

Chapter 1. The Science and Scope of Nutrition

Eating for a Lifetime: A new field in nutrition research is revealing surprising details about how food affects our genes.

Introducing the science of nutrition

Food provides nutrients and energy

What is malnutrition?

Energy Recommendations

Nutrition Science in Action

Credible Sources of Nutrition Information

Health Goals for Americans

Assessing the North American Diet

Chapter 2. Healthy Diets

From Desert to Oasis: Are "food deserts" preventing millions of Americans from eating well?

Healthy diets feature variety, balance, adequacy, and moderation

Understanding the nutrient density and energy density of foods

Limit these: solid fats and added sugars

Dietary Guidelines for Americans

Understanding the labeling on food

Menu labeling

Chapter 3. Digestive System and Digestive Disorders

A Gut Feeling: Is gluten really all that bad?

Overview of the Digestive Process

Overview of Mechanical and Chemical Digestion

The Path of Digestion from the Mouth to the Large Intestine

The Role of Bacteria in the Gastrointestinal Tract

Digestive Disorders

Irritable Bowel Syndrome (IBS) and Inflammatory Bowel Disease (IBD)

Awareness of Celiac Disease Is Growing

Chapter 4. Carbohydrates

Whole Grain Hype: Can science help us navigate the perils of the cereal aisle?

What Are Carbohydrates?

How Grain-Based Foods Measure Up

The Digestion of Carbohydrates

Added Sugars

Dental Caries

Sugar Alternatives

Understanding Fiber

Carbohydrate Intake Recommendations

NEW story!

SPOTLIGHT A: A Global Pandemic: A projected 629 million people in the world will be living with diabetes by year 2045

What Is Diabetes Mellitus?

Type 2 Diabetes

Diabetes Treatment and Prevention

NEW story!

Chapter 5. The Lipids

Is fish really brain food? Dietary lipids can profoundly affect our risk of developing dementia later in

life.

Dietary Fat

Overview of the Lipids

Lipid Digestion and Absorption

Lipoprotein Transport

Essential Fatty Acids

Trans Fats

Current Fat Intake and Recommendations

NEW!

SPOTLIGHT B: Lipids in Health and Disease

Death in Bogalusa: From tragic deaths in a southern town, insights into heart disease.

Atherosclerosis and Cardiovascular Disease

Risk Factors for Cardiovascular Disease

A Heart-Protective Diet

Fat Intake and Health—Beyond Cardiovascular Disease

Chapter 6. Protein

How much of a good thing do we need? Experts consider how much protein is best for us all.

Recommendations for Protein Intake

Protein Synthesis

Digestion and Absorption of Proteins

Varied Functions of Protein

Protein Turnover and Nitrogen Balance

Seniors May Benefit from Increased Intakes of Protein

Protein Sources

Protein Quality

Protein-Deficiency

High-Protein Diets

NEW!

SPOTLIGHT C: Plant-Based Diets

Pass the plants, please: What does a Spanish study say about the benefits of following a Mediterranean-like diet?

Vegetarian and Semi-Vegetarian Diets

Benefits of a Diet Rich in Plant Foods

How Cancer Develops

Benefits of Phytochemicals

Nutritional Considerations and Concerns Associated with Plant-Based Diets

Plant-Based and Vegetarian Guidelines

The Mediterranean Diet

NEW story!

Chapter 7. Fat-soluble Vitamins

Biofortification in Bangladesh: Can a public health crisis be solved with rice?

Introducing the vitamins

Properties of fat-soluble vitamins

Vitamin A

Antioxidants Protect Against Damage from Free Radicals

Vitamin D

Vitamin E

Vitamin K

Chapter 8. Water-soluble Vitamins

It's Not A Germ: Pioneering research uncovers vitamin deficiency diseases

Characteristics of the water-soluble vitamins

The B-vitamins

Choline

Vitamin C

Chapter 9. Major Minerals and Water

Potassium Power: Eating a diet low in sodium and rich in potassium may be protective of hypertension

Overview of the minerals

Mineral absorption and bioavailability

Minerals in our food

Calcium, magnesium and phosphorus have diverse structural roles in the body

Sulfur is a component of proteins

Sodium, potassium and chloride maintain fluid balance in the body

Water

Water intake recommendations

Chapter 10. Trace Minerals

Small Amounts with Big Importance: Is Iodine Deficiency a Thing of the Past?

Introducing the trace minerals

Iodine: Sources and Functions

Iron

Zinc

Copper

Selenium

Fluoride

Other Trace Minerals: Manganese, Molybdenum, and Chromium

Ultratrace minerals

NEW!

SPOTLIGHT D: Supplements

Supplements, herbs, and functional foods: Surprising studies on the value of vitamin supplements.

What Are Dietary Supplements?

Regulations of Dietary Supplements

Understanding Supplement Labels

Are Dietary Supplements Harmful?

Functional Foods

Chapter 11. Energy Balance and Obesity

The Sitting Disease:

Understand the causes and consequences of obesity."

Energy in, energy out

The biology of hunger

A NEAT cause of weight gain

Lifestyle and energy balance

Weight loss recommendations

Chapter 12. Nutrition and Fitness

Eating to Win: Research suggests that when athletes eat may be just as important as what they eat.

Components of fitness

Fueling the body

Measures of exercise intensity

Dietary carbohydrates for endurance exercise
Female athlete triad
Body building
Hydrating the athlete
Physical fitness: not just for athletes

Chapter 13 Nutrition through the College Years

Determinants of eating behavior, disordered eating, and alcohol: How food choices are influenced by social norms.

Growth, Development, and Nutrient Requirements in Late Adolescence

Calcium

Iron

Determinants of Eating Behavior

Eating Challenges on Campus

Eating Disorders

Alcohol

Spotlight E: Pregnancy, Lactation, and Infancy

Nourishing mother and baby: New research suggests that delaying cord clamping after birth preserves iron status.

Changing Nutritional Needs

Energy and Nutrient Needs during Pregnancy

A Healthy Pregnancy

Food Safety

Postnatal Nutrition

Nutrition during Lactation

Formula Feeding

Nutrition for the Growing Child

NEW!

SPOTLIGHT F: Childhood Nutrition

Food allergies and intolerances: As paradoxical as it may seem, could dirt and germs make children healthier for life?

What Are Children Eating?

Nutritional Recommendations for Children

Nutrients of Concern in Childhood

Childhood Obesity

Food Allergies

Growth and Development in Childhood

NEW!

SPOTLIGHT G: Nutrition and the Aging Adult

Live long and prosper: Can you eat your way to a longer, healthier life?

What Happens When We Age?

Life Expectancy and Lifespan

Blue Zones

Energy Needs and Physical Activity

Special Nutritional Concerns for Older Adults

Nutrient Recommendations for Seniors

Maintaining Physical Strength for a Lifetime

Blue Zone Secrets

NEW!

Chapter 14. Global Nutrition: Food Security and Sustainability

Feeding the world now and in the future; How will we combat global hunger while we promote food security and sustainability?

Food and Nutrition Security

Sustainability

How Are Organic Foods Different from Conventional Foods?

NEW!

SPOTLIGHT H: Food Safety

How cantaloupe turned lethal; Safe food-handling practices from farm to table can dramatically reduce the risk of foodborne illness.

A Brief History of Food Safety in America

Foodborne Intoxication and Infection

Engineering Food Safety: HACCP and Irradiation

Food Safety and Modernization Act

Food Safety in the Home