



Nutrition **Sixth Edition**

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Written for majors and advanced non-majors, ***Nutrition, Sixth Edition*** provides a modern, comprehensive introduction to nutrition concepts, guidelines, and functions. Its student-focused approach provides readers with the knowledge they need to make informed decisions about their overall nutrition.

Key Highlights

- **New** Navigate 2 Advantage Access provides an interactive eBook with animations, study tools, robust assessment materials, and—for qualified instructors—an assortment of instructor resources. Navigate 2 is free with every new copy of this text and is also available for separate purchase.
- **New** Getting Personal feature in the end-of-chapter Learning Portfolio encourages students to apply their nutritional knowledge to understanding their own diets.
- **Revised** content reflects the *2015-2020 Dietary Guidelines for Americans*, released in January 2016.
- **Revised** statistics and data incorporated throughout the text reflect the current state of nutrition in America and the world.
- **Revised** food source charts in the vitamins and minerals chapters more clearly convey optimal sources for vitamins and minerals.
- **Updated** Position Statements from the Academy of Nutrition and Dietetics, the American Heart Association, and other organizations appear throughout the text.
- **Updated** references utilize the latest science in the field.
- **New and updated** FYI, Going Green, and Quick Bite features provide in-depth discussions of controversial issues and interesting factoids.

Chapter 1—Food Choices

- **New** section discusses the impact of eating away from home
- **New** FYI feature: “The Affordable Care Act and Nutrition”
- **New** Quick Bite features: “Try It Again, You Just Might Like It,” “Does being overweight spread from person to person?” and “High-fructose corn syrup”
- **Updated** section on the impact of healthy food experiences early in life on forming healthy eating habits throughout the life cycle

- **Updated** discussion of the effect TV advertisements have on childhood nutrition

Chapter 2—Nutrition Guidelines and Assessment

- **New** discussion of FDA regulations regarding the labeling of gluten-free foods
- **New** Going Green feature: “Is the American Diet Contributing to a Warmer Planet?”
- **New** Quick Bite feature: “Variety is Key”
- **Revised** FYI feature: “Portion Distortion”

Spotlight on Dietary Supplements and Functional Foods

- **New** table highlights groups for whom nutritional supplementation may be recommended
- **Revised** FYI feature: “Defining Complementary and Integrative Health”
- **Updated** Position Statement from the Academy of Nutrition and Dietetics: “Functional Foods”

Chapter 3—Digestion and Absorption

- **New** FYI feature: “Celiac Disease and Gluten Sensitivity”
- **New** Quick Bite feature: “Living Without a Gallbladder”
- **Updated** discussion regarding the link between red meat consumption and colorectal cancer
- **Updated** Nutrition Science in Action feature: “Screen Time and Diet Quality”
- **Updated** FYI feature: “Bugs in Your Gut? Health Effects of Intestinal Bacteria”
- **Streamlined** description of emulsification and its role in fat digestion
- **In-depth** discussion of the effect of medications on food absorption

Chapter 4—Carbohydrates

- **New** table summarizing the effects of fiber on digestion and absorption, and the health benefits of these effects
- **New** comparison of soluble and insoluble fibers
- **New** discussion of agave sweeteners
- **Streamlined** discussion of artificial sweeteners, with new table summarizing nonnutritive sweeteners and sweet substances
- **Expanded** discussion of resistant starches
- **Expanded** FYI features: “The Glycemic Index of Foods: Useful or Useless?” and “Unfounded Claims Against Sugars,” with new sections on “Sugar and Type 2 Diabetes” and “High-Fructose Corn Syrup (HFCS), Obesity, and Disease”

Chapter 5—Lipids

- **New** sections providing recommendations for omega fatty acid intake and summarizing the health effects of omega-3 fatty acids
- **New** Position Statement from the Academy of Nutrition and Dietetics: “Fatty Acids for Healthy Adults”

- **Streamlined** section on fat replacers
- **Revised** Going Green feature: “Fish: Good For You and the Environment”
- **Revised** FYI feature: “Fats on the Health Store Shelf,” which now delves into coconut oil and grapeseed oil
- **Revised** table incorporating American Heart Association Diet and Lifestyle Recommendations
- **Updated** American Heart Association Position Statement: “Omega-3 Fatty Acids”

Chapter 6—Proteins and Amino Acids

- **New** discussion regarding whether eating more protein helps build more muscle
- **New** table providing dietary suggestions for vegetarians
- **New** FYI feature: “High Protein Diets and Supplements”
- **New** Quick Bite feature: “Eating lower on the food chain is good for the planet”
- **New** Position Statement from the Academy of Nutrition and Dietetics: “Vegetarian Diets”
- **Revised** Going Green feature: “Send in the Proteins”
- **Revised** FYI feature: “Do Athletes Need More Protein?” incorporating latest information from the Academy of Nutrition and Dietetics

Chapter 7—Alcohol

- **New** discussion of the prehistoric origins of alcohol
- **Revised** description of alcohol metabolism

Chapter 8—Metabolism

- **Updated** information on the role of carnitine in cardiovascular efficiency during exercise

Chapter 9—Energy Balance

- **New** discussion of digital private counseling programs
- **New** Quick Bite feature “The Raw Foods Diet”
- **New** description of metabolically healthy obesity
- **Revised** section on FDA-approved weight-loss medications
- **Updated** section on portion distortion phenomenon
- **Updated** Going Green feature: “Salad Days”
- **Updated** discussions regarding over-the-counter drugs, dietary supplements, and surgery for weight loss

Spotlight on Obesity

- **New** section on the link between gut microbiota and obesity
- **New** Quick Bite features: “Can You Pick Your Partners?” and “Your Microbiota and You”
- **New** statistics concerning obesity rates in Asia and the Middle East

- **Revised** FYI feature: “U.S. Obesity Trends: A Relentless Increase”

Chapter 10—Fat-Soluble Vitamins

- **New** table summarizes fat-soluble vitamins, their functions, and the results of deficiency and megadoses
- **New** table compares fat-soluble and water-soluble vitamins
- **New** table lists common carotenoids and their potential benefits

Chapter 11—Water-Soluble Vitamins

- **New** table summarizes water-soluble vitamins, their functions, and the results of deficiency and megadoses

Chapter 12—Water and Major Minerals

- **New** section discusses minerals in fluid balance
- **Updated** Going Green feature: “The Thirst for Water Resources”
- **Updated** FYI feature: “Tap, Filtered, or Bottled: Which Water is Best?”

Chapter 13—Trace Minerals

- **New** discussion of arsenic levels in rice-based products
- **New** reference to sea salts as sources of iodine

Chapter 14—Sports Nutrition

- **New** discussion of exercise intensity, muscle-strengthening exercises, and flexibility and neuromotor exercises
- **New** section on ephedrine
- **Updated** coverage of protein and hydration recommendations for athletes
- **Updated** discussion of nutrition supplements and ergogenic aids
- **Updated** section on caffeine
- **Expanded** discussion of the American Medical Association and American College of Sports Medicine’s *Exercise is Medicine* initiative

Spotlight on Eating Disorders

- **New** introduction of the acronym OSFED (Other Specified Feeding or Eating Disorder)

Chapter 15—Diet and Health

- **New** section on nutrition informatics
- **New** Quick Bite features: “Adaptation Gone Awry, “Smartphones Advance Artificial Pancreas,” and “What Smells in Blood Pressure?”
- **Revised** section delving into whether intakes of saturated and trans fat and cholesterol should be limited

Chapter 16—Life Cycle: Maternal and Infant Nutrition

- **New** Position Statement from the Academy of Nutrition and Dietetics: “Nutrition and Lifestyle for a Healthy Pregnancy Outcome”
- **New** table presenting a meal plan for a vegan pregnancy

Chapter 17—Life Cycle: From Childhood Through Adulthood

- **New** content discussing the increase in use of e-cigarettes among American high school students
- **Updated** information relating to lead toxicity
- **Revised** Quick Bite feature: “The Dangers of Teenage Smoking”

Chapter 18—Food Safety and Technology

- **New** FYI feature: “Are Nutrigenomics in Your Future?”
- **New** table listing food safety mistakes
- **New** information regarding the FDA’s voluntary plan to phase out the use of certain antibiotics for enhanced food production in farm animals
- **Revised** section on genetically engineered foods
- **Revised** table providing USDA’s labeling requirements for organic foods
- **Updated** Going Green feature: “Ocean Pollution and Mercury Poisoning”

Chapter 19—World View of Nutrition

- **New** Quick Bite features: “Urban Food Production” and “Tackling Food Insecurity”
- **Expanded** information on iodine deficiency disorders
- **Revised** table provides poverty guidelines based on household size
- **Updated** Position Statement from the Academy of Nutrition and Dietetics: “Addressing World Hunger, Malnutrition, and Food Insecurity”