

SEVENTH EDITION

NASM ESSENTIALS OF PERSONAL FITNESS TRAINING



EDITOR

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THE NASM MISSION

To produce world-class personal fitness professionals with the tools to transform lives. We achieve success and well-being for fitness trainers, their clients, and the population at large.



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LETTER FROM THE MANAGING EDITOR

I applaud you on your dedication and commitment to helping others live healthier lives and thank you for selecting the National Academy of Sports Medicine (NASM) for your personal training certification. By following the techniques presented in this textbook, you will gain the information, insight, and inspiration you need to change the world as a Certified Personal Trainer.

For more than 30 years, NASM has been the leading authority in personal training certification, continuing education, and career development for fitness professionals. Our scientific and holistic approach to health and fitness has created what many consider to be the current standard in professional education in the fitness industry.

The seventh edition of *NASM Essentials of Personal Fitness Training* has been updated with the most current evidence, strategies, and training techniques designed to equip fitness professionals with the necessary skills to optimize human potential and performance. The NASM Optimum Performance Training® (OPT™) model is the backbone of this process: a simple, straightforward approach to designing customized exercise programs that enhance your clients' abilities to achieve their health, wellness, and fitness goals. With OPT, you will successfully train any client toward any goal. It is proven and easy to implement.

We look forward to working with you to help shape the future of fitness. Welcome to the NASM family!

Sincerely,

Brian Sutton, MS, MA, NASM-CNC, CES, PES, CSCS
NASM Content and Production Manager

NEW CONTENT

Based on feedback from past students and fitness professionals, this new textbook includes expanded content and has been updated throughout from the previous edition.

- **Additional Chapters.** This textbook includes new chapters, expanding the textbook from 20 to 23 chapters. These additional topics will assist in creating a more well-rounded fitness professional.
- **Updated Chapter Content.** All of the topics in this textbook have been updated to include new information and updated research provided and reviewed by the most well-respected health and fitness professionals in the industry.
- **Glossary of Terms.** We have updated our glossary to include a larger number of terms and definitions.

NEW PEDAGOGICAL FEATURES

The new textbook comes with a variety of new educational features, including the following:

- New illustrations that bring principles and concepts to life
- Updated tables that summarize additional information not included in the body of the text
- New anatomical images that clearly identify important structures of the human body
- Text boxes that discuss relevant research and expanded content
- Updated photos that show proper execution of exercises

USER'S GUIDE

Please take a few moments to look through this User's Guide, which will introduce you to features that will enhance your learning experience.

Learning Objectives open each chapter and present learning goals to help you focus and retain the crucial information discussed.

LEARNING OBJECTIVES

Upon completion of this chapter, the fitness professional will be able to:

- **Distinguish** a fitness professional's role within the allied health industry.
- **Identify** the most prevalent chronic health conditions affecting modern society.
- **Differentiate** evidence-based practice from fitness fads and myths.
- **Define** a Certified Personal Trainer's scope of practice.

Sidebars, set in the margins, highlight the definitions of key terms that are presented in the chapter. The key terms are bolded throughout the chapter for easy reference.

FOOT AND ANKLE DYSFUNCTION

Foot and ankle injuries can severely limit and impact normal activities of daily living (Chinn & Hertel, 2010). Two of the most common issues at the foot and ankle complex include ankle **sprains** and **plantar fasciitis**. An ankle sprain occurs when a person's ankle is rolled, twisted, or turned, which results in the stretching or tearing of the ligaments that hold the bones of the ankle together and connect it to the foot and the lower leg. Plantar fasciitis involves inflammation of the tissue on the bottom of the foot that connects the heel bone to the toes (i.e., the plantar fascia) and often results in chronic heel pain.

The feet and ankles support the entire body; as a result, impairments to the foot and ankle complex may cause dysfunction to other regions of the body such as the knees, hips, or lower back (Menz et al., 2013; Riskowski et al., 2013). Additionally, if someone has previously injured their ankle, there is a far greater risk of injuring it again if work has not been done to properly condition it back to a strong and stable place (Fulton et al., 2014). This makes it highly important for fitness professionals to monitor the posture of their clients' feet and ankles during exercise so they can better develop proper movement patterns.

Sprain

A stretching or tearing of ligaments.

Plantar fasciitis

An inflammation of the fibrous tissue (plantar fascia) along the bottom of the foot, which often results in intense heel pain.

Stretch Your Knowledge boxes provide you with fun or interesting information as a supplement to the discussed content.



STRETCH YOUR KNOWLEDGE

Empathy and sympathy are two different concepts. Sympathy typically involves pity and feeling sorry for someone else. Conversely, empathy is a deep understanding and recognition of how someone feels. Empathy does not involve judgment.

Try This boxes provide activities you can practice on your own.



TRY THIS

Take some time to identify barriers that prevent participation in exercise and strategize ways to personally overcome these barriers. This will allow you to relate to the struggles that clients face while providing solutions. Clients will appreciate that they are not the only ones facing barriers and will benefit from the personal connection.

Critical boxes provide key information that you need to know before moving on to the next section.



CRITICAL

Fitness professionals should be aware of the psychological variables that affect behavioral change, such as motivation and social influence, but should never attempt to counsel individuals with mental disorders. Only trained and licensed healthcare professionals (e.g., physicians, psychiatrists, psychologists) are qualified to treat these individuals.

Training Tip boxes provide practical application of the concepts being discussed.



TRAINING TIP

During your initial session with a client, keep this checklist in mind:

1. Discuss health concerns.
2. Clarify fitness goals.
3. Review past exercise experiences.
4. Perform a comprehensive fitness assessment.

Once complete and your client leaves, design an exercise program based on all the information that was gathered. Then, present the program to your client at your next session and provide clear expectations so they can anticipate the process.

Helpful Hint boxes help you retain information by providing analogies or memory tips.



HELPFUL HINT

A total of 2.0 CEUs is required to renew the NASM-CPT credential every 2 years: 1.9 CEUs from continuing education efforts and 0.1 CEU from renewing a CPR/AED certification.

Getting Technical boxes dive more deeply into the content being discussed.



GETTING TECHNICAL

Two protein structures that are also important to muscle contraction are tropomyosin and troponin. Tropomyosin is located on the actin filament and blocks myosin-binding sites located on the actin filament, keeping myosin from attaching to actin when the muscle is in a relaxed state. Troponin, also located on the actin filament, plays a role in muscle contraction by providing binding sites for both calcium and tropomyosin when a muscle needs to contract (Kenney et al., 2020).

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