

# Nutrition Outline

9<sup>th</sup>/10<sup>th</sup> Grade Health Class

# Nutrition

- NUTRITION – Process by which the body takes in food.
- NUTRIENTS – substances in food that your body needs to grow & repair.
- CALORIE (kilocalorie) – units of heat that measure the energy value of food
- HUNGER – (unlearned) protects from starvation
- APPETITE – is a desire, rather than a need to eat

# Protein

- 4 calories/gram 15% of your diet
- Help to build and maintain cells
- Composed of Amino Acids
  - Complete – contains all 9 essentials AA (fish)
  - Incomplete – contains some AA (beans)
  - Complementary – combining to form a complete protein.
- Vegetarian – Does not eat meat
  - Protein Problems (too much) – Heart Disease, overweight, kidney problems

# Carbohydrates

- 4 calories/gram 55-60% of your diet
  - Provides energy for the body
    - **Glucose** – A simple sugar that is the body's main source of energy.
    - **Glycogen** – glucose that is stored in the liver & muscles as a starch-like substance
  - Types:
    - 1) Simple – broken down glucose
    - 2) Complex – Starch, glycogen
- Fiber** – Complex Carbohydrate. Helps move waste throughout the digestive system.

# Fats

- 9 calories/gram. 30% of diet (10% saturated)
- Protects organs, insulates, transport of vitamins
- Types: **Saturated** – solid at room temp (butter)  
**Unsaturated** – liquid at room temp (oil)  
**Trans fat** – natural or created

How to reduce fat – limit intake

**Cholesterol** – waxy lipid-like substance that circulates in the blood. Used to make cell membranes.

HDL – (Healthy) helps in the body

LDL – (Lousy) – builds up in arteries

# Vitamins

- **Antioxidant** – chemical compounds that protect the body from free radicals
- Types: 1) **Fat Soluble**- absorbed, stored and transported in fat

Vitamin A, D, E and K

- 2) **Water Soluble** – dissolve in water and need to be replenished regularly.

**Enrichment / Fortification/ Nutritional/  
Preserve / Preparation / Look / Taste**

# Minerals

- Substances that the body can not make but are needed for healthy body
- **Calcium** – need for healthy bone & teeth
  - **Osteoporosis** – brittle bone disease
- **Iron**- helps blood hemoglobin transport oxygen
  - **Anemia** – Deficiency of RBC / Hemoglobin
- **Potassium**– maintains fluid/electrolytes balance
- **Sodium** – regulates blood and body tissues
  - **Hypertension** – High Blood Pressure

# Water

Essential for life. 55-75% of body made up of water.

2 -3 liter a day (6-8 glasses a day)

Dehydration / Illness, activity / Kidney / Death

Dehydration conditions:

- 1) **Heat Cramps** – muscular contractions
- 2) **Heat Exhaustion** – paleness, dizziness
- 3) **Heat Stroke** – extremely high temperature

Very dangerous, Need fluids