

RESPIRATION IN HUMANS

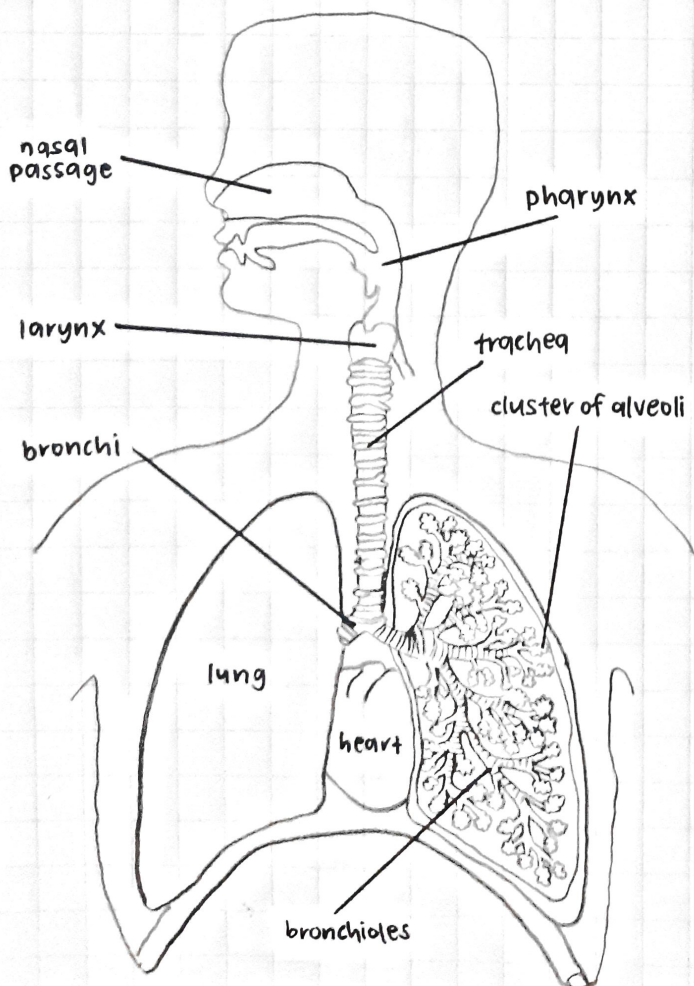
AEROBIC RESPIRATION

- $\text{glucose} + \text{oxygen} \rightarrow \text{carbon dioxide} + \text{water} + \text{large amount of energy released}$
- occurs within cell mitochondria

ANAEROBIC RESPIRATION

- $\text{glucose} \rightarrow \text{lactic acid} + \text{small amount of energy released}$
- when there is insufficient oxygen to meet the demands of the vigorous muscle contractions during a strenuous activity, muscle cells respire anaerobically for short durations to repay the oxygen debt, meet the energy demands of the activity and return the body back to its resting state.

RESPIRATORY SYSTEM



- trachea
 - supported by C-shaped rings of cartilage that keeps the lumen of the trachea open

- alveoli
 - one-cell thick wall
 - the dissolved oxygen diffuses down the concentration gradient across the alveolar wall and the endothelium of the blood capillaries into the

