

Cell Membrane

Chapter 7-3

Function

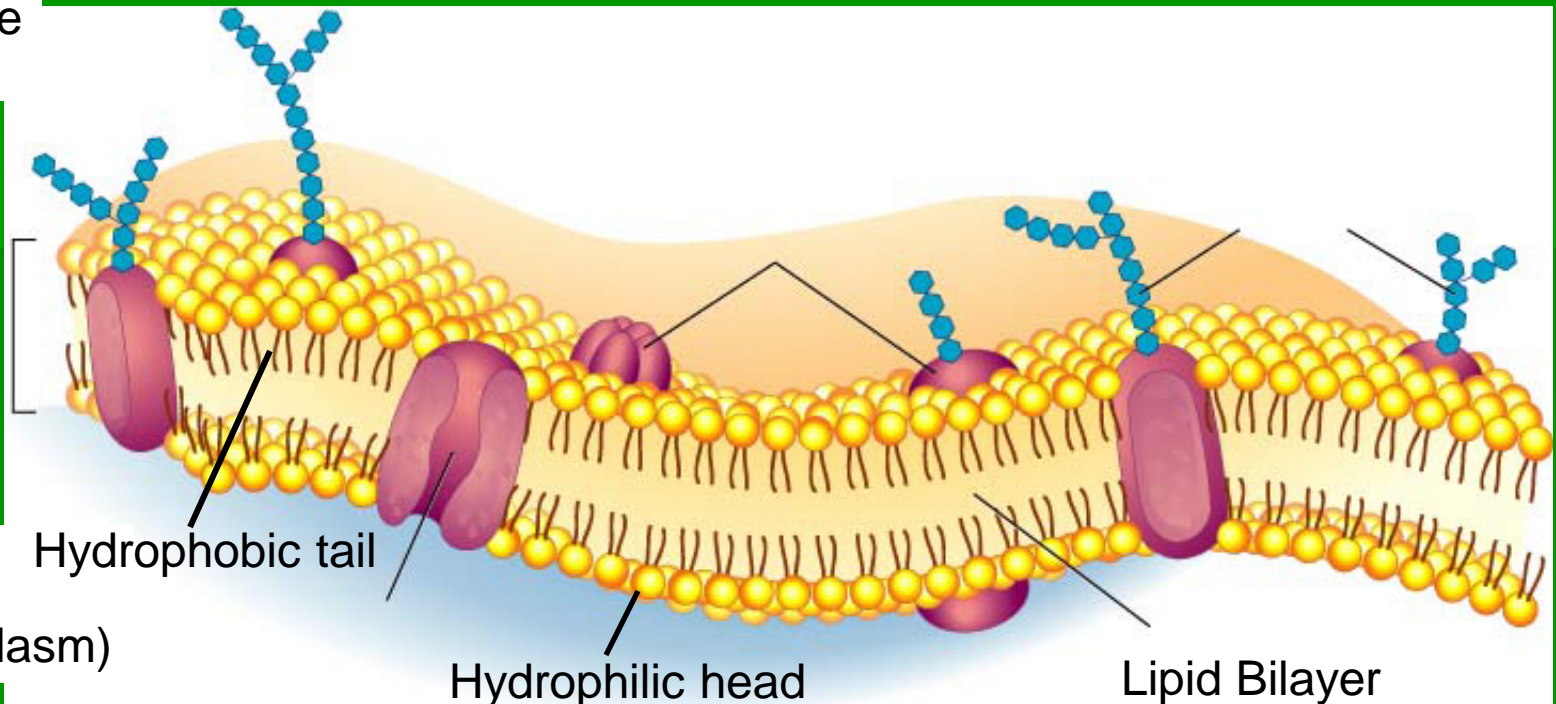
- Allows certain substances in and out of the cell
- Takes in food
- Eliminates waste
- Semipermeable

Structure

- Lipid bilayer – two layers of lipids
 - Hydrophilic head – likes water, is on the outside
 - Hydrophobic tail – doesn't like water, is in the middle

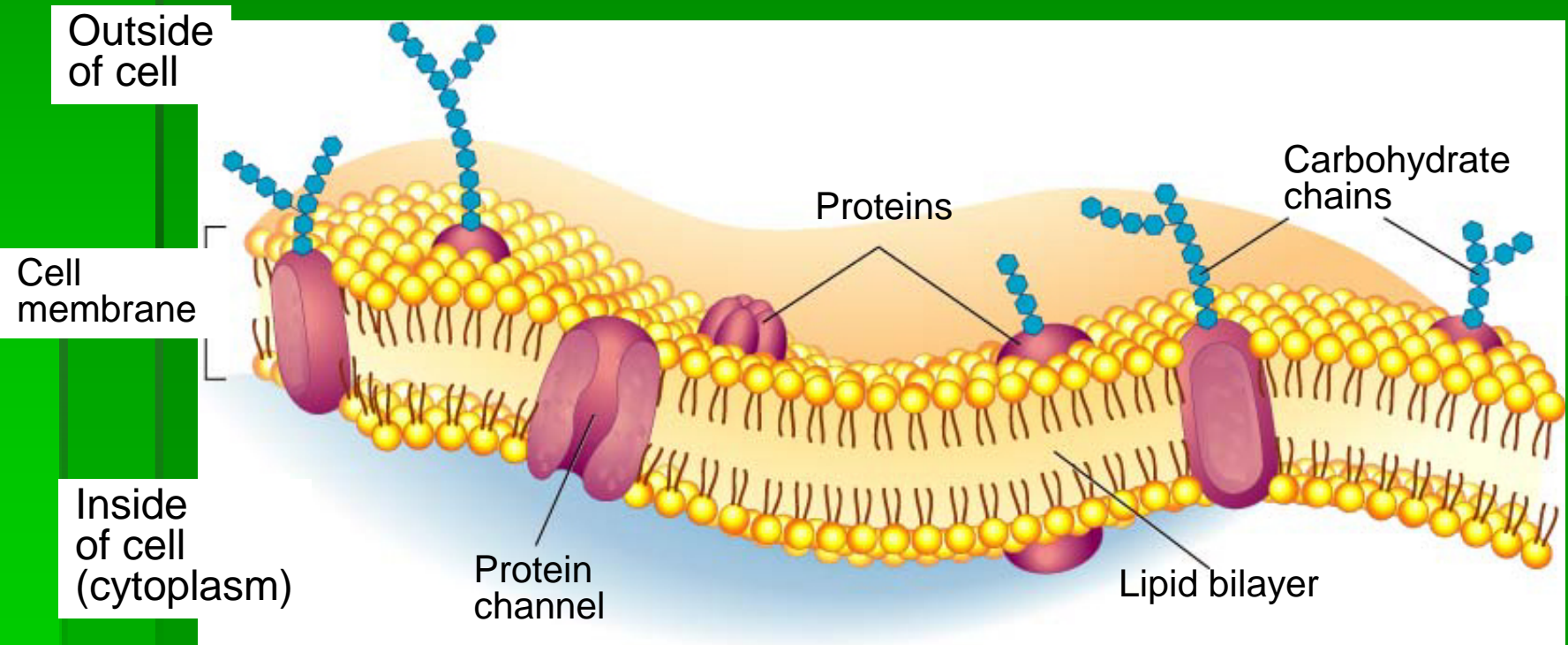
Outside
of cell

Inside
of cell
(cytoplasm)

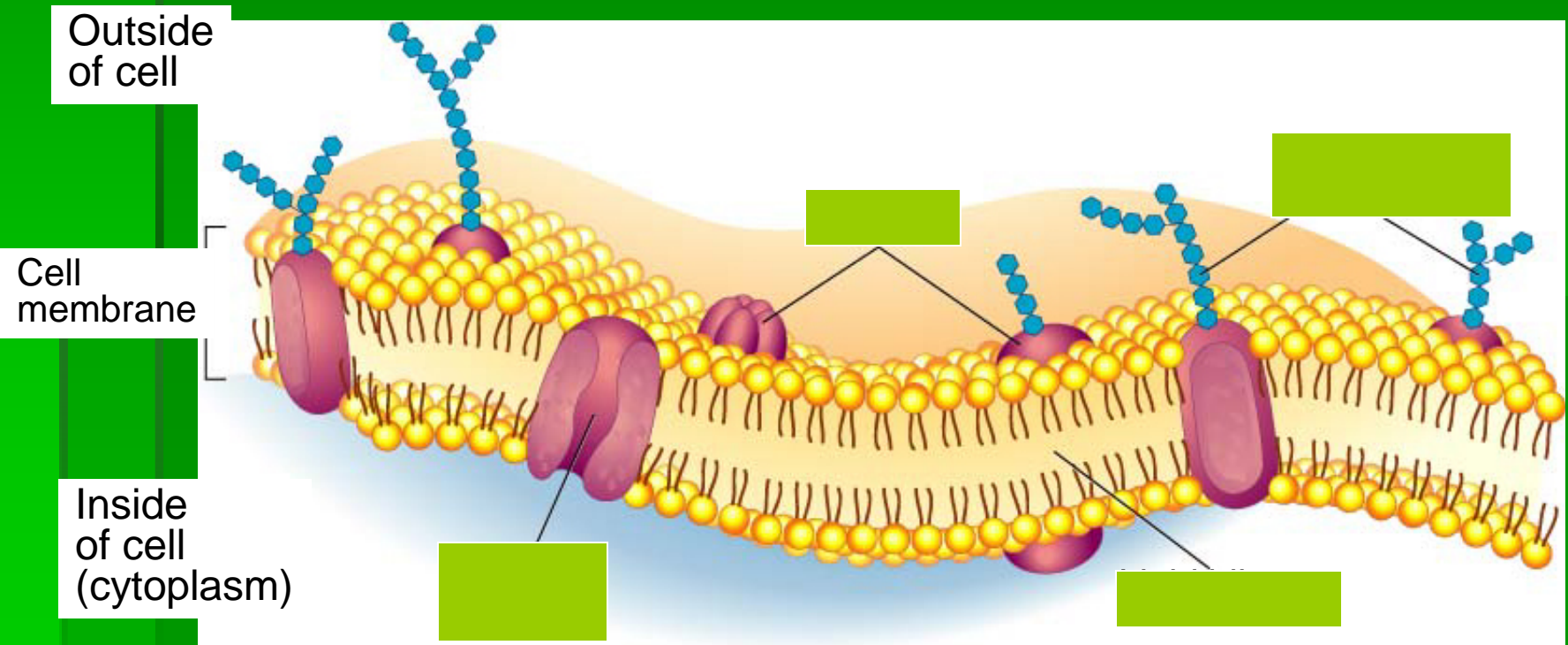


Structure

- Protein channels – transport substances
- Carbohydrate molecules – id tags

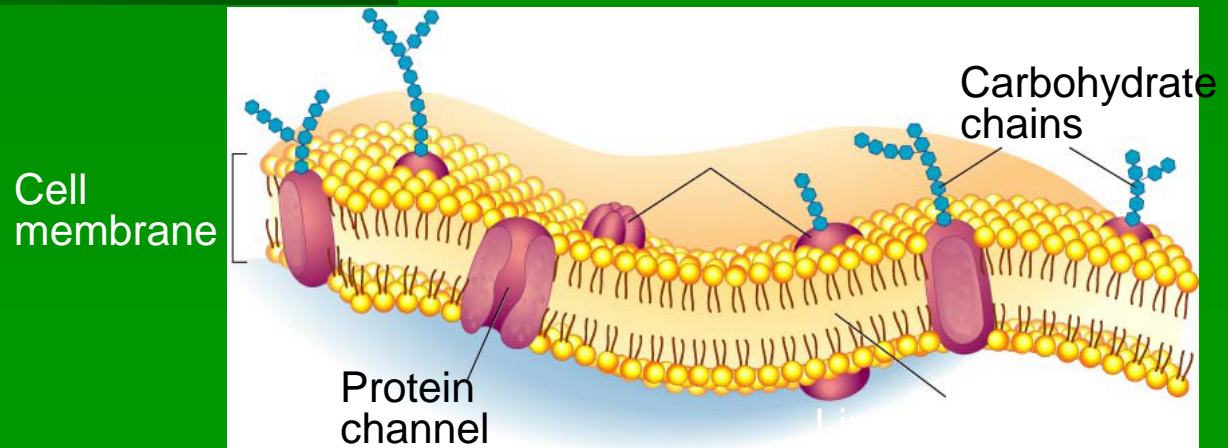


Structure



Facilitated Diffusion

- Diffusion with help
- Protein channels
 - Tunnel through membrane
 - Allow a specific molecule to pass through
 - Fast and specific, doesn't require energy
 - Check out this [video](#)



Active Transport

- Substance moved against the concentration gradient
- Area of [low] to [high]
- Requires energy
- Special “pumps” in cell membrane
- Sodium/potassium pumps pump in K^+ ions and pump out Na^+ ions
- Check out this [video](#)

Molecule to be carried

outside

Low Concentration

Cell Membrane

High Concentration

inside

Low Concentration

Cell Membrane

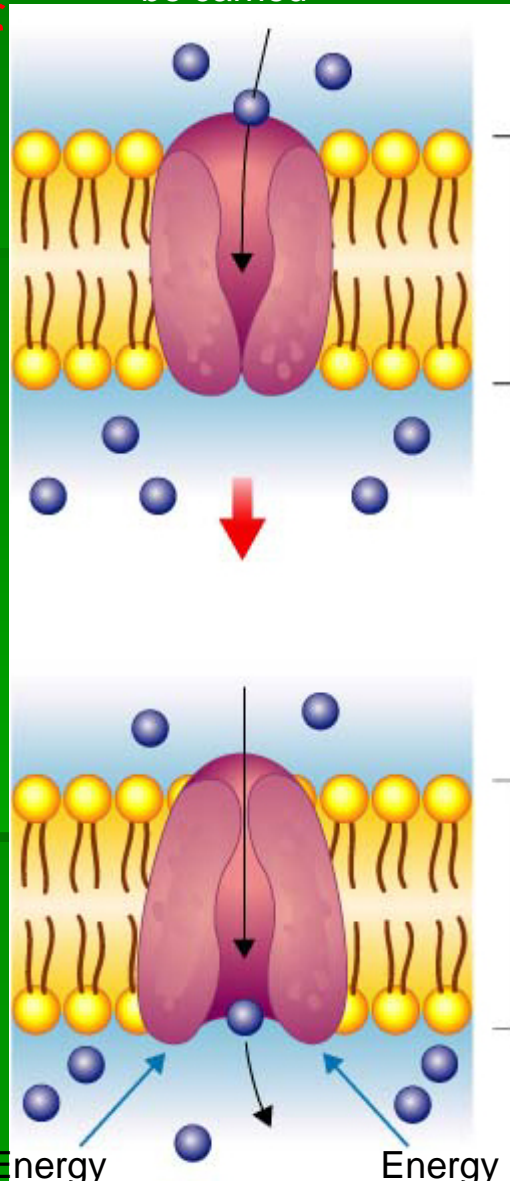
High Concentration

out

Energy

Energy

in



Membrane Folding action

- Endocytosis-- membrane folds around and engulfs small particle
- Makes a vacuole
- Phagocytosis – cell engulfs a large particle
- Exocytosis – cell spits out a particle
- Check out this [video](#)