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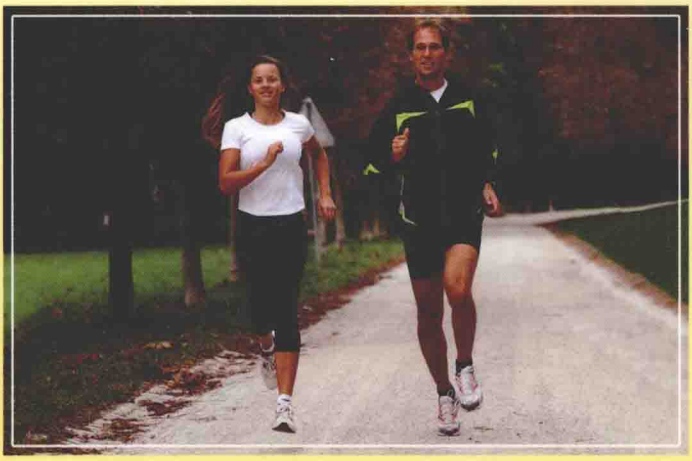
Complete Guide to FITNESS & HEALTH



Physical activity and nutrition guidelines for every age

Barbara Bushman, PhD
Editor

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To Tobin, my wonderful husband, best friend, faithful exercise partner, and true inspiration. Without your constant and unwavering encouragement, support, love, and understanding, I could not have completed this project.

–B.B.

Preface

If you opened this book and are reading this page, you are interested in improving your health. Congratulations on taking this step! Regardless of your current level of fitness, this book can direct you to better health by offering scientifically-based recommendations. *ACSM's Complete Guide to Fitness & Health* is different from other health and fitness books in that it relies on a solid scientific foundation and the most current research on physical activity and nutrition. Physical activity and a healthy diet are two important lifestyle factors. The *Complete Guide* provides you with steps to increase your activity as well as to make optimal nutritional decisions.

This book is divided into four parts; the first two are a framework for the last two, which provide age-specific recommendations as well as considerations for special health and medical conditions. Part I sets the stage by providing basic information on being fit, active, and healthy. Chapter 1 discusses the U.S. government's *Physical Activity Guidelines for Americans*, which are a continuing thread throughout the book. Chapter 2 explains how to safely start an exercise program and offers some simple ways to assess your current fitness level. Aerobic fitness, muscular fitness, and flexibility are the three components of a balanced exercise program. In chapter 3 you will learn about each of these along with how you can incorporate more physical activity into your daily schedule. Nutrition and a healthy diet can make a big difference in your overall health. *The Dietary Guidelines for Americans,* discussed in chapter 4, provides a framework for making positive nutritional choices. Wellness is a multidimensional concept influenced by many lifestyle factors. Chapter 5 explains how to make healthy choices in many areas in your life. Throughout the chapters in part I, you will discover your *Fitness ID* as you see how your knowledge and current fitness compare to the guidelines and assessment standards.

Part II focuses on the three components of a complete activity program—aerobic fitness (chapter 6), muscular fitness (chapter 7), and flexibility and balance (chapter 8). You will gain insight into the benefits of including particular activities into your weekly plan as well as specific exercises from which you can choose. Just being told to "be active" or "exercise more" is not helpful on a practical level. Rather, part II includes specific activity programs as well as photos and descriptions of activities that you can include in your personal plan. You will see how to develop your *Fitness ID* within your way of life and in a manner that reflects your personal interests. Whether you are just starting or looking for ways to progress, these chapters offer the information you need.

A physically active lifestyle and wise dietary choices have documented benefits. Part III provides age-specific recommendations for both physical activity and nutrition for children and adolescents (chapter 9), adults (chapter 10), and older adults (chapter 11). These chapters clearly illustrate how you can benefit from physical activity regardless of age. Nutritional issues specific to the various age groups are included to help you make the best food choices. Part III will help you evolve your *Fitness ID* as you create a balanced fitness program that fits your age as well as your current fitness level and goals.

Part IV focuses on special health and medical conditions. These chapters are for those whose *Fitness ID* may be affected by a special condition. Each chapter provides background related to a specific health or medical condition and then provides guidance in using nutrition and exercise to optimize your health. If you have heart disease, high blood pressure, or high cholesterol (addressed in chapters 12, 15, and 16), you can benefit greatly from physical activity and a healthy diet. Similarly, body weight and diabetes (addressed in chapters 13 and 14) can be controlled through exercise and diet. Other health conditions addressed in part IV are arthritis (chapter 17), pregnancy (chapter 18), and osteoporosis (chapter 19).

Many experts have contributed to this book. As editor, I am excited to provide scientifically-based guidance on how to begin, or improve, your personal exercise program. In addition, the clear, concise information on the value of good nutrition is intended to encourage you to find ways each day to make healthy food selections. Your *Fitness ID* is unique to you. This book will help you to discover, develop, evolve, and personalize that identity. Each person has the same 24 hours per day. Although schedules are busy, don't fall into the trap of neglecting your health. As you read this book, consider how an active investment in your personal fitness and health today can make your life better than you ever imagined, tomorrow and into the future.

What's your *Fitness ID*?

Acknowledgments

The time and effort put forth to make this book the best it can be have been significant. I would like to thank all of the authors of individual chapters who contributed their expertise. I am humbled by the level of knowledge these specialists have and hope the readers of this book will feel the passion they have for their topic areas. In addition, I acknowledge the contribution made by the many ACSM professionals who reviewed the chapters in this book to ensure that the material is based on the most current research. The critiques were thorough, and as a result, this book is set apart from others that may rely on opinion or individual impressions. A special thanks to Dr. Rebecca Battista, who headed up the review process so efficiently and effectively.

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Barbara Bushman

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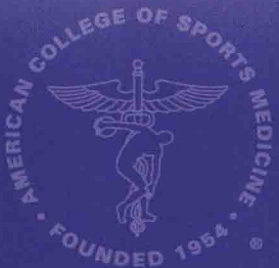
Contents



part I

Fit, Active, and Healthy

Understanding what it means to be fit, active, and healthy is the first step toward discovering your personal fitness ID. Physical activity and nutrition are two lifestyle factors that can have a major impact on your fitness and health. The chapters in this section provide you with guidance in both areas so you can optimize your exercise program as well as your diet. Specific assessments are provided to help you identify your current fitness status; you can use these assessments to chart your progress in the future. In addition, you will find suggestions on setting goals, handling stress, improving your sleep, and many other aspects of life that affect your overall wellness.

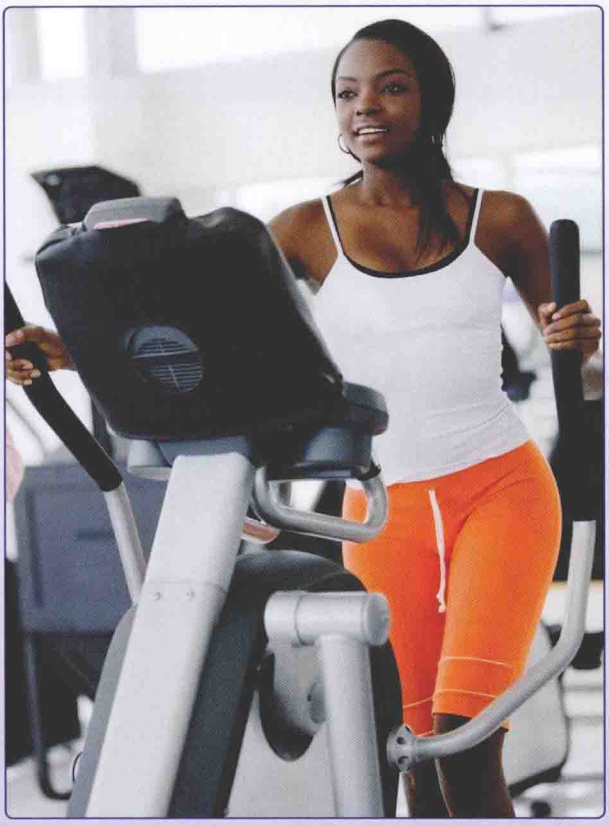
chapter 1

Meeting and Exceeding the Physical Activity Guidelines

Engaging in physical activity is one of the most important steps people of all ages can take to improve their health.[18] Why is exercise so important to your well-being? Children who are active are more likely to be at a healthy body weight, perform better in school, and have higher self-esteem. They are also less likely to develop risk factors for heart disease, including obesity.[2] Adults who exercise are better able to handle stress and avoid depression, perform daily tasks without physical limitation, and maintain a healthy body weight; they also lower their risk of developing a number of diseases.[18] Exercise continues to be important for older adults by ensuring quality of life and independence; regular exercise boosts immunity, combats bone loss, improves movement and balance, aids in psychological well-being, and lowers the risk of disease.[1]

Fitness has health-related and skill-related components. Although skill-related components of fitness (e.g., agility, coordination, balance, reaction time, power, and speed) *are* involved in your day-to-day activities, typically they are specifically included in training programs related to sports and athletic competition or when a situation presents itself, such as the loss of balance often observed with advancing age. The focus of this book is mainly on health-related components of physical fitness including aerobic fitness, muscular fitness, flexibility, and body composition, as follows.[1]

Physical Activity and Exercise—Same or Different?



Exercise is a more specific form of physical activity.

Physical activity refers to any movement of the body that involves effort and thus requires energy above that needed at rest.[1] Day-to-day tasks such as light gardening, household chores, and taking the stairs at work are examples of baseline physical activity. Including baseline activities in your daily routine is helpful, but people who do *only* this type of activity are considered to be inactive.[18] Exercise is a more focused, or specific, form of health-enhancing physical activity. Both physical activity and exercise include movement that requires energy, but the goal of exercise is to improve or maintain physical fitness. Health-related physical fitness includes aerobic and muscular fitness as well as flexibility. Examples of health-related physical fitness exercises are brisk walking or jogging, lifting weights, and stretching. The focus of this book is exercise, but keep in mind that exercise is a type of physical activity and that the two terms are often used interchangeably.

Aerobic Fitness

Cardiorespiratory endurance refers to the functioning of your heart, blood vessels, and lungs to supply working muscles and organs with the oxygen needed during activity. Cardiorespiratory endurance is often referred to as aerobic capacity or aerobic fitness. The word *aerobic* means "with oxygen." Your body requires oxygen to perform aerobic exercises. Examples of cardiorespiratory, or aerobic, exercises are walking, jogging, running, cycling, swimming, dancing, hiking, and sports such as tennis and basketball. Chapter 6 provides details on exercises to improve your cardiorespiratory endurance and explains how these exercises benefit your health and fitness.

Muscular Fitness

Muscular fitness refers to how your muscles contract to allow you to lift, pull, push, and hold objects. Muscular fitness includes both muscular strength and muscular endurance. Consider muscular strength and muscular endurance as the two ends of the muscular fitness continuum. Strength is focused on single-effort activity such as

moving a heavy box or lifting a loaded barbell. On the other end of the continuum is muscular endurance, which involves multiple contractions over time or sustained contractions. Examples of muscular endurance are lifting a small child repeatedly or holding up a child so she can see over a crowd at a parade. Repeated or sustained contractions in other activities such as yoga or rock climbing also require muscular endurance. Muscular fitness can be improved with resistance training, including lifting weights, using resistance bands or cords, and performing body-weight exercises such as push-ups and curl-ups. Chapter 7 provides details on various types and modes of activity that can help strengthen your muscles as well as specific exercises and how-to photos to help you get started or improve your current resistance training program.

Flexibility

Flexibility refers to the ability to move a joint through a full range of motion. Whether you are focusing on your golf swing or more practical aspects of daily life such as reaching for a high shelf in your closet, maintaining flexibility is important. Loss of flexibility as a result of injury, disuse, or aging can limit your ability to carry out daily activities. Flexibility can be maintained or even improved through a comprehensive stretching program. Chapter 8 outlines stretches for all the muscle groups in the body and discusses the benefits of including activities focused on stability and balance.

Body Composition

Body composition refers to the makeup of your body. The body is made up of lean tissue (including muscle) and fat tissue. Typically, the focus of body composition is the relative amounts of muscle versus fat. Although the bathroom scale can help you track your overall body weight, this measurement is general and does not reveal the amount of fat compared to muscle. Excessive amounts of body fat are related to poor health outcomes, and this is especially true for fat around the abdominal area. Chapter 13 discusses body weight management.

Of the four components of health-related fitness, the first three are part of a well-rounded exercise program, and the fourth, body composition, is influenced by both aerobic and muscular fitness exercises. This book provides activities related to aerobic and muscular fitness as well as flexibility so you can create an exercise plan that matches your goals and aspirations regardless of your age or current fitness level. Whether you are looking to begin an exercise program or optimize the time you are already investing in exercise, the upcoming chapters will show you what to include as well as how to track your progress. This book will help you balance the health-related fitness components so you can maximize the benefits from your personal exercise program.

BENEFITS OF EXERCISE

The benefits of a regular exercise program extend into many areas of life. Exercise is one intervention that is inexpensive and simple and can provide many life-enhancing advantages. Improvements in body function as a result of exercise are well documented. In addition to physiological benefits, psychological benefits can