



## Simplistic Approach — Management of Acid Base Imbalance and Electrolyte Disturbances

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A simple approach to calculate ABG disorder: My mnemonics--A, B, C, D

A. Assess Anion Gap

$Na - (Cl + HCO_3) = \text{normal } 12 \text{ plus/minus } 2$

B. Blood Gas Analysis. pH/PaCO<sub>2</sub>/HCO<sub>3</sub>

C. Calculate excess Anion Gap

D. Determine Degree of Compensation.

Remember MERO/ROME

Metabolic Equal --Acidosis pH ↓

HCO<sub>3</sub> ↓ (Primary Disturbance)

Respiratory -- Opposite--pH -

Metabolic Equal

Compensated state of Acid Base Disturbances. Mnemonics -->MERO or ROME

Metabolic -->Equal

Respiratory --->Opposite.

COMPENSATORY MECHANISM

Note that the expected change occurs in the same direction in Primary Metabolic Disorders & in opposite direction in Primary Respiratory Disorders.

It is vital to know "Respiratory compensation for Metabolic Disorders" occur rapidly, but Metabolic Compensation for Respiratory Disorders take 3 to 5 days. Please remember, the primary abnormality lies in the same direction of pH disorder. The body does not fully compensate the Primary Acid-Base Disorder.

Fluid Management

Basic Principles

History is vital. A to F My Mnemonics

A-Assess loss of Water in Diarrhea-->loss of Water, Sodium, Potassium but results in Acidosis if volume loss is severe.

B-Burns--Loss of plasma, ECF-Water, Protein, Sodium. The immensity depends on extent and depth of burns.

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C-Check H/O Vomiting or Gastric outlet obstruction-GOO-->leads->loss of water, HCL-->Metabolic Alkalosis and Potassium and Sodium loss

D-Diuretics initiative in states of Salt restrictions-->leads to mild to moderate salt exhaustion, Hypovolemia, hypokalemia following no clinical manifestations. But these patients are susceptible for hypotension while at general anesthesia or loss of fluid.

E-Enormous sweating-->notable loss of Water and Sodium leads to Hypovolemia and Shock

F-Find past history of Cardiac, Respiratory, Hepatic, Renal etiology to assess type of fluid loss