

Acid base balance disorders

Primary disorder	Respiratory acidosis	Respiratory alkalosis	Metabolic acidosis	Metabolic alkalosis
PH	↓	↑	↓	↑
HCO ₃	↑	↓	↓ ↓	↑ ↑
PaCO ₂	↑ ↑	↓ ↓	↓	↑
Main problem and important note	<p style="color: red;">Hypoventilation</p> due to problems in (CNS , PNS , muscles , chest wall and bronchial tree)	<p style="color: red;">Hyperventilation</p> due to (Anxiety , pregnancy and Thyrotoxicosis)	- Used AG to differentiate between the Etiology	- Gain of HCO ₃ due to medication (diuretic) , dehydration . - loss of H “ vomiting”
			- Gain H from outside “ethanol , methanol” or from inside “renal failure, lactic acidosis, ketoacidosis “ - loss HCO ₃ from “ diarrhea or RTA “	

Two arrows indicate initial disturbance. **Red arrows indicate Compensatory response.**