Nutrition and Dietetic Services

HS2

Basic Nutrition Requirements

Objectives

- Explore the field of nutrition and dietetic services.

b. Discuss basic nutrition requirement.

Basic Nutrition Requirements

6 categories of nutrients:

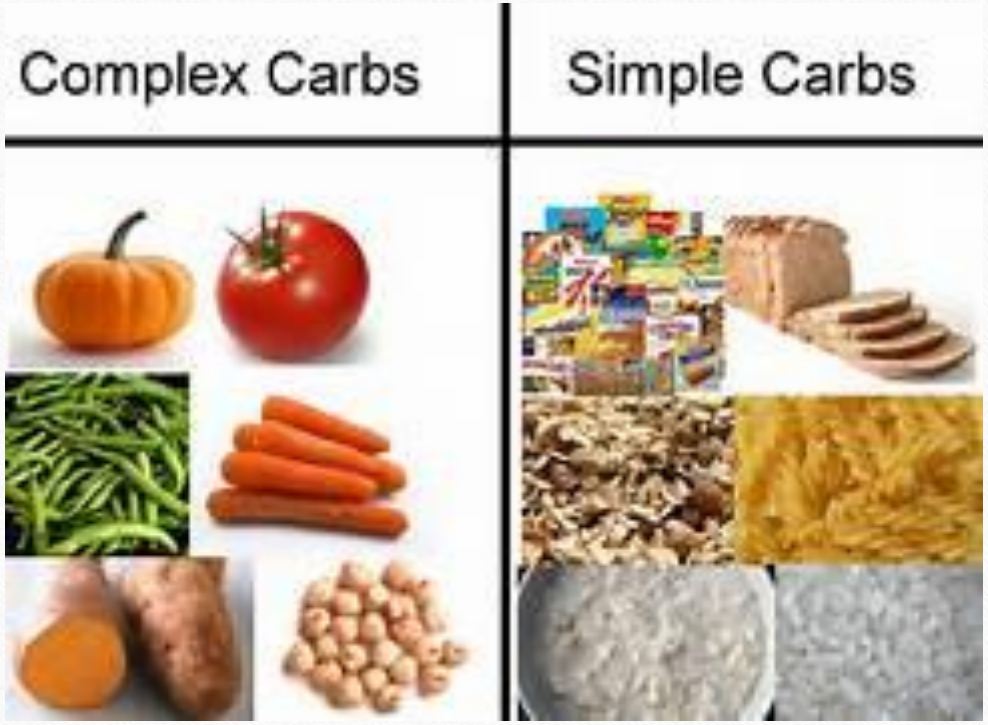
1. Carbohydrates
2. Fats
3. Proteins
4. Vitamins
5. Minerals
6. Water

Basic Nutrition Requirements

- Nutrients that supply energy: carbs, proteins, & fats
- Nutrients that build & repair: proteins
- Nutrients that regulate body processes: vitamins & minerals

Carbohydrates

- Body's main source of energy
- 2 categories of carbs: simple & complex
- ***Simple carbs*** (sugars)=composed of 1 or 2 sugar units
- Sources of simple carbs: fruit, milk, candy, soft drinks, sweet desserts



Carbohydrates

- ***Complex carbs*** (starches)=composed of many sugar units
- Body breaks down starches into smaller sugar units that are used to produce energy
- Sources of complex carbs: bread, cereal, rice, pasta, starchy veggies (potatoes, corn, squash), & legumes (dry beans, peas, & lentils)

Carbohydrates

- Dietary fiber=plant substance that body cannot digest
- Many foods high in complex carbs also have fiber
- Fiber helps digestive tract work properly & helps protect against heart disease & cancer

Fats

- Gives flavor & texture to foods
- Promotes healthy skin & normal growth
- Carries some vitamins to needed locations
- Stored fat acts as insulation, cushions & protects organs
- Fats are a natural part of some foods like meat, poultry, fish, dairy, & nuts
- Other foods are composed primarily of fats like vegetable oil, butter, cream, & mayonnaise which are used as ingredients in foods like salad dressings, ice cream, etc

Fats

- 2 classes of fats: saturated & unsaturated
- Most foods contain a mixture of theses types of fats

Fats

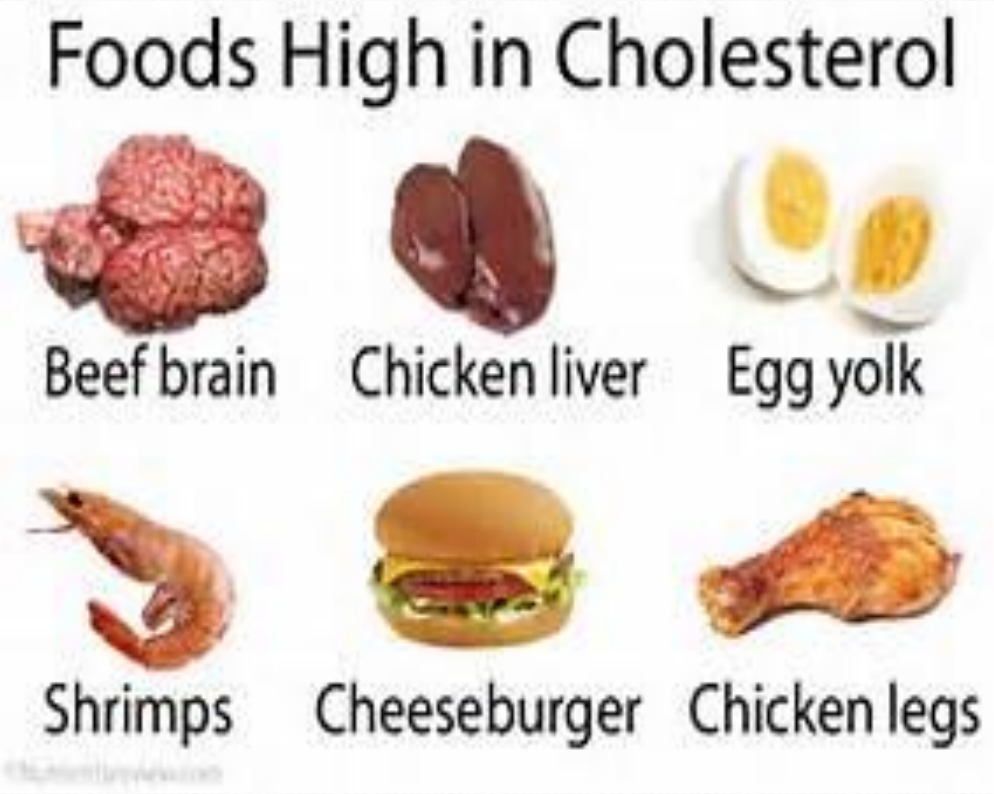
- ***Saturated fats***: solid at room temperature (butter, stick margarine, meats, poultry, some dairy products)

Fats

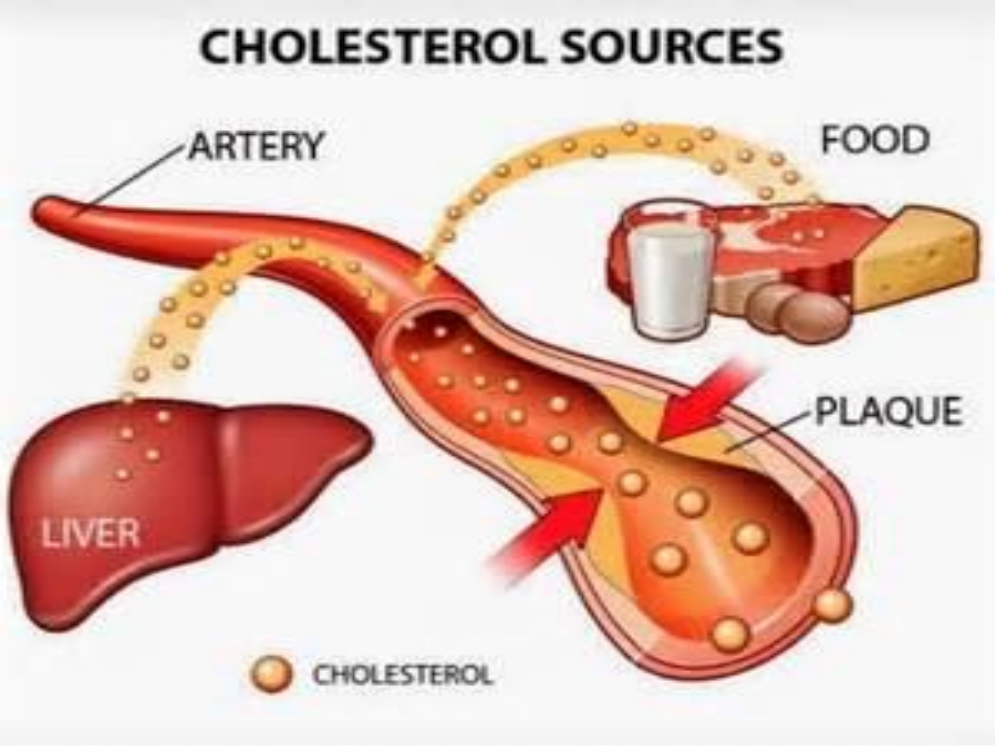
- ***Unsaturated fats***: liquid at room temperature (vegetable oil, nuts, olives, avocados)

Fats

- ***Cholesterol***=waxy substance that is part of every cell in the body
- Cholesterol is not a fat
- Sources of cholesterol: meat, poultry, fish, egg yolks, & dairy
- Foods from plant sources have no cholesterol



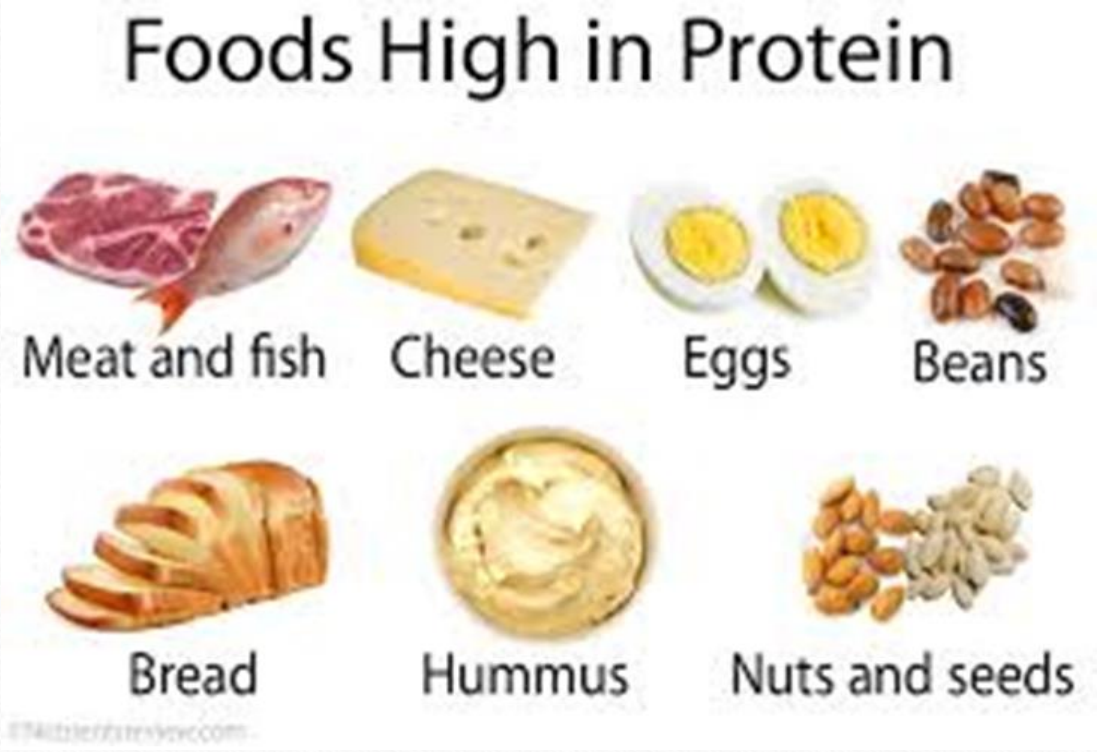
Fats



- Our body doesn't need cholesterol from food because it can produce all the cholesterol it needs
- Diets high in saturated fats & cholesterol raise body's cholesterol level which increase risk for heart disease

Proteins

- Body's building blocks because they help the body grow, repair itself, & fight disease
- Can be used for energy when needed
- Made up of units called ***amino acids***



Proteins

- Body can make some amino acids but those it cannot make are called ***essential amino acids*** & must come from food you eat
- Sources of proteins that have all the essential amino acids (***complete proteins***): meat, poultry, fish, eggs, dairy

Proteins

- Plants sources lack 1 or more essential amino acids so they are called ***incomplete proteins***
- Plants that have proteins include dry beans & peas, nuts, & grains

Vitamins

- Only needed in small amounts
- Help other nutrients do their jobs
- Don't provide energy or build body tissues
- Help regulate body processes
- Classified as either water-soluble or fat-soluble

Vitamins

Water-soluble vitamins:

- Dissolve in water
- Examples: Vitamin C and B
- Cannot be stored in the body

- Body gets rid of excess water-soluble vitamins through urine
- Taking large amounts of water-soluble vitamins can damage kidneys

Vitamins

Fat-soluble vitamins:

- Dissolve in fats
- Examples: Vitamin A, D, E, & K
- Stored in body fat & liver

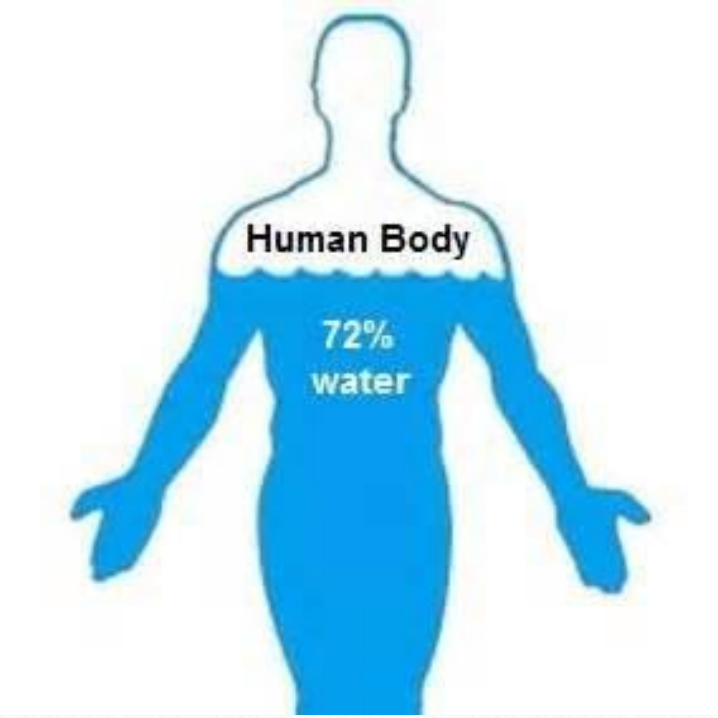
- When body needs them, they are pulled out of storage
- Excessive amounts of fat-soluble vitamins can build up to harmful levels in the body

Minerals

- Help regulate body processes
- Give structure to bones & teeth and provide materials for healthy blood & tissue
- Examples: calcium, phosphorus, magnesium, & iron
- Osteoporosis can develop due to lack of minerals
- Anemia can develop due to lack of iron

Water

- Essential to life
- Makes up 2/3 of body weight
- Functions to:
  - ✓ Help regulate body temperature
  - ✓ Transport nutrients & cell waste products
  - ✓ Aid in digestion
  - ✓ Moisten body tissues (eyes, mouth, nose)
  - ✓ Cushion joints
  - ✓ Protect organs & tissues



Water

- Each day body loses 2-3 quarts of water; it must be replaced by drinking water & other fluids
- Goal is to drink 8 cups of fluid each day (water, fruit juice, milk, soup). Soda, tea, & coffee count but contain caffeine
- Caffeine acts as a diuretic causing body to lose water
- Foods like broccoli, lettuce, tomatoes, & watermelon also provide water