

METABOLIC ALKALOSIS

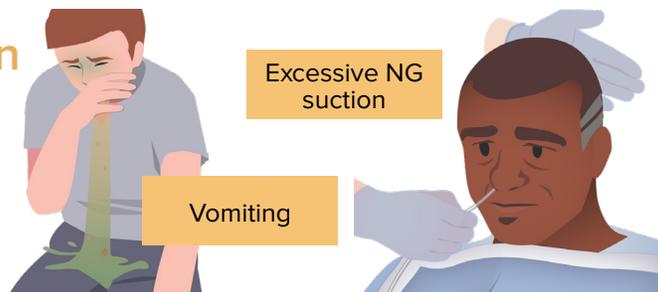


Definition

- An accumulation of bicarbonate in the body caused by loss of stomach acid
- Excess bicarbonate leads to pH imbalance.
- Usually accompanied by hypokalemia

Common Causes

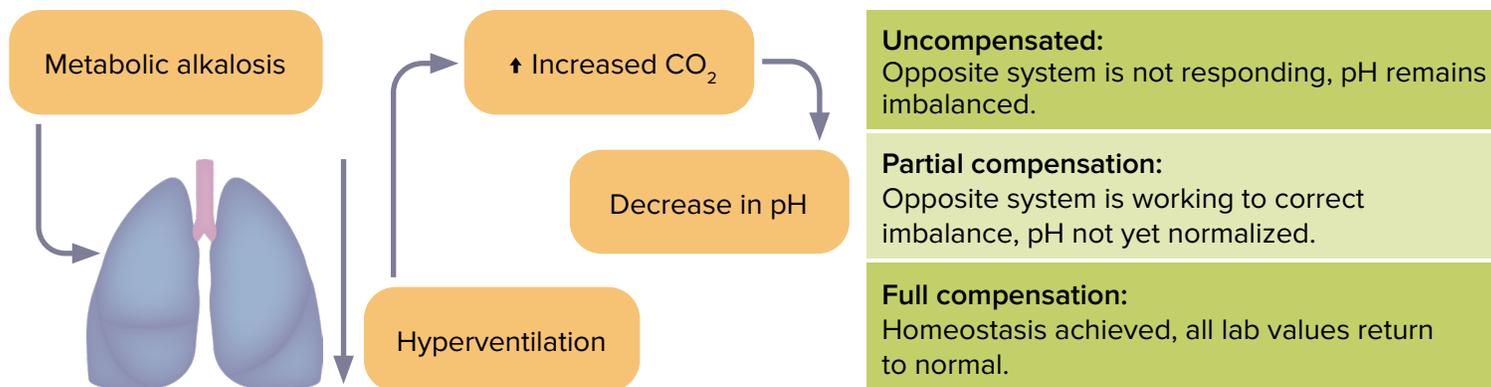
Loss of stomach acid caused by:



Lab Values

Disturbance	pH	CO ₂	HCO ₃ ⁻	Cause	Compensation
Metabolic acidosis	↑ Increased	Normal or ↑ increased	↑ Increased	Kidneys control HCO ₃ ⁻ .	Lungs excrete CO ₂ .
Normal values	7.35–7.45	35–45 mm Hg	22–26 mmol/L	O ₂ levels are not part of ABG imbalance determination.	

Compensation



Example

Steps:

1. Identify pH (acidosis or alkalosis).
2. Identify CO₂ (↑, ↓, normal).
3. Identify HCO₃⁻ (↑, ↓, normal).
4. Which label matches pH?
5. Look at opposite system, evaluate if it is bringing pH back to normal.

Disturbance	pH	CO ₂	HCO ₃ ⁻
???	7.47	47	30

Answer: metabolic acidosis partially compensated

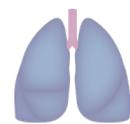
Treatment



Fix the underlying cause.



Determine if IV fluids are needed for volume replacement.



Body decreases respiratory rate to decrease CO₂.

NOTES

