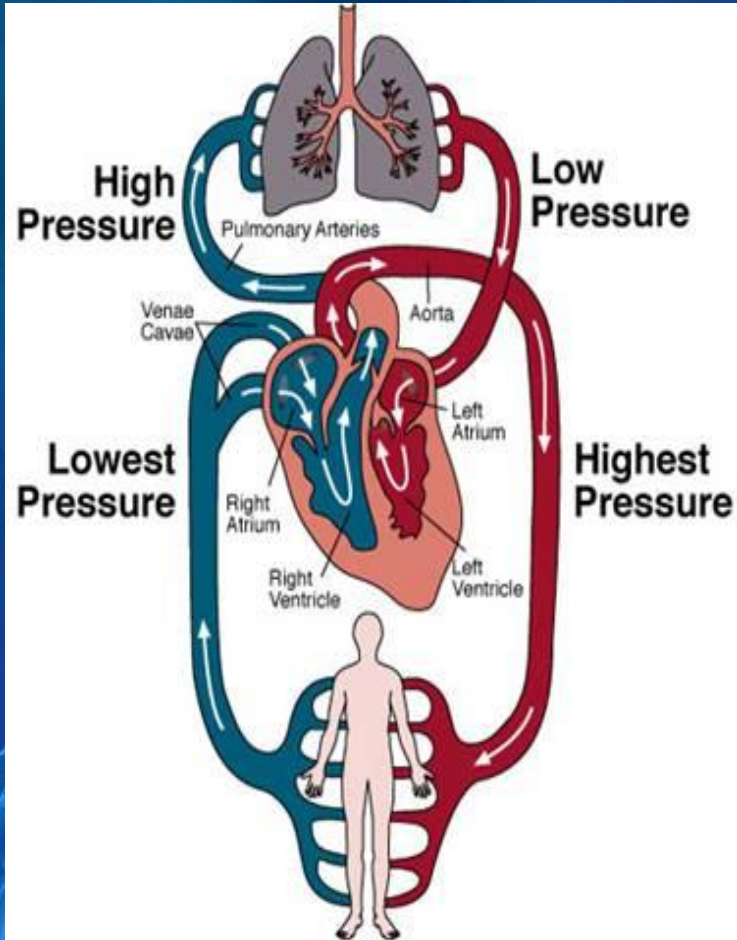


The Respiratory System



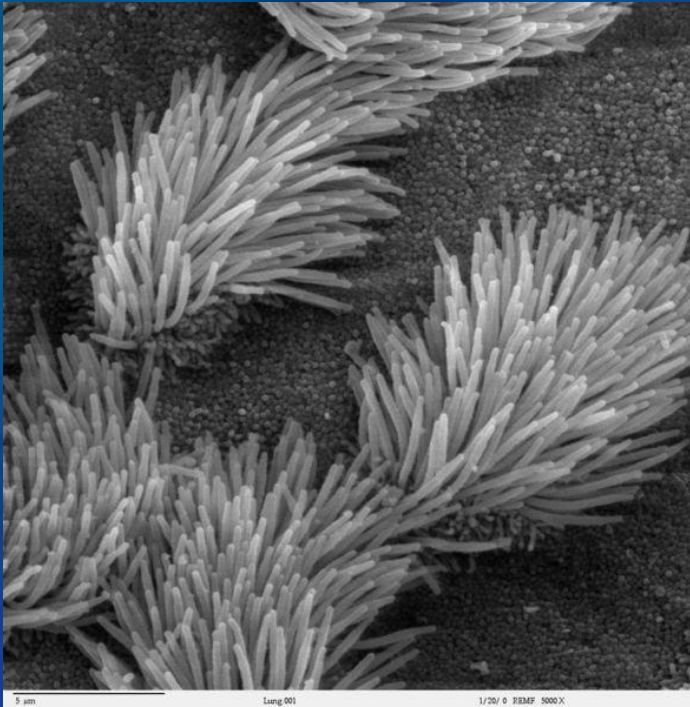
What is the Respiratory System?



- Responsible for **providing oxygen** needed for the body, in **exchange for carbon dioxide** produced by cells as they carry out their daily functions.
- The respiratory system relies on the circulatory system to **distribute oxygen** and **remove carbon dioxide**.

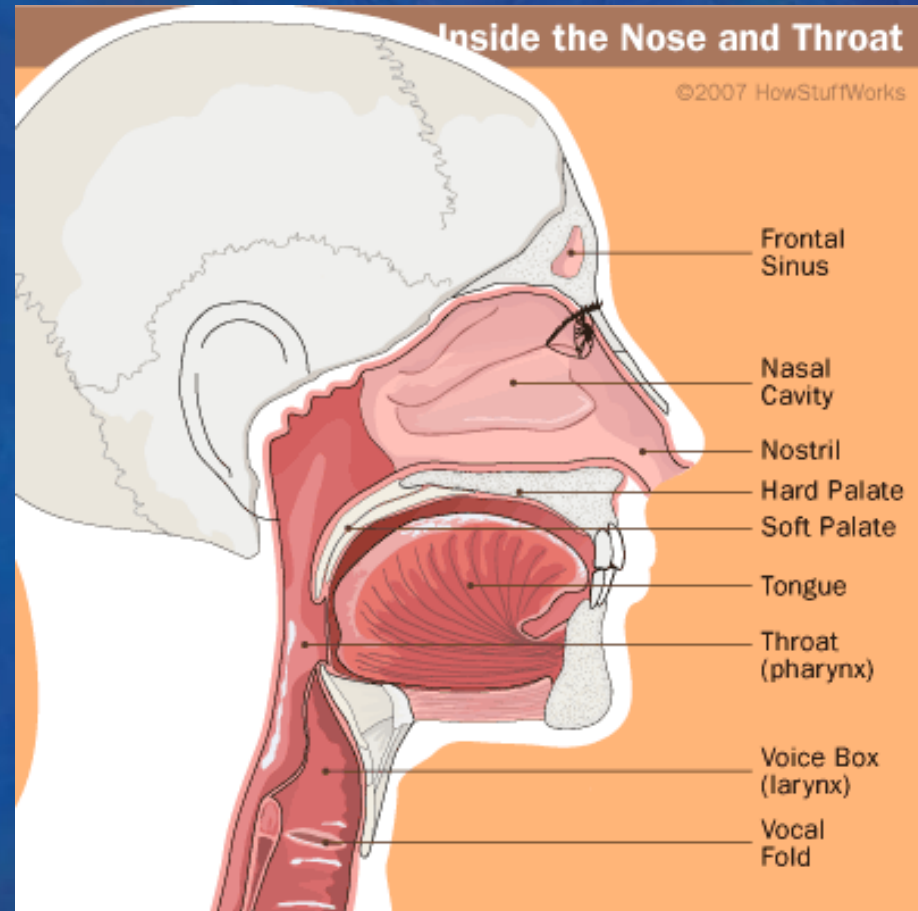
Special features include:

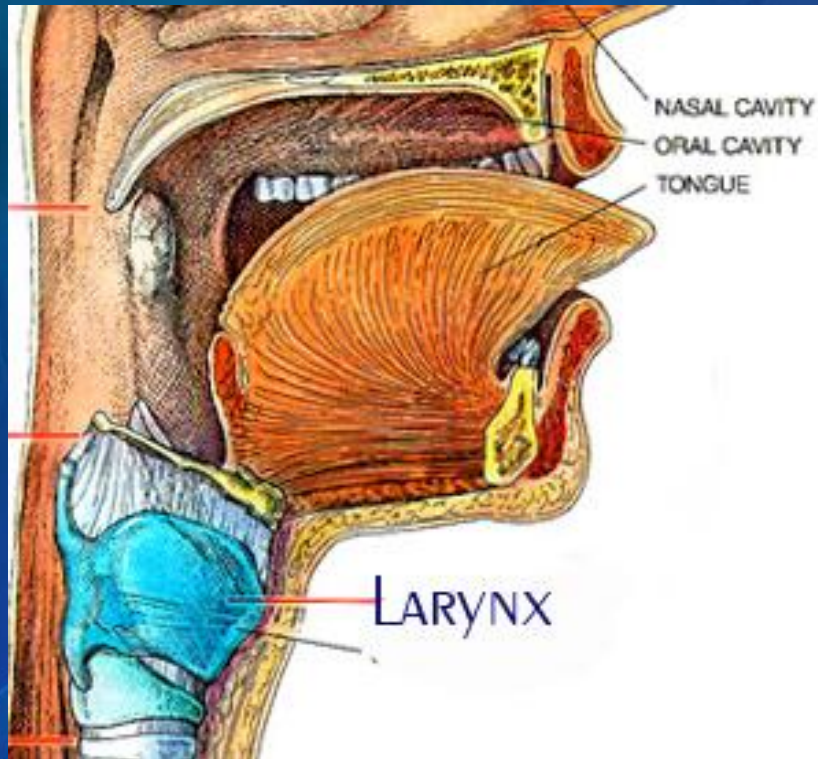
1. **Epithelial cells** needed to secrete mucus to warm and moisten the air.
2. **Cilia** needed to filter the air of foreign particles.



Parts of the Respiratory System

- **Nasal Cavity** - mucous lining and cilia inside trap foreign particles.
- **Oral Cavity** - secondary inhaler and exhaler, warms and moistens air.





- **Larynx** - The larynx has three main functions:
 - 1) a passageway for air
 - 2) a valve to close off the air (contains the epiglottis)
 - 3) as a voice box

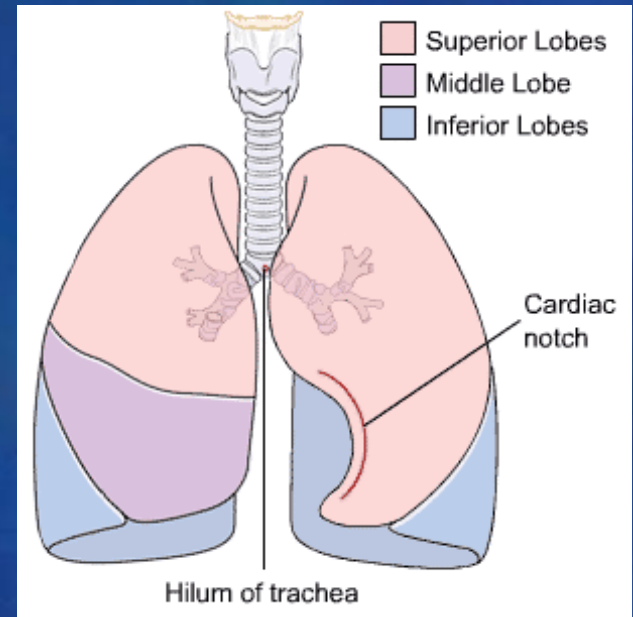


- **Pharynx** (throat)- The pharynx is shared with the digestive system, it connects oral and nasal cavities.
- Food goes on down the esophagus and air passes on through the trachea
- **Trachea** (windpipe) - allows air to pass beyond the larynx to where it divides into the left and right bronchi.

- Contains rings of cartilage for protection.



- **Lung** - The main function of the lungs is to **exchange carbon dioxide for oxygen** and vice versa.

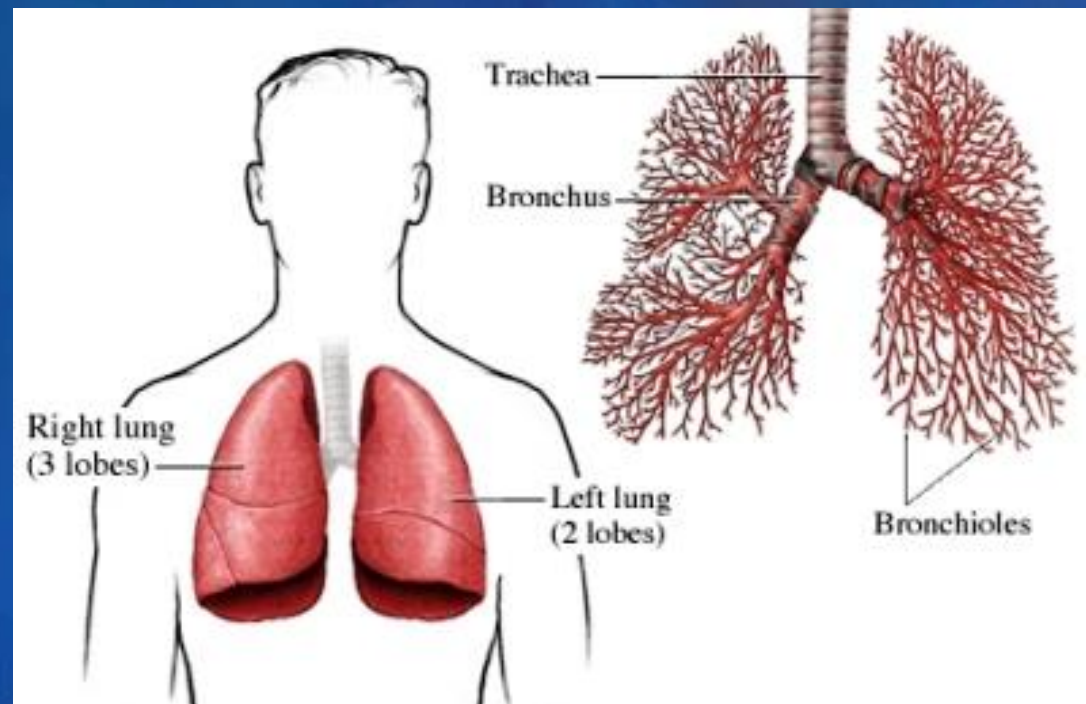


- **Right bronchus** - leading to the right lung, warms and moistens air

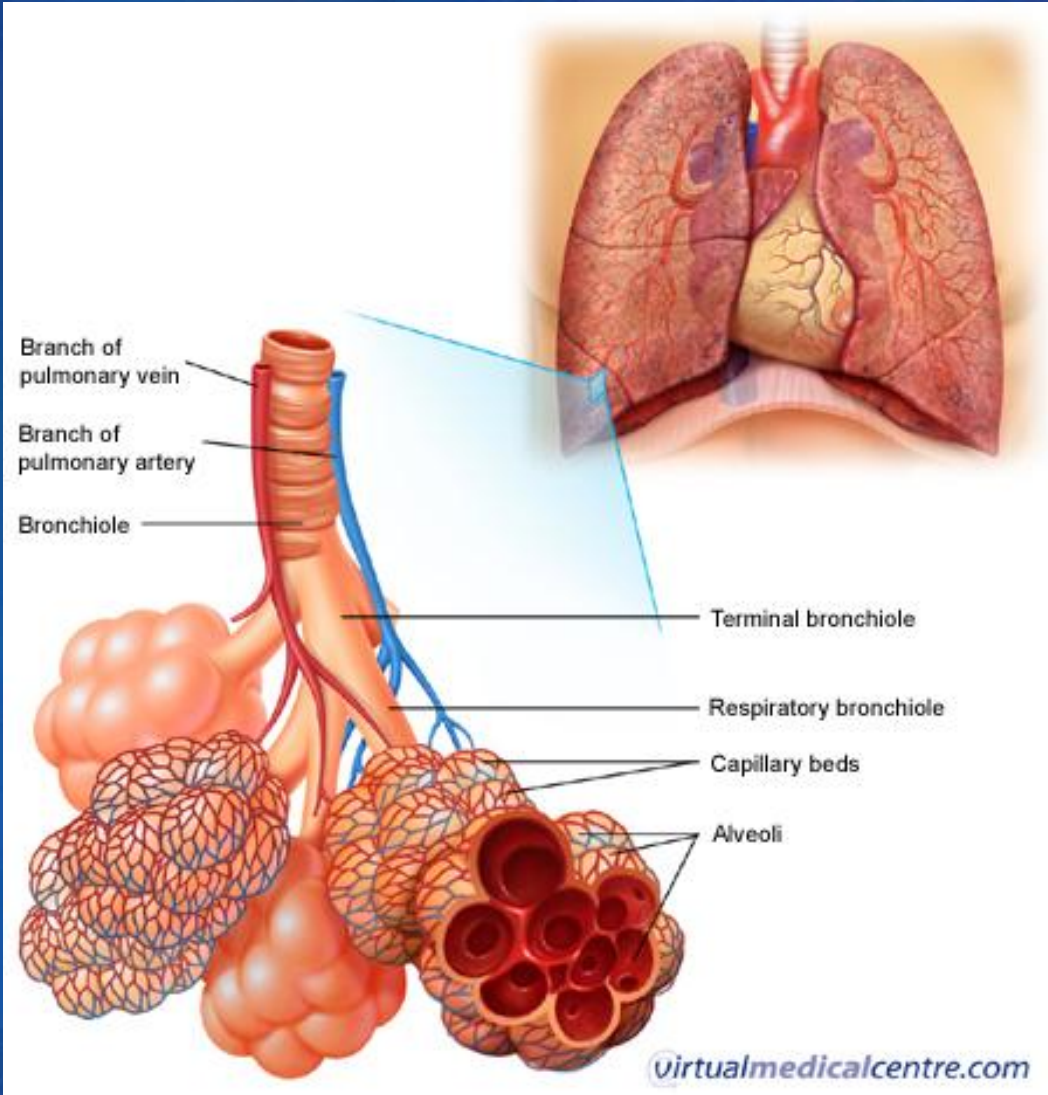
- **Diaphragm** - helps to expand and contract the lungs, forcing air into and out of them.



- **Left bronchus** - has a sharper bend due to the presence of the heart and major blood vessels directly underneath it.
- **Bronchiole** – smaller branches of bronchi, by the time the air has reached here from outside, it has been warmed up to body temperature, filtered and moisturized.



- **Alveoli** - link between the respiratory and circulatory systems, they are lined with capillaries and **gas exchange** happens here.



Respiratory System videos:

- [Mechanics of Breathing](#)
- [World's Greatest Free-Diver](#)

