ABG Interpretation Chart

Patient Information
Name:
Age:
Gender:
Date:

ABG Results
pH: _____ (Normal Range: 7.35-7.45)
PaCO2: _____ mmHg (Normal Range: 35-45 mmHg)
PaO2: _____ mmHg (Normal Range: 80-100 mmHg)
HCO3-: _____ mEq/L (Normal Range: 22-26 mEq/L)
SaO2: _____ % (Normal Range: 95-99%)

Interpretation
1. **Assess pH:** Acidosis: pH < 7.35 Alkalosis: pH > 7.45
2. **Assess PaCO2 and HCO3-:** Respiratory Acidosis: ↓pH, ↑PaCO2, Normal HCO3- Respiratory Alkalosis: ↑pH, ↓PaCO2, Normal HCO3- Metabolic Acidosis: ↓pH, Normal PaCO2, ↓HCO3- Metabolic Alkalosis: ↑pH, Normal PaCO2, ↑HCO3-
3. **Evaluate Compensation:** Partially Compensated: All three values (pH, PaCO2, HCO3-) are abnormal Fully Compensated: Normal pH with abnormal PaCO2 and HCO3-

4. **Assess Oxygenation:**
   Hypoxemia: $PaO_2 < 80$ mmHg
   Normoxemia: PaO_2 between 80-100 mmHg
   Hyperoxemia: $PaO_2 > 100$ mmHg

5. **Assess Ventilation:**
   Hypoventilation: ↑$PaCO_2$
   Normal Ventilation: $PaCO_2$ within normal range
   Hyperventilation: ↓$PaCO_2$

	Acidosis	Normal	Alkalosis
Respiratory Acidosis	↓pH, ↑$PaCO_2$, Normal HCO_3^-	Normal pH, ↑$PaCO_2$, ↑HCO_3	↑pH, ↓$PaCO_2$, Normal HCO_3^-
Respiratory Alkalosis	↑pH, ↓$PaCO_2$, Normal HCO_3^-	Normal pH, ↓$PaCO_2$, ↓HCO_3	↑pH, ↓$PaCO_2$, Normal HCO_3^-
Metabolic Acidosis	↓pH, Normal $PaCO_2$, ↓HCO_3^-	Normal pH, ↓$PaCO_2$, ↓HCO_3	↑pH, Normal $PaCO_2$, ↑HCO_3^-
Metabolic Alkalosis	↓pH, Normal $PaCO_2$, ↑HCO_3^-	Normal pH, ↑$PaCO_2$, ↑HCO_3	↑pH, Normal $PaCO_2$, ↑HCO_3^-

Interpretation Summary:

Notes: