

Chapter – 4 Keeping Diseases Away

Diphtheria

Pathogen : *Corynebacterium diphtheriae*

Modes of transmission:

- Diphtheria spreads through cough, sneezing or directly from the infected person to another person.
- It affects the mucus membrane of the nose and the throat.

Symptoms

- Toxins produced by the bacteria cause fever, throat pain and inflammation in the lymph glands of the throat.



- Cells in the mucus membrane which are destroyed by the toxins produce an ash coloured thick coating in the throat within two or three days.

Affected body parts: Brain, heart and kidneys

- Antitoxins which act against the toxins are used to protect the uninfected cells. But, if the disease becomes severe the patient cannot be recovered through medication.
- Vaccination is the best preventive method.

Tuberculosis :

Pathogen : *Mycobacterium tuberculosis*.

Symptoms: Loss of body weight, fatigue, persistent cough

Transmission of Disease : When the patient speaks, coughs or sneezes, the pathogens spread into the air and thereby to others.

Organs/Body parts Affected: Lungs kidneys, bones, joints, brain

Treatment By administering antibiotics.

Vaccine: BCG is used as preventive vaccine against tuberculosis.

Directly Observed Treatment Short course (DOTS) Directly Observed Treatment Short course (DOTS) is the treatment system recommended for tuberculosis by World Health Organisation.

- This method of treatment completely cures the disease by regular use of antibiotics.
- World's Tuberculosis day is celebrated on March 24

Virus



- **Virus** has the simple structure with a DNA or RNA molecule within a protein coat.
- Virus has no cell organelles as seen in normal cells.
- Virus multiplies by taking control over the genetic mechanism of the host cells.
- Viruses infect not only human beings but also plants, animals and bacteria.

EVALUATION:

- Collect information on other bacterial diseases and their mode of transmission and prepare a table.