



## **Lecture title: Diseases of the Respiratory System**

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### **Summary:**

#### **Definitions**

1. Hypoxia: is a diminished availability of oxygen to tissues.
2. Hypoxemia: is deficient oxygenation of blood
3. Hypercapnia is an abnormally high carbon dioxide tension in blood
4. Respiratory failure: is the inability of an animal to maintain arterial blood oxygenation and carbon dioxide tension within the normal range.
5. Dyspnea: refers to signs of respiratory distress in animals
6. Polypnea: is an excessively high rate of breathing
7. Tachypnea: is an excessively high rate of breathing, with the implication that the breathing is shallow
8. Hyperpnea: is an increased minute ventilation

#### **Type of Hypoxia:**

1. Hypoxic (or Hypoxemic) Hypoxia:  
Occurs when there is inadequate oxygenation of blood (hypoxemia) and is usually associated with disease of the respiratory tract or other causes of hypoventilation
2. Anemic Hypoxia:  
Occurs when there is a deficiency of hemoglobin per unit volume of blood (anemia)
3. Circulatory Hypoxia (Circulatory hypoxia):  
Occurs as a result of inadequate delivery of oxygen to tissue because of inadequate perfusion of tissues by blood
4. Histotoxic Anoxia:  
Occurs when oxygen delivery to tissue is adequate because both oxygen content of arterial blood and blood flow are appropriate, but the tissue is unable to utilize oxygen. e.g.: Cyanide poisoning