

*Practical Applications in*

*Sports Nutrition*

Fifth Edition
Transition Guide

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**NEW TO THIS EDITION**

The fifth edition of ***Practical Applications in Sports Nutrition***has been expanded and revised to include the most accurate and relevant information related to diet and athletic performance, allowing learners to assist athletes and fitness enthusiasts in achieving their personal performance goals.

* **NEW –** Features a full-color design and art program, adding a new dimension to the text’s readability that serves to better highlight key features
* **NEW –** Every new print copy includes **Navigate 2 Advantage Access** which unlocks a full Interactive eBook, 19 animations, workbook activities, assessments and study aids, instructor resources, and more!
* **NEW –** Addresses the *2015-2020 Dietary Guidelines for Americans* and revised Nutrition Facts label
* **NEW –** Incorporates the 2016 “Position of the Academy of Nutrition and Dietetics, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and Athletic Performance” across multiple chapters

Chapter-specific updates are listed below:

**Chapter 1: “The Basics of Sports Nutrition”**

* Adds a discussion of the new Nutrition Facts label, which was introduced in 2016 and will be required in 2018
* Incorporates the *2015-2020 Dietary Guidelines*
* Reflects updates to MyPlate online messaging

**Chapter 2: “Nutrients: Ingestion to Energy Metabolism”**

* Contains streamlined description of glucose in the liver and cholecystokinin’s role in digestion

**Chapter 3: “Carbohydrates”**

* Clarifies reason for body’s shift to carbohydrates as major source of energy during intense aerobic activity
* Adds erythritol to Table 3.5 “Sugars and Artificial Sweetners”
* Adds several sports drinks, carbohydrate gels, and energy bars to Table 3.12 “Carbohydrate Content of Commonly Used Sports Drinks, Gels, and Bars”

**Chapter 4: “Fats”**

* Incorporates the new Academy of Nutrition and Dietetics (AND) position statement on dietary fatty acids
* Contains a new *Fortifying Your Nutrition Knowledge* feature: “AHA/ACC 2013 Report on Lifestyle Management to Reduce Cardiovascular Disease Risk”
* Features updated recommendations in Table 4.4 “Daily Fat Intake Recommendations”
* Includes updated omega-3 fatty acid quantities in Table 4.5 “Omega-3 Fatty Acids in Selected Foods,” based on Release 27 of the USDA Nutrient Database for Standard Reference
* Incorporates updates to Training Table 4.7 “Examples of Preexercise, Well-Balanced Meals Containing Small Amounts of Fat” and 4.8 “Examples of Postexercise Meals Containing Small to Moderate Amounts of Fat”

**Chapter 5: “Proteins”**

* Features a new section on increased protein needs for athletes recovering from an injury
* Incorporates material on the role of proteins in cellular signaling
* Includes a streamlined description of the glucose-alanine cycle
* Includes updates to percentages in Table 5.3 “Daily Protein Recommendations for Athletes”

**Chapter 6: “Vitamins”**

* Discusses controversy surrounding the RDA for vitamin D
* Includes added material about rebound scurvy
* Incorporates updated numbers in Table 6.2 “Serum Vitamin D [25(OH)D] Concentration and Status”

**Chapter 7: “Minerals”**

* Incorporates updates about studies purporting to show magnesium prevents muscle cramps

**Chapter 8: “Water”**

* Includes update on studies exploring the efficacy of hyperhydration using glycerol
* Incorporates updates to Table 8.4 “Factors Affecting Fluid Consumption and Absorption During Exercise”
* Adds Skratch to Table 8.5 “Sports Beverage Comparison”

**Chapter 9: “Nutritional Ergogenics”**

* Features new Table 9.3 “World Anti-Doping Code: 2016 Prohibited Substances List”
* Presents updated statistics about use of dietary supplements among the U.S. population generally and athletes specifically
* Incorporates updated information about the United States Pharmacopeia (USP) verification process
* Features additions and updates to Table 9.2 “Dietary Supplements Resources”
* Adds beta-alanine to Table 9.9 “Common Nutritional Ergogenics Used by Strength/Power Athletes”
* Updates ingredients listed in Table 9.11 “Common Energy Drinks”

**Chapter 10: “Nutrition Consultation with Athletes”**

* Contains a new *Fortifying Your Nutrition Knowledge* feature: “Motivational Interviewing: A tool for helping to change behavior”

**Chapter 11: “Weight Management”**

* Contains two new *Fortifying Your Nutrition Knowledge* features: “Mobile Apps: Technology in Weight Management” and “Relative Energy Deficiency in Sport (RED-S): The female triad and more”
* Includes updated statistics about obesity in the United States

**Chapter 12: “Endurance and Ultra-Endurance Athletes”**

* Contains a new *Fortifying Your Nutrition Knowledge* feature: “High Fat, Ketogenic Diets: Is there potential for enhanced performance in endurance sports?”
* Includes information from recent studies about the role of protein in recovery from endurance exercise

**Chapter 14: “Team Sport Athletes”**

* Provides updated daily carbohydrate recommendations for team sport athletes
* Includes update protein recommendations for post-exercise recovery

**Chapter 15: “Special Populations”**

* Includes updated nutrition recommendations for athletes with diabetes
* Includes updated statistics about diabetes in the United States
* Incorporates recommendation updates to Table 15.2 “Preexercise Glucose Guidelines”
* Adds items to Table 15.5 “Healthy Snack Options for Young Athletes”

**Chapter 16: “Jobs in Sports Nutrition”**

* Incorporates updates to ACEND’s five categories of knowledge requirements
* Includes updated statistics about registered dietitian nutritionists in the United States