Water and Digestion

Body Hydration:

- Is assisted by our sense of thirst.
- Elderly lose their sense of thirst.

Water Functions:

1. Helps our body to transport nutrients and waste products.
2. Temperature regulation.
3. Help to give structure and form to the body.

Plasma Protein:

- Predominant regulator of circulatory blood volume.
- Maintain colloidal pressure, and are unable to move through membranes, because of their large size.
- Albumin in the body exerts the greatest colloidal osmotic pressure.

Osmotic Pressure:

- [How Osmosis Works](#)

Colloidal Osmotic Pressure:

Water Balance:

- Ideally intake is equal to water output.
- If output exceeds input...patient is dehydrated (-).
- If input exceeds output... patient can develop edema or water intoxication (+).

Cell:

- Intracellular contains the largest amount of body water.
- Extracellular.
- Interstitial.
- Protein, glucose, lytes (Na, K, HCO3) assist in balancing water between compartments.

**Kidneys and Water Regulation:**

**ADH:**
- Anti-Diuretic Hormone acts on the kidney, so that water can be reabsorbed.

**Infant’s body is 70% H2O.**

**Major cation: Ion that gives off a positive charge in the intracellular fluid...K+.**

**Those with muscles have greatest water content.**

Water is proportional to muscle mass.
Major anion in extracellular fluid has a negative charge. Helps H2O balance-Na-.

WATER LEAVES THE BODY BY:

Lungs:

Kidneys:

Skin:

WATER LEAVES THE BODY BY:

Transports excretion of wastes.

KIDNEYS LAUNDER BLOOD BY FILTRATION.

Ways in which water solutes move across membranes: filtration or diffusion.
FILTRATION:

Process of separating solids.