



Scientific team

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Respiratory System Biochemistry
Vein's questions

Scientific Team
With you step by step.....



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Case 1:

A 20 years old patient was ambulated to the hospital in coma. The respiratory rate was slow. He was put on a ventilator. Lab investigations for his blood sample revealed presence of morphia and the blood pH was 7.1.

1. The suggested acid base imbalance in this case is:

- A. Respiratory alkalosis.
- B. Metabolic alkalosis.
- C. Respiratory acidosis.
- D. Metabolic acidosis.

Answer: C

2. All the following apply to this case except:

- A. Excessive CO₂ retention.
- B. Respiratory center depression.
- C. Normal alkali reserve.
- D. Increased HCO₃⁻/H₂CO₃.

Answer: D

3. The body compensates for this case by:

- A. Increasing respiratory rate.
- B. Excreting more HCO₃⁻.
- C. Reabsorbing more HCO₃⁻.
- D. Decreasing respiratory rate.

Answer: C



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Case 2:

A 24 years female with broken ankle was brought to emergency with acute pain. Blood gas analysis revealed the following:

- pH: 7.55.
- pCO₂: 27 mmHg.
- pO₂: 105 mmHg.
- HCO₃: 23 mmol/L.

* What is the probable diagnosis?

Case details:

pH: 7.55 indicates alkalosis.

pCO₂: 27 low, it is a primary respiratory disturbance.

HCO₃: 23 (normal).

Interpretation:

It is respiratory alkalosis due to pain related hyperventilation.

