

# ***DYNAMIC HEALTH AND HUMAN MOVEMENT***



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# ***DYNAMIC HEALTH AND HUMAN MOVEMENT***



Human Kinetics

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# PREFACE

If I knew I was going to live this long, I would have taken better care of myself.

—attributed to Mickey Mantle (and others)

If you're like many college students, you're enjoying independence, self-exploration, meeting new friends, and experiencing new things. You might be on your own for the first time in your life, making your own lifestyle choices. It is now, during these years of growth and maturation, that your health habits, whether good or bad, are established and sometimes carried well into adulthood. And, like Mickey Mantle, you're probably not thinking about the long-term effects of the decisions you're making. This book will help you make informed decisions regarding your health and wellness. The decisions are yours, but we provide you with the best information available to help you.

People are living longer and healthier than ever before in history. Increases in life span and quality of life are due to many medical breakthroughs, countless research studies, and an increase in health literacy. In an article that received considerable attention from federal, state, and local public health officials, McGinnis and Foege (1993) argued that the real causes of death are related to behavior or the environment. The shift in public health from prevention of infectious disease to prevention of chronic disease eventually funneled down to the health education curriculum being taught in schools. State and federal government mandates the prevention-based education that is in schools today.

In Healthy People 2010, the U.S. Department of Health and Human Services defines health literacy as “the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions” (National Network of Libraries of Medicine 2008). Health literacy is important so that you can learn how to communicate with your doctors, read and interpret health literature, and have the skills to manage your health and prevent disease.

The importance of *Dynamic Health and Human Movement* establishes the relationship between learning and doing. Scenarios, examples, tips, and recommendations apply to your world and bridge the gap between learning about health and applying it to your everyday life. The textbook features a conversational tone and includes questions for assessment, review, and discussion; learning objectives; activities; and sidebars on topics in the news and culture to help you understand what you read and retain what you learn. Special focus is given to timely and controversial issues, encouraging you to think critically about media and advertising. Special elements on steps for behavioral change and the mind–body connection also show you how to take action to address health issues to improve mental and physical health.

As the scientific links between environment and health become stronger, awareness of how lifestyle choices affect health is more important than ever before. *Dynamic Health and Human Movement* provides you with the tools to increase your health literacy and make educated decisions about your health now and in the future.

## WHAT YOU'LL FIND IN THIS BOOK

The 12 chapters in *Dynamic Health and Human Movement* cover a broad range of topics to help you make informed choices about your health and wellness.

Chapter 1, Health Promotion, explains the difference between health and wellness, the six dimensions of wellness, and the many components of fitness. It also looks at the promotion of health, wellness, and fitness in the United States. It shows you how to set goals to establish



or improve healthy behaviors and helps you understand how and why we might make (or don't make) changes in our lifestyles.

Chapter 2, *Fitness Basics*, explores health-related fitness—the ability of your body to carry out everyday activities—and its five components: cardiorespiratory fitness, muscular strength, muscular endurance, flexibility, and body composition. It also delivers the practical information you need to stay physically active in college and throughout your adult life.

In chapter 3, *Nutrition*, you'll learn about the macronutrients (protein, fat, carbohydrate, and water) and micronutrients (vitamins and minerals) in the human diet and how to determine the dietary guidelines you need for maintenance, growth, and activity. The chapter also covers the safe handling of food to prevent foodborne illnesses and the specific dietary needs of vegetarians, pregnant women, and other populations.

Chapter 4, *Weight Management*, explains the nature and ramifications of the current obesity epidemic in the United States. It can be challenging to maintain a healthy body weight, but understanding the energy equation and applying it to your own behaviors is a great place to start. This chapter shows you how to develop and implement solutions for weight management that are effective, healthy, and long lasting.

When considering your health, don't focus solely on the physical. As explained in chapter 5, *Mental Health*, good mental health is important for your overall sense of well-being and your ability to adapt, maintain balance, and manage difficult situations. No one should let the stigma of mental illness prevent him or her from seeking treatment when necessary. This chapter helps you learn to recognize and deal with the signs and symptoms of mental illness in yourself or in others.

Chapter 6, *Stress Management*, teaches you how to handle the various kinds of stress that come from work, school, family, and major life changes. Health risks associated with stress can affect how well your body's systems function, and stress can be a factor in cancer, hypertension, and other diseases. Not everyone finds the same things to be stressful or deals with stress the same way, but you can learn some simple, positive management techniques such as meditation, muscle relaxation, and exercise.

Sometimes it can be difficult to stay healthy when everyone around you seems sick. Chapter 7, *Infectious Diseases*, shows you that while germs might be everywhere, you can take control of your behaviors and lifestyle choices to reduce your chance of developing an infectious disease. You'll learn about the major methods of transmission and causes of infectious diseases; the management of risk factors; the components of your immune system; and the causes, symptoms, and treatments of common infectious diseases.

Chapter 8, *Chronic Diseases*, explains how long-term diseases—such as cardiovascular disease, lung disease, cancer, arthritis, diabetes, and Alzheimer's disease—place burdens not only on the patients but also on society as a whole. Genetics plays a role in your risk of developing a chronic disease, but the good news is that maintaining a healthy lifestyle can be the best prevention strategy.

Do you know an HMO from a PPO? Have you thought much about your health care? For many people, college is the time when they begin to make decisions about choosing doctors, obtaining health insurance, paying for health care costs, and making choices about prescriptions and over-the-counter medications. Chapter 9, *Health Care Consumerism*, helps you learn how to make informed decisions about your health care. It also covers common alternative care options, including acupuncture, chiropractic medicine, massage, and herbal medicine.

Chapter 10, *Environmental Health*, looks at how our interactions with nature affect our own health—how environmental factors may have an adverse effect on human health or on the ecological balances that are essential to our long-term health and to the quality of the environment. You'll learn about ecosystems, climate change, and the impact of toxins, pollution, and waste. You'll get tips on going green and reducing your personal waste, and you'll learn about other ways to improve your environmental health behaviors.

How old is *old*? The answer depends on whom you ask. Chapter 11, *Healthy Aging*, describes how organs and body systems age, how people become more susceptible to chronic diseases,

and how everyone must make decisions about treatment and care options in later years. Genetics plays a part in how you age and whether you'll be more susceptible to disease, but your lifestyle choices—such as exercising, healthy eating, and social relationships—have an even greater impact.

Chapter 12, *Wellness Throughout Life*, shows you how maintaining your wellness (not simply your health) is an essential part of living a healthy, happy, and productive life. Health and wellness aren't just goals to achieve but the results of a lifelong process. In this chapter, you'll learn the dimensions of wellness, the factors that influence health and wellness, and how you can change your behaviors if necessary.

## WHAT YOU'LL FIND ONLINE

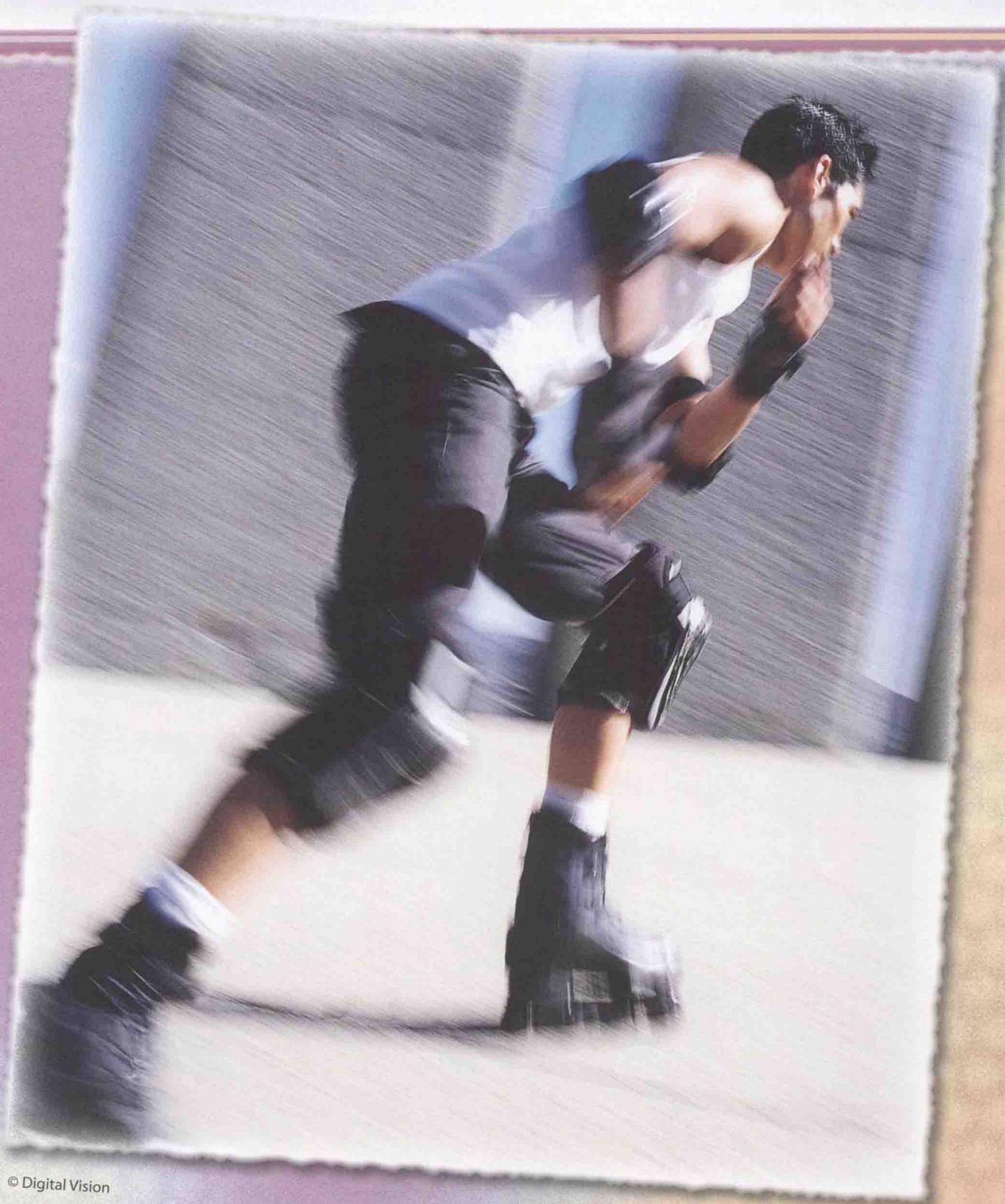
*Dynamic Health and Human Movement* is part of the Health on Demand series, and you can learn more about the series at [www.HumanKinetics.com/HealthOnDemand](http://www.HumanKinetics.com/HealthOnDemand). That Web site also provides an online student resource (OSR) that complements the textbook. For each chapter in the book, the OSR offers several extended discussions of relevant topics to help you expand your knowledge, as well as links to other pertinent sites for further exploration. In the OSR, you'll also find glossaries of terms and definitions from the book, along with answers to the review questions at the end of each chapter so that you can check your understanding of key points.

Your teacher might ask you to visit the OSR and explore its topics in conjunction with activities or assignments for chapters, but you can also check out the site on your own whenever you want to learn more about what you're reading.

## REFERENCES

- McGinnis, J.M., and W.H. Foegen. 1993. Actual causes of death in the United States. *Journal of the American Medical Association* 270 (18): 2207-2212.
- National Network of Libraries of Medicine. 2008. Health literacy. <http://nnlm.gov/outreach/consumer/hlthlit.html>.





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# HEALTH PROMOTION

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## Assessment

- ▶ What are the six dimensions of wellness, and how can you attain them?
- ▶ Certain strategies can enhance the success of your behavior changes to promote your health. What are some strategies you use when you want to change a behavior?
- ▶ How much moderate-intensity physical activity should adults engage in on most days of the week?
- ▶ What can you do to improve your fitness? How is this different from enhancing health or wellness? Why is it important to know the difference?
- ▶ What is involved with setting SMART goals?
- ▶ What might motivate you to change your health behavior? Is it just fear of illness or something more?

## Objectives

- ▶ Define *health*, *wellness*, and *fitness*.
- ▶ Analyze and synthesize factors influencing behavior change.
- ▶ Apply SMART goals and motivation strategies to a variety of scenarios.
- ▶ Discuss theories and models of behavior change.



Scott has not missed a day of work in 3 years. He does not eat many fatty foods. But if he wants something that is more than a block away, he drives. How would you describe Scott? Would you call him healthy, or fit, or well? What's the difference, anyway? There is a difference, and this chapter will teach you what it is. It'll also teach you how to set effective goals so that you can begin the process of reaching all three.

## HEALTH AND WELLNESS

On a simplistic level, **health** can be defined as the absence of illness, or as the state when body and mind are absent of abnormality. René Dubos, advisor to the 1972 United Nations Conference on the Human Environment, coined the phrase, "Think globally, act locally." He expanded the Western view of health to include interaction with physical surroundings, defining health as the result of complex interactions between a person and the environment in five dimensions: physical, mental, emotional, spiritual, and social (Moore 2005). Today's definition of health often includes environmental health as a sixth dimension.

**Wellness** builds on this definition to acknowledge that there are varying degrees of health within each dimension. A state of wellness exists on a continuum, from premature death on one end to optimal potential in one or more dimensions of health on the other (Corbin and Lindsey 2007; Donatelle 2006). The key to wellness is balance among the dimensions of health and their interaction with the environment.

The six dimensions of wellness model was developed by Dr. Bill Hettler, cofounder and president of the board of directors of the National Wellness Institute (2007). The model demonstrates that all six types of wellness—physical, intellectual, emotional, social, spiritual, and occupational—must be present for a person to attain overall wellness (see figure 1.1). Your efforts to attain wellness now will become a foundation for the rest of your life.

### Physical Wellness

**Physical wellness** refers to wellness of the physical body. It's influenced by factors such as body weight, physical fitness, and ability to perform day-to-day functions (lifting groceries or climbing stairs). You maintain physical wellness by exercising regularly, eating a healthy and well-balanced diet, making educated decisions about your health, avoiding unhealthy habits such as drug and tobacco use, and receiving adequate medical care. Remember these two tenets of physical wellness:

1. It is better to consume foods and beverages that enhance good health than those that impair it.
2. It is better to be physically fit than out of shape.

### Intellectual Wellness

**Intellectual wellness** addresses creative and mental activities and your openness to new ideas and schools of thought. It also refers to your ability to analyze, synthesize, and act on new information. If you're intellectually well, you'll welcome lifelong intellectual growth and stimulation and you'll look for interaction with the world around you. Here are some tenets of intellectual wellness:

1. It is better to stretch and challenge your mind with intellectual and creative pursuits than to become self-satisfied and unproductive.
2. It is better to identify potential problems and choose appropriate courses of action based on available information than to wait, worry, and contend with major concerns later.

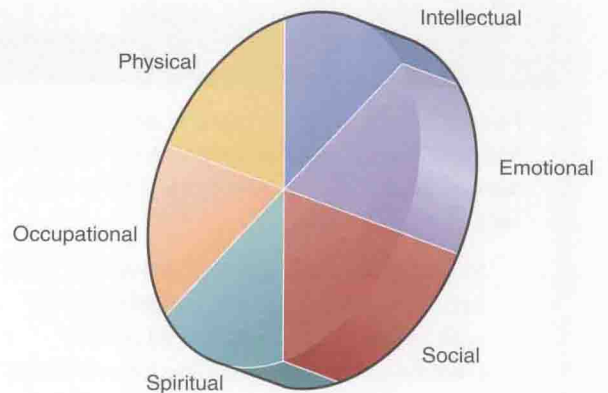
### Emotional Wellness

**Emotional wellness** gives you the ability to get through the rigors of life. Aspects of emotional wellness include self-acceptance, self-confidence, self-control, and trust. Emotional wellness



refers to the ability to deal with stress, your ability to be flexible, and your attitude toward yourself and life in general. Emotional wellness also helps you cope and become comfortable with your emotions. If you constantly strive to improve and understand your emotional wellness, you'll likely have a better outlook on life and be able to enjoy life to its fullest. You may also find you have healthier relationships because of this outlook. Remember these tenets of emotional wellness:

1. It is better to be aware of and accept your feelings than to deny them.
2. It is better to be optimistic in your approach to life than pessimistic.



**Figure 1.1** To attain overall wellness, you must have all six types of wellness.

## Social Wellness

The emphasis behind **social wellness** is being a contributing member of your community and society. You should take an active role in your community and encourage effective communication among community members. The tenets of social wellness are these:

1. It is better to contribute to the common welfare of your community than to think only of yourself.
2. It is better to live in harmony with others and your environment than to live in conflict with them.

## Spiritual Wellness

The dimension of **spiritual wellness** focuses on meaning and purpose in life. Aspects of spiritual wellness include the ability to forgive, to show compassion, and to love. Traditional religious beliefs and practices are part of spiritual wellness, but it also encompasses your relationships with other living things and your perception and appreciation of nature, the universe, and the meaning of life. The spiritual dimension also equips you with the ethics, values, and morals that help guide your decisions. These are the tenets of the spiritual dimension:

1. It is better to ponder the meaning of life for yourself and to be tolerant of the beliefs of others than to close your mind and become intolerant.
2. It is better to live each day in a way that is consistent with your values and beliefs than to do otherwise and feel untrue to yourself.

## Occupational Wellness

**Occupational wellness** applies to the personal satisfaction you get from your career. As you strive for occupational wellness, you will see that you contribute your skills and talents to work that is meaningful and rewarding. Occupational wellness includes these tenets:

1. It is better to choose a career that is consistent with your personal values, interests, and beliefs than to select one that is unrewarding for you.
2. It is better to develop functional, transferable skills through structured involvement opportunities than to remain inactive and uninvolved.



## TEST YOUR KNOWLEDGE

### How Healthy Is Grace?

Read the following description of Grace and indicate how you think she fares for each dimension of health. Would you consider her to be well?

At age 23, Grace is a recent university graduate. She completed her English degree with honors, and she still does a lot of creative writing because she loves it. Since she graduated, she's been applying for jobs. She'd like to find something in magazine publishing, but so far she hasn't had any luck, so she's working as a substitute teacher to earn money. She's worried that she's going to need to move in with her parents soon if a better-paying job doesn't turn up, and she's starting to feel discouraged.

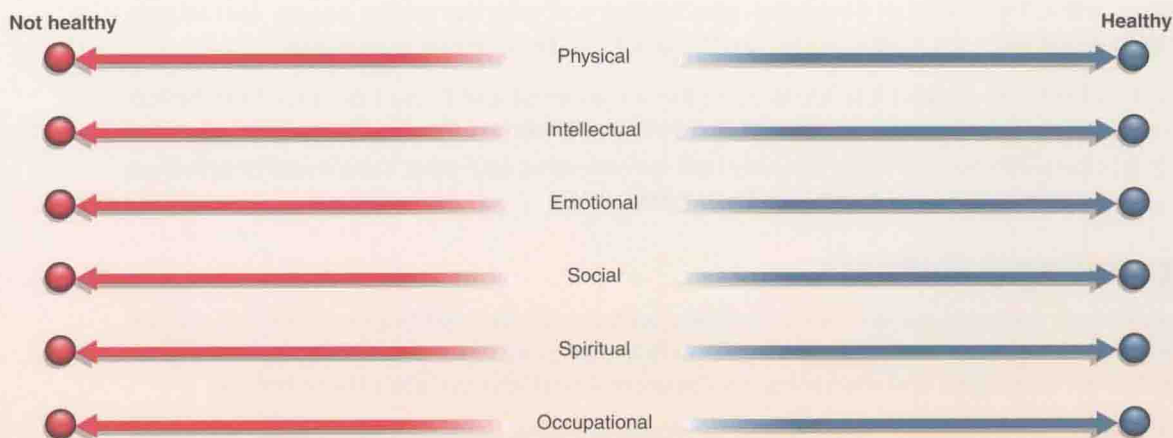
Grace's friends are great, though. She and her old roommate see each other several times a week and hang out on most week-ends. She stays in touch with old friends from the university literary magazine through phone and e-mail, and they have a great time whenever they get together. Even with their support, though, Grace

doesn't feel confident about her career situation. She prays about it a lot, and she can't help but believe there's a plan for her and her life, if she can just be patient as it unfolds.

Another thing Grace prays about is her mom's health. Her mom had a breast cancer scare recently. It turned out to be nothing, but it made Grace think about some of her own health habits. She knows she should exercise more, but her asthma seems to act up when she exerts herself, which makes it hard for her to get motivated.

Grace likes to garden; planting and weeding help take her mind off her job and money troubles. The food she grows gives her a double bonus: It saves money, and it also makes her feel connected to the earth. She did some research for a feature article on global warming, and the things she learned had an influence on her. She tries to be as easy on the environment as she can.

Where do you think Grace falls on each of the following continuums?



Look at Grace's overall wellness picture. What level of wellness do you think Grace has right now? What are some things she can do to improve her health and wellness?

## FITNESS

The term **fitness** is sometimes used interchangeably with health or wellness. That's not the correct use of the term, though. The scope of fitness includes health-related, skill-related, and physiological components (U.S. Department of Health and Human Services [USDHHS] 2000a).

### *Health-Related Components*

---

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

### *Skill-Related Components*

---

- Agility
- Balance
- Coordination
- Speed
- Power
- Reaction time

### *Physiological Components*

---

- Metabolic
- Morphologic
- Bone integrity

## Health-Related Components of Fitness

There are five health-related components of fitness: cardiorespiratory fitness, muscular strength, muscular endurance, flexibility, and body composition.

**Cardiorespiratory fitness** refers to the ability of the cardiovascular and respiratory systems to deliver oxygenated blood to the body. As workload increases, the demand for oxygen increases. **Muscular strength** refers to the intensity of muscular contractions. **Muscular endurance** shares one main quality with cardiorespiratory fitness: stamina. It refers to the ability of the muscles to sustain a contraction or to contract repeatedly over time. **Flexibility** is the ability to move a joint through its complete range of motion (ROM). Good flexibility helps reduce risk of injury, but it's sometimes ignored or forgotten in fitness programs. The final health-related component of fitness is **body composition**. The two main elements of body composition are fat mass and fat-free mass. The proportion of fat mass to total body weight is the percent body fat. Bone, muscle, connective tissue, blood, and organs make up the bulk of its fat-free mass. You can change your body composition by increasing muscle mass while at the same time decreasing fat mass.

## Skill-Related Components of Fitness

We just covered the five health-related components of fitness. Now, let's look at the six skill-related factors: agility, balance, coordination, speed, power, and reaction time. These components of fitness relate directly to performance. They relate indirectly to health in that researchers believe that highly skilled people are more likely to participate in regular physical activity (USDHHS 2000a).