

Evaluate the following ABG's

1. pH 7.20 PaCO₂ 88 PaO₂ 55 HCO₃ 26 FiO₂ .21

- Is the patient ventilating effectively? **NO, HYPOVENTILATION WITH ACIDOSIS**
- Is the patient oxygenating? **NO. MODERATE HYPOXEMIA. P/F RATIO = 262**
- Does the patient have hypocapnia, hypercapnia or eucapnia? **HYPERCAPNIA**
- Is the patient hyperventilating or hypoventilating? **HYPOVENTILATING**
- Is the patient's alveolar minute ventilation low, high or normal? **LOW**
- List two ways to correct the PaCO₂. 1. **INCREASE V_t** 2. **INCREASE f**

2. pH 7.42 PaCO₂ 36 PaO₂ 80 HCO₃ 22 FiO₂ .40

- Is the patient ventilating effectively? **YES**
- Does the patient have normal oxygenation? **YES, CORRECTED LEVEL**
- Does the patient have hypocapnia, hypercapnia, or eucapnia? **EUCAPNIA**
- Is the patient hyperventilating or hypoventilating? **NEITHER**
- Does the PaCO₂ need to be corrected? **NO**
- Does the PaO₂ need to be corrected further? **NO, FURTHER EVALUATION NEEDED**
- Is the alveolar minute ventilation low, high, or normal? **NORMAL**

3. pH 7.56 PaCO₂ 25 PaO₂ 110 HCO₃ 22 FiO₂ .21

- Is the acid-base status acute or chronic? **ACUTE**
- Is the patient ventilating effectively? **YES**
- Is the patient oxygenating? **YES**
- Does the patient have hypocapnia, hypercapnia or eucapnia? **HYPOCAPNIA**
- Is the patient hyperventilating or hypoventilating? **HYPERVENTILATING**
- List two ways to correct the PaCO₂. a. **FIND CAUSE** b. **? REBREATHING GAS**
- Is the patient's alveolar ventilation high, low or normal? **HIGH**

4. pH 7.52 PaCO₂ 50 PaO₂ 68 HCO₃ 36 FiO₂ .35
- a. Is the patient ventilating effectively? **YES**
 - b. Is the patient oxygenating? **NO**
 - c. Does the patient have hypocapnia, hypercapnia, or eucapnia? **HYPERCAPNIA**
 - e. Is the patient hyperventilating or hypoventilating? **HYPOVENTILATION**
 - f. Should the PaCO₂ be corrected? **NO, COMPENSATORY**
 - g. Is the patient's alveolar ventilation high, low or normal? **LOW**
5. pH 7.16 PaCO₂ 22 HCO₃ 8 PaO₂ 89 FiO₂ .21
- b. Is the patient ventilating effectively? **YES**
 - c. Is the patient oxygenating? **YES**
 - d. Does the patient have hypocapnia, hypercapnia or eucapnia? **HYPOCAPNIA**
 - e. Is the patient hyperventilating or hypoventilating? **HYPERVENTILATION**
 - f. Should the PaCO₂ be corrected? **NO, COMPENSATORY**
 - g. Is the patient's alveolar ventilation high, low or normal? **HIGH**
 - h. How would you treat this patient? **TREAT METABOLIC DISTURBANCE**