• Fatty acids – building blocks of fat
  - Saturated: a saturated fat is a fat in which the fatty acids all have single bonds, animal fats
  - Unsatuated: liquid at room temperature, avocado, nuts, and coconut and olive oils [add hydrogen to oil to be saturated]

• Cholesterol
  - Polysaturated and monosaturated (good)
  - Trans fat and saturated fat (bad)

FATTY ACIDS

CHOLESTEROL
• Dietary fats, or lipids, provide essential fatty acids and are needed for the absorption of fat-soluble vitamins A, D, E, and K
• Two types of cholesterol are high-density lipoproteins (HDL) and low-density lipoprotein (LDL)
• Hypercholesterolemia – low fat or fat-free milk products

PROTEINS
• Amino acids
  - Complete: come from animal sources and have a mixture of all eight essential amino acids
  - Incomplete: do not supply the body with all the essential amino acids
• Build and repair body tissue
• Provide energy when carbohydrate and fat stores are depleted
• Protein sources – meat, nuts, dairy products

VITAMINS
• Fat soluble and water soluble
• Needed for metabolic processes
• Known by letter designations
• Do not cure illnesses
• More beneficial in foods than supplements

MINERALS
• Minerals are non-organic elements and compose 5% of the body
• No calorie value, help bones and teeth develop
• Water – most important item in diet, about 50-60% of the body weight is water
  - Na (sodium) – high sodium can lead to hypertension
  - Electrolytes imbalance can lead to heart problem (example: potassium, calcium)
  - Thirteen needed to be healthy
  - Water-electrolyte balance
  - Acid-base balance
  - Regulate muscular and nervous activity
  - Help in blood clotting
  - Regulate heart rhythm

Can affect prescribed medications
No calorie value, organic substance found in food
Water Soluble Vitamins: Vitamin B and C
Fat Soluble Vitamins: Vitamin A, D, E, K. Toxicity can occur when consumed in large quantities

VITAMIN A
• Carotene – yellow or orange fruits and vegetables, liver, dairy products
• Formation and maintenance of skin, mucous, membrane and aids in vision in dim lights
• Deficiency – dry skin, night blindness

VITAMIN B
• Whole grain, milk, eggs
• $B_1$ (thiamine) = nerve disorder, mental confusion
• $B_2$ (riboflavin) = rash, anemia, cracks in the corners of the mouth
• $B_6$ (pyridoxine) = dermatitis, confusion
• $B_{12}$ (cobalamin) = anemia, neural brain degeneration

VITAMIN C
• Citrus fruits, berries and peppers
• Deficiency – scurvy (gum) bleeding, slow wound healing

VITAMIN D
• Dairy products (has Calcium), eggs, sunlight
• Deficiency – rickets, calcium loss in adult

VITAMIN K
• Vegetables, fruits, dairy, grain
• Deficiency – bleeding disorders