

Acid – Base Disorders

" Summary "

Disorder	Acute Situation	Compensation	Treatment
Respiratory Acidosis	pH = Low PCO ₂ = High HCO ₃ = N	<ul style="list-style-type: none"> • Conserve HCO₃ • Excrete H⁺ pH = N PCO ₂ = High HCO ₃ = High Low Urine HCO ₃	Restore ventilation IV Lactate solution
Respiratory Alkalosis	pH = High PCO ₂ = Low HCO ₃ = N	<ul style="list-style-type: none"> • Conserve H⁺ • Excrete HCO₃ pH = N PCO ₂ = Low HCO ₃ = Low High urine HCO ₃	Breath in a paper bag IV Chloride solution
Metabolic Acidosis	pH = Low PCO ₂ = N HCO ₃ = Low	<ul style="list-style-type: none"> • Hyperventilation • Conserve HCO₃ • Excrete H⁺ pH ≈ N PCO ₂ = Low HCO ₃ = Low	IV Lactate solution
Metabolic Alkalosis	pH = High PCO ₂ = N HCO ₃ = High	<ul style="list-style-type: none"> • Hypoventilation • Conserve H⁺ • Excrete HCO₃ pH ≈ N PCO ₂ = High HCO ₃ = High	Electrolytes replacement IV Chloride solution

Normal Values: pH = 7.35 – 7.45 PCO₂ = 40 mmHg HCO₃ = 24 mEq/L

Done By: Khulood Al-Raddadi