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

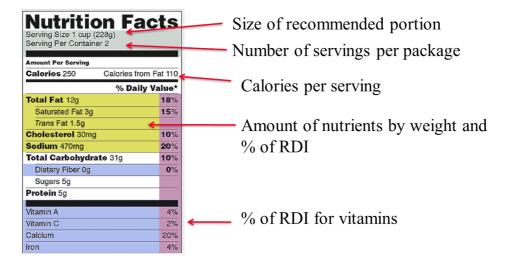
- SI unit = joule (J)
- More common = dietary calorie (Cal)

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.



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?