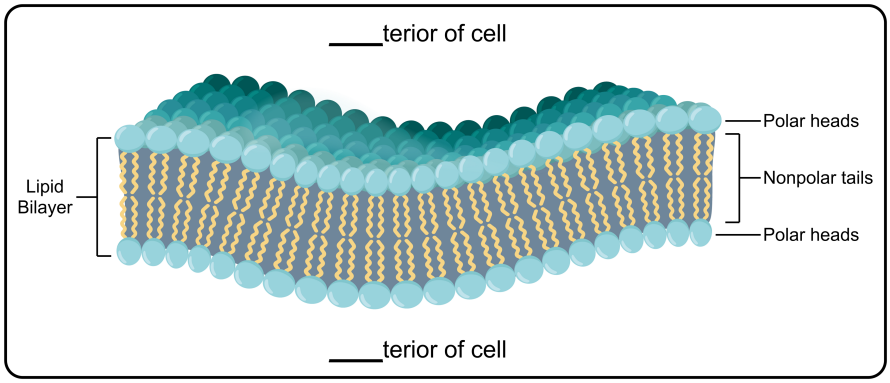
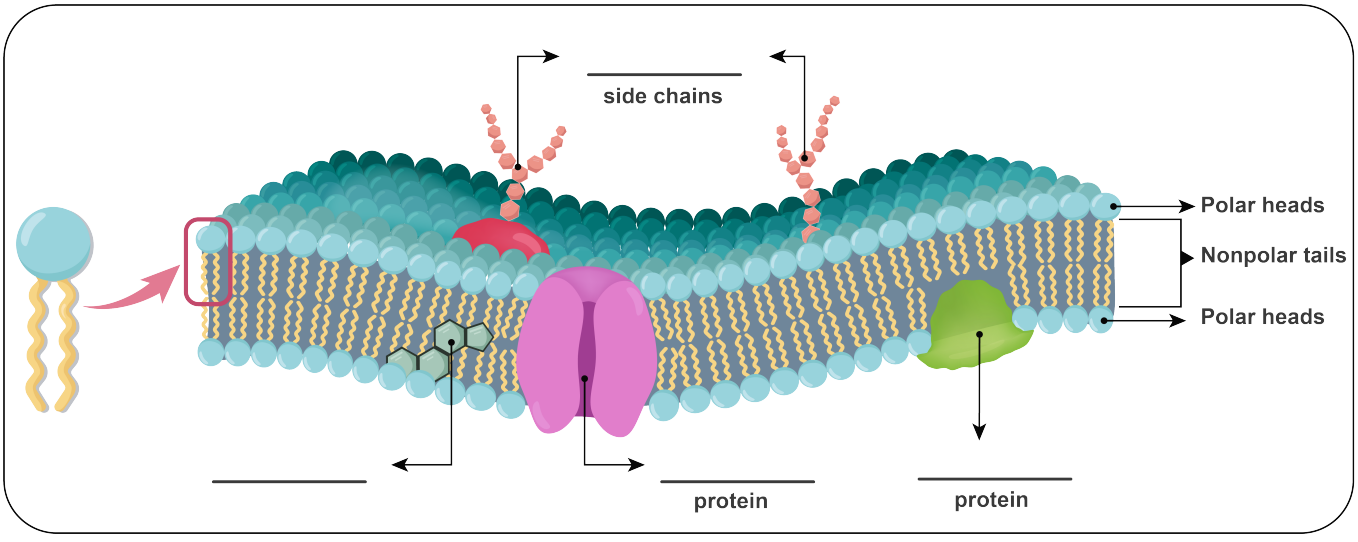
CONCEPT: CELL MEMBRANES

- Cell membrane _____ the interior of the cell from the external environment.
  - □ Mainly composed of glycerophospholipids and sphingolipids.
  - □ _____ **Permeable:** controls what goes into and out of the cell.



Membrane Structure

- **Fluid Mosaic Model:** a model for representing the general structure of cell membrane.
  - □ **Fluid:** the lipid bilayer is not _____ but fluid and _____.
    - Phospholipids in the lipid bilayer do not fit closely together due to kinks in fatty acid chains.
  - □ **Mosaic:** the lipid bilayer also contains proteins, carbohydrates, and cholesterol molecules.



  - □ **Integral Proteins:** extend through the _____ bilayer and appear on _____ sides.
  - □ **Peripheral Proteins:** associated with just _____ side.
  - □ **Carbohydrate chains:** extend into the extracellular fluid, responsible for cell recognition & communication.
  - □ **Cholesterol:** resides _____ the bilayer and increases membrane strength.

CONCEPT: CELL MEMBRANES

EXAMPLE: Which one of the following is not a component of cell membranes?

a) Cholesterol

b) Sphingomyelins

c) Proteins

d) Waxes

PRACTICE: Which one of the following components of a cell membrane extends through its entire thickness?

a) Cholesterol

b) Peripheral proteins

c) Integral protein

d) Sphingomyelin

PRACTICE: Keeping in mind that unsaturated fatty acids form kinks in the phospholipid tails, what would happen if all of the unsaturated fatty acids in a lipid bilayer were replaced with saturated fatty acids?

a) It will become more fluid.

b) Its fluidity will be significantly reduced.

c) There will be no effect on its fluidity.

d) The lipid bilayer will become resistant to oxidation.