
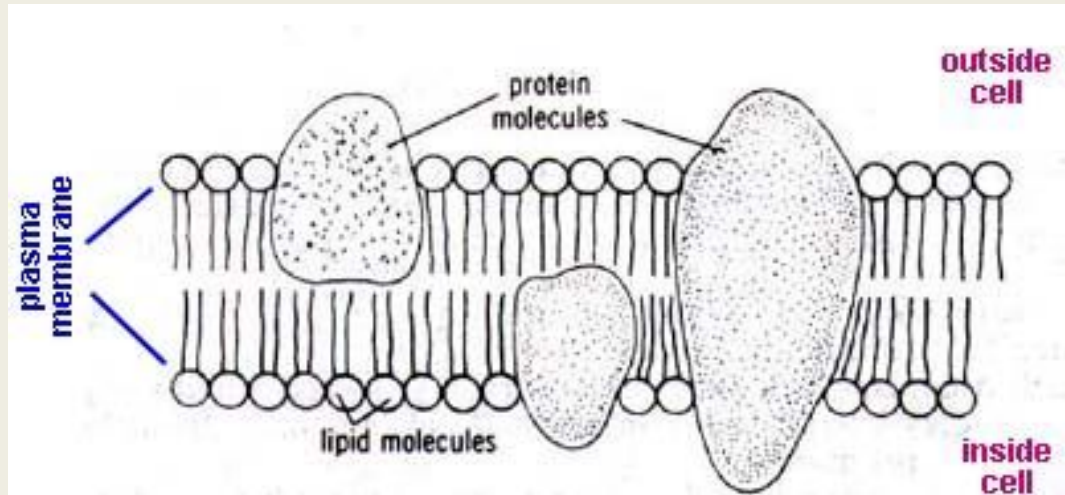


How does the cell's
semi-permeable
membrane allow the cell
to function?



Review: Cell membrane function

- ❖ Made up of a phospholipid bilayer and proteins
 - Allows items in and out of the cell (i.e. water, important ions)



BUT, how do they get water and ions to move in and out?

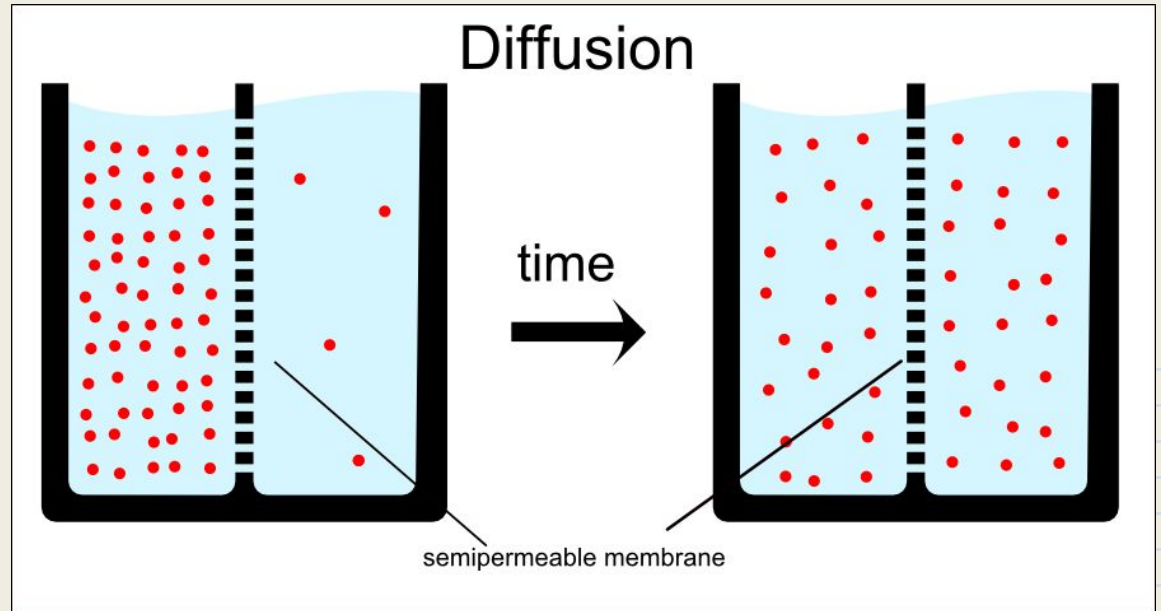
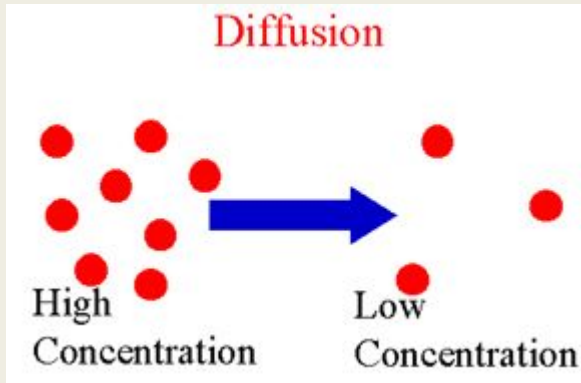
Diffusion

Let's work together and come up with a definition of diffusion as we watch:

Diffusion in action!

Diffusion

= movement of a solvent from an area of high concentration to an area of low concentration



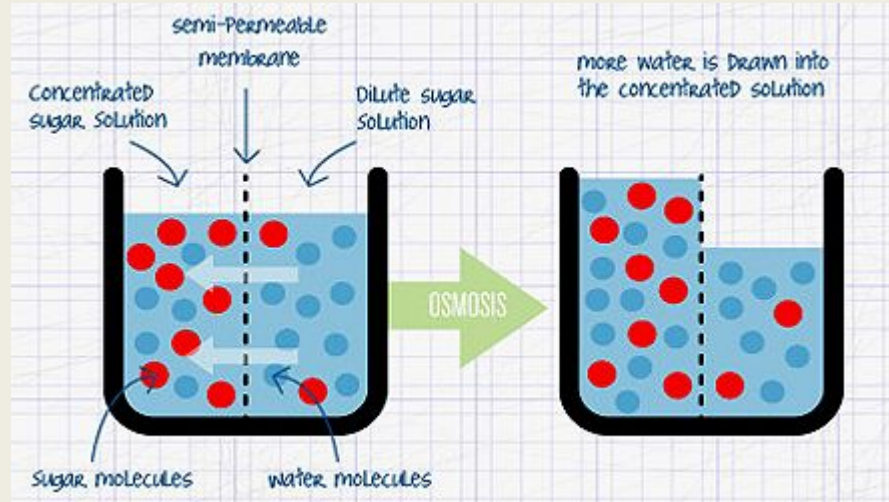
Osmosis

Let's work together and come up with a definition of diffusion as we watch:

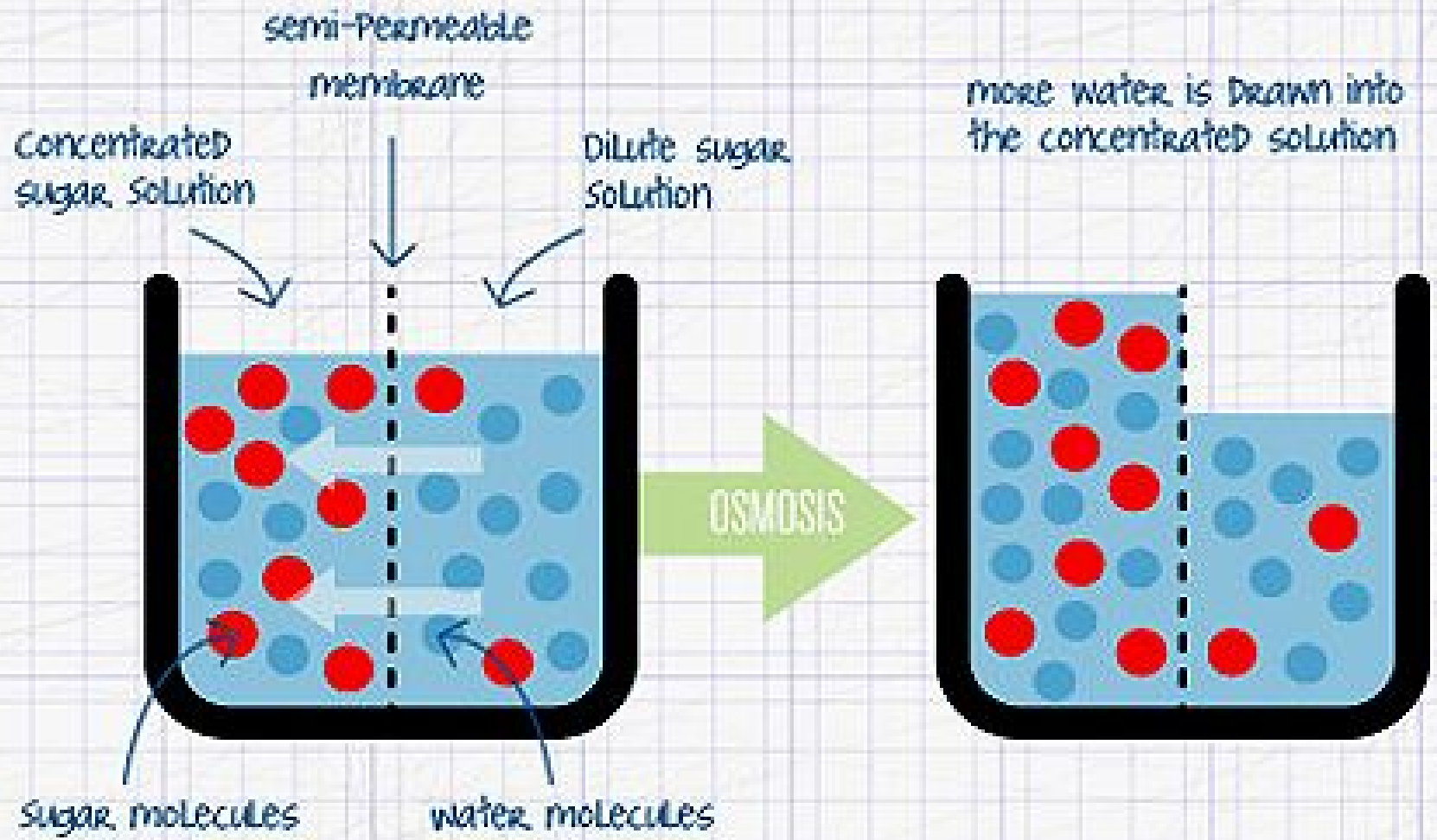
Osmosis!!!!!!!!!!!!

Osmosis

= diffusion of water (WATER equals out concentration) across a semi-permeable membrane



The semi-permeable membrane only allows water and maybe smaller molecules through

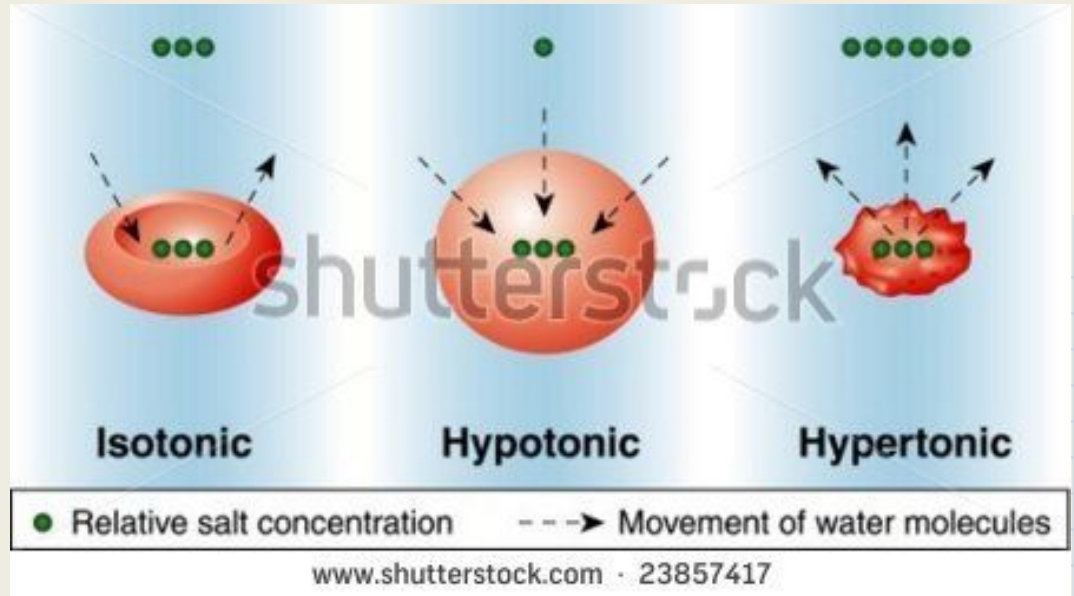


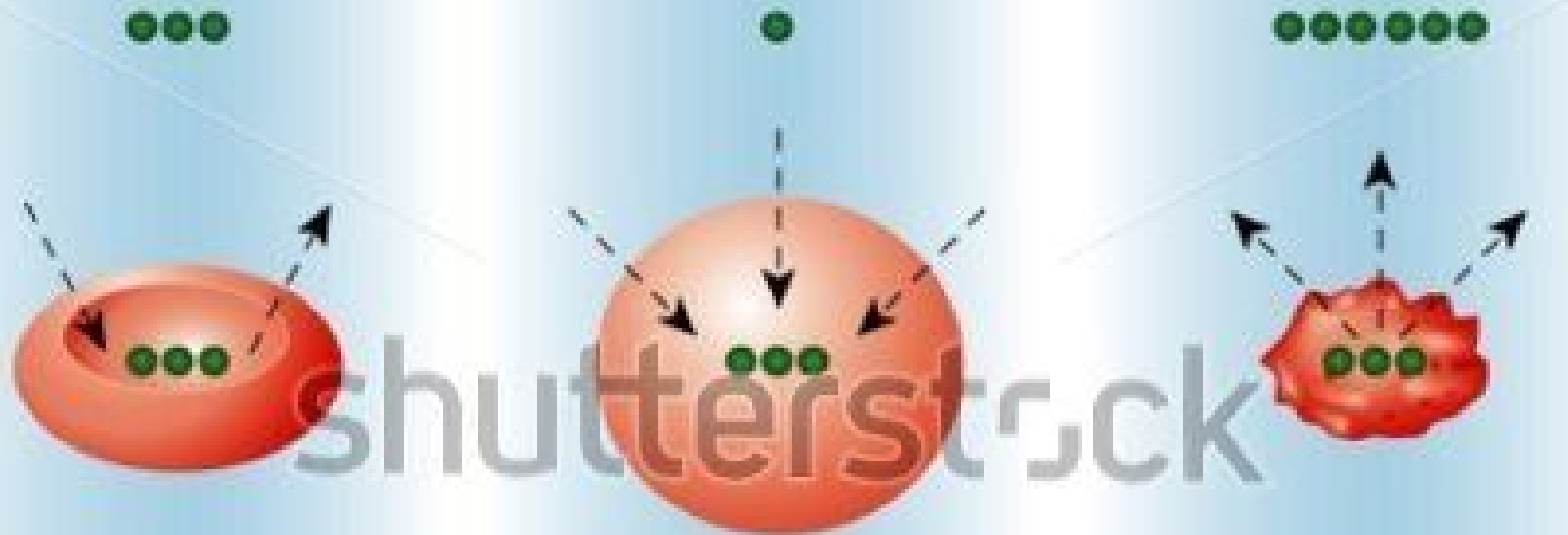
But HOW do things move in and out of the cell?

It depends on the concentration (or amount) of a substance in the solution (not in the cell):

Three “conditions” of a solution:

- 1.) Isotonic (“even”)
- 2.) Hypotonic (“low”)
- 3.) Hypertonic (“high”)





Isotonic

Hypotonic

Hypertonic

● Relative salt concentration

- - -> Movement of water molecules