**Two Types of Nutrition**

**Organic** = those compounds composed of carbon and hydrogen
- _______________ - Proteins
- _______________ - Vitamins

**Inorganic** = those compounds **NOT** composed of carbon and hydrogen
- _______________, _______________, _______________

**[Organic Nutrients]**

1. **Carbohydrates**
   a. Primary use is to supply energy for ________________ processes.
   b. Sources include _______________ from grains and vegetables, _______________ from meats, disach and monosachs.
   c. _______________ converts these to _______________ and excess carbs stored as lipids.
   d. Too many carbs = excess _______________ (fat tissue), hyperactivity, nervousness, and tooth decay.
   e. Too few carbs = _______________ may break down proteins to maintain cell processes.
   f. Depending on weight: 125g-175g of _______________ required per day.

2. **Lipids**
   a. Primary use is to supply energy for cellular processes and for building structures like _______________ membranes and _______________ sheath of neurons.
   b. Sources include oil, _______________, nuts, _______________, and meat.
   c. Lipids broken down into _______________ acids and glycerol (=metabolism of fats controlled by the liver)
   d. Provides _______________x as much energy as carbs, so no more than 10% should make up your diet.

3. **Proteins**
   a. Primary uses are as energy from amino acids, _______________ and repair of cell parts, _______________ for chemical reactions, muscle components, and _______________ building.
   b. Sources include: _______________, legumes (_____________), milk, _______________.
   c. Digestive _______________ break them down into _______________ different amino acids.
   d. Protein synthesis cannot occur if even one amino acid is _______________ from diet.
   e. 0.8 grams _______________ per Kilogram of body weight.
      a. 80 kg man x 0.8g = 64g of protein / day
   f. Pregnant (+7.1g) or nursing women (+18.9g) require _______________ daily protein.

4. **Vitamins**
   a. Substances in _______________ amounts necessary for cell processes but which the body cells can’t _______________ in adequate amounts.
      a. *Exceptions: Vitamin D, B6 and Folic Acid.*
b. __________________________, but not an energy source.

c. Necessary to prevent deficiency syndromes:
   – Vitamin C deficiency: creates __________________ → lose teeth, wounds won’t heal, fragile blood vessels.
   – Vitamin D deficiency: creates __________________ → brittle bone disease.
   – Vitamin B deficiency: creates __________________ → paralysis of smooth muscle in the GI tract and skeletal muscle.

d. Water __________________ Vitamins = include B complex vitamins, C, Folic Acid, Niacin, and Biotin.
   – Water soluble vitamins enter the body __________________ in water.
   – __________________ and unused vitamins exit the body through ________________.

e. Fat Soluble Vitamins = include _______________________. (Remember adek)
   – Enter the body and are stored in ________________ tissues.
   – Can ________________________ on these (=Hypervitaminosis)

[Inorganic Nutrients] = Compounds _______________ composed of carbon and hydrogen.

1. Water
   a. No energy but absolutely ____________________________.
   b. Body is 70% water and blood ______________________ made up of 92% water.
   c. Primary use is for cytoplasm, interstitial spaces, fluid for __________________ of food from blood
to cytoplasm, and __________________ of waste.
   d. Water from __________________ regulates body __________________.
   e. Water is the great ______________________ of substances.
   f. Water is temperature ____________________________.
   g. Loss of water from __________________ spaces = _____________________________.

2. Minerals and Electrolytes
   a. Salt (NaCl) = retains water __________________ through sweat and ________________.
   b. Calcium (Ca)= component of ____________________, bones, and muscle and ______________ action.
   c. Phosphorous (P)= component of ____________________, teeth and bones, and ________________.
   d. Iron (Fe)= needed for _______________ formation and part of hemoglobin (gas transport protein).
   e. Potassium (K) = needed for ______________________ and nerve __________________________.
   f. Iodine (I) = necessary for proper _________________ gland secretion. Poisonous if pure, so must be obtained in a_____________________ like iodized salt.