What is a 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.

Types of Diseases

The diseases may be classified into two broad categories

1. Congenital diseases Acquired diseases (Present since birth).
2. Acquired diseases (Present since birth) (Develop after birth)
3. Communicable diseases Non-communicable diseases (Spread from infected person to a healthy person)
4. to healthy person (do not spread from a diseased person to a healthy person)

1-Degenerative (caused due to malfunctioning of Vital body organ).

2-Deficiency (caused due to Lack of nutrient in diet).

1. Allergies (caused due to due to hypersensitivity to certain foreign substances).
2. Cancer (caused due to uncontrolled growth of cells/ tissues).
3. Other diseases (caused due to various physical agents or any other reason).

A. Congenital disease : The disease which is present from birth (e.g. hole in the heart in infants). They are caused by some genetic abnormality or metabolic disorder or malfunctioning of an organ.

B. Acquired disease : The disease which may occur after birth during one’s

lifetime.

**Acquired diseases may generally be classified into :**

(**i) Infectious diseases :** The diseases which can be transmitted from diseased healthy person person to e.g. measles.

**(ii) Degenerative diseases :** The diseases caused by the malfunction of some vital organs of the body e.g. heart failure.

**(iii) Deficiency diseases :** These are caused due to nutritional deficiency such as that of minerals or vitamins in the diet e.g. anaemia (Fe), Beri- beri (vitamin B).

**(iv) Cancer :** This is an abnormal, uncontrolled and unwanted growth of cells. e.g. breast cancer.

**Acquired diseases are studied under two categories :**

**(i) Communicable diseases :** The diseases which can be transmitted from

an infected person to a healthy person.

**(ii) Non-communicable diseases :** These diseases do not spread from an

affected person to a healthy person.

**Modes of Spread of Communicable Diseases**

Communicable diseases spread from the infected person to a healthy person in the following ways.

**Direct transmission**

The pathogens of diseases infect a healthy person directly without an intermediate agent. It can take place by various means such as,

 **(i) Direct contact** **between the infected person and the healthy person :**

Diseases like small pox, chicken pox, syphilis, gonorrhoea spread through direct contact.

**(ii)** **Droplet infection :** The infected person throws out tiny droplets of mucus by coughing, sneezing or spitting. These droplets may contain the pathogen. By inhaling the air containing the droplets, a healthy person may get the infection. Diseases like common cold, pneumonia, influenza, measles, tuberculosis and whooping cough spread through droplet infection.

**(iii) Contact with soil** contaminated with disease-causing viruses and bacteria.

**(iv) Animal bite:** Viruses of rabies are introduced through the wound caused by the bite of rabid animals, especially dogs. The virus is present in the saliva of the rabid animals.

**Indirect transmission**

The pathogens of certain diseases reach the human body through some intermediate agents. It can take place by various means, which are as follows :

(i) By vectors such as houseflies, mosquitoes, and cockroaches. Examples:

Houseflies carry the causative organisms of cholera on their legs and mouth parts from the faeces and sputum of infected persons to food and drinks and contaminate them. When this contaminated food is taken by a healthy person, he gets the infection. Similarly, mosquitoes carry virus of dengue and malarial parasite which causes malaria.

(ii) Air-borne : The pathogens may reach humans with air and dust. The epidemic typhus spreads by inhalation of dried faeces of infected fly.

(iii) Object borne Many diseases are transmitted through the use of contaminated articles, such as clothes, utensils, toys, door handles, taps, syringes and surgical instruments.

(iv) Water borne : If potable water (drinking water) is contaminated with

pathogens of diseases such as cholera, diarrhea, hepatitis or jaundice, it

reaches a healthy person upon consuming such water.

**Some Important Terms**

**Pathogen :** A living organism which causes a disease.

**Parasite :** An organism which gets food and shelter from host.

**Host :** The living body on or inside which the disease-producing organism takes shelter.

**Infestation :** Presence of a large number of parasitic organisms on the surface of body of the host or on the clothings.

**Vector :** It is an organism which harbours a pathogen and may pass it on to another person to cause a disease (Mosquitoes harbour malarial parasite and transmits it to humans).

**Carrier :** It is an organism which itself does not harbour the pathogen but physically transmits it to another person (Housefly is the carrier of cholera germs).

**Reservoir :** An organism which harbours pathogens in large numbers that do not cause any suffering to it.

**Epidemic :** Spreading of a disease among a large number of people causing a huge loss of life in the same place for some time e.g. plague.

**Endemic :** A disease which is regularly found among a particular group of people e.g. goitre, restricted to a certain locality or a country.