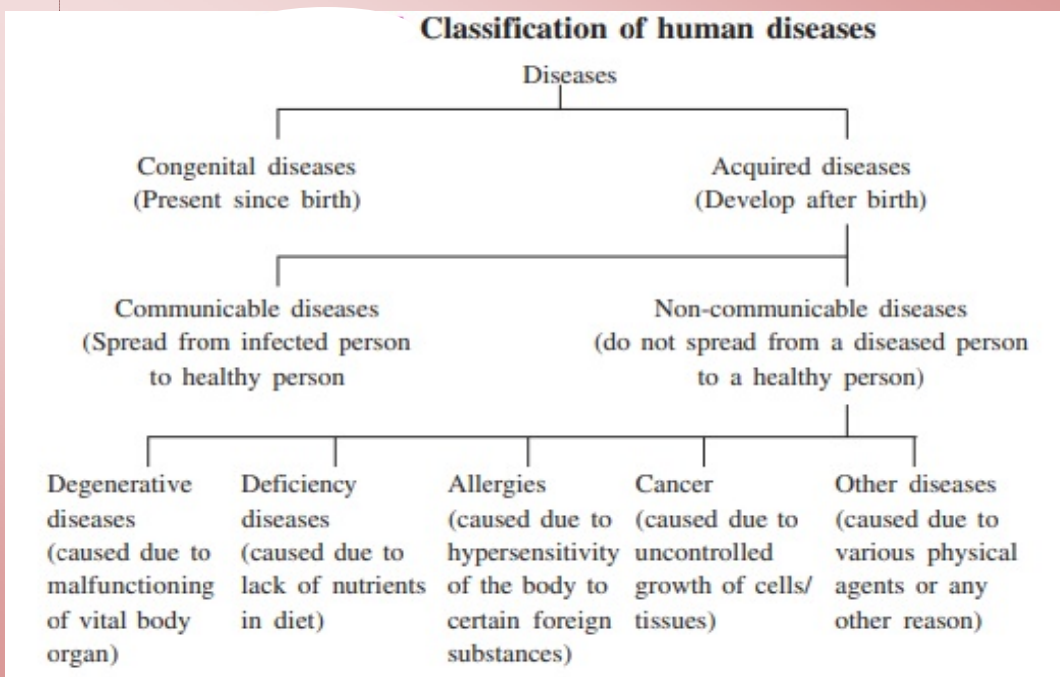


Lesson-29
Some Common Human Disease

- Any malfunctioning process which interferes with the normal functioning of the body is called a disease. In other words, disease may be defined as a disorder in the physical, physiological, psychological or social state of a person caused due to nutritional deficiency, physiological disorder, genetic disorder, pathogen or any other reason.



Acquired diseases are studied under two categories:

| | Communicable Disease | Non-Communicable Disease |
|----|---|--|
| 1. | Caused by some biological agents or pathogens, such as viruses, bacteria, protozoans and helminths (worms). | Caused due to some specific factor, such as malfunctioning of some vital organ, and deficiency of nutrients. |
| 2. | Spread from one person to another through contact, water, air, and food, etc. | Do not spread from one person to another by contact. |
| 3. | The concern of the diseases involves the society as these are related to community health. | The concern of the disease is restricted to the individual only |

- The diseases which spread from one diseased person to another through contaminated food, water or contact or through insects and animals are called communicable diseases. These are caused by different causative agents (pathogens).
- The pathogen can enter body by various means and multiply and interfere with normal body functions and activities.

DISEASES CAUSED BY VIRUS

| Diseases | Pathogen | Mode of transmission | Incubation period | Symptoms |
|--------------------|--|---|---------------------------------|---|
| Chicken pox | Chicken pox virus (<i>varicella</i>) | By contact or through scabs | 12-20 days | Fever, headache and loss of appetite Dark red-coloured rash on the back and chest which spreads on the whole body |
| Measles | Virus (Rubeola) | By air | 3-5 days | (i) Common cold (ii) Small white patches in mouth and throat. (iii) rashes on the body |
| Poliomyelitis | Polio Virus | Virus enters inside the body through food or water | 7-14 days | Stiffness of neck, fever, loss of head support |
| Rabies | Rabies | Bite by a rabid dog. | 10 days to 1-3 months | Severe headache and high fever. (ii) Painful contraction of muscles of throat and chest. (iii) Choking and fear of water leading to death. |
| Hepatitis B virus. | | Mainly through contaminated water. | Generally 15-160 days. | Body ache, Loss of appetite and nausea, Eyes and skin become yellowish, urine deep yellow in colour. And Enlarged liver |
| Influenza | | Coughing and sneezing. Direct contact with infected person. | 1-4 days (average about 2 days) | Sudden onset of fever with cough, sore throat, muscular aches and a headache. |
| Dengue | Dengue virus | bite of an infected <i>Aedes aegypti</i> mosquito | 4 to 6 days | High fever, generally 104-105 °C (40 °F), which may last 4- 5 days. Headache, pain in the joints and muscles, body aches. Nausea or vomiting, Pain behind the eyes which worsens with eye movement. |

DISEASES CAUSED BY BACTERIA

| Diseases | Pathogen | Mode of transmission | Incubation period | Symptoms |
|--------------|-----------------------------------|---|--|--|
| Tuberculosis | <i>Mycobacterium tuberculosis</i> | Airborne-discharged through sputum, cough and sneeze, of the infected person. | 2-10 weeks during which the bacteria produce a toxin, tuberculin | Persistent fever and coughing. (ii) Chest pain and blood comes out with the sputum. (iii) General weakness. |
| Typhoid | <i>Salmonella typhi</i> | Through contaminated food and water | About 1-3 weeks | Continuous fever, headache, slow pulse rate. (ii) Reddish rashes appear on the belly. (iii) In extreme cases, ulcers may |

| | | | | |
|--|------------------------------------|--|---------------------|---|
| | | | | rupture resulting in death of the patient. |
| Cholera | <i>Vibrio cholerae</i> | Contaminated food and water. Housefly is the carrier | 6 hours to 2-3 days | Acute diarrhoea and watery stool. (ii) Muscular cramps. (iii) Loss of minerals through urine. (iv) Dehydration leads to death. |
| Diphtheria (Occurs in children of 1-5 years of age.) | <i>Corynebacterium diphtheriae</i> | Through air (droplet infection) | 2-4 days | Fever, Sore throat (ii) Oozing semisolid material in the throat which develops into a tough membrane. The membrane may cause clogging (blocking) of air passage, resulting into death |
| Leprosy | <i>Mycobacterium leprae</i> | Prolonged contact with the infected person. | 1-5 years | Affects skin. (ii) Formation of nodules and ulcer. (iii) Scabs and deformities of fingers and toes. (iv) Infected areas lose sensation. |

DISEASES CAUSED BY PROTOZOAN

| | | | | |
|---------------------------------------|--|--|-----------------|--|
| Malaria | different species of Plasmodium | By bite of female Anopheles mosquitoes | Approx. 12 days | Headache, nausea and muscular pain. (ii) Feeling of chilliness and shivering followed by fever (iii) The patient becomes weak and anaemic. (iv) If not treated properly secondary complications may lead to death. |
| Amoebiasis (Amoebic dysentery) | <i>Entamoeba histolytica</i> | Contaminated food and water | | Formation of ulcers in intestine. (ii) Abdominal pain and nausea. (iii) Acute diarrhoea and mucus in stool. |

DISEASES CAUSED BY WORMS

| Diseases | Pathogen | Mode of transmission | Incubation period | Symptoms |
|-------------------|--|--|-------------------|--|
| Filariasis | Filarial worm (<i>Wucheraria bancrofti</i>) | Bites of mosquitoes - <i>Aedes and Culex</i> . | - | (i) Fever (ii) Swelling of legs which appear as legs of elephant, so this disease is also called elephantiasis |

NON-COMMUNICABLE DISEASES

| Diseases | Causes | Symptoms | Prevention and cure |
|--------------------------|--|--|--|
| Diabetes mellitus | Less secretion of insulin hormone from the pancreas. (ii) Mental stress (iii) Through heredity from parents to children. | More glucose in blood. (ii) Frequent urination (iii) Feeling thirsty and hungry frequently. (iv) Reduced healing | Control weight of the body. (ii) Controlled diet. (iii) Less sugar and carbohydrate in food. (iv) Injection of |

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|---------------------------------|--|---|--|
| | | capacity of injury. (v) body weakness | insulin before meals, if required |
| Cardio vascular diseases | Deposition of cholesterol leads to heart attack. | (i) Due to reduced blood and oxygen supply, available to the muscles, Health heart's efficiency is affected. (iii) Obesity (over weight) Hypertension Persistent high blood pressure (BP) (ii) It may damage the arteries of kidney. | (i) Avoid mental tension. (ii) Low fat diet (iii) Body Weight must be under control. (iv) Medicines may be taken as per doctor's advice. (v) Avoid smoking and alcohol (vi) Electrocardiogram (ECG) can diagnose the disease. (vii) By-pass surgery is performed in extreme cases. |
| Osteoporosis | age dependent disorder with loss of the normal density of bone | Symptoms of osteoporosis are related to the location of the fracture. | Vitamin D and calcium supplements. lifestyle and diet are also recommended |

Sexually Transmitted Diseases (STD).

- **Diseases which spread by sexual contact are called sexually transmitted diseases**
- Syphilis, gonorrhoea, and AIDS are some sexually transmitted diseases.
- Gonorrhoea is caused by a bacterium (*Neisseria gonorrhoeae*).
- Syphilis is caused by a long, corkscrew bacterium (*Treponema pallidum*).
- **AIDS** (Acquired Immuno Deficiency Syndrome) is caused by HIV. It is a disease of cell-mediated immune system of the body.

Test Yourself

1. What are the differences between deficiency disease and degenerative disease? give some examples.
2. Write down the causal organism, symptoms and preventive measures of the disease Typhoid and Filariasis.
3. Malaria is caused by mosquito bite, but why it is called as protozoan disease?