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Structure of the Cell Membrane

- I. How is the cell membrane selectively permeable?
 - a. Explain the fluid mosaic model
 - b. What makes a phospholipids amphipathic?
 - c. How does the cell membrane remain fluid and explain the importance
 - d. Structure
 - i. Integral protein
 - ii. Peripheral protein
 - iii. Glycolipid
 - iv. Glycoprotein
 - e. What is a transport protein and describe its function
 - f. What is an aquaporin and describe its function
 - g. Compare/contrast passive and active transport
 - h. Define concentration gradient and explain the significance
 - i. Compare/contrast diffusion, osmosis, facilitated diffusion, active transport
 - j. Compare/contrast isotonic, hypotonic, hypertonic
 - k. How does the paramecium osmoregulate and why?
 - l. Compare/contrast turgid with flaccid cells.
 - m. Compare/contrast ion channels with gated channels
 - n. Explain the importance of the sodium-potassium pump and describe its function
 - o. What is membrane potential? Describe its relationship to an electrochemical gradient.
 - p. Describe the differences between electrogenic and proton pumps
 - q. What is cotransport?
- II. Bulk transport
 - a. Compare/contrast exocytosis, endocytosis, pinocytosis, receptor mediated endocytosis
 - b. Describe the function of ligands