

Chapter 7

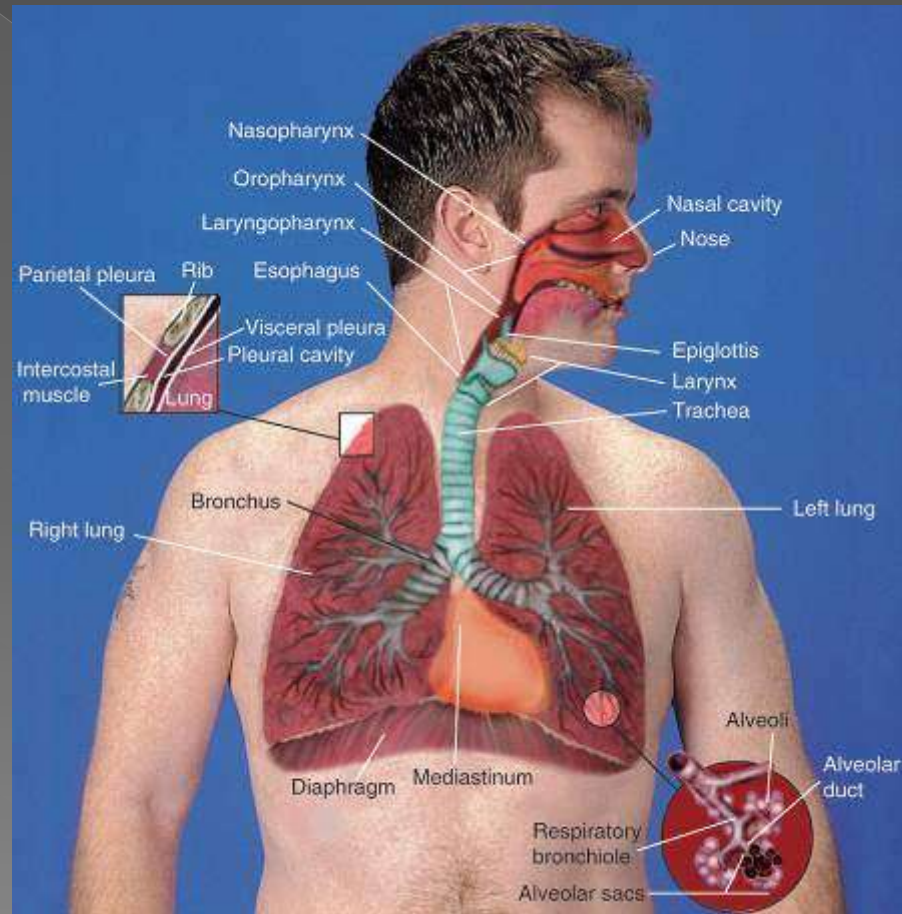
The Respiratory System

**You need a book and
your notes out please!**

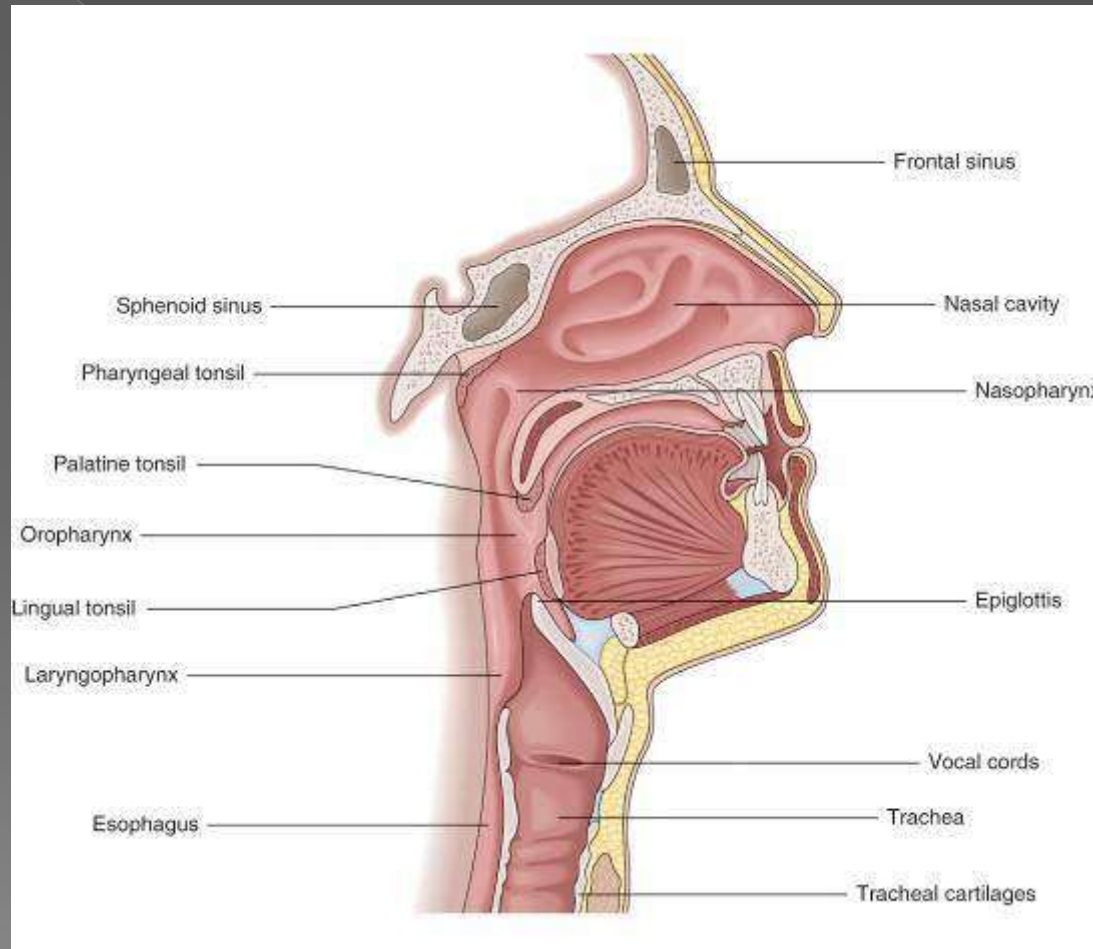
also have supplies for notebooking



Structures of the Respiratory System

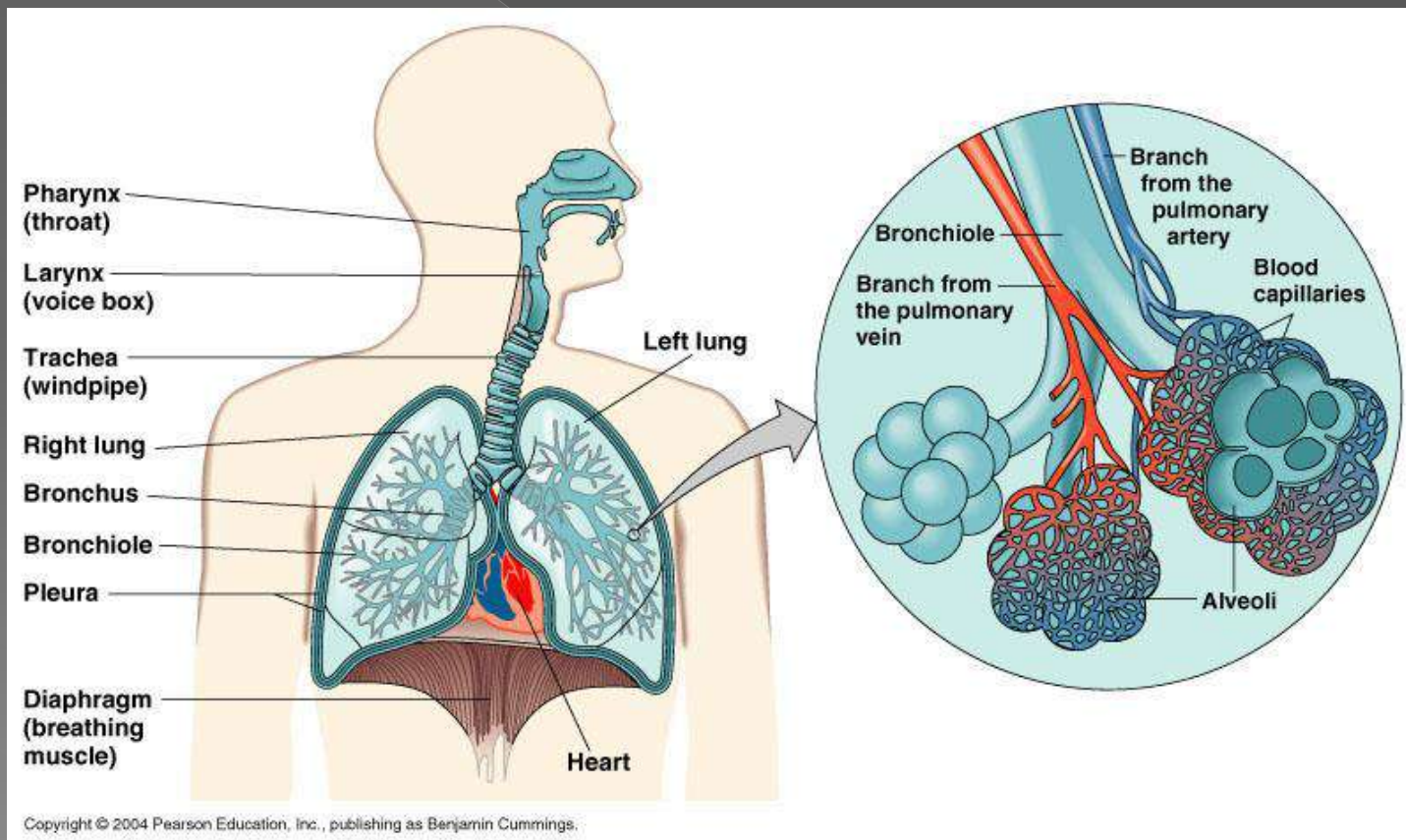


Structures of the Upper Respiratory Tract



The Lower Respiratory Tract

- Consists of bronchial tree and lungs.



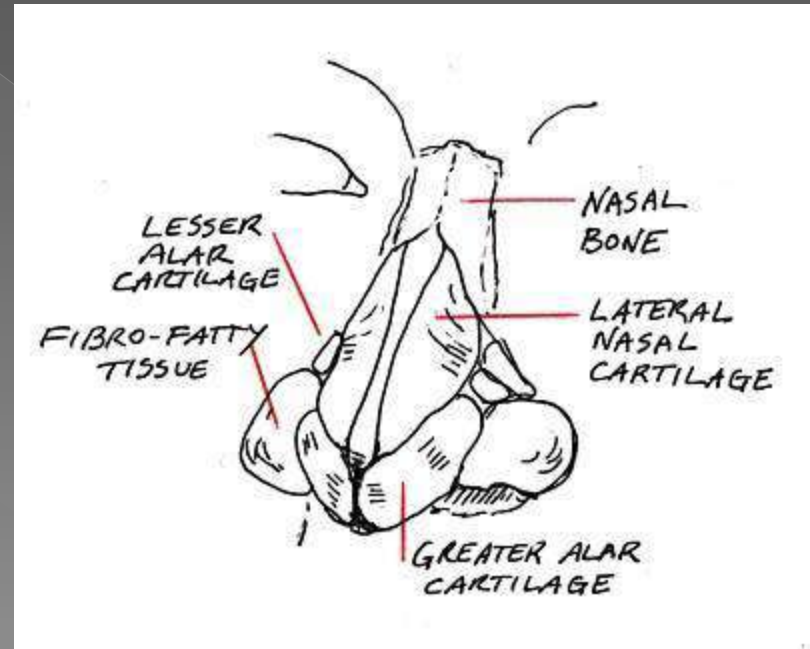
Nose

Primary Functions

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

Related Combining Forms

- nas/o
- rhin/o



Sinuses

◎ Primary Functions

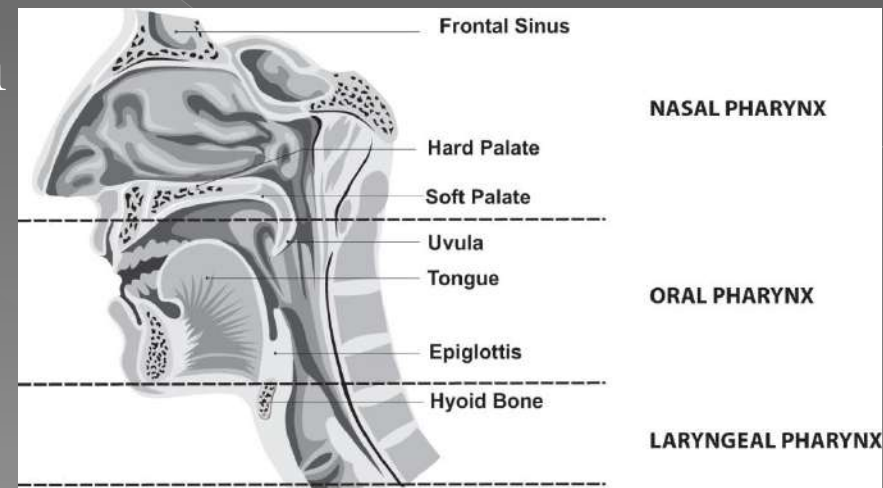
- Provides mucus.
- Makes bones of the skull lighter.
- Aids in sound production.

◎ Related Combining Form

- **sinus/o**

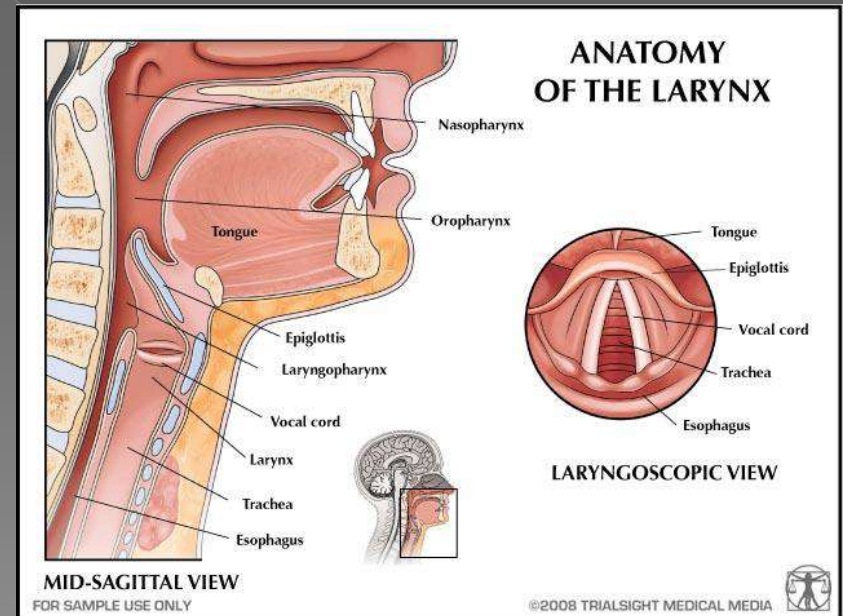
Pharynx

- 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



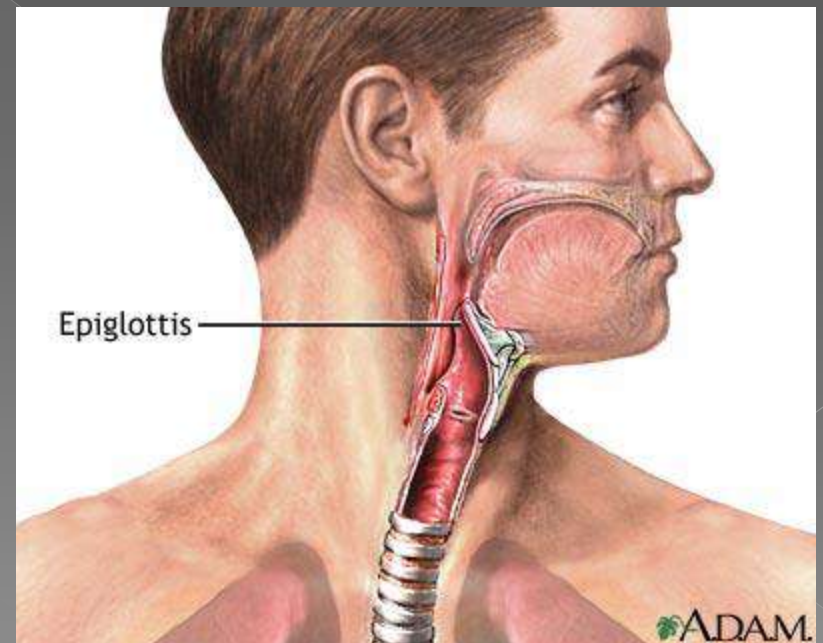
Larynx

- Primary Function
 - Makes speech possible.
- Related Combining Form
 - laryng/o



Epiglottis

- Primary Function
 - Closes off the trachea during swallowing.
- Related Combining Form
 - epiglott/o



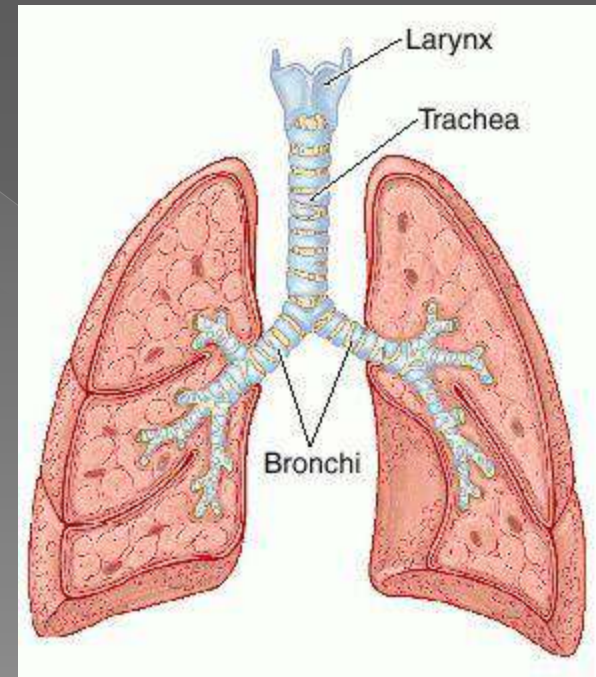
Trachea

- Primary Function

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

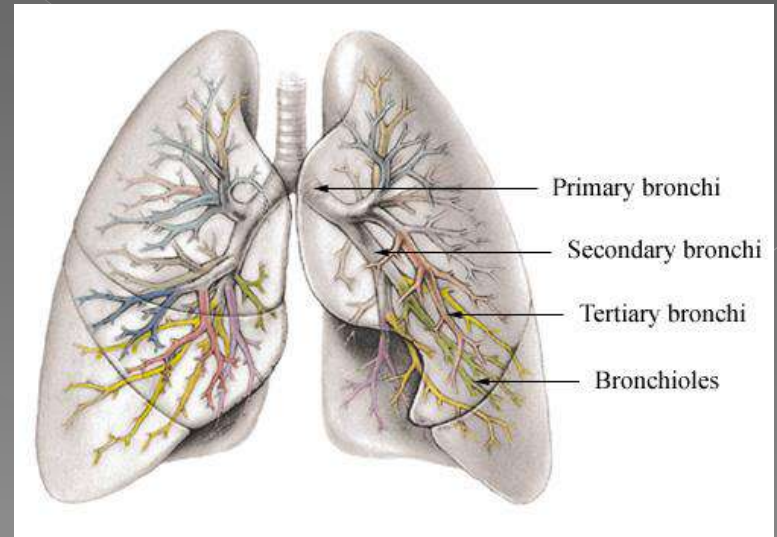
- Related Combining Form

- 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**



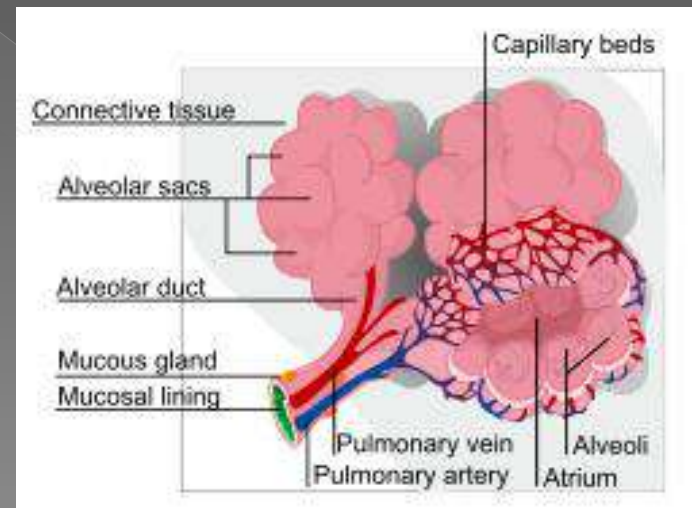
Alveoli

◎ Primary Function

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

◎ Related Combining Form

- alveol/o



Pleura

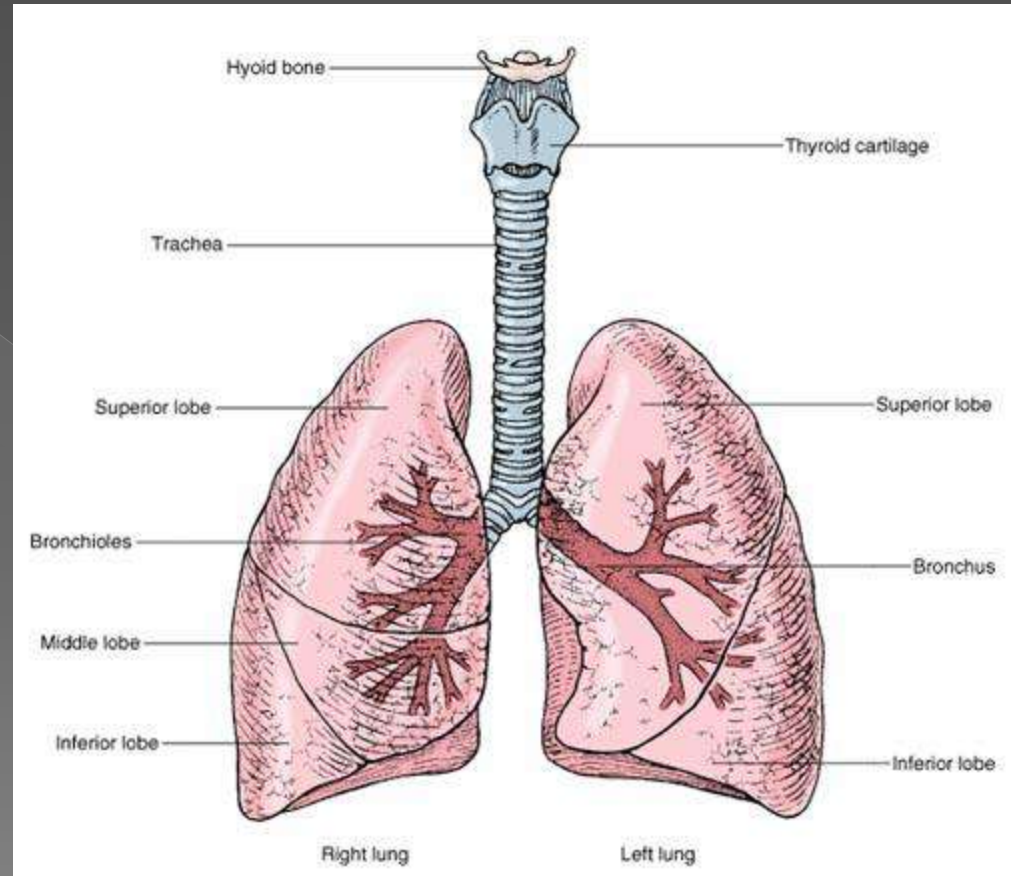
- Is a multilayered membrane that surrounds each lung with its blood vessels and nerves
- Pleura Cavity: airtight space between the folds of the pleural membrane
 - Function: contains a watery lubricating fluid that prevents friction when the membranes rub together during respiration

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 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.

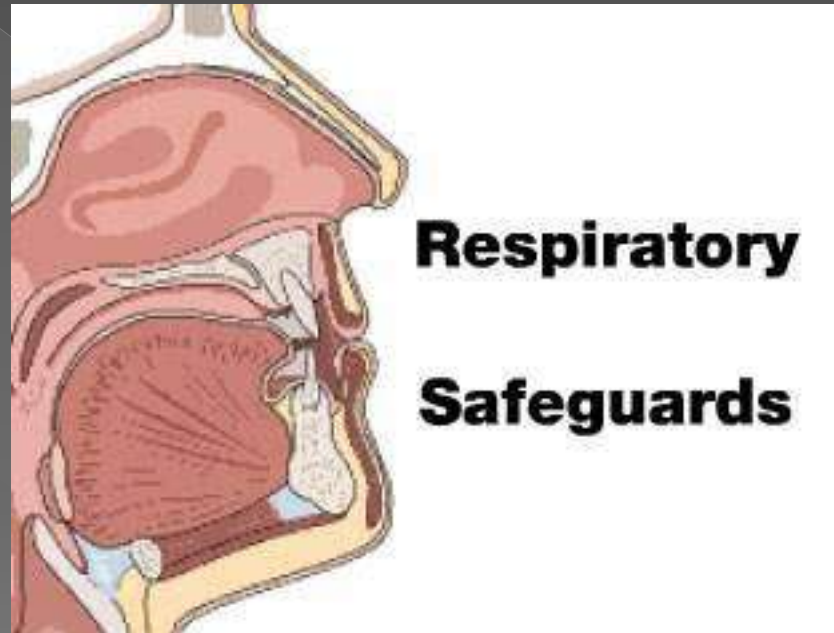
Procedures

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

Treatments

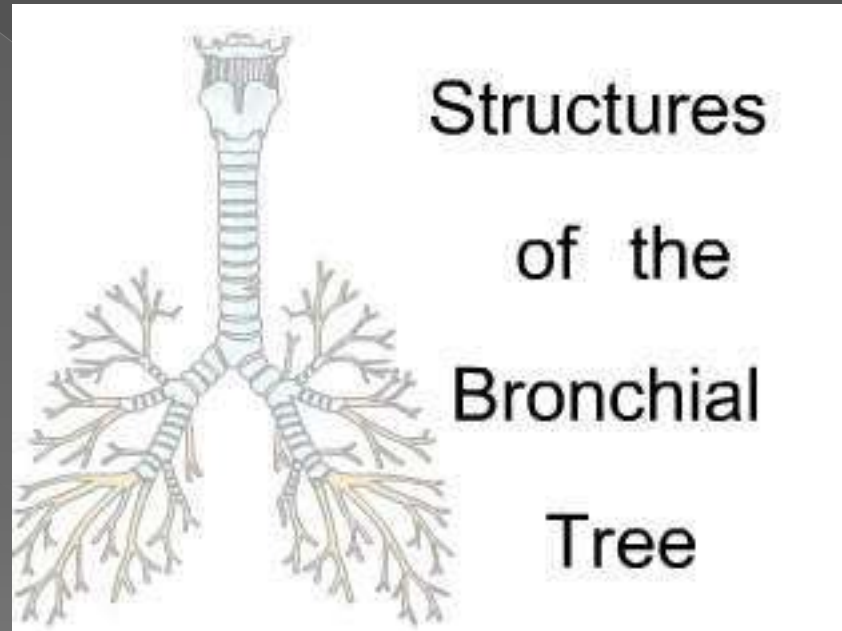
- ◉ Bronchodilators- opens the lungs, used to treat asthma.
- ◉ Oxygen
- ◉ Ventilators
- ◉ Thoracotomy-surgical incision into the chest.

Respiratory Safeguards



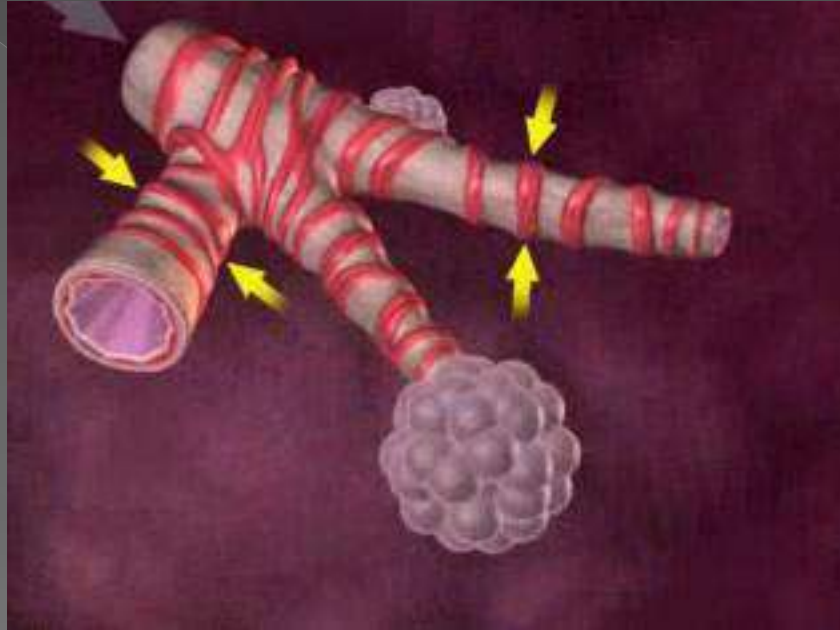
[Click Here to play Respiratory Safeguards animation](#)

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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