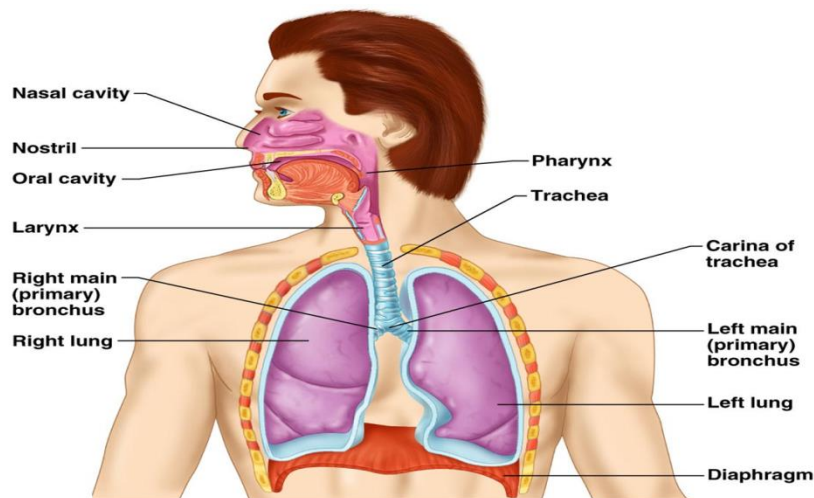


Respiratory system

The respiratory system is to allow **oxygen** from **the air** to enter **the blood** and **carbon dioxide** from the blood to exit **into the air**.

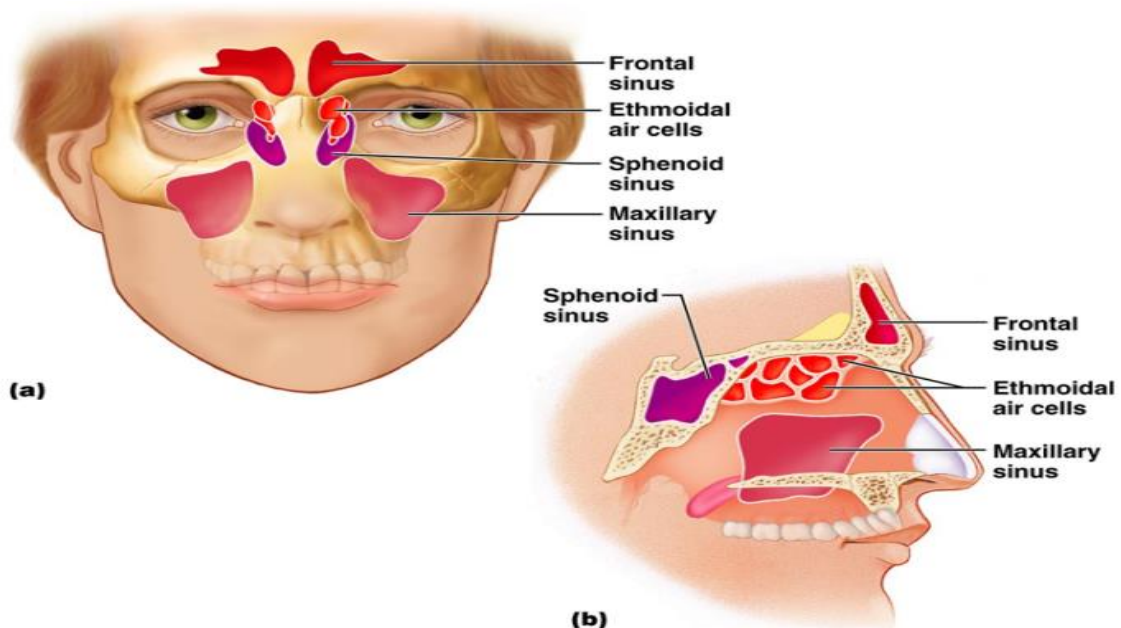


Nose: is a prominent feature of the face. **Air enters** the nose through external openings called **nostrils**.

Paranasal sinuses: The nasal cavities also communicate with the **paranasal sinuses**, air-filled spaces

Kinds of Paranasal sinuses:

- **Maxillary sinus**
- **Frontal**
- **Sphenoid**



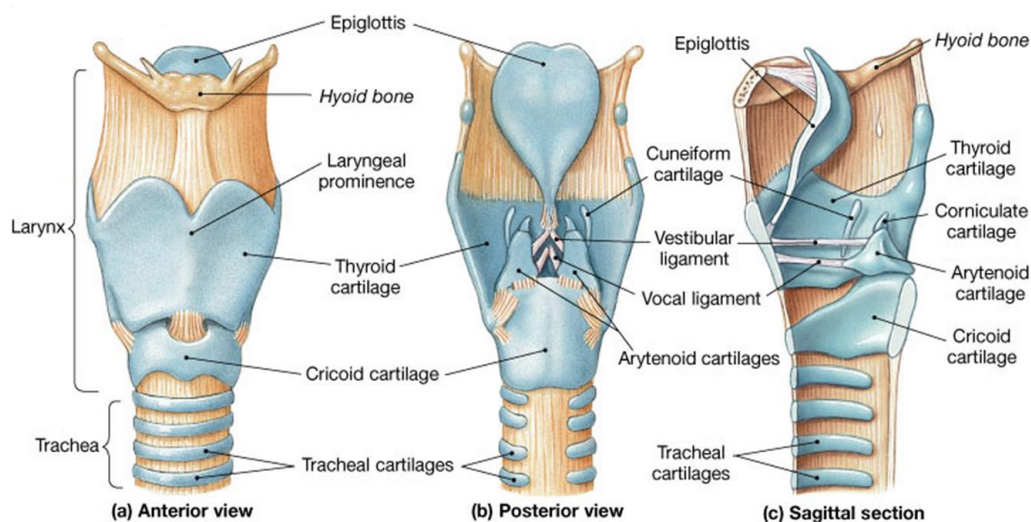
The Pharynx: is a funnel-shaped passageway that connects the nasal and oral cavities to the **larynx**. The pharynx commonly referred to as the **(throat)**

The tonsils: are forming a protective ring at the junction of the oral cavity and the pharynx. Being **lymphatic tissue**.

The Larynx: is also known as **the voice box**. The larynx is **located** in the anterior portion of the neck. Contains special structures known as **vocal cords**

Structures of Larynx: Several **cartilage structures** make up the larynx.

- **The epiglottis** is one of the **cartilage pieces** of the larynx.
- **The thyroid cartilage** is often referred to as the **Adam's apple**
- **Cricoid cartilage** is inferior to the **thyroid cartilage** is the ring-shaped.



The Trachea: is commonly called the **windpipe**, is a tube connecting the larynx to the primary bronchi. The trachea lies in **Anterior (ventral)** to the esophagus.

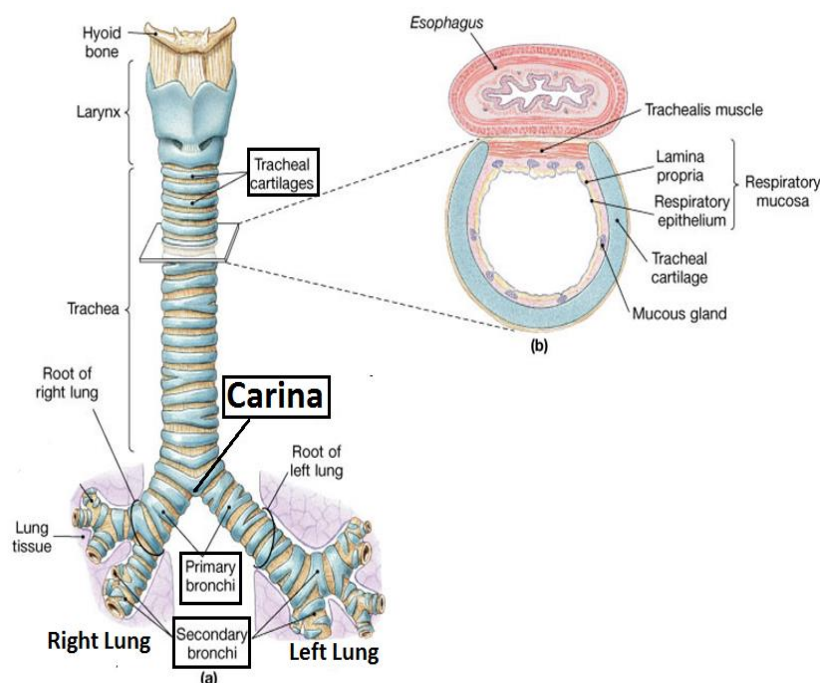
Structures of Trachea:

- The trachea is held open by **C-shaped cartilaginous rings**.

- The **open part** of the C-shaped rings faces **the esophagus**.

- The **posterior free ends** of the cartilage are connected by **smooth muscle**,

- The **carina** is trachea ends below by dividing into **right and left primary bronchi**.



Bronchial Tree

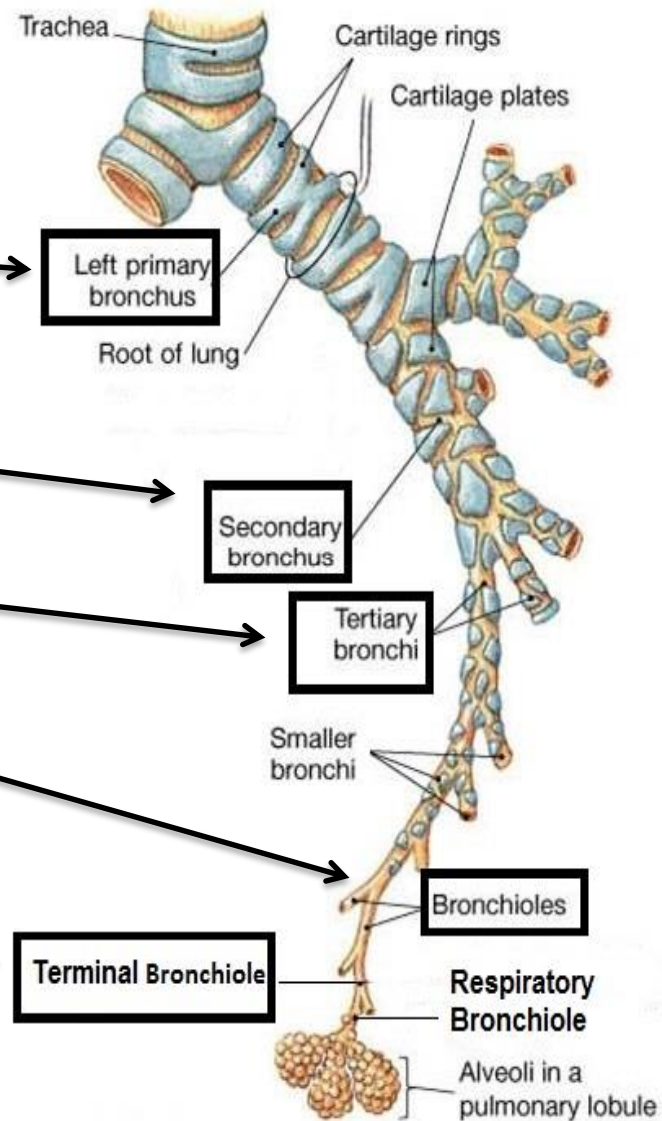
- The trachea bifurcated into the right and left **primary or main bronchi (bronchus)** which lead into the **right and left** lungs.

- The primary bronchi branch into a great number of **secondary bronchi**.

- **Tertiary (segmental) bronchi** - branch into each lung segment.

- **Bronchioles** - little bronchi, less than 1 mm in diameter.

- **Terminal bronchioles** - less than 0.5 mm in diameter.



NOTE:

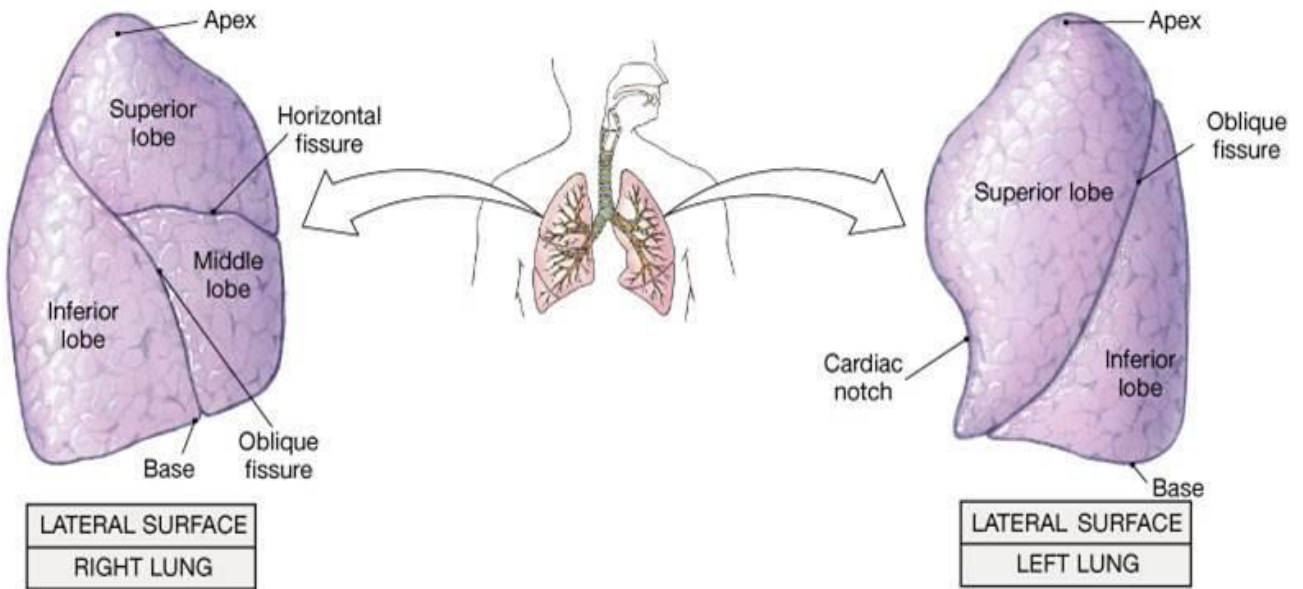
- Each **respiratory bronchiole** divides into **2 to 11 alveolar ducts** that enter the **alveolar sac**
- Each **alveolus** is surrounded by **blood capillaries** to achieve the **gas exchange**.

The Lungs: are the body's **major organs of respiration**. The lungs are located on **each side of the chest** within the rib cage.

Right Lung: is slightly **larger than** the left and is divided by the **oblique and horizontal fissures** into three lobes: the **upper, middle, and lower** lobes.

Left Lung

The left lung is divided by a **similar oblique fissure** into two lobes: the **upper and lower** lobes.



At about the middle surface is the **hilum or hilus**, a depression in which the **primary bronchus, pulmonary arteries, veins, and nerves** that form the root enter and leave the lung.

