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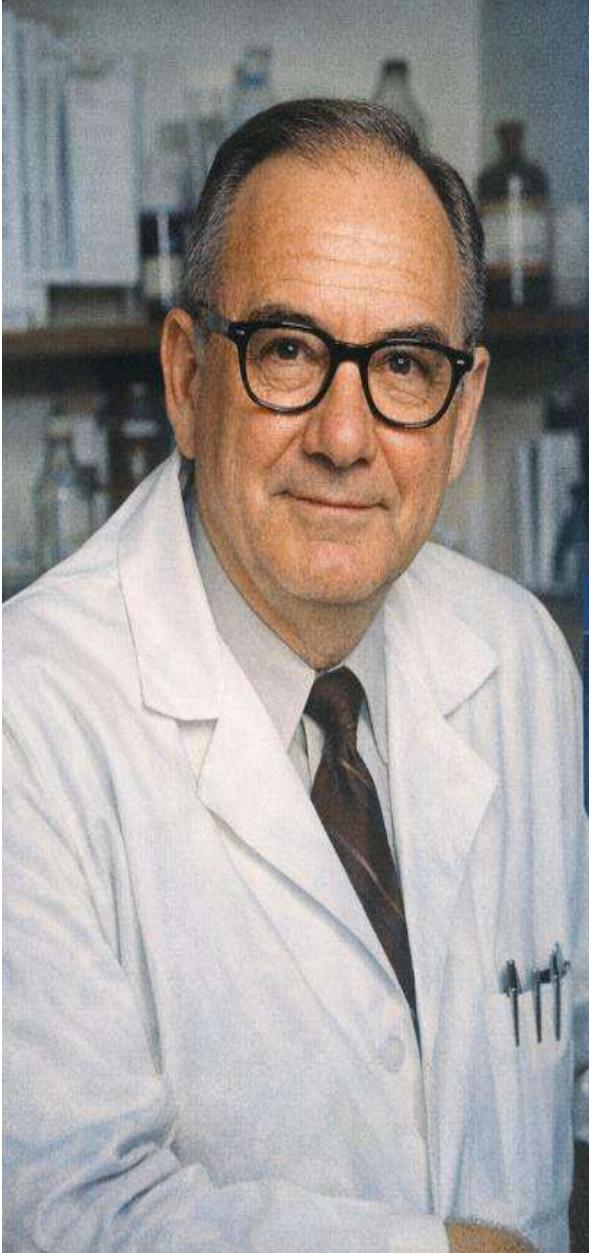
05.01.2026

History in Nephrology

Legends whose contributions inspire us even today!

ANION GAP AND ACID BASE BALANCE.

- William D.Rose
- Burton D.Rose
- Lawrence Joseph Henderson.



William D. Rose, MD

Pioneer of the Anion Gap

Introduced the anion gap concept to identify unmeasured anions in metabolic acidosis.

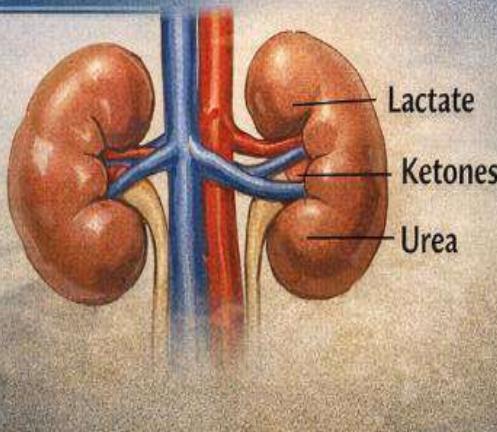
Transformed clinical acid-base diagnosis.

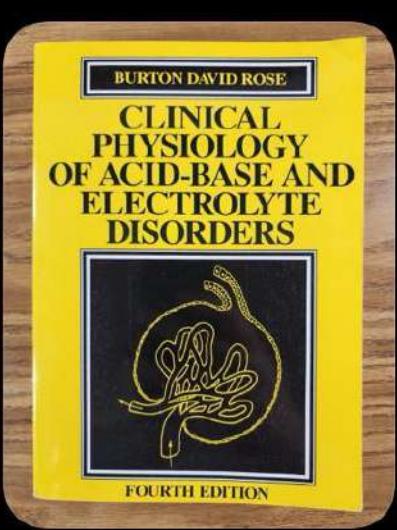


CLINICAL PEARL:

$$\text{Anion Gap} = \text{Na}^+ - (\text{Cl}^- + \text{HCO}_3^-)$$

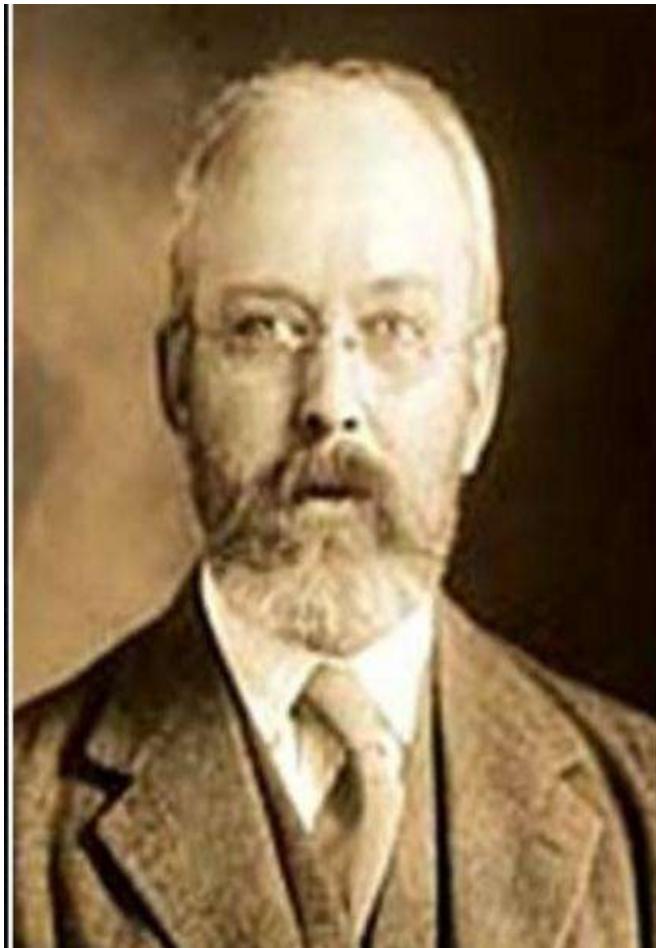
Lactic Acidosis | DKA | Uremia





📌 *Burton D. Rose was an American nephrologist known for clinical acid-base and electrolyte teaching, creator of UpToDate, and author of "Clinical Physiology of Acid-Base and Electrolyte Disorders."*

[Wikipedia](#)



Science owes more to the steam engine than the steam engine owes to science.

— *Lawrence Joseph Henderson* —

AZ QUOTES

Lawrence J. Henderson (1908) – described the bicarbonate buffer system

Henderson–Hasselbalch refers to the Henderson–Hasselbalch equation, fundamental to acid–base physiology.

- **Henderson was emphasizing that practical technological advances (like the steam engine) often precede and stimulate scientific theory, rather than arising from it.**
- **In fact, thermodynamics developed largely because engineers were trying to understand and improve steam engines.**