

Nutrition



Food is any substance that is ingested ("eaten") and helps sustain **life**.

- Food categories:
 - Meats and Alternative
 - Dairy Products
 - Fruits and Vegetables
 - Breads, Cereals, Rice and Pasta
 - Fats, Oils and Sweets

Food contains **essential dietary factors** known as **Nutrients** that perform several different **functions** within the body.

Nutrient	Function	Food
Carbohydrates		
Protein		
Fat		
Vitamins, Minerals, Fiber and Water.		

Carbohydrates

- Main source of energy
- Simple Sugars
 - 1-2 sugar molecules connected together. (Digested quickly)
 - Pop, candy, honey, sweets, fruit
- Complex Carbohydrates
 - 3+ sugar molecules connected together. (Longer to digest)
 - Legumes, Grains, Vegetables

Protein

- Composed of chains of **Amino Acids**.
- Used in growth and repair of tissues

Fats

- Second source of energy (energy storage)
- **Saturated Fats**
 - Animal sources (solid at room temperature)
 - Linked to increased cholesterol levels
- **Unsaturated Fats**
 - Vegetable sources (Liquid at room temperature)
 - Linked to reduced cholesterol levels

Ways to reduce fat consumption

- > **Low fat cooking methods**
- > Minimize processed foods
- > **Avoid inner aisles of grocery stores**
- > Use better cuts of meats (lean)
- > **Use low fat alternatives**
- > Decrease use of condiments (mayonnaise)

Vitamins

- Nutrients that are essential to all bodily functions
- **Regulate metabolism** (chemical reactions that take place in the body, needed to live)
- Fat Soluble vitamins
 - Dissolved and stored in fat
- Water soluble vitamins
 - Dissolved in water, excess is excreted in urine.

Minerals

- **Inorganic elements** found in food that are essential to life processes
 - > e.g. Calcium, Potassium, Sodium, Phosphorus, Iron

Water

- approximately 60% of body-weight
- **Regulates metabolism**
- Major part of blood plasma
- Lubricates joints
- Shock absorber in eyes, spinal cord, and amniotic sac (during pregnancy)
- Dissolves materials in the body
- Needed for certain chemical reactions in the body
- Helps maintain body temperature

Energy Needs

- Every individual has his or her energy requirements
 - > **Basal metabolism** - energy needed by the body to when **at rest** (heart, respiration, cellular activity.
 - > **Physical activity** - walking, running, moving
 - > **Digestion and absorption** - breaking down food
- Determined by:
 - > Age
 - > Sex
 - > Weight
 - > Level of **physical activity**
 - > Overall state of **health**

Energy Units

- SI unit = **joule (J)**
- More common = dietary calorie (**Cal**)

Average Teenager Energy Needs

- Avg teen girl requires between **1800 & 2400 Cal / 7200 & 9600 kJ** per day
- Avg teen boy requires between **2200 & 3200 Cal / 8800 & 12800 kJ** per day

Reading Nutrition Labels

- By law, food labels must contain certain things. Some of the legal requirements are:
- List of Ingredients:
 - List starts with the ingredient of the largest amount and continues to the ingredient of the smallest amount.
 - Must list (may contain...) for potential allergens like peanuts
- Nutrition Label:
 - Only became law as of December 2005
 - Displays the nutritional information contained in the product in grams and % of the Recommended Daily Intake (RDI) that is in one serving of that product.

Nutrition Facts	
Serving Size 1 cup (228g)	
Serving Per Container 2	
Amount Per Serving	
Calories 250	Calories from Fat 110
% Daily Value*	
Total Fat 12g	18%
Saturated Fat 3g	15%
Trans Fat 1.5g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%

Size of recommended portion

Number of servings per package

Calories per serving

Amount of nutrients by weight and % of RDI

% of RDI for vitamins

How much energy will I get from 1 serving of the food above?

How many servings of the food above would I have to eat to get all of the calcium I need for the day? All of the Fat I need for the day?