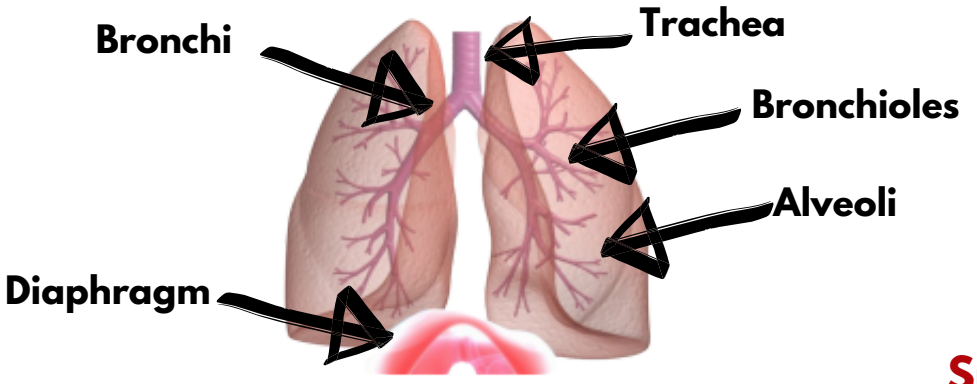
Lungs are the main organ involved in respiration.

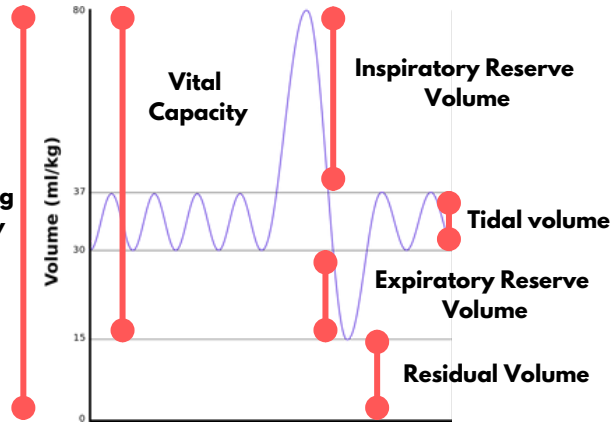


The **diaphragm** changes shape during ventilation -

Inhalation - Contracts and flattens

Exhalation - Relaxes and becomes dome shaped

Spirometer Trace -

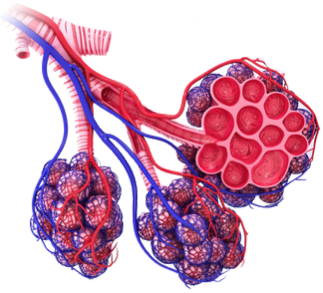


Spirometer Trace Changes in Exercise -

Tidal volume and minute ventilation **increase**

Inspiratory reserve volume and expiratory volume **decrease**

Residual volume **stays the same**



Applied Anatomy and Physiology - Respiratory System

Gas Exchange -
Where the waste product **carbon dioxide** diffuses out of the blood and **oxygen** diffuses into the blood. This takes place in the **alveoli.**

This is possible vecause of the conceps of **diffusion, partial pressure** and **concentration gradients**

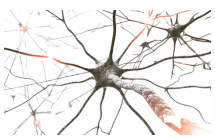
Each gas will diffuse down their own concentration gradient

Chemoreceptors

Baroreceptors

Chemical

Regulation of Pulmonary Ventilation



Neural

Proprioceptors

Smoking is the lifestyle choice with the greatest number of direct negative effects on the respiratory system

- Irritation of the trachea and bronchi
- Damaged cilia
- Nicotine constricts the bronchioles
- Carbon monoxide exposure
- Damaged alveoli