



6 Essential Nutrients

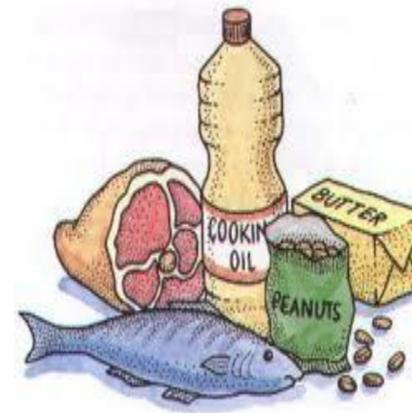
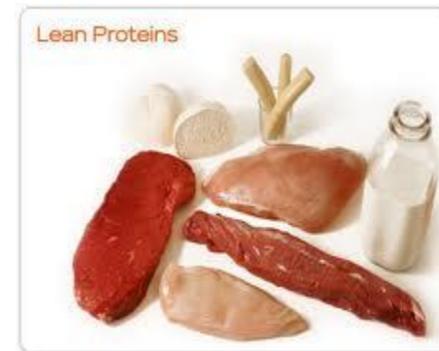
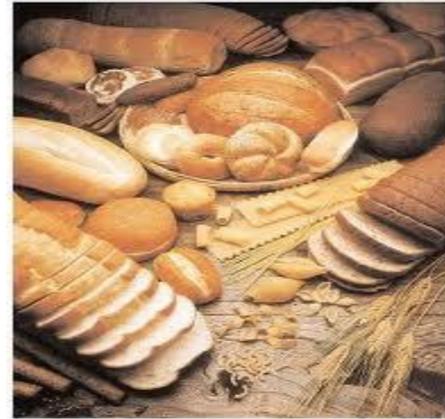
Learning Target

I will be able to identify the 6 essential nutrients the human body needs

- **Success Criteria:**
 - I can name each essential nutrient.
 - I can describe each nutrient's function.
 - I can explain how to obtain healthy amounts of each nutrient in my diet.

What are they?

- Carbohydrates
- Proteins
- Fats
- Vitamins
- Minerals
- Water



Carbohydrates

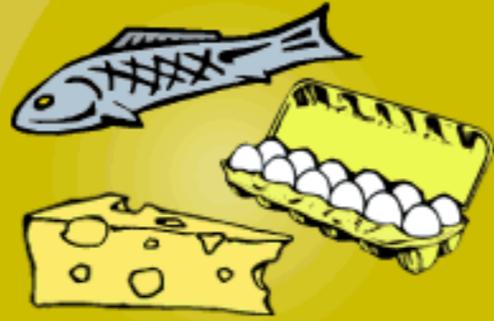
- Supply our bodies with the main source of energy
- What do you think are the best sources of carbohydrates?
 - whole grains
 - vegetables
 - beans
- Used as energy
 - Yield: 4 calories/gram

What does your body do with carbs?

- Easiest to break down
 - Breaks it down into it's simplest form (sugar)
 - Goes into the bloodstream (blood sugar level)



Learning About Proteins



Proteins

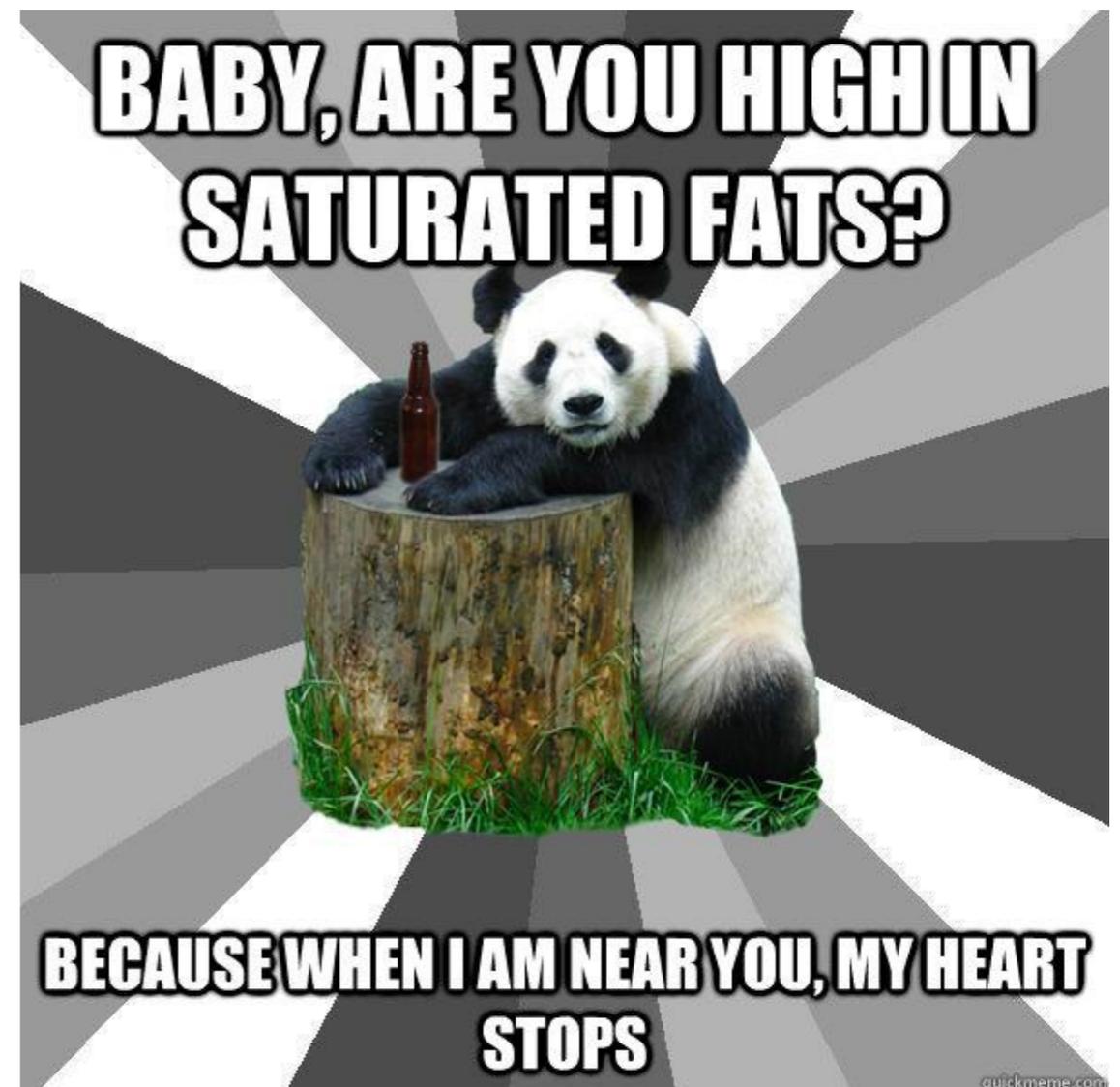
- Build up, maintain and replace tissue
 - muscles, organs, immune system made of protein
- Body breaks down the proteins and makes specialized protein cells
 - Hemoglobin (carries oxygen, part of our red blood cells)
- Used as energy
 - Yield: 4 calories/gram

What does your body do with protein?

- Breaks it down into its simplest form: amino acid
 - Amino acids are used for different functions
- Humans need 20 amino acids, but the body can only make 11
 - **Complete proteins have all 9** (like meat and milk)
 - Incomplete is missing 1 or more (like vegetables)

Fats

- 3 types of fat
 - Saturated
 - Unsaturated
 - Trans
- Used as energy
 - Yield: 9 calories/gram
- Absorbs vitamins
- Helps the brain and nervous system develop
- Insulates/cushions body
- Helps create hormones

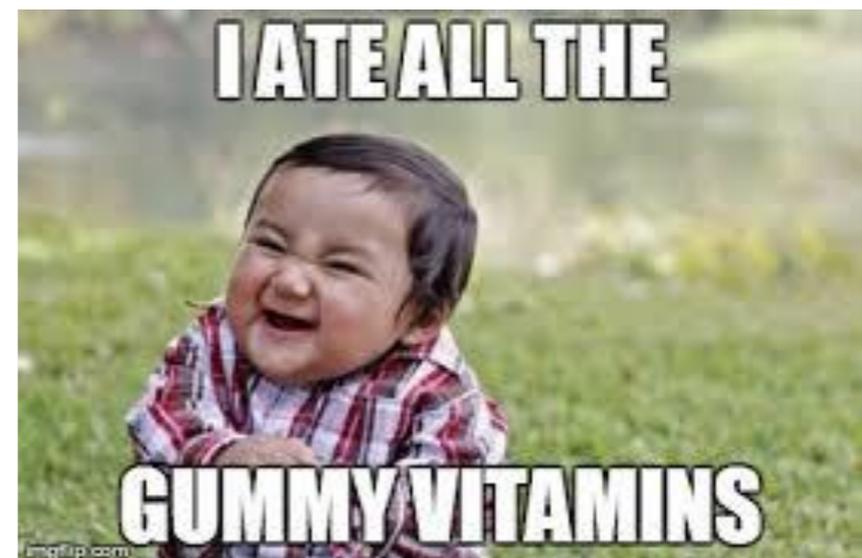


Types of Fat

- **Saturated Fat**
 - found in meat, milk, cheese, coconut oil
 - too much can raise your blood cholesterol
- **Unsaturated Fat**
 - found in plant foods (almonds, olive oil) and fish (salmon, tuna)
 - good for heart health (in moderation)
- **Trans Fat**
 - found in margarine, snack foods, baked goods
 - a.k.a hydrogenated or partially hydrogenated
 - too much can raise your blood cholesterol

Vitamins

- Substances found in the foods we eat
- Your body cannot make vitamins so we have to obtain them from our diet
- Name some of the vitamins you know and what they do...
 - Vitamin A (eye health)
 - Vitamin D (bone health)
 - Vitamin C (immune health)
 - B Vitamins (make energy!)



Types of Vitamins

- Fat soluble

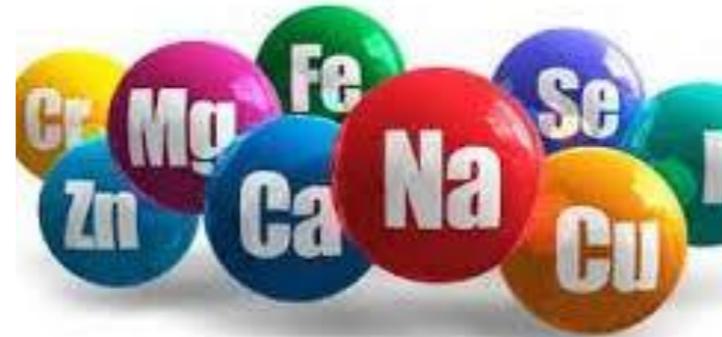
- Stored in fat! (and liver) until your body uses it, a few days-6 months
- A, D, E, & K are all fat soluble

- Water soluble

- Travel through your bloodstream, and excess is expelled through urination
- Need to be replaced more often



Minerals

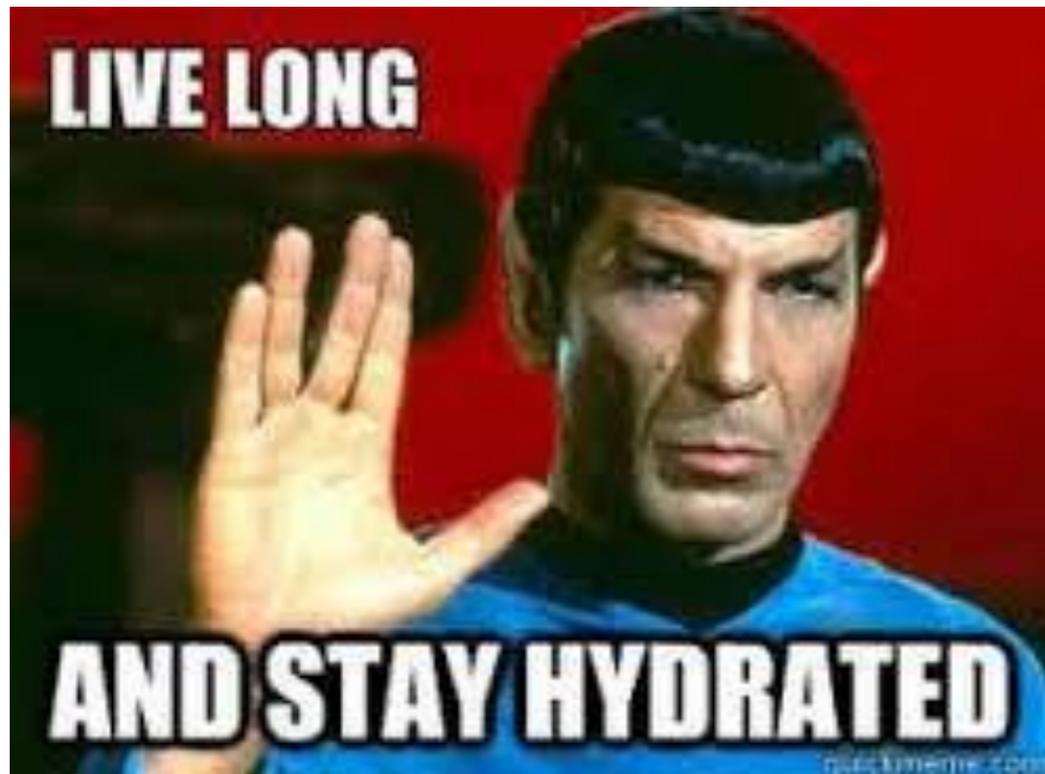


- Help your body grow, develop and stay healthy
- 2 main kinds of minerals
 - Macro-mineral
 - Trace (micro) Mineral
- Of which do you need more?

Types of Minerals

- Macrominerals (100mg needed daily)
 - Calcium
 - Phosphorous
 - Manganese
 - Sodium
 - Potassium
 - Chloride
 - Sulfur
- Trace Minerals (.2-15mg needed daily)
 - Iron
 - Manganese
 - Copper
 - Iodine
 - Zinc
 - Cobalt
 - Fluoride
 - Selenium

Water



- Makes up 50-65% of your body
- Essential for survival – 3 days
 - Blood is made up of mostly water, it carries oxygen to your body

What does water do?



- Used in ALL cells, tissues, organs
- Lost through respiration, perspiration, digestion, urination
- Cools your body down

