

Sports and Exercise Nutrition

Bibiographical Information:

Authors:

McArdle, William D.

Publication Statement:

Philadelphia: Wolters Kluwer, 2019

ISBN:

9781496377357

Call Number in Library:

QT263.M1133s 2019

Editorial Reviews:

This edition of McArdle, Katch, and Katch's respected text reflects the most recent, evidence-based information on how nutrition affects exercise and sports performance. Using high quality research to illustrate teaching points, the authors provide detailed yet accessible coverage of the science of exercise nutrition and bioenergetics, along with valuable insights into how the principles work in the real world of physical activity and sports medicine. New content, new research citations, and new case studies throughout help prepare students for a successful career in exercise science.

eBook available. Faster, smarter, and more convenient, today's eBooks can transform learning. These interactive, fully searchable tools offer 24/7 access on multiple devices, the ability to highlight and share notes, and much more.

New coverage. The authors provide new and expanded coverage



of such key topics as special populations (diabetes, vegan), micronutrients, and exercise and nutrient prioritization.

New activities and assignments direct students to the USDA's Super Tracker, where they can follow a personalized nutrition and physical activity plan and track their food intake and physical activities.

New Case Studies. Each chapter contains case studies that connects personal health and exercise nutrition. Studies include real world examples that highlight application of dietary guidelines, weight control, body composition assessments, and practical physical activity recommendations.

Striking full-color art program featuring more than 500 figures and images to bring the content to life.

An accessible handbook approach makes detailed and challenging material more accessible.

Focused organization. The book starts with coverage of the basic science of nutrition, builds on that, and ultimately applies the content to diverse exercise science contexts.

Built-in learning aids. In every chapter, Test Your Knowledge assessments, Personal Health and Exercise Nutrition boxes, Connections to the Past features, Personal Health and Exercise Nutrition activities, Section Summaries, and Additional Insights help students master key content.

FYIs interspersed throughout the text help bring timely examples to expand on information in the text.

References include links to current research to help students expand on their knowledge and learning.



Summary:

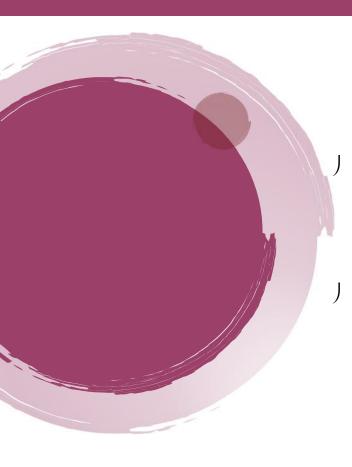
"The goal of the text is to illustrate the "integration of nutrition and exercise and its impact on optimal exercise performance and training responsiveness." This is the most in depth and detailed sports nutrition book on the market authored by the well-known team of McArdle, Katch and Katch. The challenge of this course is presenting nutrition content/material at the level that is appropriate for those studying exercise science and not nutrition"--Provided by publisher.

Prepare for a successful career in physical education, exercise science, sports and athletic training, and the kinesiological sciences, with this new 5th edition.

With references to high-quality research and stunning reliable coverage of the science of exercise nutrition and bioenergetics and give penetrating insights into how basic principles tie in to the expanding world of physical activity and sports science. A striking, full-color art program with 196 updated figures, more than 500 internet links to governmental and nongovernmental websites, 1200 citations to published research, and an array of online learning resources enhance the book's content.

Features:

- Updated content. The book reflects the most recent, evidence-based understanding of how nutrition compliments exercise and sports performance and features new and expanded coverage of topics such as special populations; macro and micronutrients; physical activity intensity, mode, and duration on gastrointestinal functions and common GL disorders; standards for overweight and obesity in the United States and worldwide; state-by-state adult an childhood obesity rates; health risks of excess central fat deposition; and exercise and nutrient optimization.
- New Case Studies. Each chapter contains case studies that connect personal health and exercise nutrition. Studies includes real-world examples from application of dietary guidelines, weight control, and body composition assessments, to practical physical activity



recommendations.

Built-in Learning Aids. In every chapter, Test Your Knowledge assessments, Personal Health and Exercise Nutrition summaries, For Your Information (FYI) boxes, Connections to the Past, Section Summaries, animation callouts, recent references lists, and more, help you master key content.

Five Key Appendices provide timely information and includes: Nutritive Values for Common Foods, Alcoholic and Nonalcoholic Beverages, and Specialty and Fast-Food Items; Energy Expenditure in Household, Occupational, Recreational, and Sports Activities; Assessment of Energy and Nutrient Intake: 3-Day Dietary Survey; Body Composition Assessment; Representative Body Composition Characteristics of Athletes in Different Sports; and Three-Day Physical Activity Log.

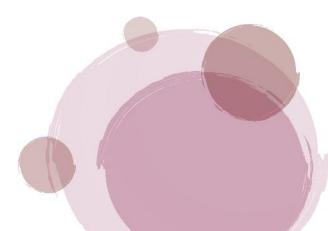


Table of Contents:

Contents

Preface v
Introduction xiv

PART () FOOD NUTRIENTS: STRUCTURE, FUNCTION, DIGESTION, ABSORPTION, AND ASSIMILATION 1

Chapter 1 The Macronutrients 2

Chapter 2 The Micronutrients and Water 47
Chapter 3 Nutrient Digestion and Absorption 96

PART (2) NUTRIENT BIOENERGETICS DURING EXERCISE AND TRAINING 127

Chapter 4 Nutrient Role in Bioenergetics 128

Chapter 5 Macronutrient Metabolism during Physical Activity and Exercise Training 166

Chapter 6 Measurement of Energy in Food and during Physical Activity 184

PART (3) OPTIMAL NUTRITION FOR THE PHYSICALLY ACTIVE PERSON 215

Chapter 7 Making Informed and Healthful Nutritional Choices for the Physically Active

Person 216

Chapter 8 Nutritional Considerations for Intense Training and Competition 262

Chapter 9 Making Wise Choices in the Nutrition Marketplace 289

PART (4) THERMOREGULATION AND FLUID BALANCE DURING HEAT STRESS 323

Chapter 10 Physical Activity: Thermoregulation, Fluid Balance, and Rehydration 324

PART (5) PURPORTED ERGOGENIC AIDS 355

Chapter 11 Pharmacologic and Chemical Ergogenic Aids Evaluated 356

Chapter 12 Nutritional Ergogenic Aids Evaluated 395

PART (6) BODY COMPOSITION, WEIGHT CONTROL, AND DISORDERED EATING BEHAVIORS 425

Chapter 13 Body Composition Assessment and Sport-Specific Observations 426

Chapter 14 Energy Balance, Physical Activity, and Weight Control 482

Chapter 15 Disordered Eating 523

Appendix A Nutritive Values for Common Foods, Alcoholic and Nonalcoholic Beverages,

and Specialty and Fast-Food Items 558

Appendix B Energy Expenditure in Household, Occupational, Recreational,

Fitness, and Sports Activities 591

Appendix C Assessment of Energy and Nutrient Intake: 3-Day Dietary Survey 604

Appendix D Body Composition Assessment 613

Appendix E Representative Body Composition Characteristics of Athletes in Different Sports 625

Appendix F Three-Day Physical Activity Log 630

INDEX 635

