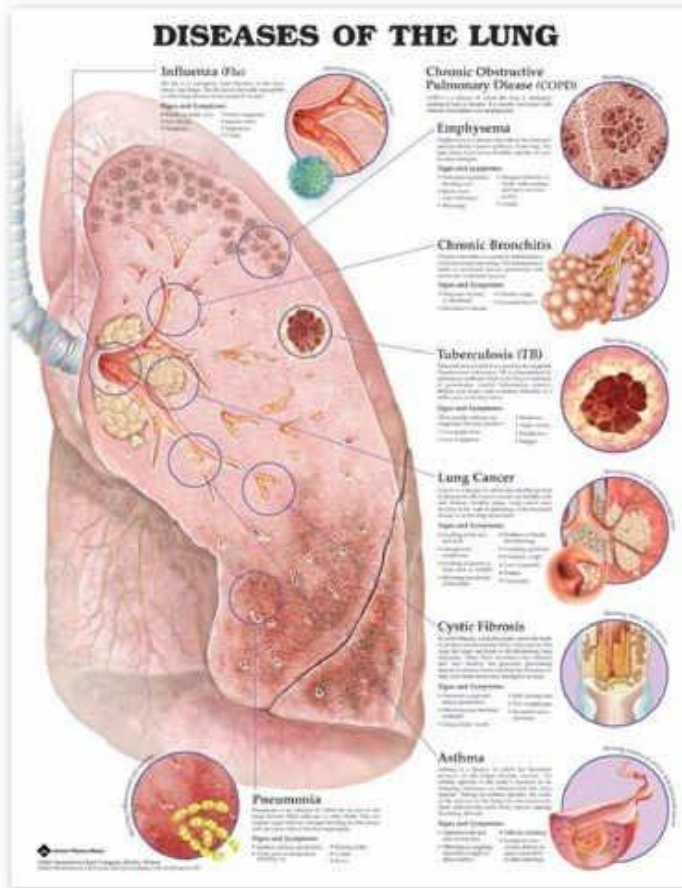


# Respiratory

disease  
is



*Respiratory structures such as the airways, alveoli and pleural membranes may all be affected by various disease processes.*

These respiratory diseases include:

1. Infections such as pneumonia.
2. Obstructive disorders that obstruct airflow into and out of the lungs such as asthma, bronchitis and emphysema.
3. Restrictive disorders are conditions that limit normal expansion of the lungs such as pneumothorax, atelectasis, respiratory distress syndrome and cystic fibrosis.
4. Cancers or exposure to Inhaled particles alter the pulmonary function.

# *Respiratory infections*

## Infections of the respiratory tract can occur in:

1. The upper respiratory tract or
2. The lower respiratory tract, or
3. Both.

## Organisms capable of infecting respiratory structures include:

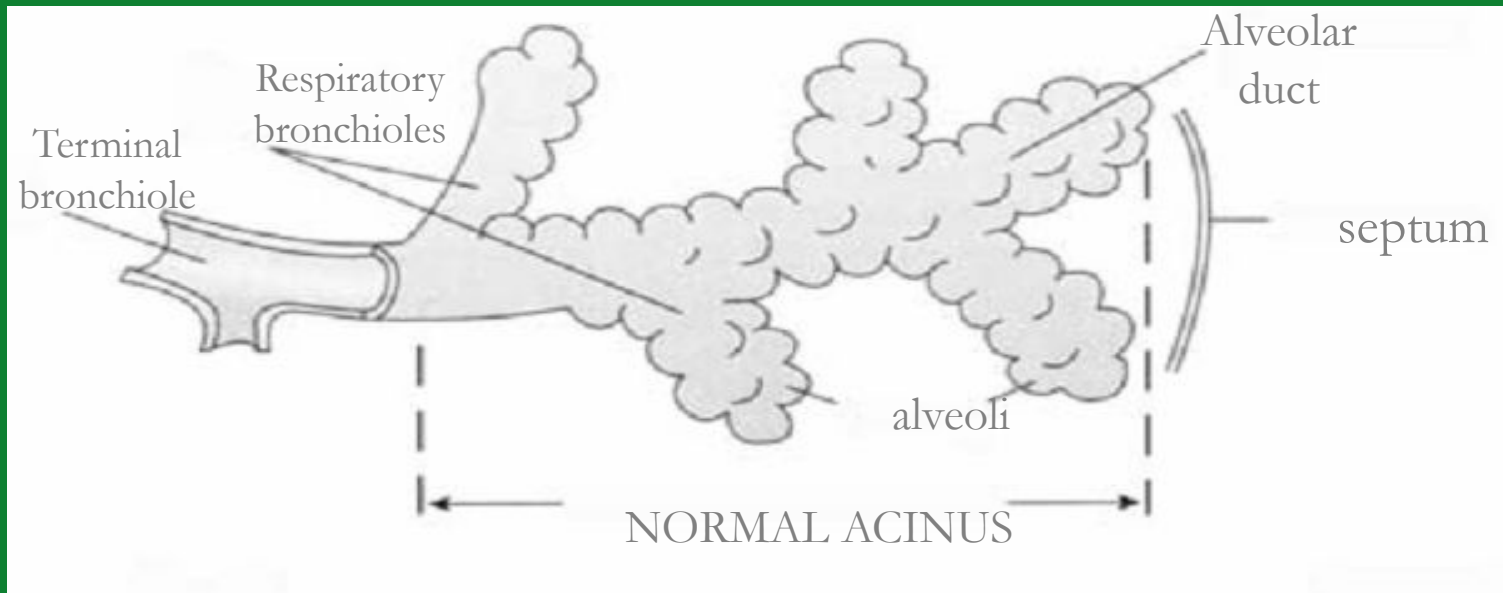
1. bacteria.
2. viruses: the majority of upper respiratory tract infections are caused by viruses as *rhinovirus* and *parainfluenza virus*.
3. fungi.

Depending on the organism and extent of infection, the manifestations can range from mild to severe and even life threatening.

# *Obstructive Respiratory Disorders*

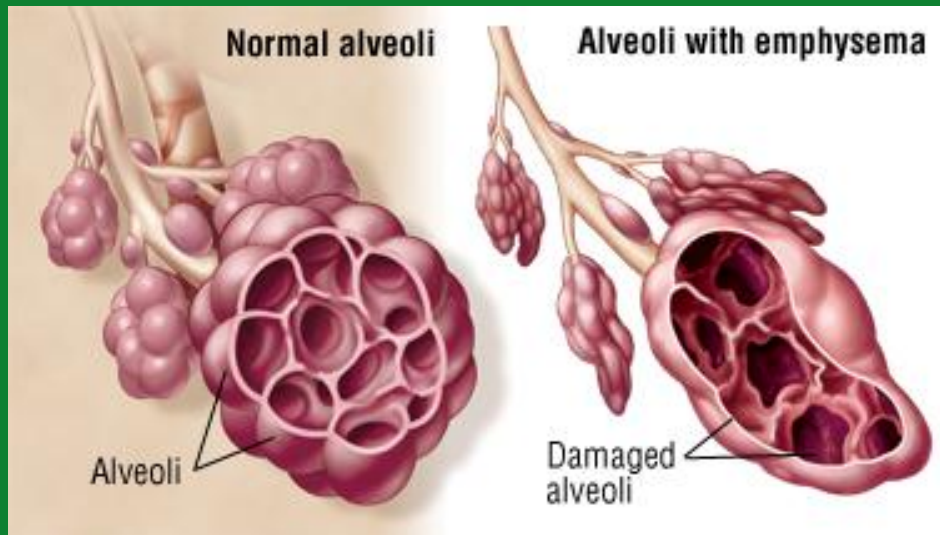
## *Emphysema*

- Emphysema is a respiratory disease that is characterized by **destruction and permanent enlargement of terminal bronchioles and alveolar air sacs**





**Pulmonary emphysema** is a condition in which the air sacs of the lungs are damaged and enlarged, causing breathlessness

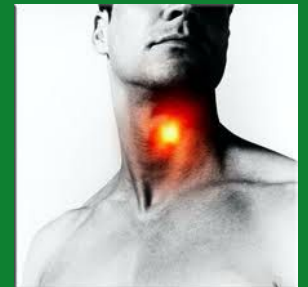
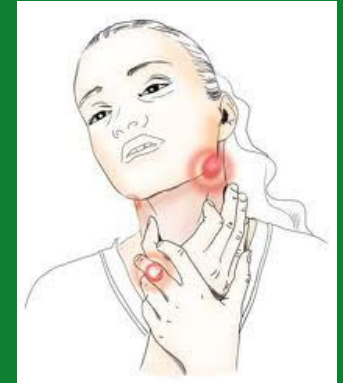


# Rhinitis



**Rhinitis** is inflammation of the mucous membrane of the nose, caused by a virus infection (e.g. the common cold) or by an allergic reaction (e.g. hay fever).

- Sinusitis is inflammation of a nasal sinus.
- Tonsillitis is inflammation of the tonsils.
- Pharyngitis is inflammation of the pharynx, causing a sore throat.
- Laryngitis is inflammation of the larynx, typically resulting in huskiness or loss of the voice, harsh breathing, and a painful cough.





# Asthma

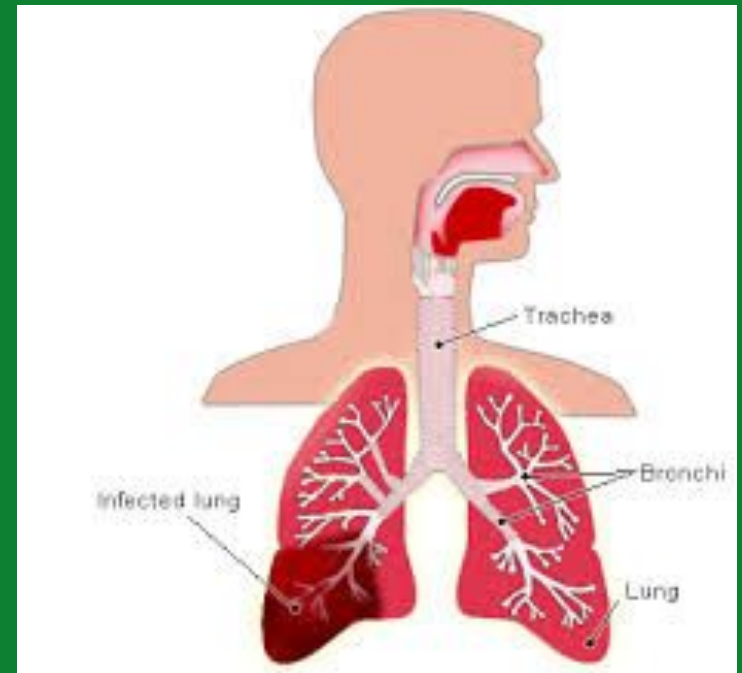
- **Asthma** is a respiratory condition marked by attacks of spasm in the bronchi of the lungs, causing difficulty in breathing. It is usually connected to allergic reaction or other forms of hypersensitivity.





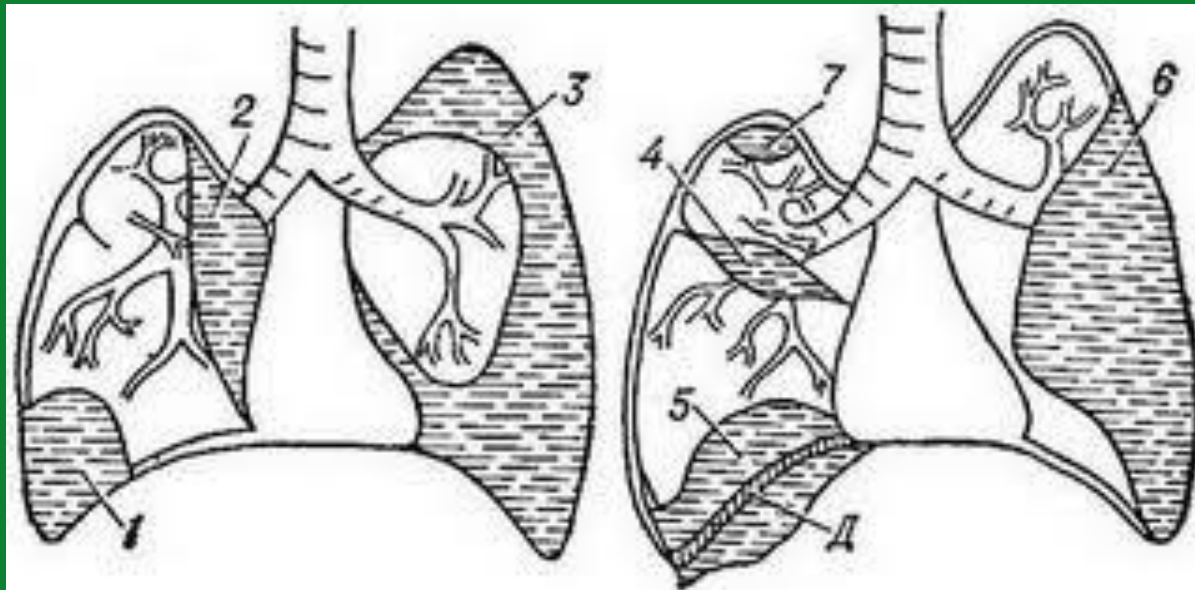
# Pneumonia

**Pneumonia** is lung inflammation caused by bacterial or viral infection, in which the air sacs fill with pus and may become solid. Inflammation may affect both lungs ( **double pneumonia**) or only one (**single pneumonia**).



# Pleurisy

- **Pleurisy** is inflammation of the pleurae, which impairs their lubricating function and causes pain when breathing. It is caused by pneumonia and other diseases of the chest or abdomen.



# Tuberculosis

- Tuberculosis is an infectious bacterial disease characterized by the growth of nodules (tubercles) in the tissues, especially the lungs.
  - The disease is caused by the bacterium *Mycobacterium tuberculosis* or (especially in animals) a related species; Gram-positive acid-fast rods
  - **pulmonary tuberculosis** is also known as ‘consumption’



# *Respiratory failure*

- **Respiratory failure** is a condition that results when the lungs are no longer able to oxygenate the blood sufficiently or remove CO<sub>2</sub> from it.

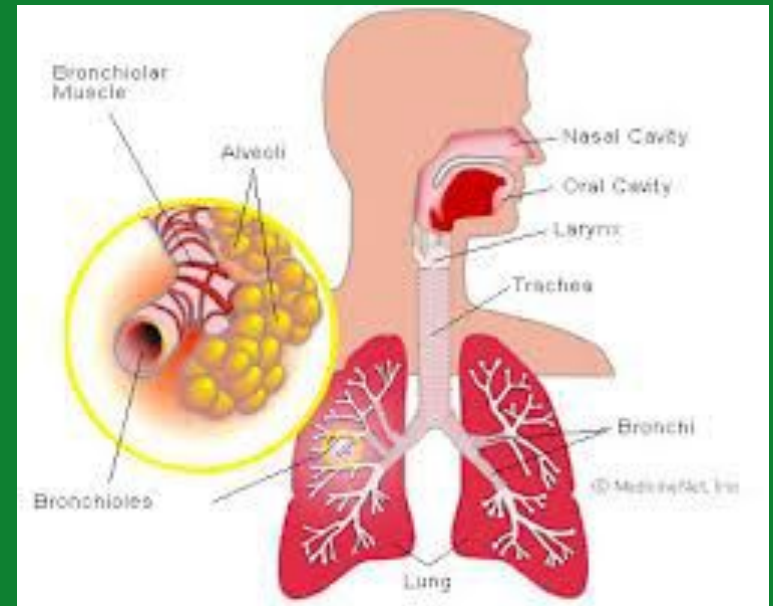
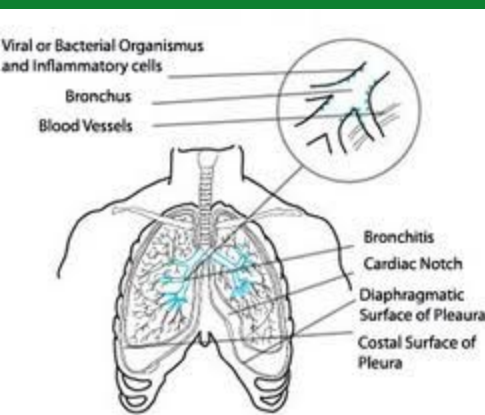
# Obstructive Respiratory Disorders

## Bronchitis



- Bronchitis is inflammation of the mucous membrane in the bronchial tubes. It typically causes bronchospasm and coughing.

**Acute bronchitis:** Inflammation of the bronchial passages most commonly caused by infection with bacteria or viruses.



# Obstructive Respiratory Disorders

## Bronchitis

- Chronic bronchitis: Chronic bronchitis is a chronic obstructive pulmonary disease caused by chronic inflammation of the bronchi that is most frequently associated with **cigarette smoking** (approximately 90% of cases). Chronic bronchitis may also be caused by prolonged exposure to inhaled particulates such as **coal dust** or other pollutants.
- The disease is characterized by excess mucus production in the lower respiratory tract. This mucus accumulation can impair function of the ciliated epithelium and lining of the respiratory tract and prevent the clearing of debris and organisms. As a result, patients with chronic bronchitis often suffer repeated bouts of acute respiratory infection.
- Chronic bronchitis sufferers are often referred to as “blue bloaters” as a result of the cyanosis and peripheral edema that is often present.

