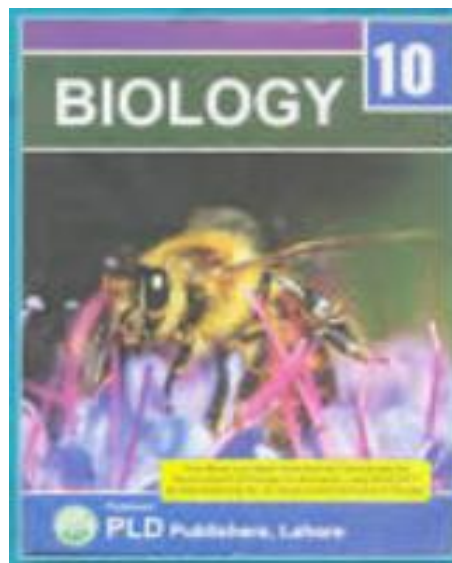


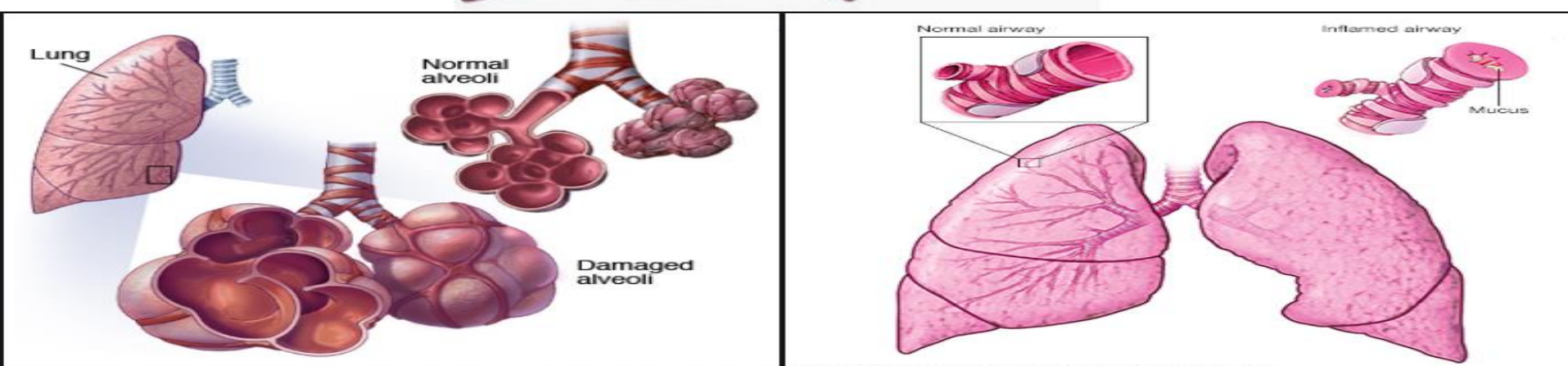
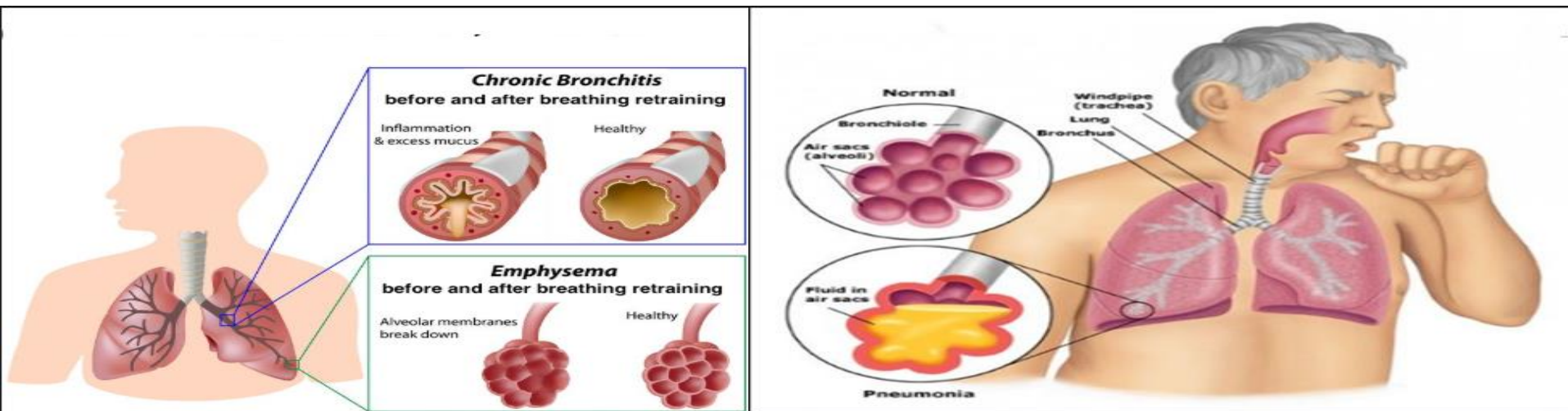


Pakistan School
Kingdom of Bahrain





ENGAGING STARTER



Objectives:

At the end of the lesson, students will be able to:

- Describe the signs, symptoms, causes and treatment of various respiratory disorders.

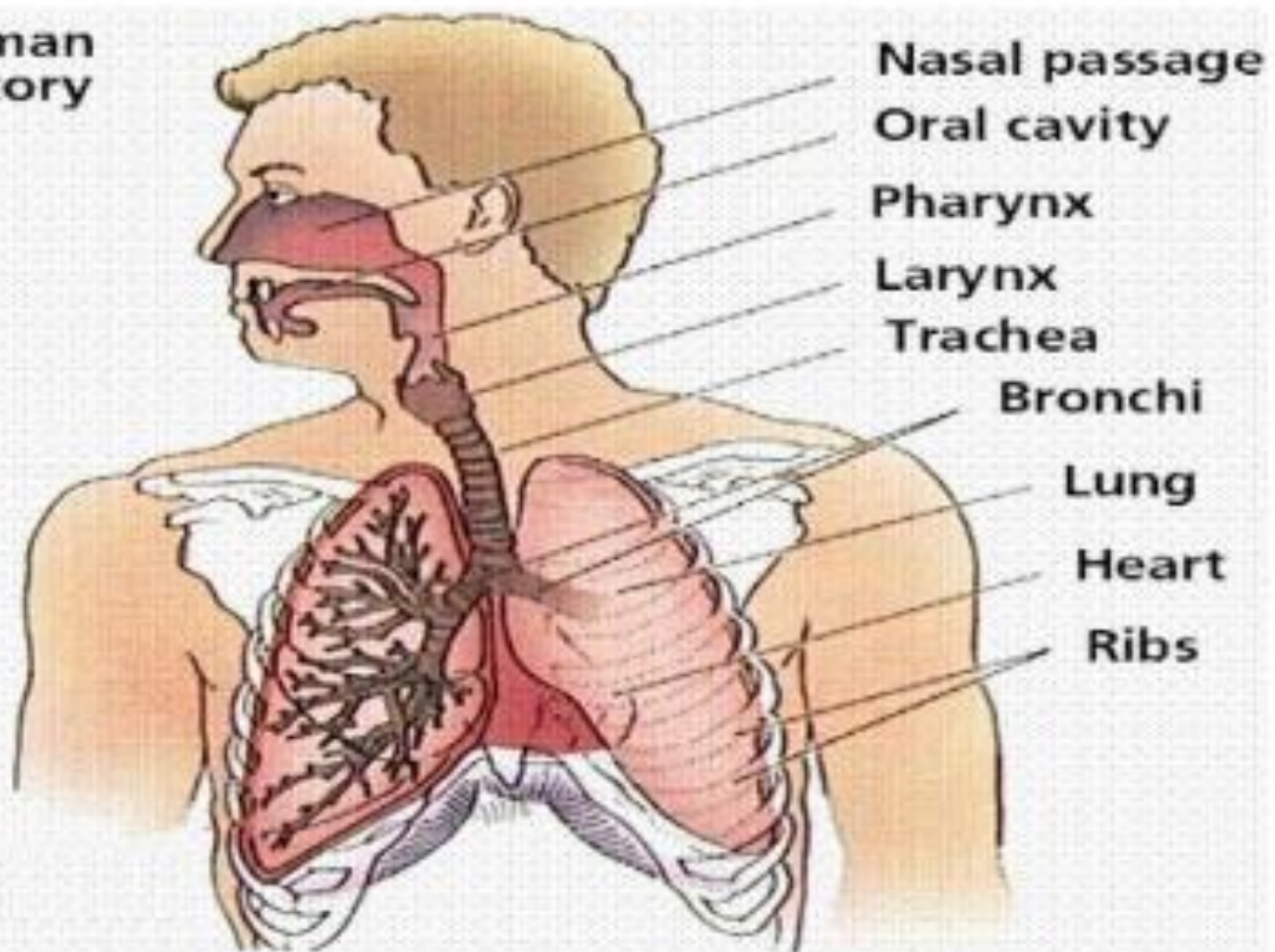
Chapter 1. Gaseous Exchange

Topic: The Respiratory Disorder

Page- 11-15

RESPIRATORY DISORDERS

The Human
Respiratory
System

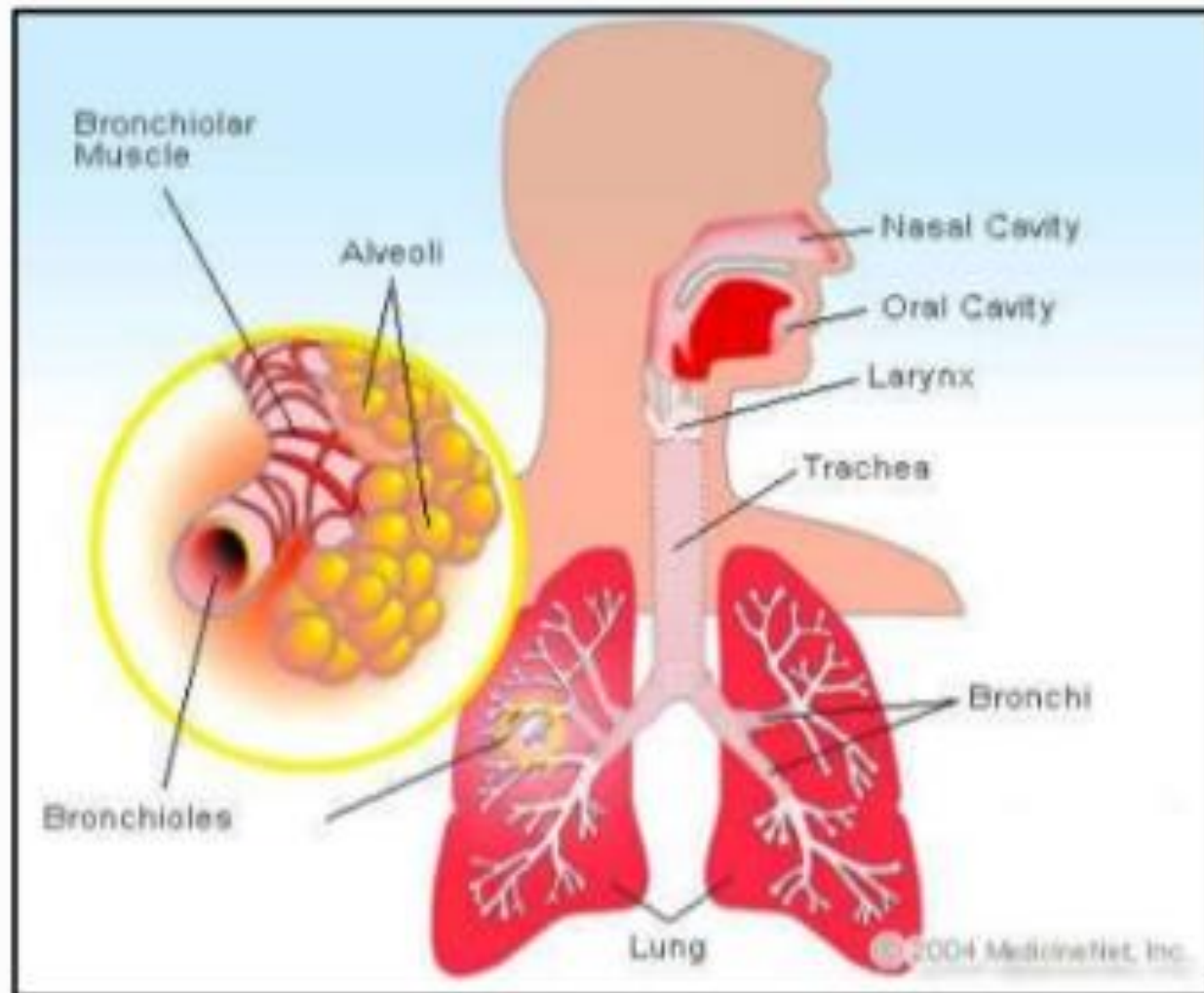


There are number of respiratory disorders which effect people. The percentage of such disorders is particularly high in Pakistan. It is due to more concentration of air pollutants not only the urban but also in the rural atmosphere. Some of the important respiratory disorders we will discuss today.

RESPIRATORY DISORDERS

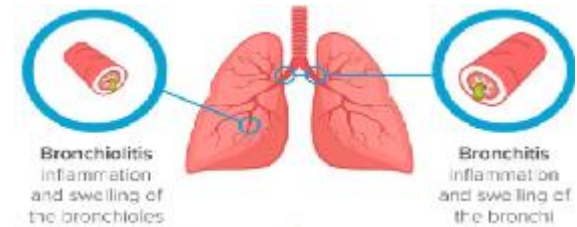
- Bronchitis
- Emphysema
- Pneumonia
- Asthma
- Lung cancer

BRONCHITIS



1. Bronchitis:

Causative agent: It is caused by viruses ,Bacteria or exposure to chemical irritants(tobacco smoke)



Types. There are two major types of Bronchitis.

1. The acute type of Bronchitis. Usually lasts about two weeks and patient recover with no permanent damage to the bronchi or bronchioles.
2. Chronic bronchitis. The bronchi develop chronic inflammation. It usually lasts for three months to two years.
3. Symptoms. Symptoms of bronchitis include a cough, mild wheezing, fever, chills and shortness of breath (especially when doing hard job).

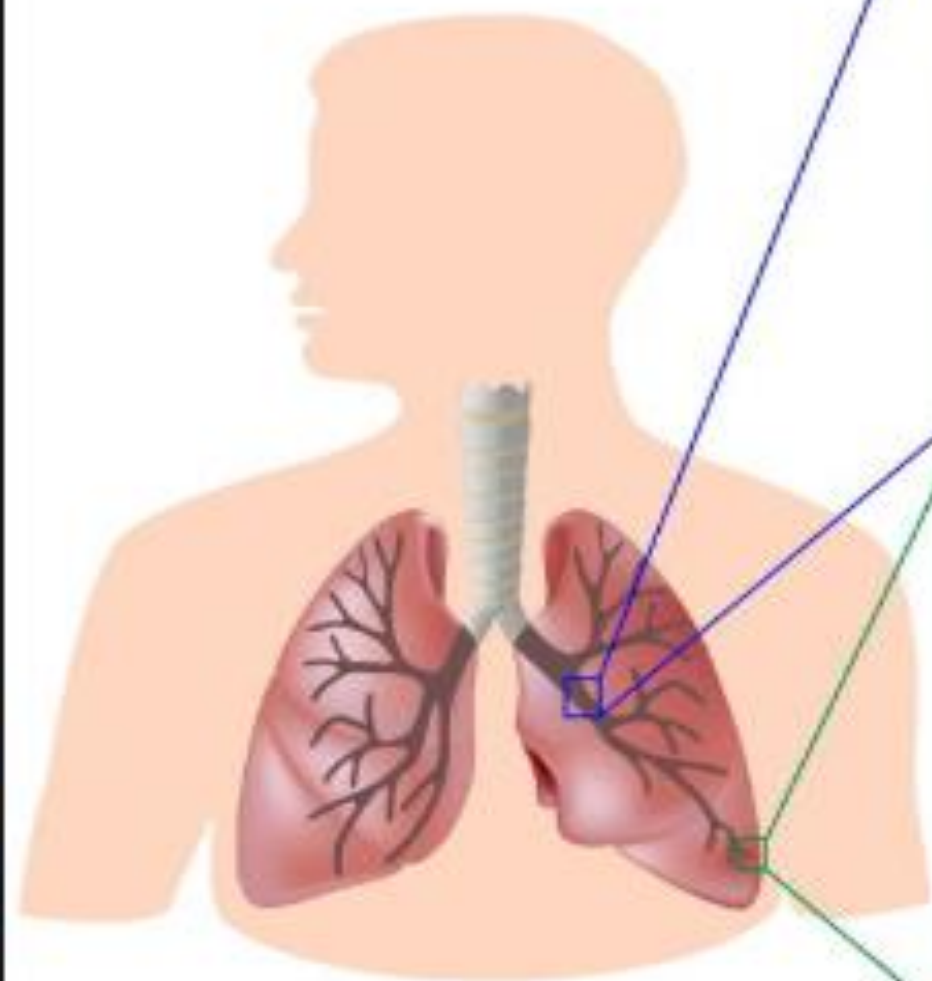
2. Emphysema.

Causes. emphysema is the destruction of the walls of the alveoli. It results in larger sac but with less surface area for gaseous exchange. As lungs tissues break down, the lungs do not come back to their original shape after exhalations air can not be pushed out and is trapped in the lungs.

Symptoms:

Shortness of the breath, fatigue, recurrent respiratory infections and weight loss.

By the time the symptoms of the emphysema appear the patient has usually lost 50% to 70% of his or her lung tissues. The level of oxygen in blood may get so low that it causes serious complications.



Chronic Bronchitis
before and after breathing retraining

Inflammation
& excess mucus



Healthy



Emphysema
before and after breathing retraining

Alveolar membranes
break down



Healthy



Pneumonia :

Pneumonia is an infection of lungs. If this infection effects both lungs, it is called double pneumonia.

Causative agent: The most common cause of pneumonia is bacterium *Streptococcus Pneumoniae*.

Some viral (influenza virus)

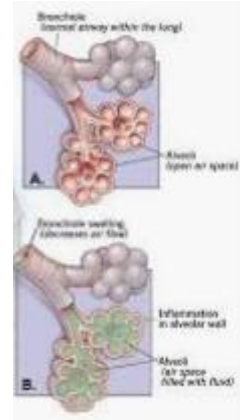
Some fungal infections may also lead to pneumonia.

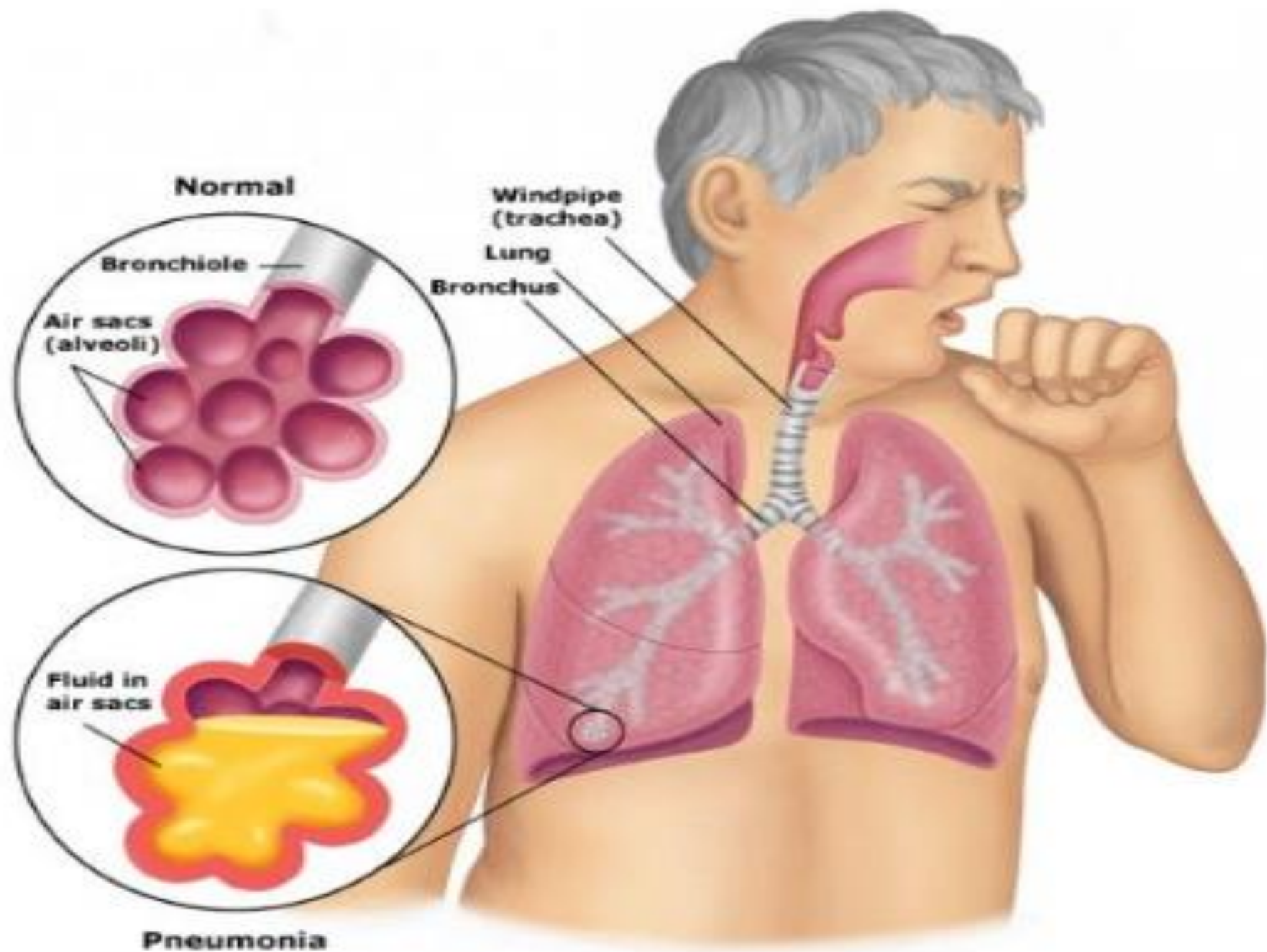
Spread of disease. When the causative organisms enter the alveoli, they settle there and grow in number. They break the lung tissues and the area becomes filled with fluid and pus.

Symptoms. The symptoms of pneumonia include cold ,followed by high fever, shivering and a cough with sputum production Patient may become short of breath. The patient's skin colour may change and become dusky or purplish. It is due to poor oxidation of blood.

Treatment. Vaccine are available to prevent pneumonia caused by *S.pneumoniae*.

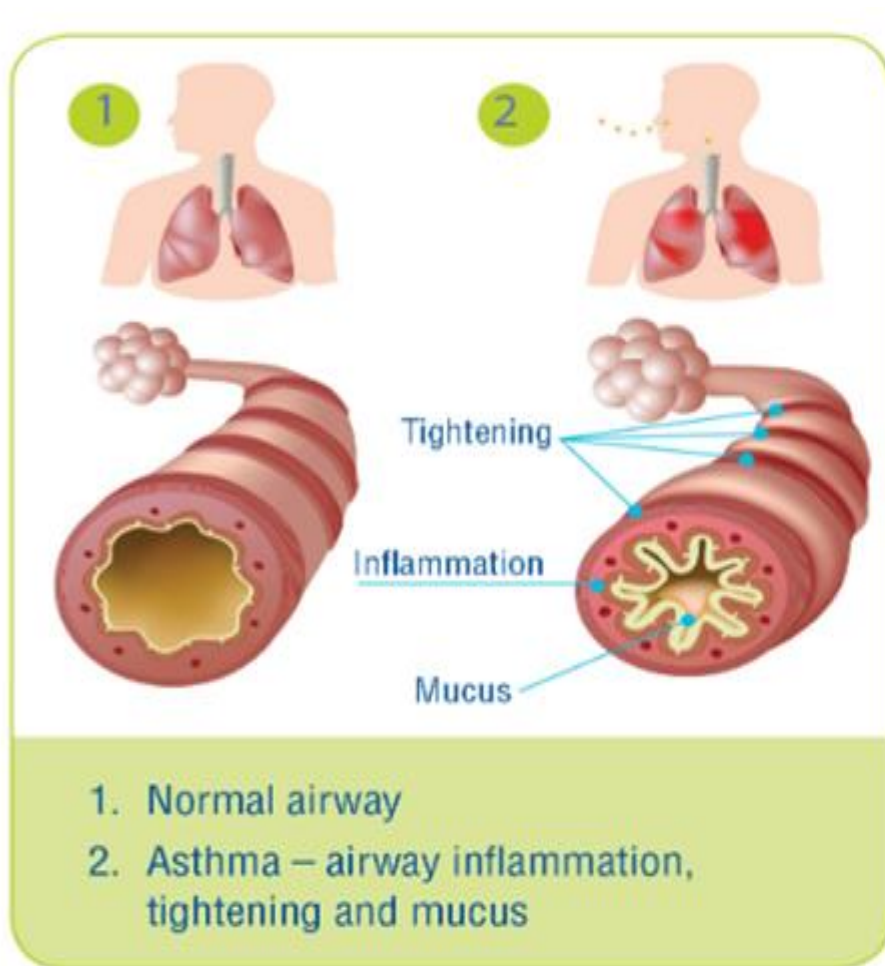
Antibiotics are used in the treatments of this type of pneumonia.





Asthma:

Asthma is a form of allergy, in which there is inflammation of the bronchi, more mucous production and narrowing of the airways.



Causes of asthma:

In asthma patients, the bronchi and bronchioles become sensitive to different allergens (allergy causing factors) e.g. dust, smoke, perfumes, pollens etc. When exposed to any of such allergens the sensitive airways show immediate and excessive response of constriction. In this condition, the patient feels difficulty in breathing.

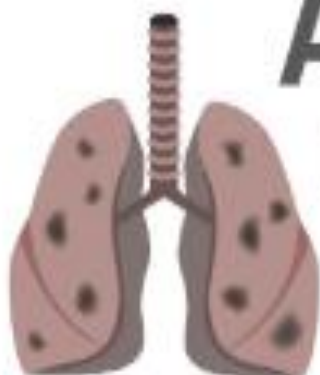
Sign and symptoms

The symptoms of asthma vary from person to person. The major symptoms include shortness of breath (especially with exertion or at night), wheezing (whistling sound when breathing out), cough and chest tightness.

Treatment and drugs:

The chemicals with ability to dilate the bronchi and bronchioles are used in the treatment of asthma. Such medicine is given in the form of inhalers.

ASTHMA INFOGRAPHICS



TREATMENTS



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Normal

Asthma

Asthma
Attack



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RISK FACTORS



Heredity



Pollution



Infection



Pet



Dust



Food

SYMPTOMS



Difficulty
breathing



Dry cough



Chest pain
or tightness



Night cough

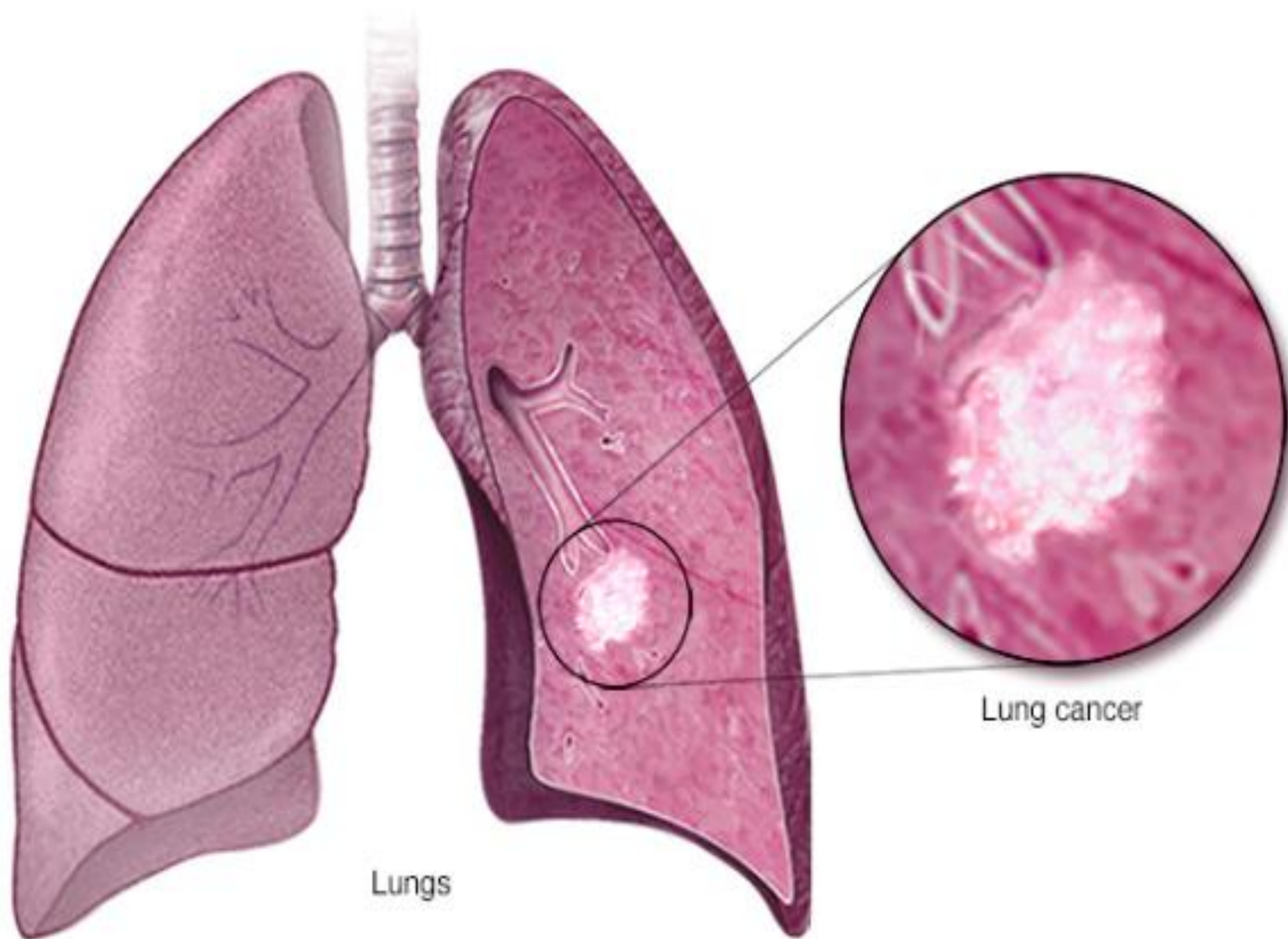


Shortness
of breath



Wheezing





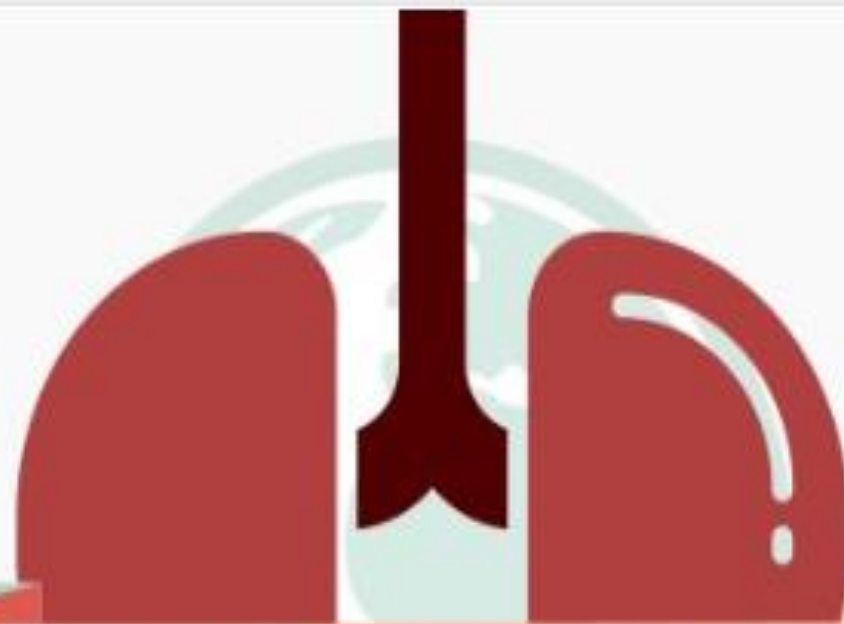
Lungs

Lung cancer

How is Lung Cancer Treated?



- **Treatment depends on the stage and type of lung cancer**
- **Surgery**
- **Radiation therapy**
- **Chemotherapy (options include a combination of drugs)**
- **Targeted therapy**
- **Lung cancer is usually treated with a combination of therapies**



LUNG CANCER

Causes, Symptoms & Treatment

In the past few years, lung cancer has been one of the most common reason for deaths all around the world. It usually results from abnormal growth of cells present in the lung's lining, which further leads to growth of a tumor.

Causes

- Persistent cigarette smoking
- Exposure to the harmful radon gas
- Continuous inhalation to asbestos
- Presence of Chronic Obstructive Pulmonary Disease (COPD)
- Air pollution caused due to emissions from vehicles & industries



Symptoms



- Consistent pain in the chest
- Difficulty in swallowing food
- Persistent hoarseness or cough
- Shortness of breath or dizziness
- Weight loss, weakness or fatigue

Treatment Techniques

- Chemotherapy
- Radiation therapy
- EGFR targeted therapies
- Surgical removal of cancer





Bad Effects of Smoking

Bad Effects of Smoking:

i. Chemicals in smoke:

Smoking is harmful due to the chemicals in cigarettes and smoke. Tobacco smoke contains over 4,000 different chemicals, out of which at least 50 are carcinogens and many are poisonous.



POUMONS SAINS



POUMONS TABAGIQUES

Smoking causes lung cancer

ii. Smoking lead to the cancers:

Smoking may also lead to the cancers in kidneys, oral cavity, larynx, breast, bladder and pancreas etc. Many chemicals in tobacco smoke damage the air passageway, which leads to emphysema and other respiratory disorders.

iii. Effect on circulatory system:

Smoking also has effects on the circulatory system. The carbon monoxide present in tobacco smoke lessens the oxygen-carrying capacity of hemoglobin.

Many other chemicals in smoke increase the production of blood platelets. When platelets are more than the normal numbers, they make the blood viscous and it can lead to arteriosclerosis.

iv. Infections in the lungs:

Smokers are at greater risk of developing infections, particularly in the lungs. For example, smoking increases the risk of tuberculosis by two to four times, and of pneumonia by four times

Smoking causes **87%**
of **lung cancer** deaths.



NEGATIVE EFFECTS OF SECONDHAND SMOKE



LUNG
INFECTIONS



ASTHMA



LUNG
CANCER



LOW BIRTH WEIGHT



HEART DISEASE



PREMATURE AGING
OF YOUR SKIN



v. Weakening and staining of teeth:

Smoking is also responsible for weakening, and staining the teeth. Tooth loss is 2 to 3 times higher in smokers than in non-smokers

How
Does
Tobacco
Effect
My
Teeth??



- Lowered immune factors
- Periodontal Disease
- Gingival recession
- Bone loss
- Increased tooth loss
- Increase bleeding
- Xerostomia
- Severe staining
- Bad breath

World No Tobacco Day

The World No Tobacco Day is celebrated on 31st of May every year

second-hand smoke (passive smoke)

Non-smokers who are exposed to second-hand smoke (passive smoke) at home or work increase their heart cancer risk by 20-30% and their lung disease risk by 25-30%.

Affects on social life

Smoking also affects the social life of a person. Smokers may face social un-acceptance because other people may not want to be exposed to other's smoke.

Health Risks of Smoking Clove Cigarettes



**Acute lung
damage**



**Nicotine
addiction**



Heart disease



**Accelerated
heartrate**



Nausea



Cancer

WORKSHEET1

MCQs.

1. _____ are used in the treatment of asthma
 - a. Inhalers b. antibiotics c. drugs d. allergens
2. Lung cancer causes more than _____ deaths worldwide annually;
 - a. 1.3 million b. 40000 c. 1 lakh d. 1 million
3. If a person stop smoking;
 - a. cancer decreases b. cancer increases
4. The world No tobacco day is celebrated on the _____ of every year;
 - a. 31st of may b. 2nd January c. 14 February d. 1st may

WORKSHEET- Home work

Answer the Following Questions;

1. Write the symptoms of asthma.
2. What are the main causes of cancer?
3. Why Nicotine is called as powerful poison?

Closure

- Today we have done the topic_____.
- Asthma is the form of _____.
- Symptoms of asthma_____.
- Medicine is giving in the form of _____.
- Lung cancer is a diseases of _____.
- The main cause of any cancer include_____.
- Cigarette smoke contains over _____ carcinogens.
- Tabaco smoke contains over_____ different chemical.
- Smoking increases the risk of _____ by two to four times and pneumonia by four times.

Any
Questions?



Thank You!



Prepared By
Shahnaz Riasat