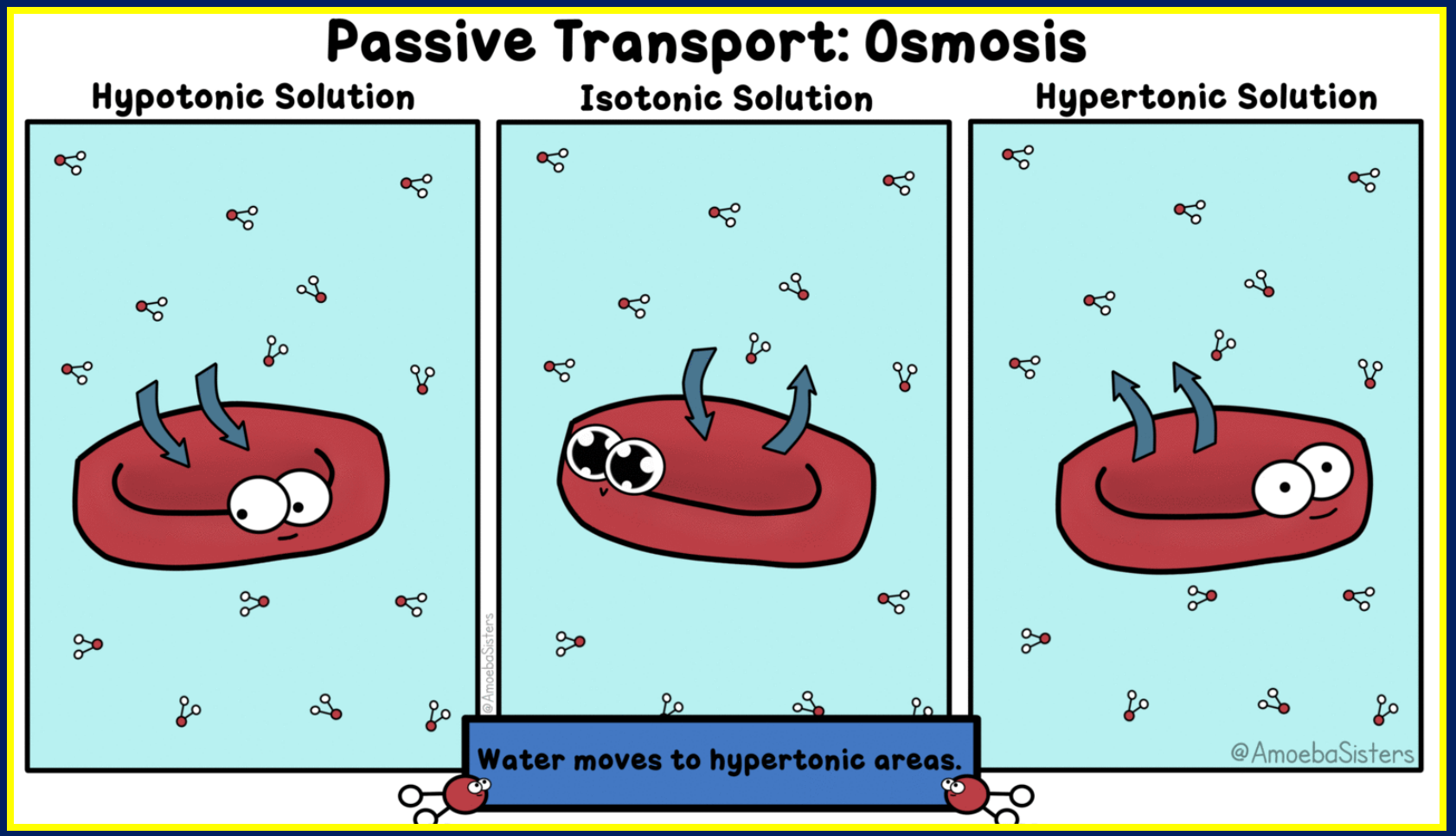
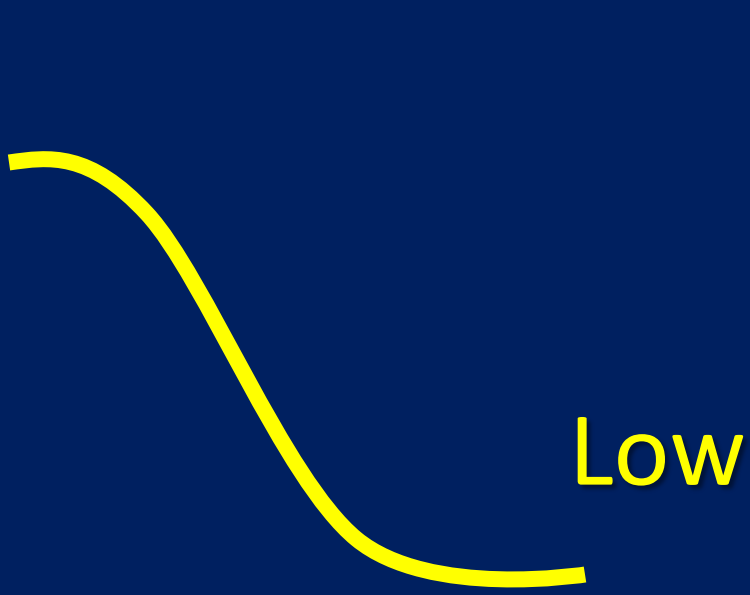
Osmosis


Passive Transport: Osmosis
Hypotonic Solution
Isotonic Solution
Hypertonic Solution
@AmoebaSisters
Water moves to hypertonic areas.
@AmoebaSisters

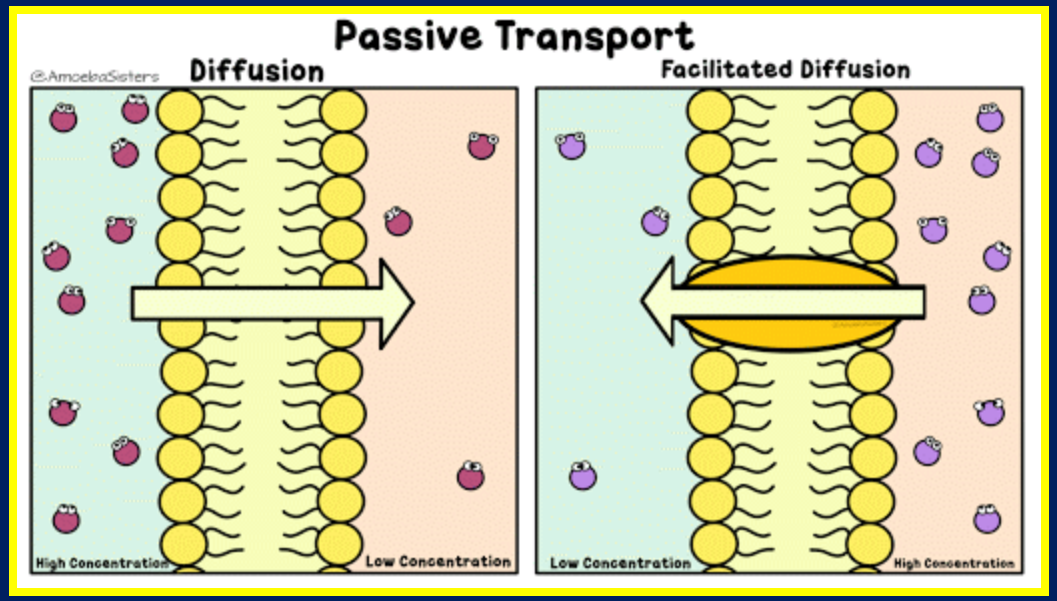
During passive transport, molecules move from areas of high concentration to areas of low concentration



Requires No Energy

Three types of Passive Transport Mechanisms

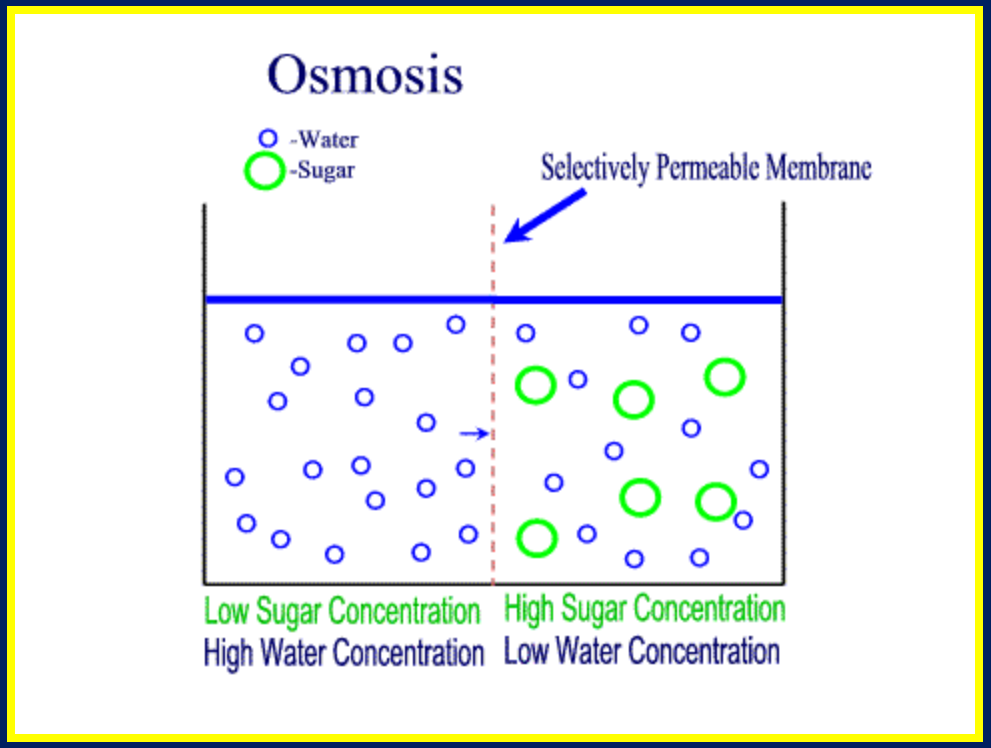
1. Simple Diffusion
2. Osmosis
3. Facilitated Diffusion



Osmosis

Diffusion of water
across a semi-permeable membrane
from high H_2O conc. to low H_2O conc.

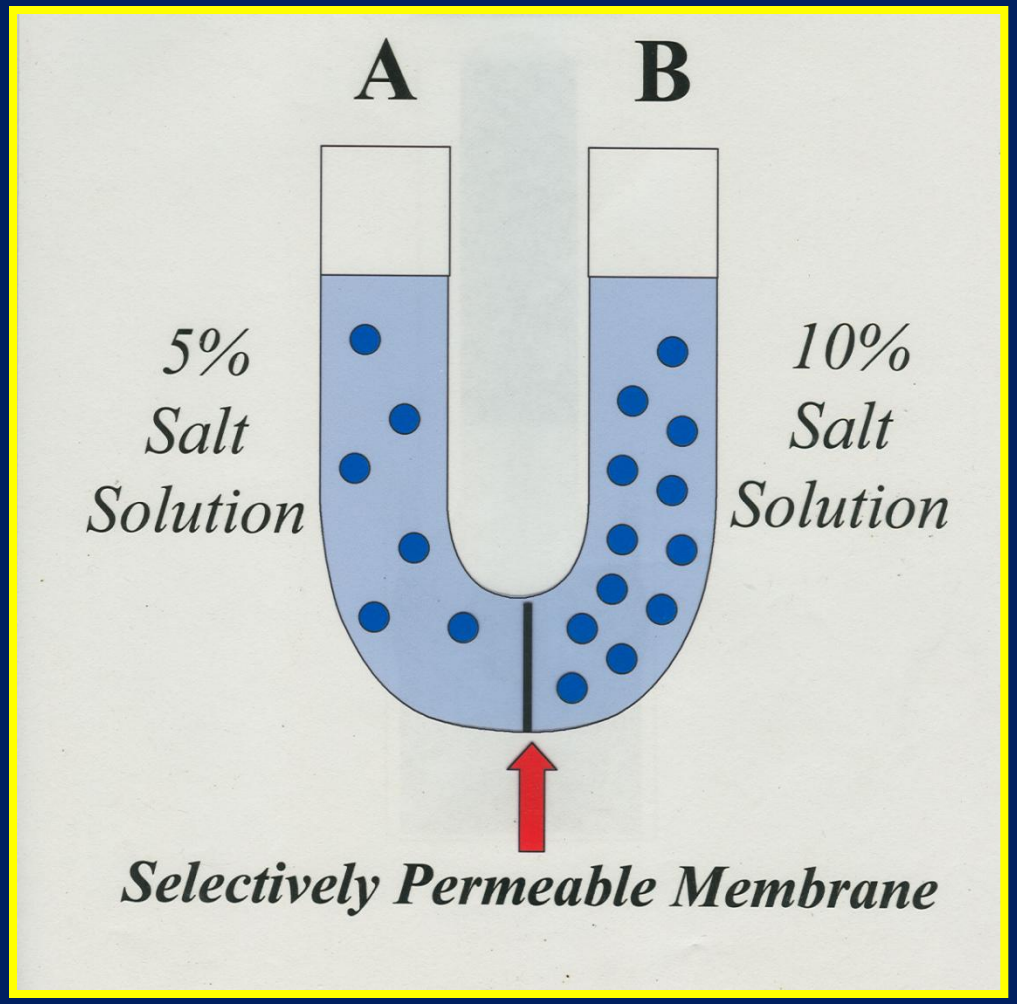
Hypotonic



Hypertonic

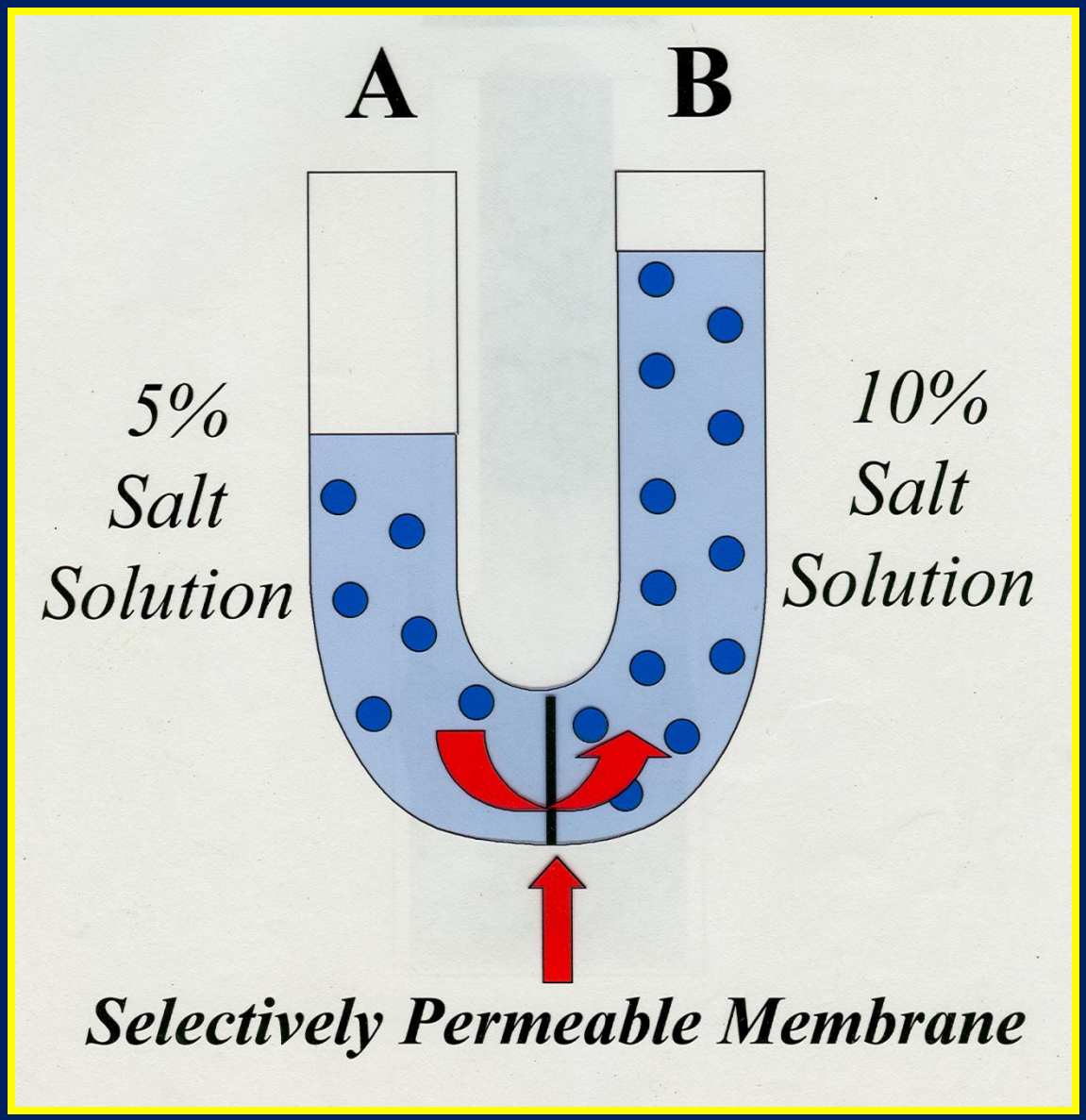
In which side of the tube will the water rise?

Hypotonic



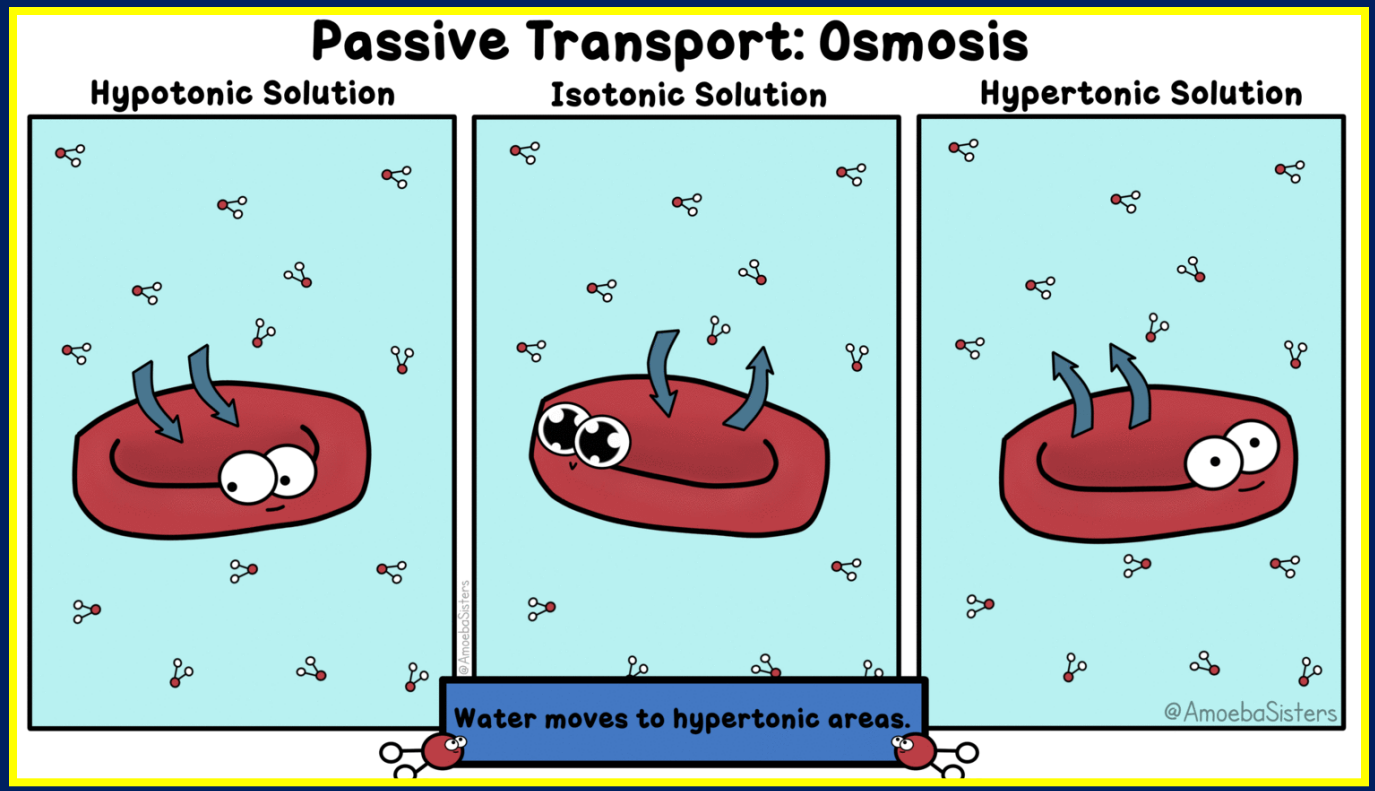
Hypertonic

95% Water → 90% water

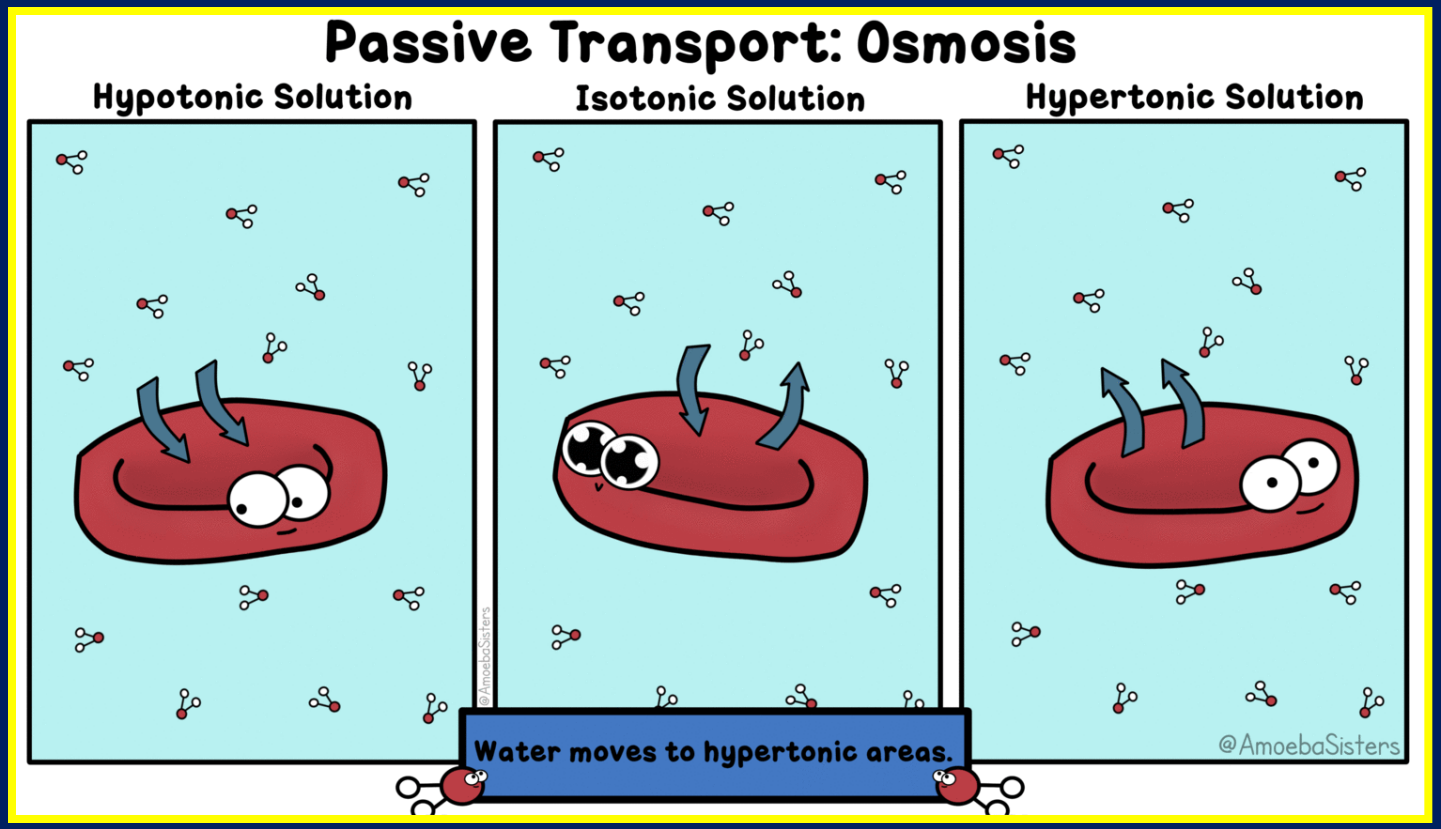


Cells and Osmosis

Water will flow into or out of the cell depending upon the concentration of water in the cell's environment.



Three Types of Common Cell Environments

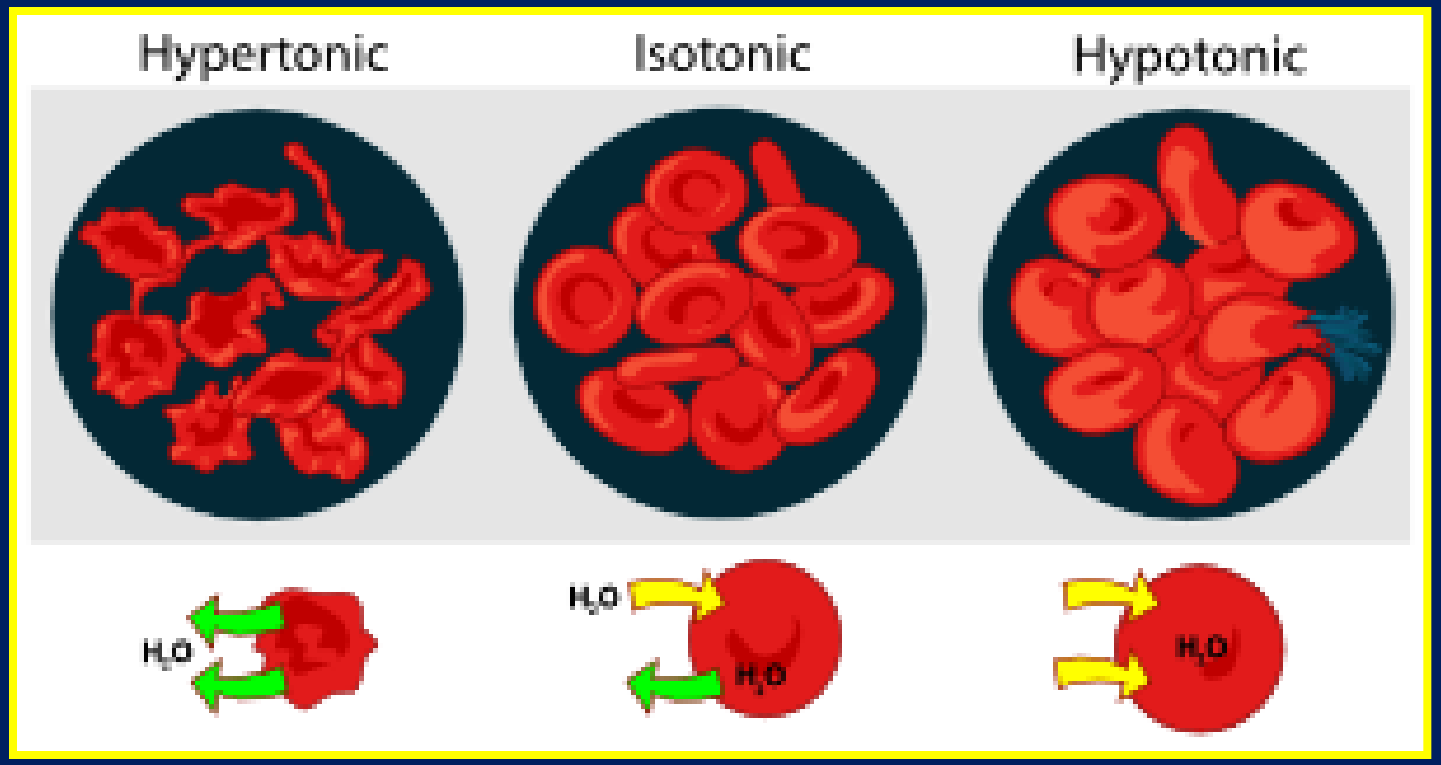


Fresh Water

Plasma

Salt Water

Osmosis in Animal Cells

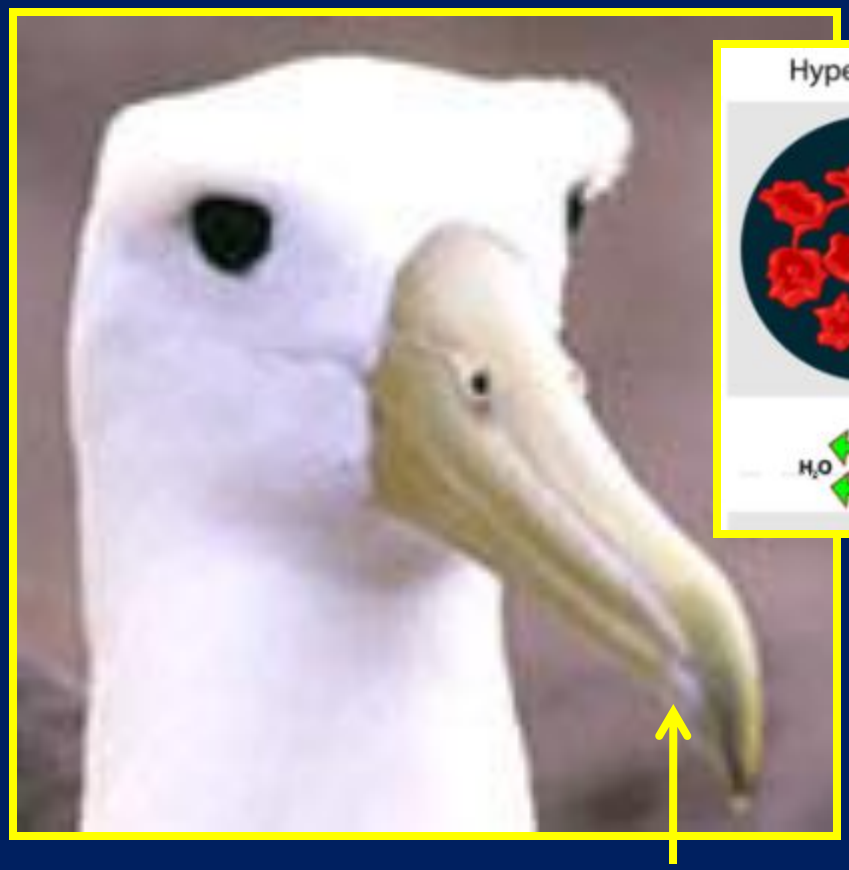


Salt Water

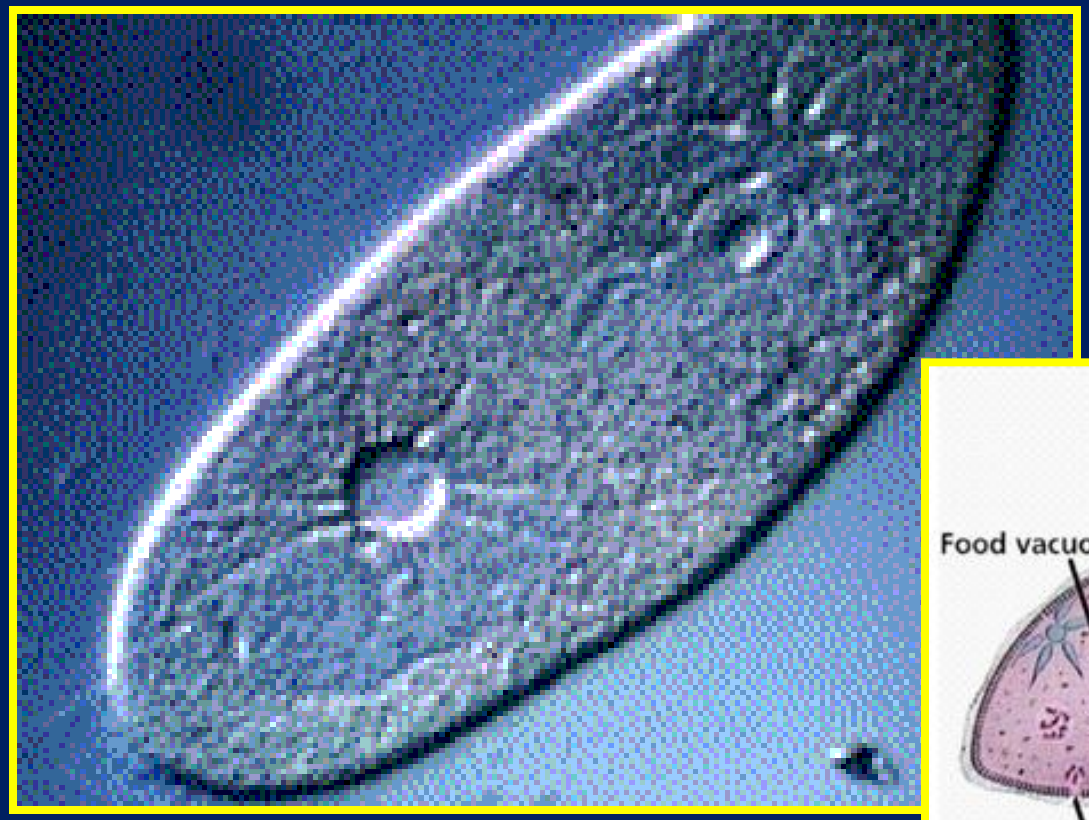
Plasma

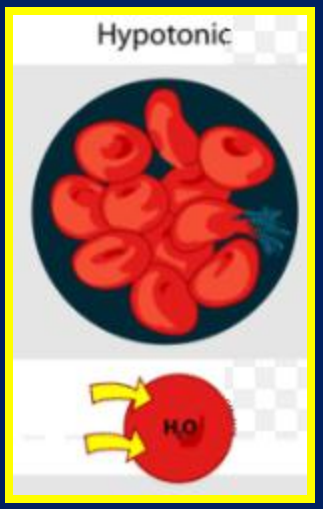
Fresh Water

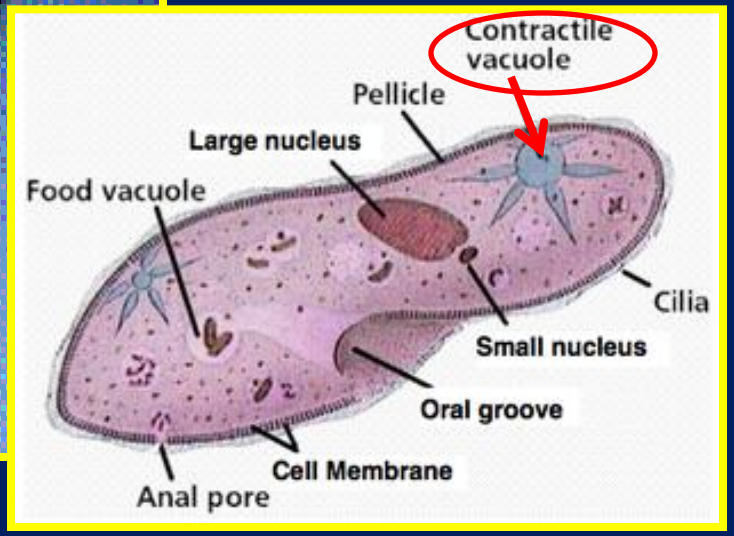
Many animals that live in saltwater have developed adaptations that help them rid their bodies of excess salt



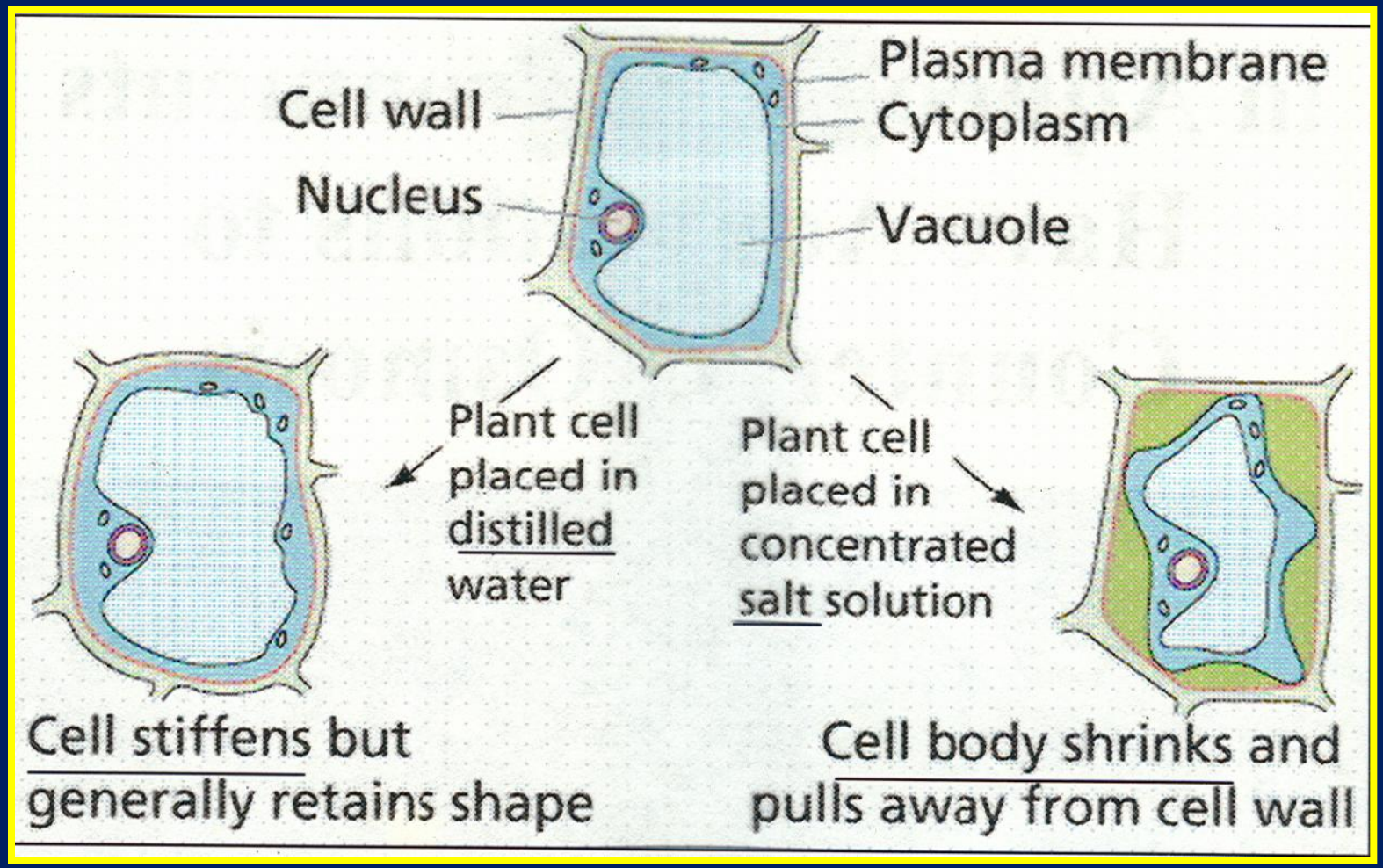
Organisms that live in freshwater, like protista, have contractile vacuoles that rid the cell of excess water.



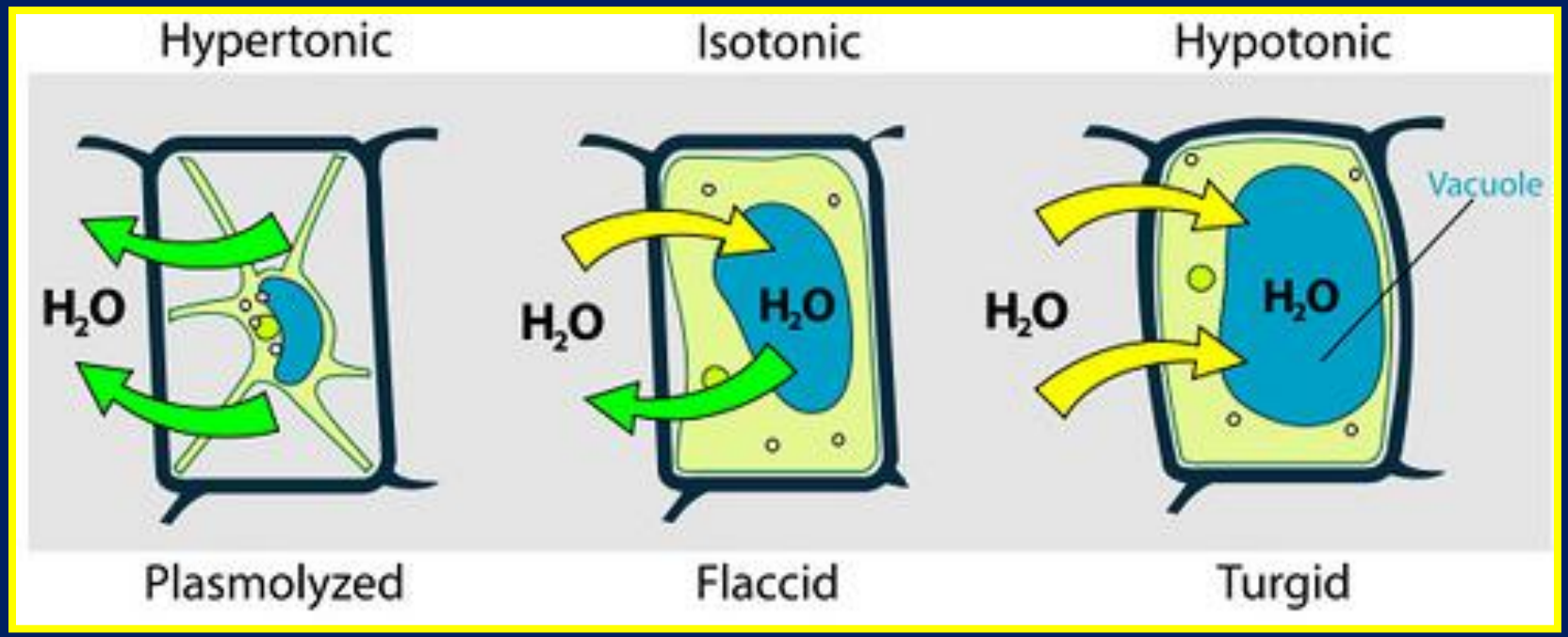




Osmosis in Plant Cells



Plant cells contain cell walls. When the water balance changes, cell walls can help them maintain their shape.

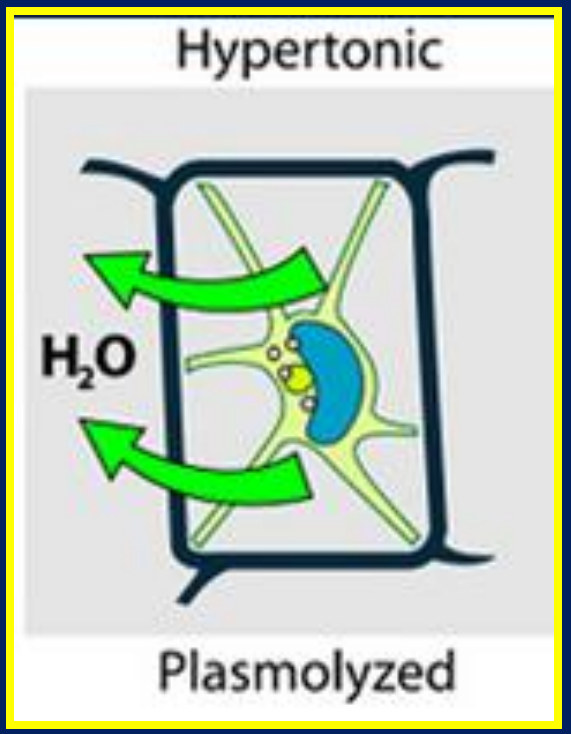


Salt Water

Isotonic

Fresh Water

Plants that live in saltwater marshes need adaptations, similar to salt glands, to rid their cells of excess salt



The End

Freshwater alligators will go into saltwater to kill parasites on their skin.