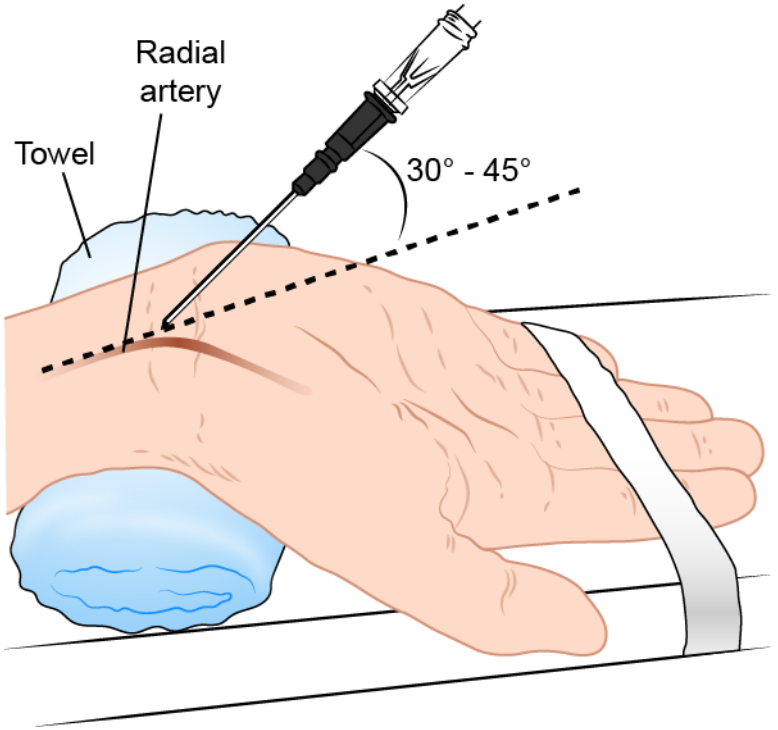
The NCLEX Tutor

KoaPine Tutoring & Test Prep



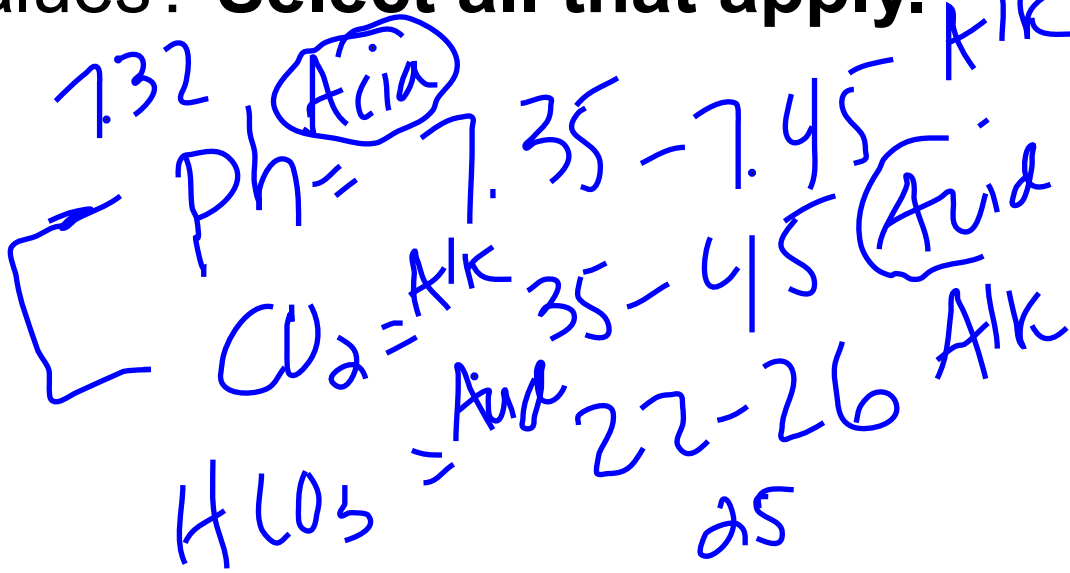
Acid-Base Webinar

Justine Buick, MSN, RN

1. A nurse analyzes a client's arterial blood gas values (ABGs). Which acid base imbalance should the nurse associated with these ABG values? **Select all that apply.**

PH = 7.32
PaCo2 = 55 mm Hg
HCO3 = 25 mEq/L

1. Respiratory
2. Metabolic
3. Acidosis
4. Alkalosis
5. Uncompensated
6. Partially compensated
7. Fully compensated



abnormal (CO_2 or HCO_3)

2. A nurse analyzes a client's arterial blood gas values (ABGs). Which acid base imbalance should the nurse associated with these ABG values? **Select all that apply.**

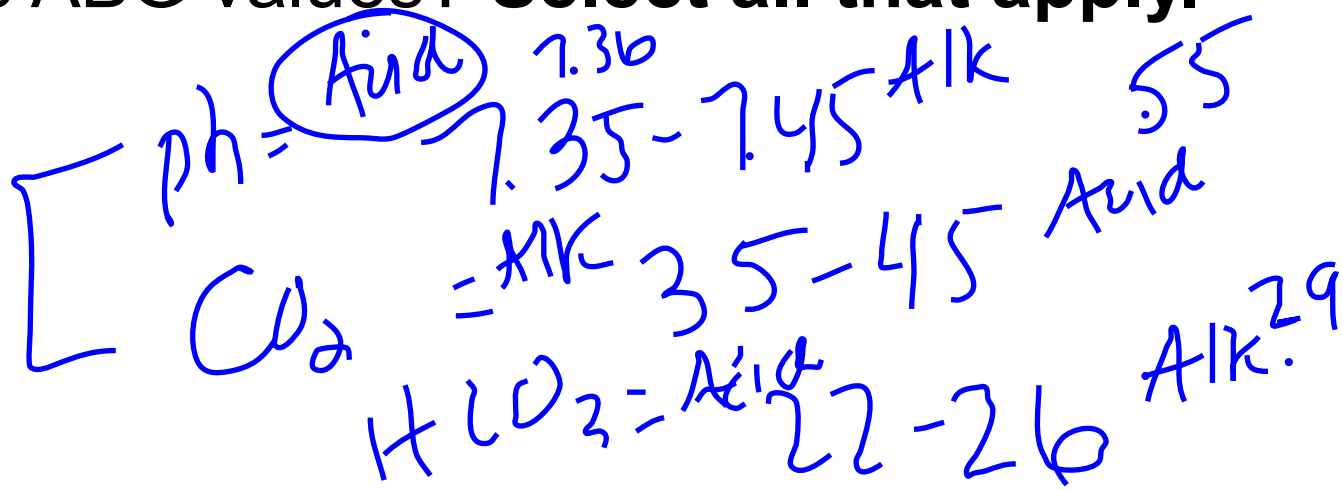
PH = 7.32
PaCo2 = 55 mm Hg
HCO3 = 29 mEq/L

7.32 Acid
pH 7.35 - 7.45 Alk
CO_2 Alk 35 - 45 Acid
HCO_3 Acid 22 - 26 Alk

1. Respiratory
2. Metabolic
3. Acidosis
4. Alkalosis
5. Uncompensated
6. Partially compensated
7. Fully compensated

3. A nurse analyzes a client's arterial blood gas values (ABGs). Which acid base imbalance should the nurse associated with these ABG values? **Select all that apply.**

PH = 7.36
PaCo2 = 55 mm Hg
HCO3 = 29 mEq/L



1. Respiratory
2. Metabolic
3. Acidosis
4. Alkalosis
5. Uncompensated
6. Partially compensated
7. Fully compensated

4. A client arrives in the ER with a suspected acid-base imbalance. What would the nurse assess?
Select all that apply.

1. Presence of dysrhythmias
2. Level of consciousness
3. Chvostek's and Trosseau's sign
4. Respiratory rate
5. Urine output
6. Fall risk

5. A nurse obtains the recent medical history of a newly admitted client. Which factors in the client's history should the nurse identify as placing the client at risk for respiratory acidosis. **Select all that apply.**

1. Renal failure
2. Fever
3. Oxycodone use
4. Nausea and vomiting
5. Pneumonia

6. A nurse analyzes the STAT laboratory data of a child admitted to the emergency department after inhaling a marble. Which laboratory results should the nurse expect to be abnormal? **Select all that apply.**

1. Blood pH.
2. HCO_3 level. Kidney.
3. PaO_2 level. 80–100 mmHg.
4. $PaCO_2$ level.
5. Serum K level.

8. A nurse is caring for a client who is having a panic attack and begins to hyperventilate. The client reports dizziness and circumoral tingling and numbness. For which acid-base imbalance is the client most at risk for?

1. Respiratory acidosis.
2. Metabolic acidosis.
3. Respiratory alkalosis.
4. Metabolic alkalosis.

Metabolic Alkalosis:

(controlled by kidneys)

- caused by losing too much acid such as vomiting/GI suction; or taking in too much bicarb such as taking too many antacids

- s&s: respirations will be shallow & will compensate quickly

9. The client with DKA has a blood sugar of 320 mg/dL (18 mmol/L), a respiratory rate of 32 breaths/min, and a deep regular respiratory effort. The nurse should implement interventions for which acid-base imbalance?

1. Metabolic acidosis
2. Metabolic alkalosis
3. Respiratory acidosis
4. Respiratory alkalosis

HCl

10. The client is hospitalized with a history of chronic emesis from purging. Based on the client's history, the nurse should monitor for which complication?

1. Hyperkalemia
2. Hyperchloremia
3. Metabolic alkalosis
4. Metabolic acidois

11. A home health nurse visits an older adult client diagnosed with type 2 diabetes mellitus. The client has signs and symptoms of a urinary tract infection and has been limiting fluid intake to avoid urination. The client's blood glucose level is 620 mg/dL (34 mmol/L), and the client's urine dipstick is negative for ketones. Which condition should the nurse associate with these manifestations?

1. Diabetic ketoacidosis (DKA).
2. End-stage renal disease.
3. Exocrine pancreatic insufficiency.
4. Hyperosmolar hyperglycemic state (HHS).

type II syndrome.

q BS.

12. A nurse is preparing to administer insulin to a client diagnosed with DKA. Which agent should the nurse identify as the insulin of choice for this client?

1. lispro rapid
2. regular insulin short - IV
3. NPH - int.
4. glargine lng.

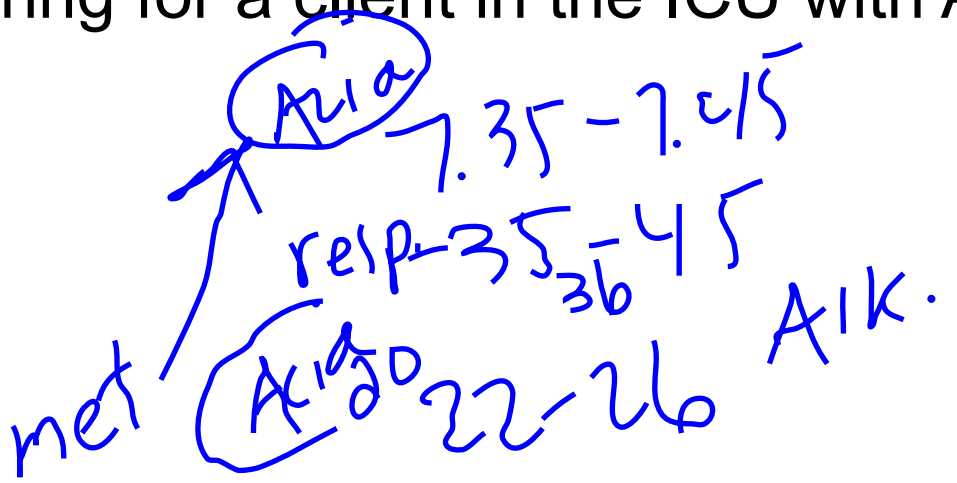
Extra

13. The nurse is caring for a client in the ICU with ABG results of:

PH: 7.32

CO2 = 36

HCO3 = 20



While the nurse and HCP look for the cause of the imbalance, which medication would the nurse give to quickly fix the imbalance?

1. Sodium bicarbonate IV
2. Hydralazine ↓BP
3. Rosuvastatin - ↓chol
4. Ondansetron - n/v.

14. A nurse assesses an older adult client for the presence of an acid-base imbalance. Which questions should the nurse ask the client when performing this assessment? **Select all that apply.**

1. "Did you get a flu shot this year?"
2. "Has your urine changed color?"
3. "When was your last physical examination?"
4. "Have you had any shortness of breath during activity or at rest?"
5. "Have you noticed any changes in memory or difficulty concentrating?"

15. Which interventions are appropriate for the nurse to implement when caring for a client diagnosed with respiratory acidosis secondary to COPD. **Select all that apply.**

1. Implement airborne precautions.
2. Place the client in an upright position.
3. Administer oxygen at 6 L/min via nasal cannula.
4. Administer IV 0.9% saline solution.
5. Administer methylprednisolone.

2 HCO_3 PaO_2

16. A student nurse is observing a specially trained registered nurse who is preparing to draw an ABG specimen. Which statement by the student nurse is correct?

1. "Arterial blood gases are used to evaluate a client's fluid and electrolyte status."

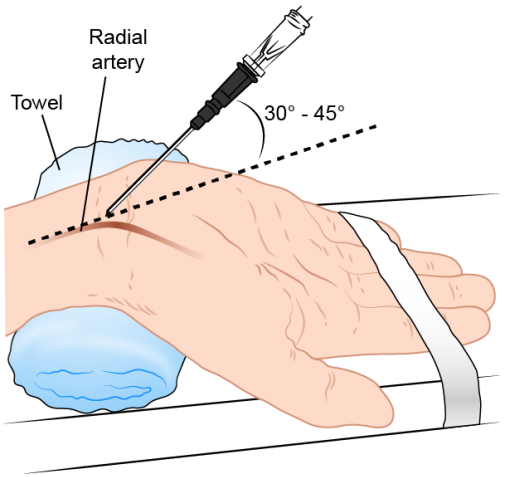
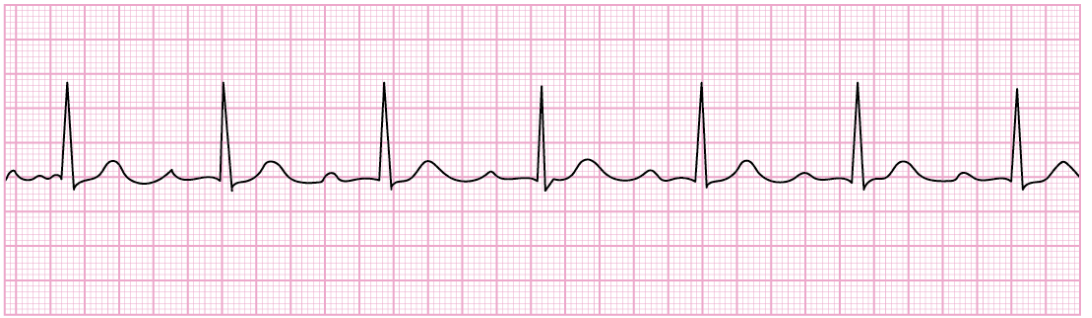
2. "Venous blood and arterial blood provide the same information about a client's status."

3. "It is important to apply pressure for 2 minutes after drawing an arterial blood gas."

4. "Arterial blood gases may be drawn by a respiratory therapist or nurse with specialized training."

The NCLEX Tutor
KoaPine Tutoring & Test Prep

Questions?



Next week: EKGs