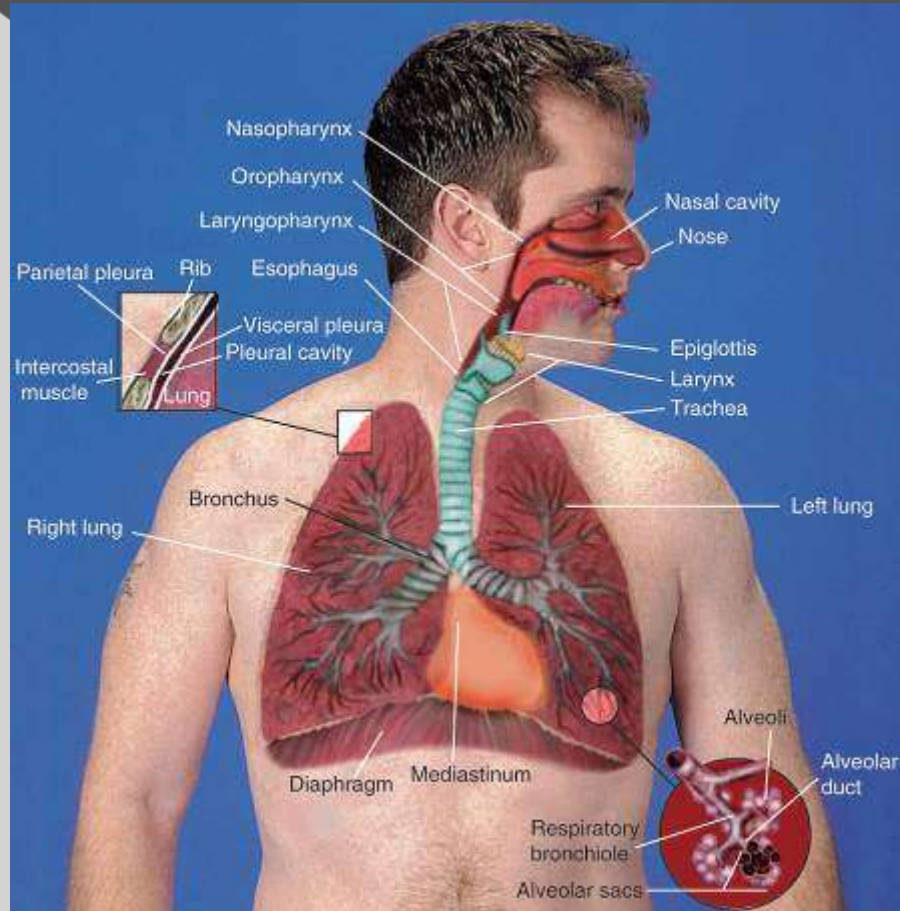
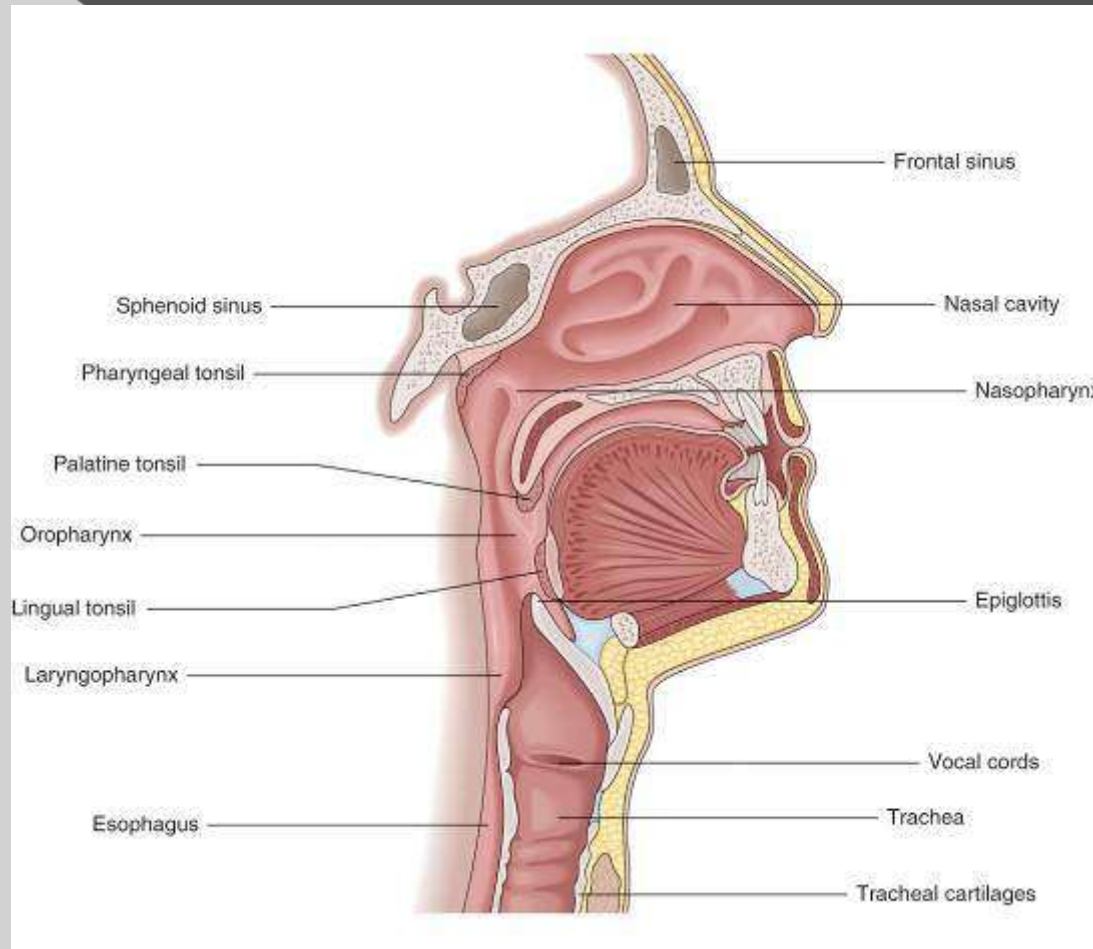


The Respiratory System

Structures of the Respiratory System

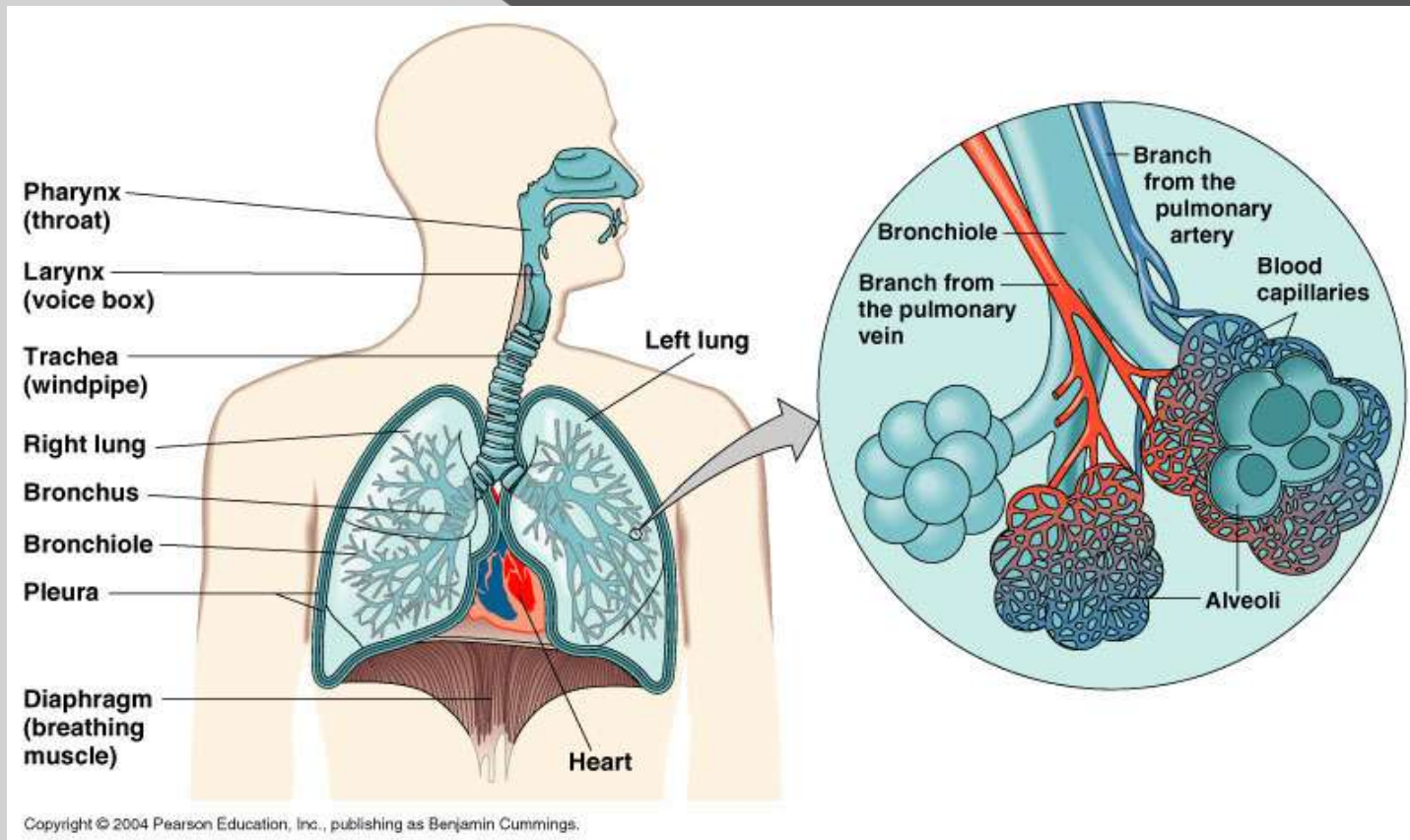


Structures of the Upper Respiratory Tract



The Lower Respiratory Tract

● Consists of bronchial tree and lungs.



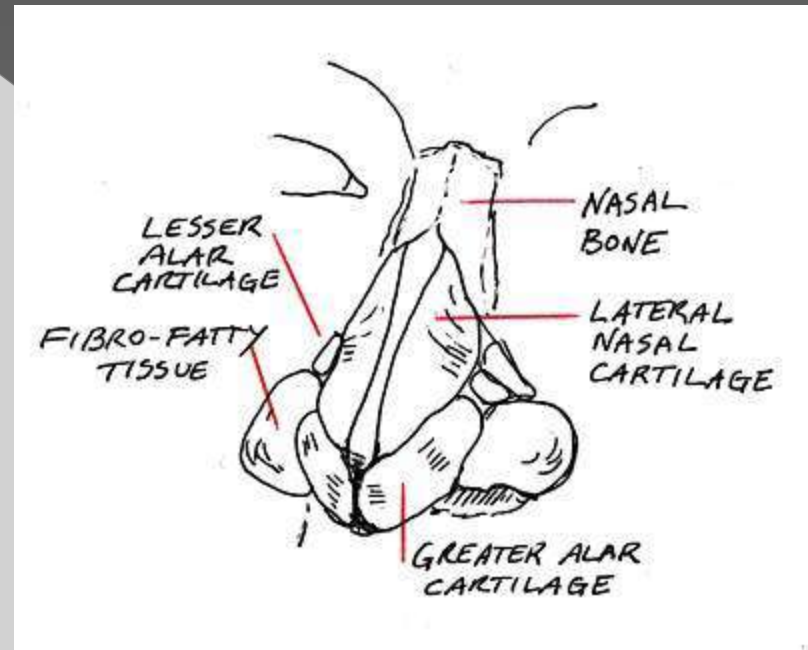
Nose

Primary Functions

- Exchanges air during inhaling and exhaling.
- Warms, moisturizes, and filters inhaled air.

Related Combining Forms

- nas/o
- rhin/o



Sinuses

◎ Primary Functions

- Provides mucus.
- Makes bones of the skull lighter.
- Aids in sound production.

◎ Related Combining Form

- sinus/o

Pharynx

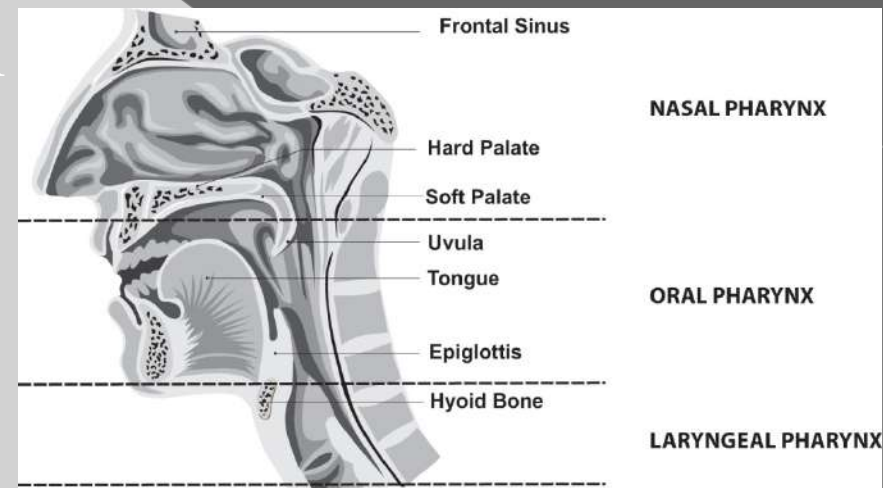
Commonly called the throat (has 3 divisions: naso, oro & laryngo)

Primary Function

- Transports air to and from the nose to the trachea
- .

Related Combining Form

- **pharyng/o**



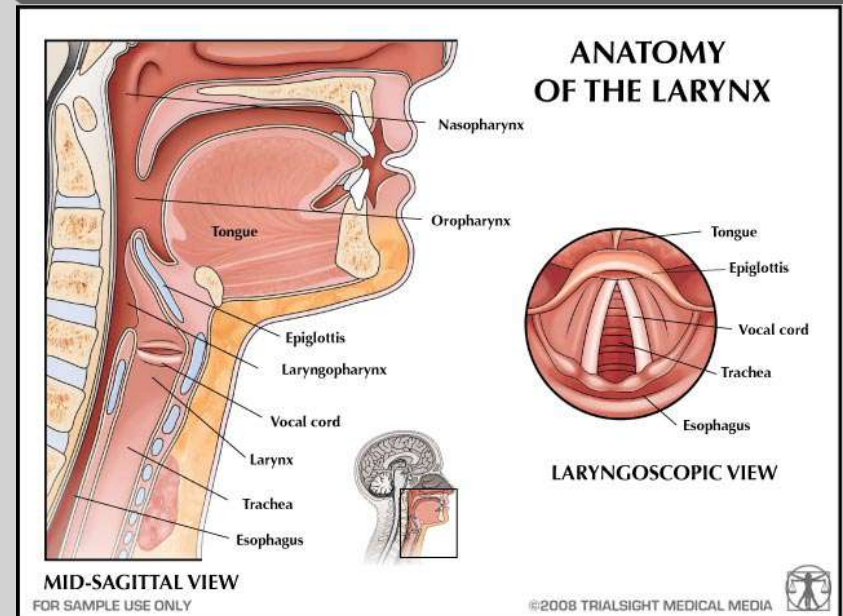
Larynx

Primary Function

- Makes speech possible.

Related Combining Form

- laryng/o



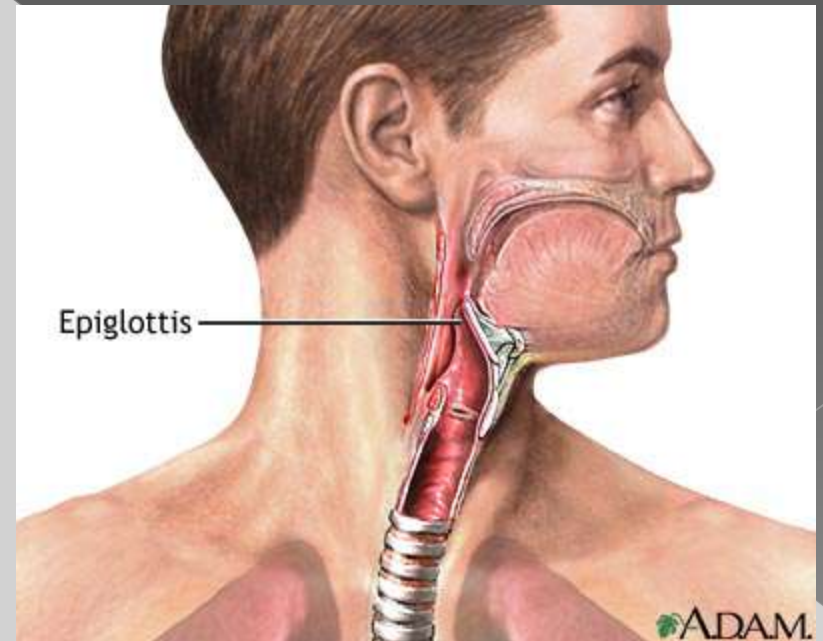
Epiglottis

Primary Function

- Closes off the trachea during swallowing.

Related Combining Form

- **epiglott/o**



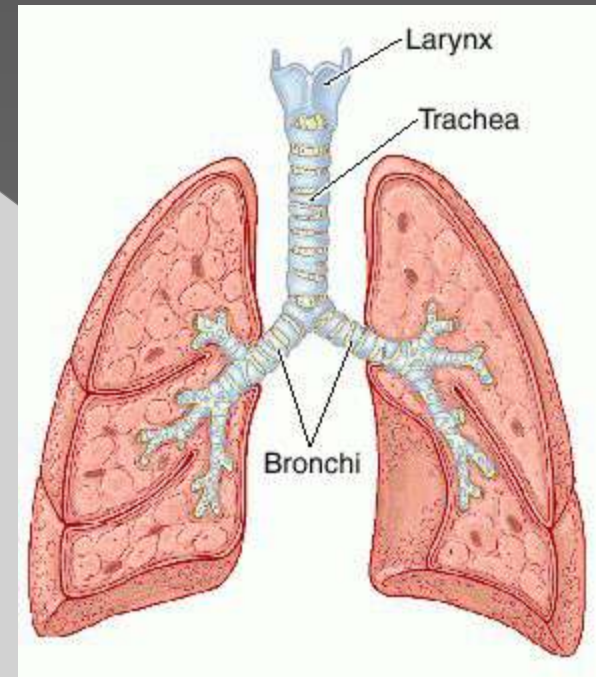
Trachea

Primary Function

- Transports air to and from the pharynx to the bronchi.

Related Combining Form

- **trache/o**



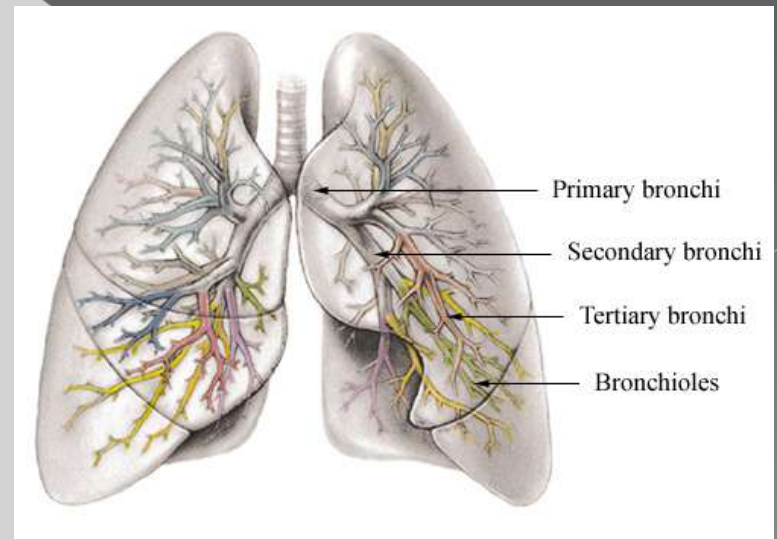
Bronchi

◎ Primary Function –branch off of the trachea. One branch into each lung. In the lung subdivides into bronchioles

- Transports air from the trachea into the lungs.

◎ Related Combining Forms

- **bronch/o, bronchi/o**



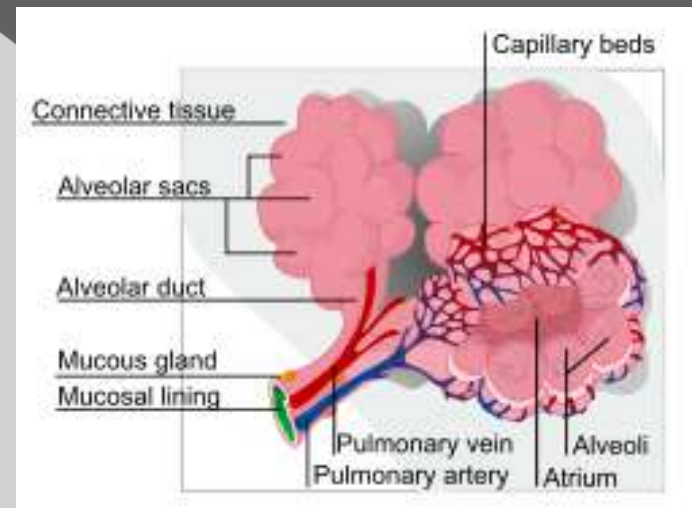
Alveoli

Primary Function

- Air sacs that exchange gases with the pulmonary capillary blood.

Related Combining Form

- alveol/o



Pleura

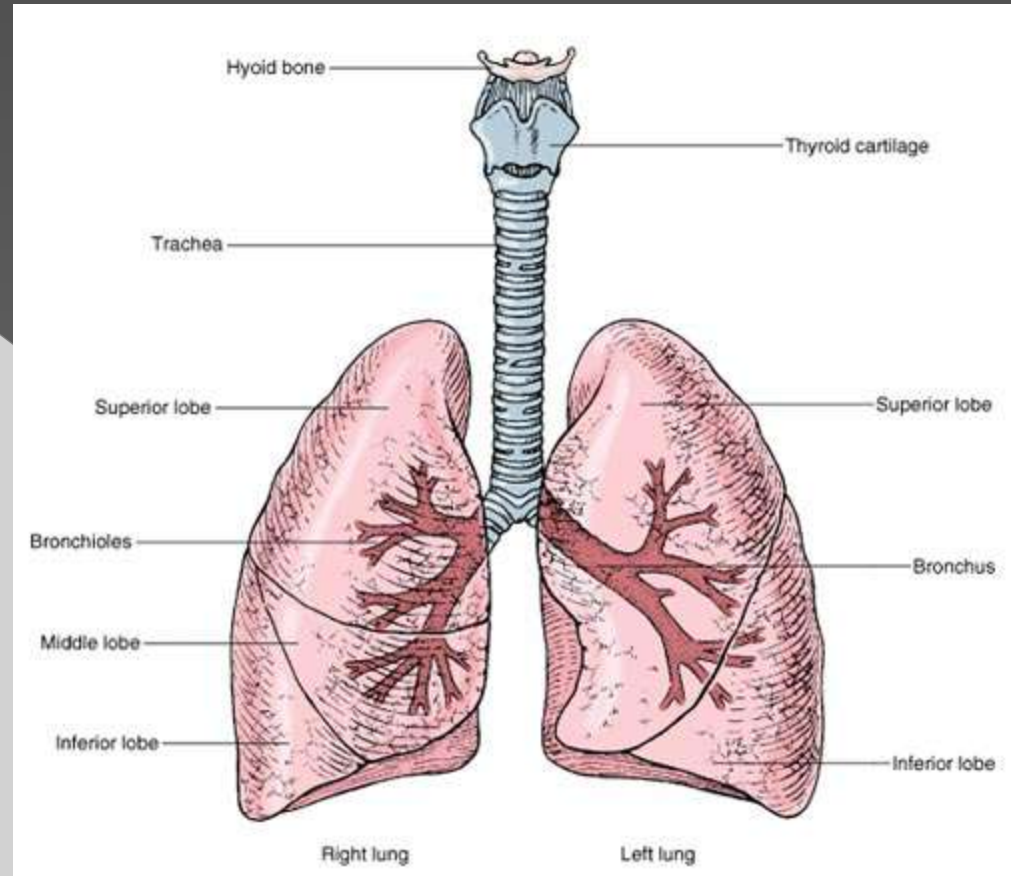
- Is a multilayered membrane that surrounds each lung with its blood vessels and nerves
- Pleura Cavity: airtight space between the folds of the pleural membrane
 - Function: contains a watery lubricating fluid that prevents friction when the membranes rub together during respiration

Diaphragm

- Is the muscle that separates the thoracic cavity from the abdomen
- It is the contraction and relaxation of this muscle that makes breathing possible

Lungs

- Lobe – division of the lungs
- Right Lung – has three lobes: the superior, middle and inferior
- Left Lung – has two lobes: the superior and inferior



Respiration

- Breathing- brings air into & out of the lungs.
- Inhalation- breathing in, diaphragm contracts
- Exhalation- breathing out, diaphragm relaxes
- Internal respiration is the exchange of gases within the cells of the body.

Careers related to Respiratory System

- ◎ **Pulmonologist**-doctor that specializes in the diagnosis & treatment of the lungs.
- ◎ **Respiratory Therapist**-treats patients with lung problems by administering oxygen or treatments under the supervision of a physician.

Lung Diseases

- ◎ **COPD**- group of conditions which is characterized by chronic impairment of airflow.
- ◎ **asthma**- breathing difficulty, due to swelling of the airways. Treated with bronchodilators.
- ◎ **Emphysema**-decreased lung function, destruction of the alveoli.

Respiratory Diseases

- ⦿ **“allergies”**: **allergic rhinitis**- Allergic reaction to airborne allergens.
- ⦿ **Influenza**-viral respiratory infection. Spread by droplet(cough & sneezing).
- ⦿ **Pneumonia**-inflammation of the lungs in which the air sacs fill with pus & other fluid.

● **Cystic Fibrosis**-genetic disease which causes the lungs to be clogged with abnormally large amounts of thick mucus.

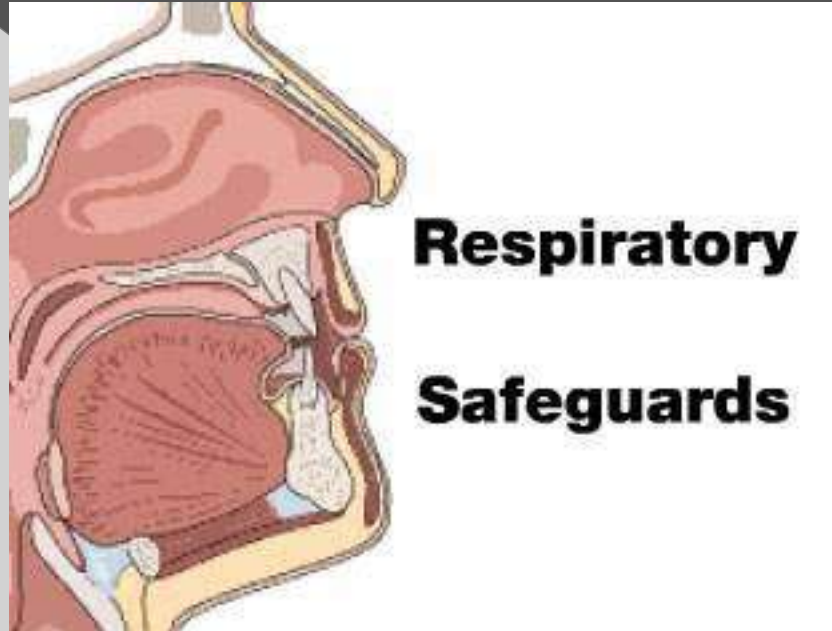
Procedures

- ⦿ Bronchoscopy
- ⦿ Spirometry- tests to record amount of air inhaled & exhaled.
- ⦿ Chest xrays- will show pneumonia, tumors, emphysema.

Treatments

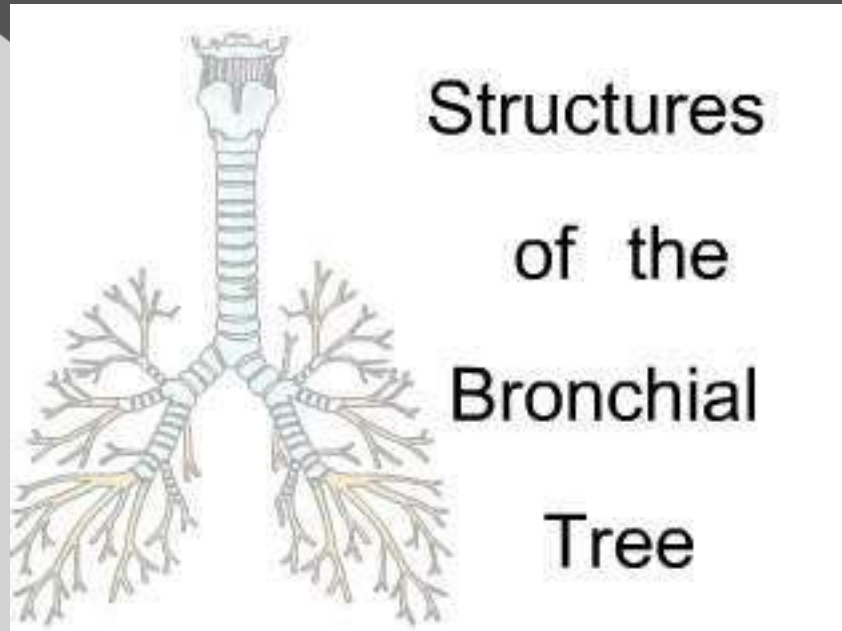
- ⦿ Bronchodilators- opens the lungs, used to treat asthma.
- ⦿ Oxygen
- ⦿ Ventilators
- ⦿ Thoracotomy-surgical incision into the chest.

Respiratory Safeguards



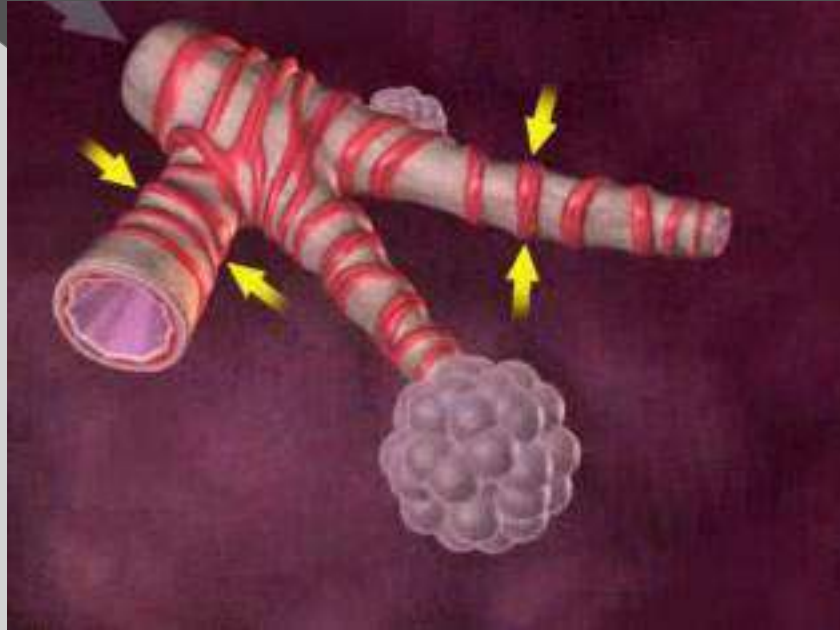
[Click Here to play Respiratory Safeguards animation](#)

Structures of the Bronchial Tree



[Click Here to play Structures of the Bronchial Tree animation](#)

Asthma



[Click Here to play
Asthma animation](#)

Smoking

⦿ <https://www.youtube.com/watch?v=yskYG-EVIBY>

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