

Instructional Module 7: ABG Practice 1

Student Name: Brianna Johnson

Date: 04/23/22

Respiratory } pH ↑ PaCO₂ ↓ alkalosis
Opposite } pH ↓ PaCO₂ ↑ acidosis
Metabolic } pH ↑ PaCO₂ ↑ alkalosis
Equal } pH ↓ PaCO₂ ↓ acidosis

WITHIN RANGE
 OUT OF RANGE

[pH: 7.35-7.45 PaCO₂: 35-45 HCO₃: 22-26 pO₂: 80-100]

PO₂

mild: 70-79
 moderate: 60-69
 severe: <60

Uncompensated:

pH: abnormal
 PaCO₂/HCO₃: 1 out of 2 abnormal

Partial Compensation:

pH: abnormal
 PaCO₂/HCO₃: both abnormal

Fully Compensated:

pH: normal
 PaCO₂/HCO₃: both abnormal

1	2	3
pH 7.38	pH 7.60 ↑	pH 7.37
PaCO ₂ 30 mmHg ↓	PaCO ₂ 25 mmHg ↓	PaCO ₂ 59 mmHg ↑
HCO ₃ 10 mEq/L ↓	HCO ₃ 24 mEq/L	HCO ₃ 34 mEq/L ↑
pO ₂ 60 ↓ moderate	pO ₂ 72 ↓ mild	pO ₂ 82 normal
Interpretation:	Interpretation:	Interpretation:
fully compensated	uncompensated	fully compensated
metabolic acidosis	respiratory alkalosis	metabolic alkalosis
moderate hypoxemia	mild hypoxemia	normal oxygenation

4	5	6
pH 7.56 ↑ -	pH 7.34 ↓	pH 7.15 ↓
PaCO ₂ 40 mmHg	PaCO ₂ 50 mmHg ↑	PaCO ₂ 49 mmHg ↑
HCO ₃ 38 mEq/L ↑	HCO ₃ 31 mEq/L ↑	HCO ₃ 25 mEq/L
pO ₂ 59 ↓ severe	pO ₂ 65 ↓ moderate	pO ₂ 74 ↓ mild
Interpretation:	Interpretation:	Interpretation:
uncompensated	partial compensation	uncompensated
metabolic alkalosis	respiratory acidosis	respiratory acidosis
severe hypoxemia	moderate hypoxemia	mild hypoxemia

7	8	9
pH 7.20 ↓	pH 7.54 ↑	pH 7.42
PaCO ₂ 30 mmHg ↓	PaCO ₂ 44 mmHg	PaCO ₂ 38 mmHg
HCO ₃ 18 mEq/L ↓	HCO ₃ 36 mEq/L ↑	HCO ₃ 25.3 mEq/L
pO ₂ 55 ↓ severe	pO ₂ 64 ↓ moderate	pO ₂ 92 normal
Interpretation:	Interpretation:	Interpretation:
partial compensation	uncompensated	NORMAL 😊
metabolic acidosis	metabolic alkalosis	ARTERIAL BLOOD GAS
severe hypoxemia	moderate hypoxemia	

10	11	12
pH 7.31 ↓	pH 7.27 ↓	pH 7.55 ↑
PaCO ₂ 33 mmHg ↓	PaCO ₂ 35 mmHg	PaCO ₂ 34 mmHg ↓
HCO ₃ 16 mEq/L ↓	HCO ₃ 10 mEq/L ↓	HCO ₃ 16.8 mEq/L ↓
pO ₂ 68 ↓ moderate	pO ₂ 78 normal	pO ₂ 91 normal
Interpretation:	Interpretation:	Interpretation:
partial compensation	uncompensated	partial compensation
metabolic acidosis	respiratory acidosis	respiratory alkalosis
moderate hypoxemia	normal oxygenation	normal oxygenation