

# Chapter Eight: Cellular Structure and Function

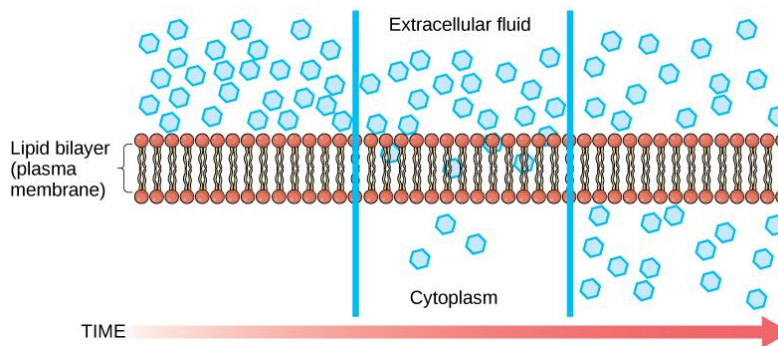
## Lesson 8.3: Cell Transport

**Homeostasis:** relatively constant internal physical and chemical conditions that organisms maintain

- One of the most important processes carried out by cell
- Movement of molecules from one side to the other

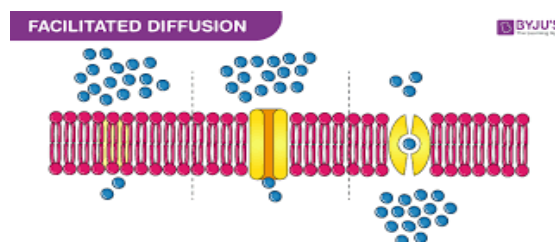
**Diffusion:** process by which particles tend to move from an area where they are more concentrated to an area where they are less concentrated

- Driving force behind the movement across the cell membrane
- Equilibrium is reached when the concentration on both sides of the cell membrane is the same
- Passive transport – the movement of molecules across the cell membrane without using cellular energy

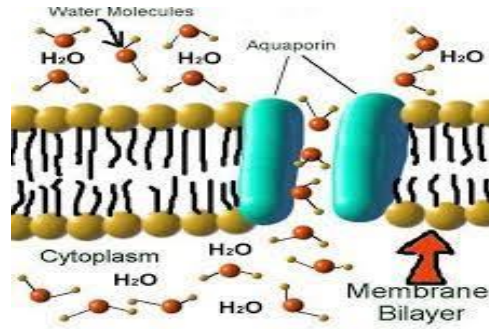


**Facilitated diffusion:** process of diffusion in which molecules pass across the membrane through cell membrane channels

- Protein channels make it easier for certain molecules to cross



**Aquaporins:** water channel protein in a cell that allows water to pass right through it even though the lipid bilayer has a hydrophobic tail



**Osmosis:** diffusion of water through a selectively permeable membrane

- Exactly like diffusion but with water as the molecule coming across

**Isotonic:** when the concentration of two solutions is the same

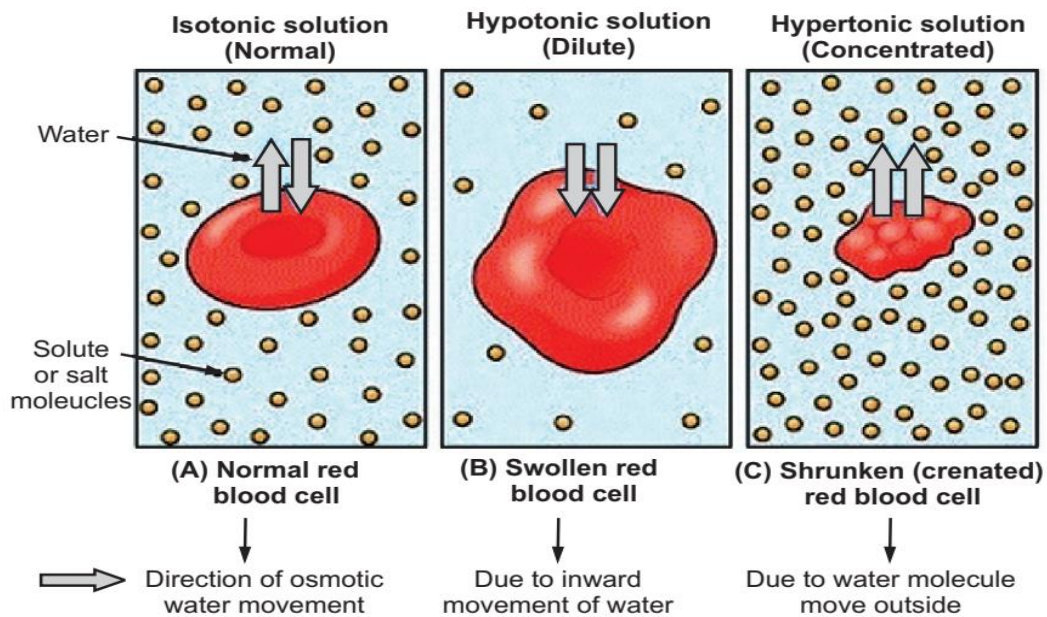
**Hypertonic:** when comparing two solutions, the solution with the greater concentration of solutes

- Hyper-: high or excessive

**Hypotonic:** when comparing two solutions, the solution with the lesser concentration of solutes

- Hypo-: below normal or under

**Osmotic pressure:** pressure that must be applied to prevent osmotic movement across a selectively permeable membrane



Letter B (hypotonic) is what can cause your legs to swell called edema.

Active transport: the movement of materials against a concentration difference

- Requires energy

Endocytosis: the process of taking materials into the cell by means of infoldings, or pockets, of the cell membrane

Exocytosis: the membrane of the vesicle or vacuole surrounding the material fuses with the cell membrane, forcing the contents out of the cell

# Endocytosis

# Exocytosis

