

- Chapter 1
- Food, Nutrition, and Health
- Chapter 1
 - Lesson 1.1
- Key Concepts
- Optimal personal and community nutrition is a major component of health promotion.
- Certain nutrients in food are essential to our health and well-being.
- Nutrition and Dietetics
- Nutrition
 - The sum of the processes involved in taking in nutrients and assimilating and using them
 - Food people eat and how the body uses it
- Nutrition science
 - Scientific knowledge on human food requirements
- Nutrition and Dietetics, cont'd
- Registered Dietitian (RD)
 - Nutrition authority on the health care team
 - Other terminology
 - Clinical nutrition specialist or public health nutritionist
 - Check to make sure RD credentialed
- Dietetics

— Field that applies nutrition science to human health and assists in disease management

- Health and Wellness
- Proper nutrition is essential to good health
- Health includes meeting basic human needs
- Wellness seeks the full development of health potential for all persons
- Wellness Movement and National Health Goals
- Response to medical care system's focus on illness and disease
- Response to rising health costs
- Focus on lifestyle and personal choices
- Traditional and Preventive Approaches to Health
- Traditional
 - Attempts change only when illness or disease already exists
 - Little value for lifelong positive health
- Preventive
 - Identify risk factors
 - Allows people to choose behaviors to minimize risk of disease
- Signs of Proper Nutrition
- Well-developed body
- Ideal weight for body composition
- Adequate muscle development

- Smooth skin, glossy hair, clear and bright eyes
- Mental and physical alertness
- Ability to resist disease
- Increased life span
- Nutrients in Food
- Provide energy
- Build tissue
- Regulate metabolic processes
- Individual nutrients with specific metabolic functions
- No nutrient ever works alone
- Energy Sources
- Carbohydrates
 - Primary source of fuel for heat and energy
 - Maintain body's back-up store of quick energy
 - Should provide 45% to 65% of total kilocalories
- Energy Sources, cont'd
- Fats
 - Animal and plant sources
 - Secondary (storage) form of heat and energy
 - Should provide no more than 20% to 35% of total kilocalories

- **Energy Sources, cont'd**
- **Proteins**
 - Primary function is tissue building
 - Should provide 10% to 35% of total kilocalories
 - Source of energy when supply from carbohydrates and fats is insufficient
- **Tissue Building**
- **Proteins**
 - Provide amino acids
 - Necessary for building and repairing tissues
- **Vitamins and minerals**
 - Vitamin C for tissue building
 - Calcium and phosphorus
 - Building and maintaining bone
- **Tissue Building, cont'd**
- **Iron**
 - Essential part of hemoglobin in the blood
- **Fatty acids**
 - Build central fat substance of cell walls
- **Regulation and Control**
- **Vitamins**

- Function as coenzyme factors
 - Components of cell enzymes in governing a chemical reaction during cell metabolism
- Minerals
 - Also serve as coenzyme factors
- Regulation and Control, cont'd
- Other nutrients
 - Water
 - Essential base for all metabolic processes
 - Fiber
 - Regulates passage of food material through gastrointestinal tract
- Types of Nutrition Health
- Optimal nutrition
 - Obtained from a varied diet
 - Desired amounts should be balanced
- Undernutrition
 - Less than desired amounts of nutrients
 - Limits work capacity, immune system, mental activity
- Types of Nutrition Health, cont'd
- Malnutrition
 - Reserves depleted

- Nutrient and energy intake insufficient
- **Overnutrition**
 - Excess nutrient and energy intake over time
 - Produces harmful gross body weight
 - Excessive amounts of nutrient supplements over time
- **Chapter 1**
 - Lesson 1.2**
- **Key Concepts**
- **Food and nutrient guides help us to plan a balanced diet according to individual needs and goals.**
- **Dietary Reference Intakes (DRIs)**
- **Published by the National Academy of Sciences**
- **Updated every 5 to 10 years**
- **Includes recommendations for each gender and age group**
- **DRIs, cont'd**
- **Encompass four interconnected categories of nutrient recommendations**
 - **Recommended Dietary Allowances (RDAs)**
 - **Estimated Average Requirements (EARs)**
 - **Adequate Intake (AI)**
 - **Tolerable Upper Intake Level (UL)**

- DRIs, cont'd
- Recommended Dietary Allowance (RDA)
 - Daily intake of nutrients that meet needs of almost all healthy individuals
- Estimated Average Requirement (EAR)
 - Intake level that meets needs of half the individuals in a specific group
- DRIs, cont'd
- Adequate intake (AI)
 - Used when not enough evidence to establish the RDA
- Tolerable upper intake level (UL)
 - Sets maximal intake unlikely to pose adverse health risks
- MyPyramid
- Food guidance system
- Valuable nutrition education tool for the public
- Goal is to promote physical activity, variety, proportionality, moderation, and gradual improvements
- MyPyramid, cont'd
- Dietary Guidelines for Americans, 2005
- Result of growing public concerns in the 1960s
- Based on chronic health problems of an aging population
- Relate current scientific thinking to America's health problems

- **Dietary Guidelines for Americans, 2005, cont'd**
- **Nine focus areas**
 - **Adequate nutrients within calorie needs**
 - **Weight management**
 - **Physical activity**
 - **Food groups**
 - **Fats**
 - **Carbohydrates**
 - **Sodium and potassium**
 - **Alcoholic beverages**
 - **Food safety**
- **Dietary Guidelines for Americans, 2005, cont'd**
- **Updated statement released every 5 years**
- **Reflect current DRIs**
- **Include 18 specific population recommendations**
- **Changing Food Environment**
- **Heightened reliance on fast, processed, or pre-packaged foods**
- **Surveys indicate malnutrition in U.S., however:**
 - **Fast food restaurants are offering lower-fat, health-conscious alternatives**
 - **Chain restaurants are developing new menu items**
 - **Shoppers are using FDA's nutrition labeling**
- **Summary**
- **Proper food and key nutrients are essential to life and health**
- **Registered Dietitian is the nutrition expert**

- Proper nutrition requires carbohydrate, protein, fat, vitamins, minerals, and water
- Established nutrient and food guides for health promotion