

## CSM Human Biology Spring 2007 Quiz 2 Review Sheet

1. Describe the types of fat found in the humans and in their diet. Include triglycerides, phospholipids, cholesterol. Why are saturated fats bad for you, and unsaturated fats better for you? What are HDLs and LDLs and which is a cause of cardiovascular disease? Which helps reduce risk of cardiovascular disease? How can you increase that type of fat in your body?
2. Describe the structure of the cell membrane. How does the membrane control movement of substances across the membrane? Describe diffusion (passive transport) and active transport, endo and exocytosis. Provide examples of these types of movement.
3. Describe the other roles of the membrane proteins, including cell to cell communication using chemical messengers and receptors, cell to cell contact, and surface markers. Provide examples from your class notes.
4. Explain how cell membrane proteins are involved in diabetes mellitus type II, tissue transplant rejection, rejection of the Rh + fetus by a Rh- mom.
5. Describe the roles of the following organelles, and be able to label them on a drawing:
  - Mitochondria
  - Endoplasmic reticulum, rough
  - Endoplasmic reticulum, smooth
  - Golgi apparatus
  - Centrioles
  - Cytoskeleton
  - Lysosome
  - Cilia
  - Flagellum
  - Ribosomes
6. Provide an illustration or description of the process of cell respiration and fermentation. Define aerobic and anaerobic metabolism.
7. Describe the role of the DNA in the nucleus and how genes code for traits and are inherited. Identify the structure of DNA and RNA. Explain the processes of protein synthesis – and the information transfer from DNA to RNA to proteins, and gene regulation. Provide examples of how science is expanding its knowledge and use of DNA.
8. Explain why cells divide. Tell the difference between mitosis and meiosis.