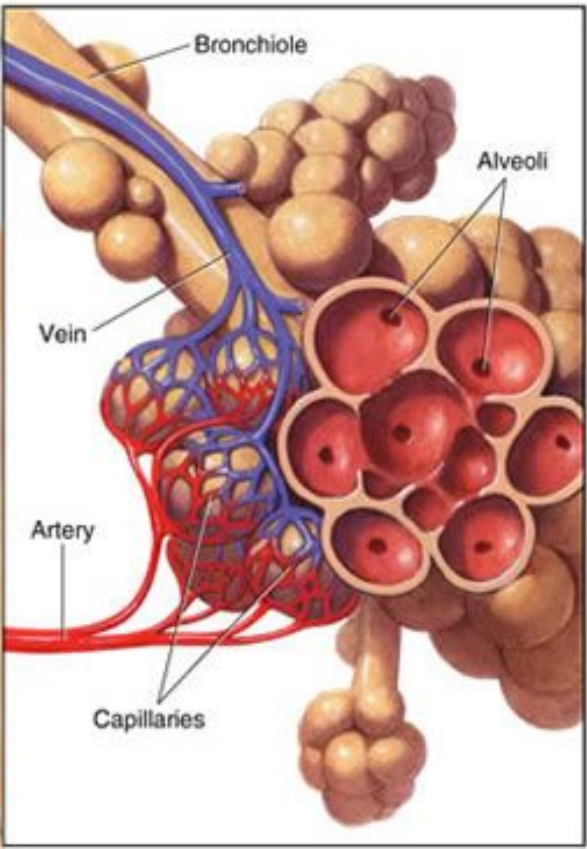
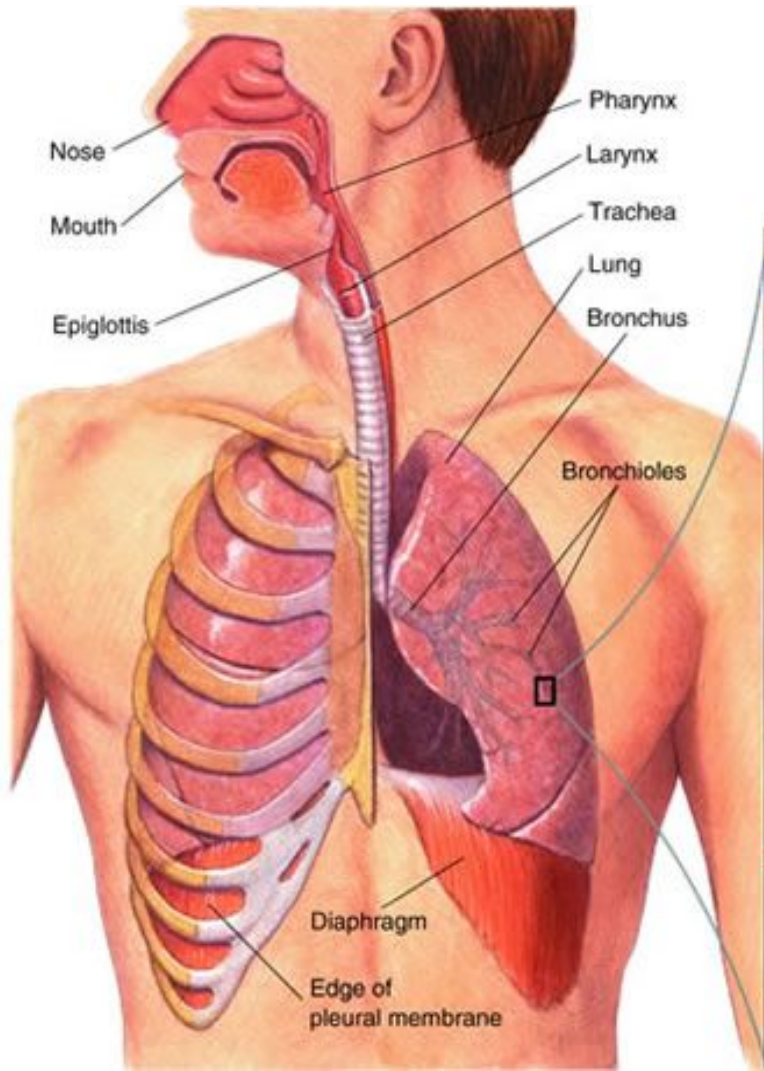


The Respiratory System

WATCH THIS!

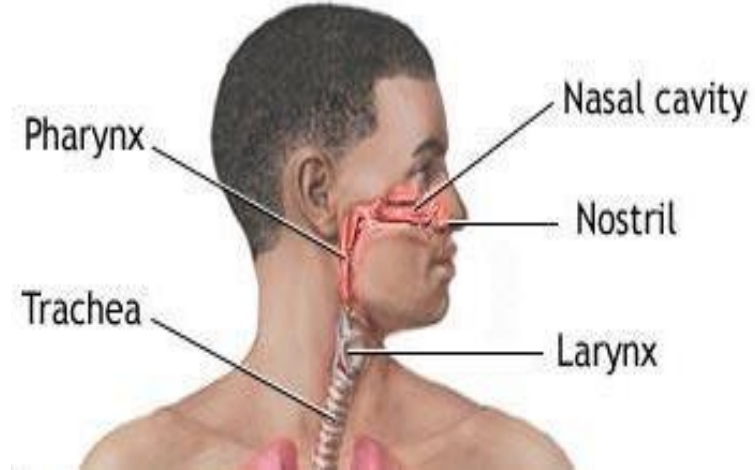


Click [HERE](#) to learn about the parts of the Respiratory System

Alveoli Gas Exchange [Video](#)

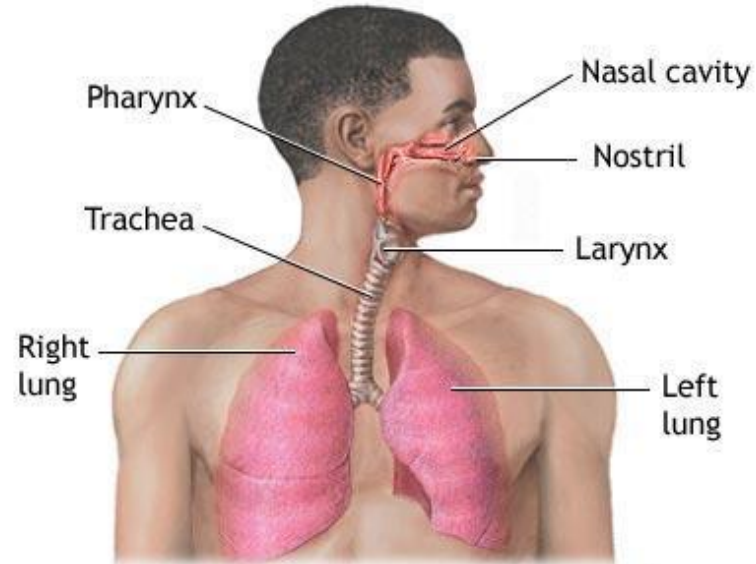
Nasal Cavity to the Larynx

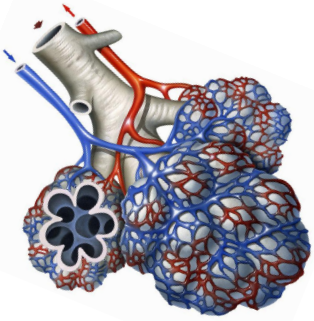
- Nasal and Oral Cavity
 - Air enters through nostrils
 - Warmed (capillaries), filtered (cilia) and moistened
 - Inhaling through mouth misses some steps
- Pharynx
 - Common path for air and food
 - Branches into trachea and esophagus
- Epiglottis
 - covers trachea on swallowing to prevent food from entering the lungs
- Larynx
 - contains vocal cords—the voicebox



Trachea to the Lungs

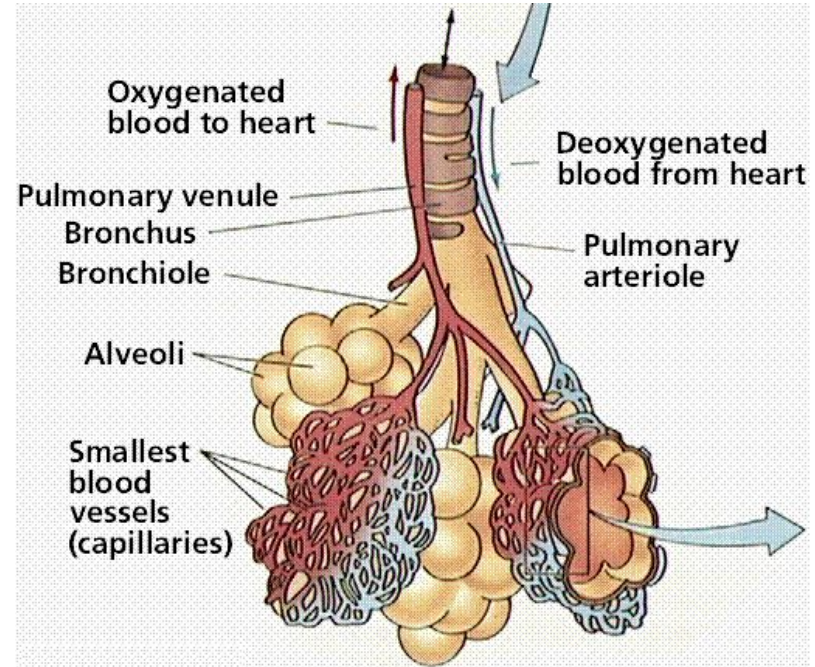
- Trachea
 - Connects pharynx to lungs
 - Divides into bronchi
- Bronchi (bronchus)
 - pass air from trachea to bronchioles in each lung
- Bronchioles
 - branch off the bronchi, pass air from bronchus to alveoli
- Lungs
 - Joined to trachea by bronchi
 - Bronchi divide into bronchioles
 - Each bronchiole ends in alveolar sac (alveoli)
 - protected by the rib cage





Alveoli

- Tiny, hollow air sacs
 - One cell thick
- Surrounded by capillary system
- Functional units of respiratory system
 - Where **gas exchange occurs**
- Increase surface area



**Respiratory
Labelling Game -
Click [HERE](#)**

Steps of Respiration

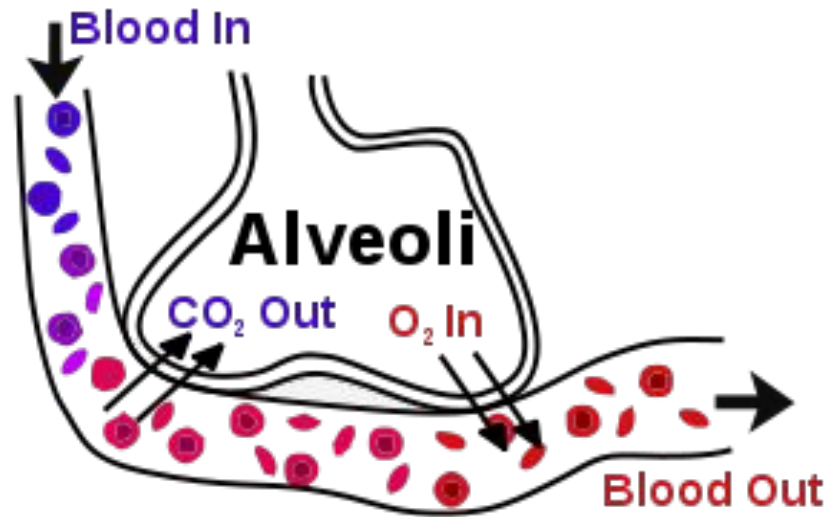
1. Ventilation

- Inhalation and exhalation

	N ₂	O ₂	CO ₂
Inhaled	78%	21%	0.03%
Exhaled	78%	16%	5%

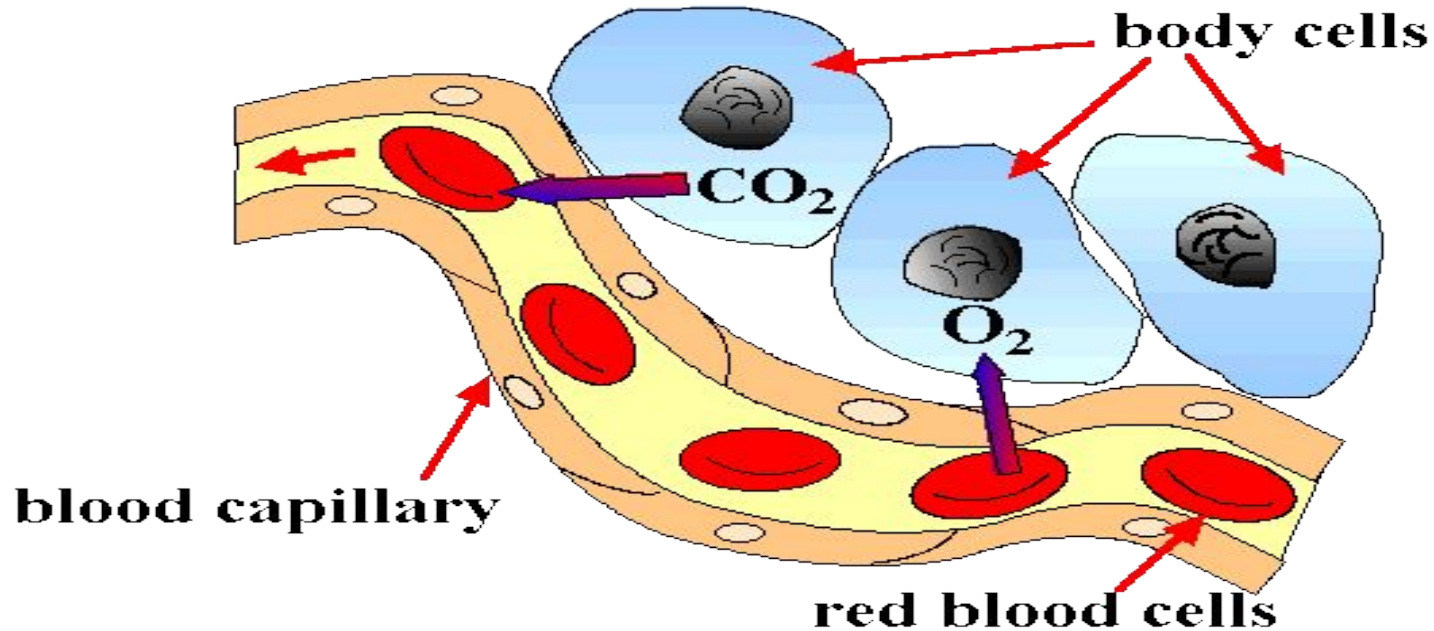
2. External Respiration

- Gas exchange between alveoli and blood



3. Internal Respiration

- Gas exchange between blood and cells

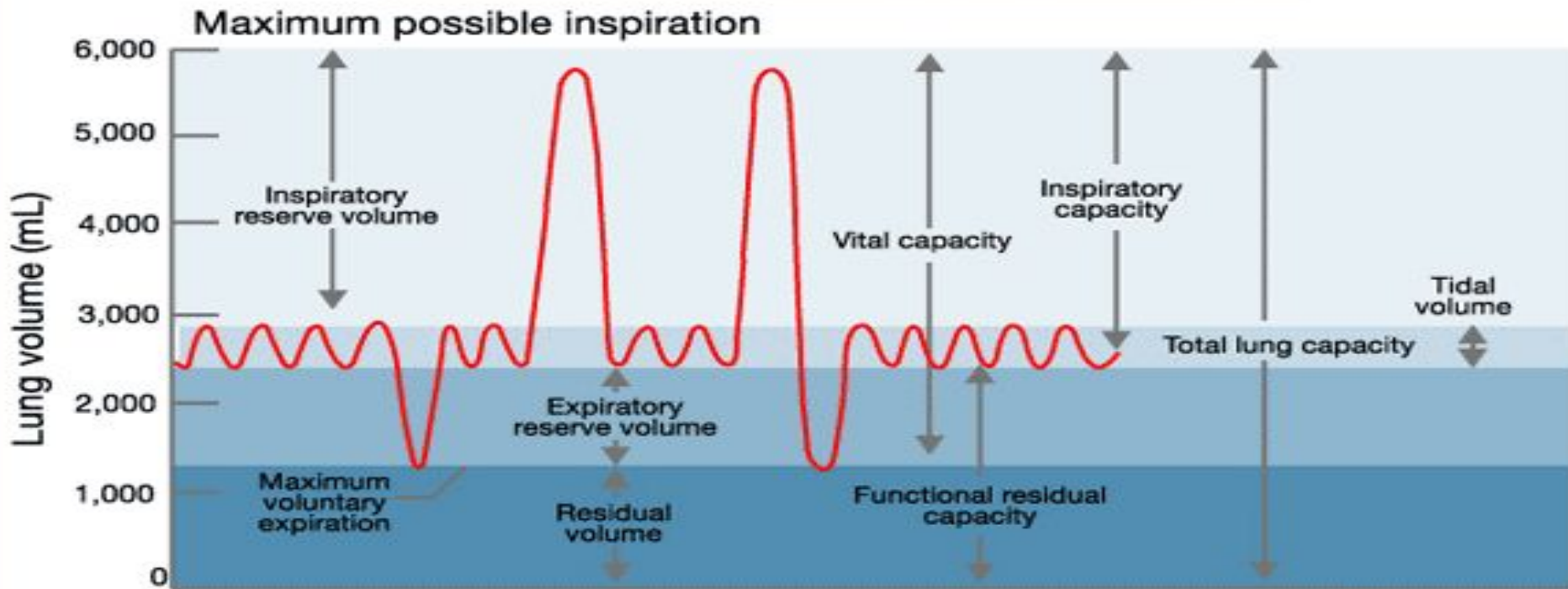


4. Cellular Respiration

– Energy production in mitochondria



Lung Volumes and Capacities



Videos to Illustrate the Respiratory System

- [Khan Academy: Meet the Lungs - Respiratory System Physiology \(9:36 mins\)](#)
- [Crash Course Biology - Respiratory System, Part 1 \(9:21 mins\)](#)