

# **RESPIRATORY SYSTEM**

**PART I NOTES: STRUCTURE FUNCTION**

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# OUTCOMES

**B11-3-13: Distinguish between cellular respiration, internal respiration, and external respiration. (GLO: DI)**

**B11-3-14: Identify major structures and functions of the human respiratory system from a diagram, model, or specimen. (GLO: DI) Include: lungs, pleura, nasal cavity, epiglottis, bronchi and bronchioles, alveoli, pulmonary capillaries, diaphragm, pharynx, larynx, trachea, uvula, ribs, and intercostal muscles**

# TYPES OF RESPIRATION

- In the human body there are 3 different types of respiration:

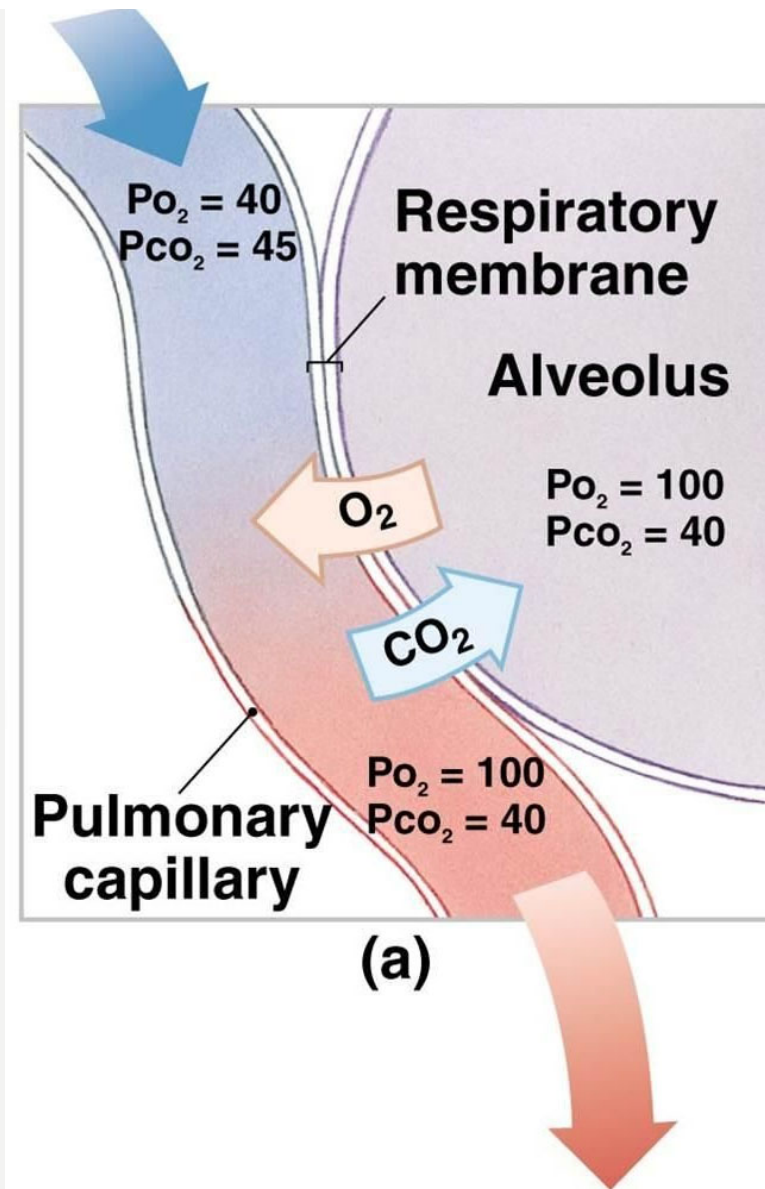
## I. Cellular Respiration

- Occurs in the mitochondria
- Produces ATP (adenosine triphosphate) or energy
- $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + \text{energy (ATP)}$   
*glucose oxygen carbon dioxide water*
- This is considered respiration because the reaction takes in oxygen and produces carbon dioxide for elimination

# TYPES OF RESPIRATION

## 2. External Respiration

- Occurs at the lungs
- Gas exchange occurs between the alveoli and capillaries
- This is how the oxygen is getting into the bloodstream and the carbon dioxide is getting out of the blood stream.



# TYPES OF RESPIRATION

## 3. Internal Respiration

- Occurs at the separate body tissues
- Gas exchange happens between the blood and the body cells
- This is how oxygen is getting to cells, and how the cells eliminate carbon dioxide.

