

# Nutrition

Mid-Term review

From 10/27/05

- fat vs oil
- triglyceride vs phospholipid
- construction of fatty acid
- sat vs unsaturated
- mono and poly unsaturated
- hydrogenated fatty acid – what is this
- medical levels of cholesterol – (200 and 250)
- Cholesterol lipoproteins (worst to best, lightest to heaviest)
- Omega 3 and Omega 6 or linoleic, linolenic and arachidonic
- Olive oil Nonessential Omega 9, but good for you
- GLA – only omega 6 you may want to buy (evening primrose, current)
- LNA, EPA, DHA – Omega threes
- ratio of 6 to 3's is close to 20-1 in this country it should be 4-1
- Prostaglandins and Omega 6 vs Omega 3
- Too many Omega 6 prostaglandins make us achy.
- LNA – (plant) flaxseed oil
- Fish oils
- Cod liver oil – excess amounts of Vitamin A & D
- Vitamin E – acts as an antioxidant. - take this, it stops rancidity
- Cooking any type of oil makes it rancid (you want cold pressed or modified expeller)

Amino Acids

- Know names of 22 amino acids
- Know essential vs nonessential
- Know Baby

Elements

- 7 major elements – three bones (calcium, magnesium, phosphorus), 3 electrolytes (Chlorine, Potassium, Sodium), + Sulfur (amino acids)
- Trace elements
  - Can't be deficiency – 8 (Chromium, copper, iodine, iron, manganese, molybdenum, selenium, zinc)
  - Could be deficiency – 6 (boron, cobalt, nickel, silicon, tin, Vanadium)

Vitamins

- Know alternate names (match name to letter)
- A – carotene, retinal
- C – ascorbic acid
- D – calciferol's
- E – tocopherol's
- K – weird names...
- B vitamins
  - Thiamine (sulfur)
  - Riboflavin
  - Niacin
  - Pantothenic acid

- Pyroxine
- Biotin
- Folic acid
- Cobalamine

#### Carbohydrates

- 5 carbon – pentose sugars (DNA, RNA)
- 6 carbon – hexose sugars (glucose, fructose, galactose --- Sucrose (G+F), Maltose (G+G), Lactose (G+G))

#### 60/20/20 rule

- 60% of 150 pound person is 90 pounds of water
- 20% of 150 pound person is 30 pounds of lipids
- 20% of 150 person is:
  - 23 pounds of protein,
  - 7 pounds of minerals,
  - 1.5 pounds of carbohydrates and trace amounts of vitamins
- *Children can run as high as 70%, old folks can run as low as 45% water.*

#### Macronutrients

- simple & disaccharides

#### Proteins

- name 22 amino acids essential vs non-essential vs children
- 3 essential fatty acids (which are omega 3 and which are omega 6's)

Chapter 12 is the extra credit chapter.