

Vocabulary / Topics / & Study Questions for Fluids, Electrolytes, and Acid-Base Balance System (lecture and 2 labs)

ICF, ECF, ISF, and plasma

osmosis & osmotic pressure

electrolytes

Na^+ , K^+ , Cl^- , Ca^{++} , HPO_4^- , HCO_3^-

osmolarity / osmolality

cation vs. anion

Hyperkalemia vs. Hypokalemia

Hypercalcemia vs. Hypocalcemia

Hypernatremia vs. Hyponatremia

acidosis

alkalosis

respiratory acidosis

metabolic acidosis

respiratory alkalosis

metabolic alkalosis

How is osmolality predicted based on $[\text{Na}^+]$?

Draw a diagram representing the various fluid compartments of the body. Name each compartment and state the approximate percentage of fluid each contains.

Explain how hyper- and hypokalemia each affect RMPs and therefore excitability of nerves and muscles.

How are blood levels of potassium regulated.

Explain how hyper- and Hypocalcemia each affect RMPs and therefore excitability of nerves and muscles.

How are blood levels of calcium regulated?

How are blood levels of sodium regulated?

Why are most IV solutions isotonic? Name 3.

Name one hypotonic IV solution. What condition would it be used to treat?

Name one hypertonic IV solution. What condition would it be used to treat?

What are the major effects of acidosis?

What are the major effects of alkalosis?

List the 4 acid-base imbalances in order from most common to least common.

Know your "What ifs..."

Understand the various causes of acid-base imbalances. Blank copies available on my web page for practice.

Be able to identify the acid-base imbalance based on ABG #s. Blank copies available on my web page for practice.