impaired intellectual functioning) can make it difficult to function in certain circumstances but need not limit health, wellness, and fitness. All people have a limitation of one kind or another. Societal efforts to help all



Disabilities need not limit one's ability to experience an active, fulfilling life.

PhotoAbility/Blend Images

people function within their limitations can help everyone, including people with disabilities, have a positive outlook on life and experience a high quality of life.

Social Determinants

Social determinants of health contribute to health disparities in society. Social determinants of health (SDH) are defined by the CDC and the public health service as "the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks." It is now well established that differences in these fundamental determinants contribute to the social, racial, and cultural disparities and inequities in public health. The five established dimensions of SDH include economic stability, education, the built environment, the community context, and health care (see left side of Figure 2) .

Determinant Various biological, social, environmental, or life-style factors that influence health status.

Self-Management Skills Skills that can be learned to support healthier decisions and adoption of healthier behaviors.

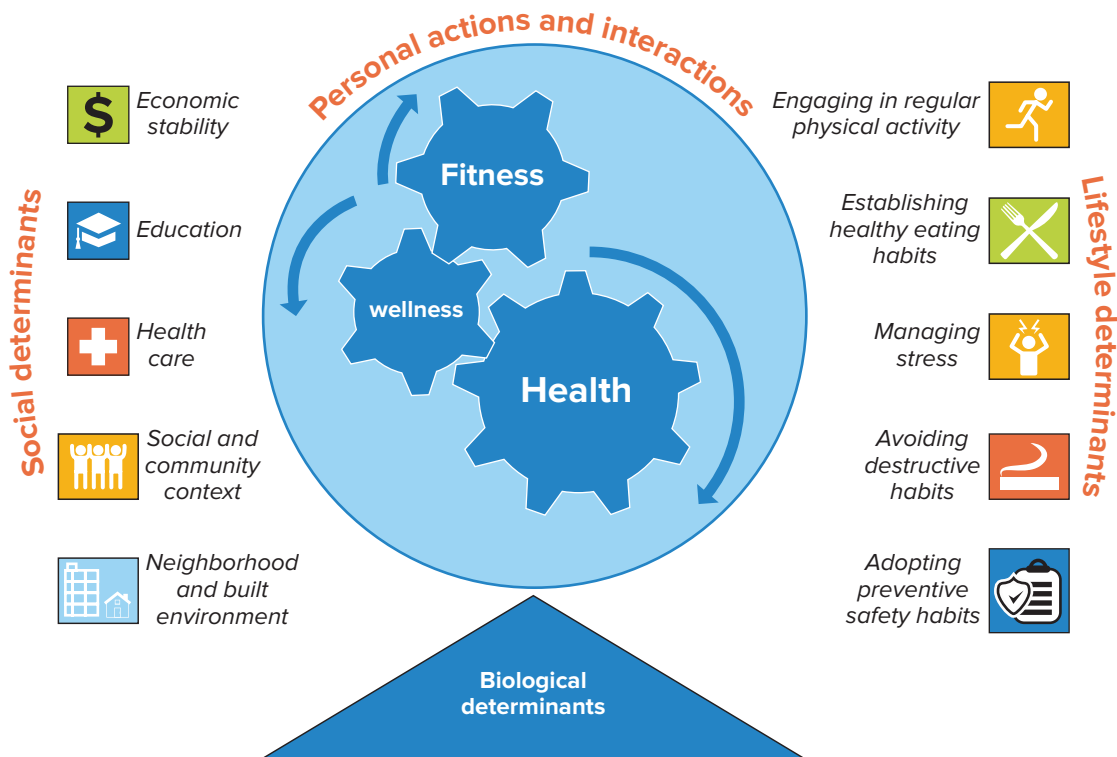


Figure 2 ► Influence of personal actions and interactions on health, wellness, and fitness.

The health-care system affects our ability to overcome illness and improve our quality of life. Approximately 10 percent of unnecessary deaths occur as a result of disparities in the health-care system. The quality of life for those

who are sick and those who tend to be sick is influenced greatly by the type of medical care they receive. As indicated in Figure 2, health care is a social determinant, one that is not equally available to all. Each year, thousands of people die because they lack health insurance. Uninsured individuals may not seek health care, and the quality of the care they do receive may not be high. Chronic conditions that go undetected can become untreatable or lead to additional complications. The passage of the Patient Protection and Affordable Care Act (shortened to the Affordable Care Act, or ACA) addressed this issue by enabling all Americans to have access to health insurance. According to the National Center for Health Statistics, the number of uninsured Americans dropped from 16 percent in 2010 to all-time lows in 2016. The percentage of uninsured American's is currently about 8.5 percent.

Even with coverage, many people fail to seek medical help when warranted, and others fail to follow medical advice. For example, they do not take prescribed medicine or do not follow up with treatments. Males are less likely to seek medical advice than females, and this is a problem since some treatable conditions lead to bigger problems or become untreatable over time. This is why it is important to follow recommendations for regular screenings and seek medical advice when warranted.

Wellness as evidenced by quality of life is also influenced by the health-care system. Traditional medicine, sometimes

HELP

**Health is available to Everyone
for a Lifetime, and it's Personal**

Social Determinants and Social Justice

The *Healthy People 2030* goals chart a new path for public health by increasing the focus on social determinants of health. The prioritization recognizes the greater challenges that some segments of the population have in accessing health care or in adopting healthy lifestyles. Addressing these inequities will require major changes in various systems and our society overall. The challenges parallel the need for systemic changes to address other social justice and equity issues in our society. (See Suggested Resources and Readings.)

The HELP philosophy emphasizes that health, wellness, and fitness are for everyone. Do you take aspects of your environment, health care, and your opportunities for granted? Do you think the focus on social determinants will help promote better equity in health?

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VIDEO 2

referred to as the **medical model**, has focused primarily on the treatment of illness with medicine, rather than illness prevention and wellness promotion. Strategies built into the ACA have placed greater emphasis on promoting healthy lifestyles within the health-care system. Examples include enhanced access to clinical preventive services, stronger referral networks to community programs, and incentives for prevention and wellness programs in the private sector. While you don't have full control over your access to quality medical care, you do have some control over your decisions to seek and follow medical advice.

The built environment and social/community context interact to influence health, wellness, and fitness. Environmental determinants account for nearly one-fourth of all early deaths and affect quality of life in many ways. While there are many facets of the environment, the notion of the *built environment* has been emphasized by public health leaders as an important predictor of lifestyle behaviors and health. The built environment includes the availability of services such as transportation, parks and trails, and food stores. Social and community context is also important and includes factors such as density of housing and neighborhood safety, as well as cohesiveness within the community.

While you don't have complete control over the built environment around you, you do have some control over how you interact with your environments and the extent with which you take advantage of available opportunities. You can seek out healthy environments that enable you to be more active or to eat healthier. You can also look to avoid unhealthy or unsafe environments. Many people actively consider aspects of their environment when considering places to live or work since it has such a strong influence on their lifestyle. Circumstances may make your preferred choices impossible, but it is important to at least be aware of the impact that your environment and the social context have on your health as well as your social, spiritual, and intellectual well-being.



The built environment influences where and how you can be active.
FatCamera/Getty Images

Lifestyle Determinants

Your lifestyle has the most direct impact on your health and well-being. Lifestyles are more than just the way we spend our time. While lifestyles can be described simply as “patterns of living,” the definition in this book (behaviors we adopt based on the context of our life circumstances) carries additional meaning. It emphasizes personal control with the use of the word *adopt*, but it also recognizes that your life circumstances can dictate your behaviors. The WHO definition of lifestyles takes an additional step by describing lifestyles as a “way of living based on identifiable patterns of behavior which are determined

Medical Model The focus of the health-care system on treating illness with medicine, with little emphasis on prevention or wellness promotion.

Lifestyles Patterns of behavior adopted within the context of personal life circumstances.



In the News

International Health Rankings

Although the United States is one of the wealthiest countries in the world, it is far from the healthiest. According to the Bloomberg Global Health Index, Americans are less healthy than people in 34 other developed countries. (Spain and Italy ranked number 1 and number 2; Canada ranked number 16.) This is attributed to a number of factors, including access to health care, environment (e.g., clean water, safe environment, economic

equity), and lifestyles (e.g., sound nutrition, active living, low incidence of drug abuse). (See Suggested Resources and Readings.)

What do you think is the most significant barrier to health in the United States? Based on the factors mentioned, do you think the United States will go up or down in future rankings and why?

by the interplay between an individual's personal characteristics, social interactions, and socioeconomic and environmental living conditions." Regardless of the definition, it is important to take control over your own lifestyle as much as possible to ensure that it guides you toward good health, wellness, and fitness. The five categories of lifestyle behaviors emphasized in this edition are engaging in regular physical activity, establishing healthy eating habits, managing stress, avoiding destructive habits, and adopting preventive safety habits (see Figure 2).



Physical activity is the behavior that contributes to improvements in physical fitness, but a broader array of lifestyle behaviors influences your overall health and wellness. The CDC uses the term *health-related quality of life* to describe the wellness benefits that result from healthy lifestyles. Public health efforts are similarly focused on enhancing the quality of life as well as the quantity. Thus, well-being, or wellness, is associated with optimal social, emotional/mental, intellectual, spiritual, and physical health.

Lifestyle choices impact risks for disease and early death. Statistics show that more than half of early deaths are the result of chronic diseases caused by unhealthy lifestyles. Scientific advances and improvements in medicine and health care have dramatically reduced the incidence of infectious diseases over the last century (see Table 1). Diphtheria

and polio, both major causes of death in the 20th century, have been virtually eliminated in Western culture. Smallpox was globally eradicated in 1977. In large measure, infectious diseases have been replaced with chronic lifestyle-related conditions as the major causes of death. Four of the top eight current causes of death (heart disease, cancer, stroke, and diabetes) fall into this category. While heart disease remains the leading killer among all adults, cancer is the leading cause for some regions and segments of the population. Until the COVID-19 outbreak, suicide was ranked 10th among leading causes of death. Six of the top ten showed recent reductions in death rates. Suicide and influenza/pneumonia were the only ones that showed increases (diabetes and kidney diseases were unchanged).

In spite of medical advances that have reduced deaths from infections, influenza and pneumonia have remained a leading killer in the United States especially among older individuals, minorities, and low-income groups. New or novel infectious diseases have affected death rates in the United States and worldwide. For example, the novel COVID-19 virus resulted in high death rates, moving it into the top 10 (number 3 in 2020). During several months in 2020 and 2021, COVID-19 was the leading cause of death. In 2020 the average life expectancy of Americans dropped by more than



A CLOSER LOOK

Lifestyles and COVID-19

The COVID-19 pandemic revealed the important, but sometimes subtle, ways our lifestyles influence our health and well-being. Evidence accumulated quickly that older individuals and those with obesity or chronic diseases were more susceptible to COVID-19 than younger and healthier individuals. This is because underlying conditions made it harder for the body to battle the virus and less able to withstand the challenge. Research has directly documented that regular physical activity and healthy diets both improve immune function. Maintaining these habits reduces risk of chronic diseases and also enhances your body's ability to fight off microbial agents such as COVID-19. Prior to 2020, microbial agents accounted for less than 1 to 2 percent of deaths, but the impact of COVID-19 is certainly much greater. While many were able to fight off COVID-19, experts warn that we will likely face similar pandemics in the future.

How has the COVID-19 pandemic influenced your perceptions of personal health and lifestyle behaviors?



Table 1 ► Major Causes of Death in the United States (Based on 2020 Rankings)

Current Rank	Cause	1900 Rank	Cause
1	Heart disease	1	Pneumonia*
2	Cancer	2	Tuberculosis*
3	COVID-19*	3	Diarrhea/enteritis*
4	Unintentional injuries	4	Heart disease
5	Respiratory diseases	5	Stroke
6	Stroke	6	Liver disease
7	Alzheimer disease	7	Injuries
8	Diabetes	8	Cancer
9	Influenza/pneumonia*	9	Senility
10	Kidney disease	10	Diphtheria*

*Infectious diseases

Source: Data from the Centers for Disease Control and Prevention (CDC).

one year, to a rate that is the lowest in 15 years. As with the flu and pneumonia, older adults, minorities, and low-income groups had higher death rates from COVID-19. For example, life expectancy dropped by nearly two years for Hispanics and nearly three years for African Americans as a result of COVID-19. It is anticipated that COVID-19 will drop out of the top 10 as more people are vaccinated and other preventive methods and treatments are made available. The shifts are similar to those observed with HIV in the 1980s and 1990s when it was among the top 10 causes of death. It later dropped out of the top 10 list because of anti-retroviral treatments, early detection, and increased prevention methods.

Lifestyles interact to influence health and well-being.

Although your lifestyle captures a constellation of different behaviors, some are more important than others. A report from the National Research Council and the National Academy of Medicine determined that nearly half of all deaths can be attributed to lifestyles. Inactivity and poor nutrition (combined) were identified as the leading actual cause of preventable death based on this analysis. These behaviors were likely combined since they interact to impact risks for obesity and many other chronic diseases. Tobacco use had previously been the leading cause of actual death but is now the second leading cause. Other destructive habits such as alcohol misuse, illicit drug use, and unsafe sexual behavior were also identified as prominent causes. Accidents due to firearms, toxic agents, and motor vehicles account for other premature deaths, but these may be linked to alcohol, drugs, or poor decision making.

Establishing healthy habits is important for long-term effects.

Habits reflect behaviors that have become automatic or habitual. Habits can be formed for many behaviors, but Table 2 lists 10 important lifestyle habits that impact health. Emphasis in this book is on **habit formation** in three “priority” lifestyles: engaging in regular physical activity, establishing healthy eating habits, and managing stress. There are several reasons for placing priority on these lifestyles. First, they affect the lives of all people. Second, they are lifestyles in which large numbers of people can make improvement. Finally, modest changes in these behaviors can make dramatic improvements in individual and public health. Avoiding destructive habits and adopting preventive safety habits are also important but do not affect everyone as much as the first three in the table. The last five habits in Table 2 capture overall health habits that also support and enhance healthy living: social habits, prevention habits, medical habits, consumer habits, and environmental habits. Although many healthy lifestyles will be discussed in the Concepts that follow, we will focus on priority healthy lifestyles because virtually all people can achieve positive wellness benefits if they adopt and sustain them (as habits).



Physical activity A behavior that involves human movement and that results in physiological attributes including increased energy expenditure and improved physical fitness.

Habit Formation The process of making lifestyle decisions and behaviors more automatic and sustainable.

Table 2 ► Habits for Optimal Health

Types of Habits	Description
Physical Activity Habits	Finding ways to get regular physical activity
Nutrition Habits	Making healthy food choices
Stress Management Habits	Coping with stressful situations
Destructive Habits	Avoiding tobacco, drugs, and excessive alcohol
Safety Habits	Adopting safe practices and making safe decisions
Social Habits	Seeking out positive influences and social support
Prevention Habits	Following recommended health practices
Medical Habits	Adhering to screening guidelines/Following medical advice
Consumer Habits	Making informed choices about health, wellness, and fitness
Environmental Habits	Supporting conservation and healthy environments

Determinant Interactions

Determinants interact to influence your health, wellness, and fitness. The different determinants illustrated in Figure 2 interact to influence your health, wellness, and fitness. Biological, social, and lifestyle determinants do not operate in a vacuum. Each is influenced by the others.



Cognitions and emotions influence the choices you make. Humans have the ability to think (cognitions) and to use critical thinking to make informed choices. For example, you can use your cognitive abilities to learn about your family history and use that information to limit the negative influences of heredity. You can learn how to adapt to disabilities and personal limitations, as well as to the aging process. You can research the health-care system and seek out healthy opportunities and options even in unhealthy environments. While cognitions can be logical, we are also dramatically influenced by our moods and emotions. Learning to manage and regulate emotions is an important behavioral skill since emotions can cloud our cognitions and lead to poor decisions. Emotions also affect personal actions and interactions. A major goal of *Concepts of Fitness and Wellness* is to help you use your cognitive abilities to solve problems and make good decisions about your health, wellness, and fitness, as well as to help you be in control of your emotions when taking action and making decisions that affect your health.

Personal actions and interactions directly influence your health, wellness, and fitness. While you have no control over heredity, age, and disability (and limited control over health care and the environment), you can act (and interact) in ways to positively influence your lifestyle. Learning how to focus and prioritize your energies and actions is an important life skill and it also influences your health and well-being. Our interactions with others influence our lifestyles and the choices we make. The spread of COVID-19 dramatically illustrated how our personal actions and interactions influence each other. While you can't control all interactions, you have a choice about the environments in which you place yourself and the people with whom you interact.

Using Self-Management Skills

Manage your personal actions and interactions to overcome barriers to healthy living. There are many reasons why people with good intentions fail to be active or fail

to adhere to healthy lifestyles. In this Concept, you learned that environments can either enhance or inhibit healthy behaviors. However, by planning ahead, you can take steps to address barriers and challenges imposed by your environment and become physically active.

- **Find convenient and safe places to be physically active.** Safety is a major deterrent to walking and biking for some people, but many communities have websites that provide information about safe places to participate in sports and active recreation. Search online for information about bike, walking, or jogging paths and well-lighted parks for evening activity.
- **Consider walking inside when the weather is bad.** Extremely cold or hot weather can be a significant barrier to being active. However, malls and stores can be alternative places to walk that are safe and climate controlled.
- **Advocate for safe and healthy environments.** Taking control over your health often necessitates being an advocate for change. The results may not be immediate, but advocating for parks or biking paths can lead to better opportunities for physical activity. Requesting healthier food choices at restaurants or grocery stores can also lead to gradual shifts in what is promoted or available.



Natural areas and trails are great places for healthy recreation and relaxation.

Prostock-Studio/iStock/Getty Images

Use self-management skills to adopt and sustain a variety of healthy lifestyles. Consider how to apply these specific self-management skills to help take positive actions related to health, wellness, and fitness.

- **Manage your time effectively.** Lack of time due to busy school and work schedules may make being physically active and eating healthfully a challenge. Thus, it is important to use time wisely. Time management is a skill that can be learned to help you manage your lifestyle *and* your stress. In a later Concept, you will learn specific techniques for managing time.
- **Get help and social support from friends, family, and/or experts.** Research shows that support from others can be helpful to eating healthfully, performing regular

exercise, and adopting other healthy lifestyles. However, friends and family may not know of your interests or values regarding health and wellness. Thus, it is important to manage your personal interactions. Also, sometimes the help of an expert may be necessary. Specific information about finding help is provided in many of the Concepts.

- **Build knowledge by learning the facts.** There is considerable misinformation on the Internet and in the media, so it is important to be an informed consumer. Too often people fall prey to health fraud because they lack good information. Learning facts can help you “do it right” and avoid failure resulting from trying things that are not based on solid research.



Strategies for Action: Lab Information

Self-assessments of lifestyles will help you determine areas in which you may need changes to promote optimal health, wellness, and fitness. The Healthy Habit Questionnaire in Lab 2A will help you

assess your current lifestyle behaviors to determine if they are contributing positively to your health, wellness, and fitness. As you continue your study, refer back to this questionnaire to see if your lifestyles have changed.

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ACTIVITY

Suggested Resources and Readings

The websites for the following sources can be accessed by searching online for the organization, program, or title listed. Specific scientific references are available at the end of this edition of *Concepts of Fitness and Wellness*.

- Centers for Disease Control and Prevention. Health-Related Quality of Life.
- Centers for Disease Control and Prevention. Health, United States.
- Centers for Disease Control and Prevention. Healthy Places.
- Centers for Disease Control and Prevention. *Impact of the Built Environment on Health*. (pdf)
- Johns Hopkins Medicine. Johns Hopkins Medicine Podcasts.
- National Academies of Science, Engineering and Medicine. National Academies Press. Coronavirus Resources Collection. (pdfs)
- National Academies of Science, Engineering and Medicine. *Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health*. Washington, DC: National Academies Press.
- National Academy of Medicine. *Perspectives on Health Equity and Social Determinants of Health*. Washington, DC: National Academies Press. (pdf)
- National Institutes of Health. MedlinePlus. Genetic Testing.
- National Institutes of Health. MedlinePlus. "What Is Genetic Ancestry Testing?"
- National Research Council and Institute of Medicine. *U.S. Health in International Perspective: Shorter Lives, Poorer Health*. Washington, DC: National Academies Press.
- National Research Council and Institute of Medicine. *Measuring the Risks and Causes of Premature Death: Summary of Workshops*. Washington, DC: National Academies Press.
- U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. *Healthy People 2030*. Social Determinants of Health.
- WorldHealth.net. Bloomberg's Global Health Index for 2020.

Lab 2A Healthy Habit Questionnaire

Name

Section

Date

Purpose: To assess the current status of various lifestyle behaviors and to help you make decisions concerning good health and wellness for the future.

Procedures

1. Complete the Healthy Habit Questionnaire by answering “Almost Never,” “Sometimes,” or “Almost Always” to each of the questions. If your behavior is not consistent, or you feel you are between the extremes, then choose the middle option (“Sometimes”).
2. For each of the 10 lifestyle habits, sum the scores in the adjacent Total box.
3. Sum the 10 composite scores to create a Total Lifestyle Rating.
4. Record your scores in the Results section.
5. Use the Healthy Habit Rating Chart to determine your ratings. Add the ratings to the Results section.
6. Answer the question in the Conclusions and Implications section.

Results

Lifestyle Behavior	Score	Rating
Physical Activity Habits		
Nutrition Habits		
Stress-Management Habits		
Destructive Habits		
Safety Habits		
First Aid Habits		
Health Habits		
Medical Habits		
Consumer Habits		
Environmental Habits		
Total Score		

Healthy Habit Rating Chart

Habit Rating	Score
Good lifestyle	5–6
Neutral lifestyle	3–4
Needs improvement	1–2
Total Score Rating	
Good lifestyle	46–60
Neutral lifestyle	30–45
Needs improvement	<30

Note: Your scores on the Healthy Habit Questionnaire should be interpreted carefully. The statements are intended to provide a simple self-evaluation and are not designed as a screening or diagnostic tool. The various lifestyle behaviors pose different types of risks. For example, using tobacco or abusing drugs has immediate and significant negative effects on health and wellness, whereas other health lifestyles and skills, such as knowing first aid, may have subtler and less direct effects. Therefore, it is important not to compare scores on the different scales. The goal is to evaluate your overall profile and identify areas where you are doing well and areas that may need improvement.

Conclusions and Implications: In the space below, summarize the overall status of your lifestyle behaviors and indicate your strengths (areas where you are adopting healthy lifestyles) and concerns (areas where you may need to improve).

Healthy Habit Questionnaire

Directions: Use the following ratings to determine your habits: 1 = Almost Never, 2 = Sometimes, 3 = Almost Always. Place that number in the box to the right of each question. Sum the two numbers to get a score for each lifestyle habit. Sum the lifestyle habit scores to get a total lifestyle rating.

Physical Activity Habits

1. I perform physical activity most days of the week (or vigorous three days).
2. I look for ways to add physical activity into my lifestyle.

Nutrition Habits

3. I consume four to five servings of fruits and vegetables per day.
4. I make healthy food choices at stores and restaurants when possible.

Stress-Management Habits

5. I am able to identify situations in daily life that cause stress.
6. I take time out during the day to relax and recover from daily stress.

Destructive Habits

7. I do *not* smoke or use other tobacco products.
8. I do *not* binge drink or abuse alcohol or drugs.

Safety Habits

9. I use seat belts and adhere to the speed limit when I drive.
10. I practice safe sexual habits.

Social Habits

11. I seek out people and environments that support my well-being.
12. I avoid risky environments and situations.

Prevention Habits

13. I follow good hygiene practices (e.g., brushing/flossing my teeth; frequent hand washing).
14. I get an adequate amount of sleep each night.

Medical Habits

15. I do regular self-exams and have regular medical checkups.
16. I seek and follow medical advice when needed and prescribed.

Consumer Habits

17. I read product labels and make careful decisions before I buy.
18. I avoid using questionable products or programs.

Environmental Habits

19. I seek out environments that support healthy living.
20. I try to look for ways to conserve energy and protect the environment.

Total Lifestyle Rating

=

Note: These 10 habits capture only a sample of important lifestyle behaviors. A number of other potentially harmful behaviors are intentionally excluded due to their personal nature (such as the use and abuse of drugs, sexual practices, drinking and driving). Use the framework from this lab to think critically about your lifestyle behaviors and how you can work to improve them.

Self-Management Skills for Health Behavior Change

LEARNING OBJECTIVES

After completing the study of this Concept, you will be able to:

- ▶ Identify and define the five stages of change and explain how the stages relate to making lifestyle changes.
- ▶ Describe the four key factors that influence health behaviors, describe components in each category, and explain how the factors relate to stages of change.
- ▶ Identify and describe the self-management skills that predispose and enable you to change and to reinforce changes once you have made them.
- ▶ Identify and describe the six steps in self-planning and explain how they can be used to make personal plans for behavior change.
- ▶ Conduct self-assessments of your current stages for health behaviors and your self-management skills for making health behavior change.

Learning and regularly using self-management skills can help you adopt and maintain healthy lifestyles throughout life.



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Why It Matters!

Nearly everyone values good health, wellness, and fitness, but many people struggle to adopt the lifestyle patterns needed to achieve these outcomes.

The focus in this Concept is on introducing different self-management skills that are needed to adopt and maintain healthy lifestyles. You may be good at some but not at others so this information will help you identify personal strengths and weaknesses. It is important to understand that self-management skills (like any skill) must be practiced and refined if they are to be useful. The labs and activities in this Concept (and others) provide opportunities to build these skills. However, it is up to you to learn from your experiences, apply the information, and adopt a long-term perspective for health behavior change that ultimately leads to healthy living throughout life.

Understanding Behavior Change

Changing your health behaviors can be challenging.

Most adults want to adopt healthy lifestyles but find changes hard to make. You may personally value physical activity but find it hard to fit it into your schedule. Similarly, you may know that nutrition is important for your health but may not eat well. Adopting and sustaining healthy behaviors such as these is challenging, but lifestyle skills can be learned and healthy habits can be formed. Although practicing one healthy lifestyle does not ensure **adherence** to another, there is evidence that making one lifestyle change often makes it easier to make other changes.

In Concept 2, you learned that various determinants influence your health, wellness, and fitness. However, the core message was that you have the most control over lifestyle determinants. In this concept, you will learn the principles of

behavior change and learn about the self-management skills that can help you adopt and sustain healthy lifestyles.

A variety of theories have been proposed to understand health behavior. Human behavior researchers have proposed a number of theories to help explain the behavior change process (e.g., Social Cognitive Theory, Self-Determination Theory, Theory of Planned Behavior, Theory of Reasoned Action). Although each theory provides unique insights, they share many of the same components. For example, most emphasize the importance of **self-confidence** and **self-efficacy** as critical components of motivation. Contemporary theories also collectively document the importance of role models, positive norms, and social support. Understanding the nuances of different theories is not critical for changing behavior, but it is helpful to have an understanding of the overarching principles.

Two contemporary *meta-theories* provide particularly important insights about the behavior change process. These meta-theories integrate aspects of established theories into conceptual frameworks or models that can be more easily applied. The Transtheoretical Model integrates elements from multiple theories to provide insights about strategies needed to make and sustain changes. A novel aspect of this model is that the recommended strategies vary to a great extent depending on where you are in the process. The Social-Ecological Model integrates multiple theories as well, but also emphasizes that your behavior is strongly influenced (either positively or negatively) by various social and environmental factors. If you are in a supportive social environment and have access to healthy foods and activity resources, adopting healthier lifestyles is easier. Although these models are widely used in public health to guide programming, understanding them can also help you identify the factors that influence your own personal lifestyle. Applications of both models are provided in the subsequent sections.



In the News

Myths and Medical Conspiracy Theories

Conspiracy theories are commonly reported on in the news and many involve health and medical claims. For example, many people erroneously believe that agencies like the Food and Drug Administration intentionally keep information and medical treatments away from the public rather than serve and protect the public. The impact of this distrust was clearly evident in how individuals responded to COVID-19 information. Some people believed myths that the virus was intentionally created and others questioned the implications (calling it a “hoax”). Myths and conspiracy theories

are fueled, in part, by web posts and media reports that legitimize or reinforce unsubstantiated observations or statements about health and medicine. This misinformation adds to the confusion about what and whom to believe. (See the link in Suggested Resources and Readings.)

Why do some people question science related to health and medicine? How can you ensure that you get accurate health information?

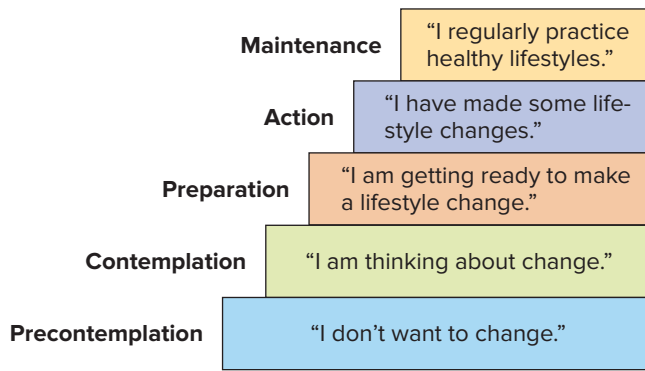


Figure 1 ► Stages of lifestyle change.

The Transtheoretical Model suggests that behavior change is a process that occurs in stages. In the **Transtheoretical Model**, lifestyle changes occur in at least five distinct stages (precontemplation, contemplation, preparation, action, and maintenance). The steps are described as *stages of change* because they represent distinct phases in the behavior change process (see Figure 1). An important premise in the model is that different strategies and self-management skills are needed at each stage to build toward the ultimate goal of lifelong maintenance.

For example, let's look at the stages a person may go through when trying to quit smoking. A smoker who is in the *precontemplation* stage must first commit to the need to change before being able to consider how to make that change. When the smoker starts to think about change, the contemplation stage has been reached. Once in the *contemplation* stage, the smoker may seek out specific strategies to help with quitting. Purchasing a nicotine patch or a book about smoking cessation reflects the *preparation* stage. This stage marks an intentional step toward changing behavior. The *action* stage occurs when the smoker initiates a specific change in behavior, even a small one, such as cutting back on the number of cigarettes smoked. The fifth stage, *maintenance*, is reached when the smoker has stopped smoking for a relatively long time (e.g., 6 months).

It is common for individuals to shift among stages over time (in upward or downward directions). Sometimes this can be discouraging, but the insights gained from previous efforts are part of the behavior change process. For example, smokers who succeed in quitting permanently often report having stopped and started dozens of times before reaching lifetime maintenance. This also holds true for efforts to change other behaviors, such as adopting a regular physical activity routine or making healthier food choices. Thus, the stages of change can apply to an array of health behaviors.



The Social-Ecological Model indicates that behaviors are influenced by our social, cultural, and physical environments. The **Social-Ecological Model** provides important insights about the external factors that may facilitate

or inhibit our efforts to change behavior. The essence of the model is that there are layers of influence that shape our lifestyle behaviors (see Figure 2). Your values, beliefs, habits, and experiences (yellow layer) are shaped by your education, health status, and socioeconomic status as well as by your age, sex, gender identity, and heredity (green layers). Your lifestyle behaviors are influenced by these personal factors as well as by social and environmental factors, such as your current life stage, social roles, and interpersonal relationships (orange layers).

Your current lifestyle as a student is likely influenced by competing priorities, busy schedules, financial worries, and personal/social connections. Cost, convenience, and access are important drivers of lifestyle decisions, and they likely influence some of your behaviors while in college. The same factors influence decisions in other life stages, but they may be perceived differently when you take on full-time work, get married, or have children. The dynamic nature of these external forces is why we define lifestyles as the *behaviors we adopt based on the context of our life circumstances*. The Social-Ecological Model emphasizes that your behavior is strongly influenced (either positively or negatively) by various social and environmental factors.

As emphasized earlier, you have limited control over personal and social determinants, but you have more control over your lifestyles. The white layer in Figure 2 is used to depict settings where lifestyle decisions are made and how self-management skills can help you make healthier choices. The dotted line in Figure 2 reflects the importance of **personal agency**, which is the ability to make healthy lifestyle decisions in different settings. If you are in a supportive social environment and have access to healthy foods and activity resources, adopting healthier lifestyles is easier. However, you can build self-management skills that can help you overcome barriers and challenges.

Adherence Adopting and sticking with healthy behaviors, such as regular physical activity or sound nutrition, as part of your lifestyle.

Self-Confidence The belief that you can be successful at something (for example, the belief that you can be successful in sports and physical activities and can improve your physical fitness).

Self-Efficacy Confidence that you can perform a specific task (a type of specific self-confidence).

Transtheoretical Model A widely used theoretical framework for understanding the processes and stages involved in behavior change.

Social-Ecological Model A conceptual framework that recognizes multiple levels of influence on health behaviors as well as the complex interactions between individual and environmental factors.

Personal Agency An individual's capacity to act independently and to make his or her own free choices.

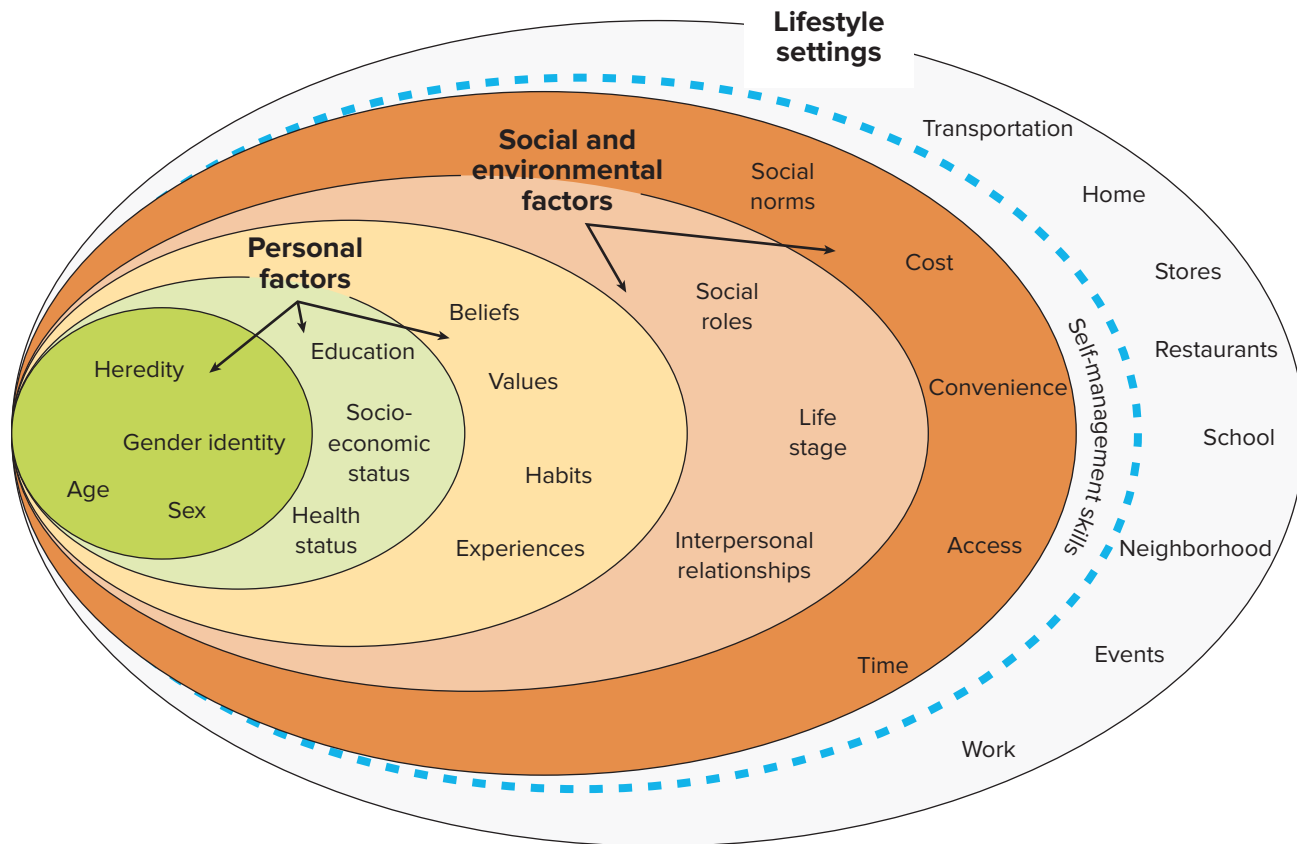


Figure 2 ► Layers of influence in the Social-Ecological Model.

Importance of Self-Management Skills

Learning self-management skills enhances your capacity for healthy living. The various skills needed to adopt and maintain healthy lifestyles have been referred to as **self-management skills** since they

connect
VIDEO 2

influence the way that you manage your personal lifestyles. Table 1 summarizes 15 different skills that can facilitate behavior change. As with other skills, you need to practice them to improve. In Lab 3A, you will be able to self-assess your stage of readiness for three priority lifestyles (physical activity, nutrition, and stress management) and to rate your self-management skills in each domain. Learning to apply the various skills in Table 1 is critical for healthy living.



A CLOSER LOOK

Social Justice and the DEI Movement

The notion of a “society” is that it should provide for the common interests of *all* members and protect them from outside threats. *Social justice* is a broad concept in which equity or justice is achieved in every aspect of society rather than in only some aspects or for some people. However, systemic racism, bias, and lack of tolerance for individual differences remain problematic in our larger society, making it difficult for all members to be treated equally. An increased awareness and visibility of the diversity, equity, and inclusion (DEI) movement offers some hope that this can change. *Diversity* refers to the inclusion of different types of people in

society regardless of race, ethnicity, age, disability, culture, socioeconomic status, sex, or gender identity; *equity* refers to the personal quality of being fair and impartial (free of bias or favoritism); and *inclusion* emphasizes including all people, especially those who have previously been excluded. Numerous organizations have committed to social justice and the DEI movement, but addressing the systemic challenge requires change by everyone.

How has the DEI movement influenced your attitudes and views? How can you be part of the solution?

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ACTIVITY