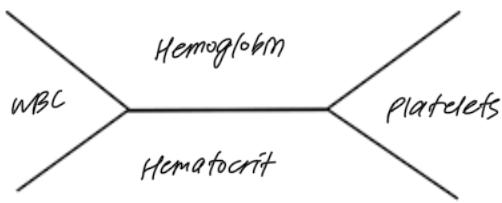
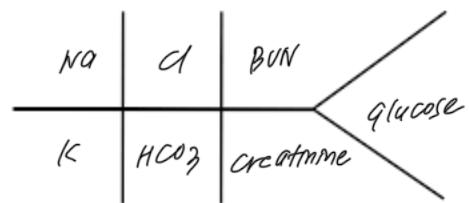


Name: Jamie Lee

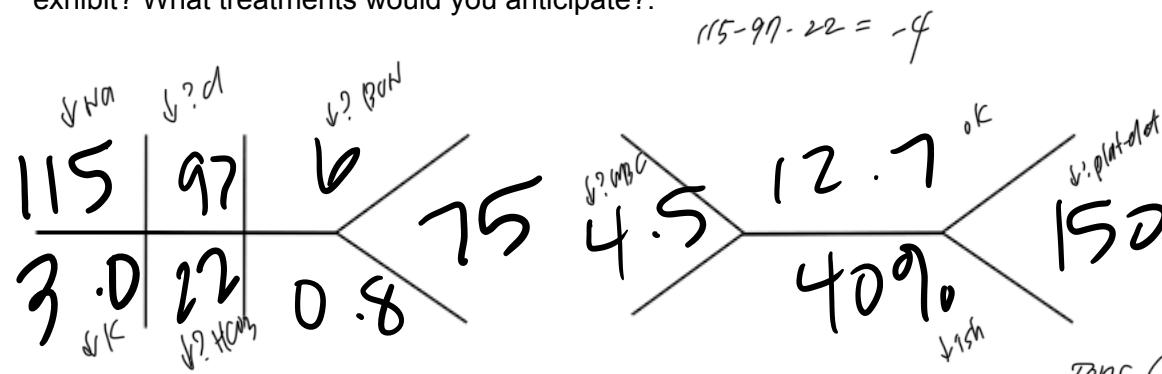


(Correctly label each diagram)

Electrolyte	Normal Values	Hyper signs and symptoms	Hypo signs and symptoms
Sodium	135 - 145 mEq/L	muscle twitching agitation extreme thirst ↑ BP	muscle weakness dizziness dry mouth seizures
Potassium	3.5 - 5.0 mEq/L	bradycardia muscle twitching (early) muscle weakness (late)	arrhythmias muscle weakness decreased bowel sounds ST depression
Chloride	98 - 106 mEq/L	fatigue muscle weakness ↑ BP	fever difficulty breathing confusion
Magnesium	1.7 - 2.3 mg/dL	weakness nausea drowsiness confusion	hypocalcemia arrhythmias Tremors
Phosphorous	2.5 - 4.5 mg/dL	dry skin memory problems seizures	dumbness muscle weakness muscle pain
Calcium	8.6 - 10.2 mg/dL	weakness nausea abdominal pain	irregular heartbeat tingling

IV fluid	Type (colloid, crystalloid)	Tonicity
Normal Saline (____ % saline)	crystalloid	isotonic
D5W (5% dextrose in water)	crystalloid	isotonic
Lactated Ringers (LR)	crystalloid	isotonic

1. Your patient is admitted with the following labs. What is the patient's primary problem? What signs and symptoms may they exhibit? What treatments would you anticipate?:



The patient's primary problem is metabolic alkalosis, as indicated by the low anion gap and low potassium levels. This patient may exhibit symptoms of nausea, vomiting, high anxiety and muscle tremors. I expect replacement of lost H<sup>+</sup> ions (e.g. NS or LR) and to check causes (e.g. CTD).

2. What are the primary differences between colloids and crystalloids?  
 3. The patient admitted after cardiac surgery has a CVP of 1.4 mmHg and is ordered 500mL of IV albumin. As if you were educating the patient, describe albumin (what it does, why it was ordered, contraindications, etc).

We ordered this albumin for you because you've lost some blood during surgery. Blood loss is to be expected, but we would ideally like to replace whatever you've lost. Which is why we ordered the albumin, not only in order to help replace that blood, but it's also a protein that helps keep your blood in your veins.

Sometimes we don't like to give albumin — if you have really severe anemia or really bad heart failure, it could do more harm than good.

Volume Overload	Dehydration
<p>Signs/Symptoms:</p> <p>↑BP swelling/edema bloating headache</p> <p style="text-align: center;">shortness of breath</p>	<p>S/S:</p> <p>✓ BP dizziness dry skin &amp; mouth confusion</p>
<p>Management:</p> <p>diuretics reducing salt intake fluid limit drugs</p>	<p>Management:</p> <p>either crystalloids or colloids blood transfusion treat the cause</p>

	<b>Met. Acidosis</b>	<b>Met. Alkalosis</b>	<b>Resp. Acidosis</b>	<b>Resp. Alkalosis</b>
Cause(s)	ketone buildup diarrhea kidney failure shock	antacid use steroid use diuretics dehydration electrolyte imbalances	hypoventilation MS COPD / asthma obesity ) obstruction scoliosis ) marginas	hyperventilation hypocapnia CPR
S/S	↓ BP headache muscle twitching LOC changes	muscle twitching fatigue confusion tachycardia & arrhythmias N/V	rapid, shallow respirations ↓ BP muscle weakness dyspnea headache headache hypertension	tachycardia ↑ anxiety ↓ BP hypokalemia numbness hyperreflexes
Treatment	IV NaHCO <sub>3</sub> sodium citrate (for CKD) Insulin (if diabetes related)	saline infusion replace potassium & magnesium stop medication that caused it	↑ respirations supplemental O <sub>2</sub> bronchodilators treat the cause	sedation anxiety medications therapeutic techniques to reduce anxiety

aka. treat the cause.