

Chapter 8: Human Health and Diseases

Health: It's not just the absence of disease but a state of complete physical, mental, and social well-being.

Disease Types:

Infectious Diseases: Caused by pathogens (bacteria, viruses, fungi, protozoans).

Non-infectious Diseases: Not caused by pathogens (e.g., genetic disorders, lifestyle diseases).

Common Diseases in Humans:

Bacterial: Typhoid, Pneumonia, Tuberculosis (TB), Diphtheria, Leprosy.

Viral: AIDS, Influenza, Rabies, Hepatitis.

Protozoan: Malaria, Kala-azar, Sleeping sickness.

Helminthic: Ascariasis, Filariasis.

Fungal: Ringworm.

Immunity:

Body's defense mechanism against pathogens.

Innate (Non-specific) Immunity: General protection mechanisms present at birth (e.g., skin, saliva, stomach acid).

Acquired (Specific) Immunity: Developed after exposure to foreign substances. It includes:

Active Immunity: When the body is exposed to live pathogens and produces antibodies.

Passive Immunity: Readymade antibodies are directly given to protect the body.

AIDS:

Caused by Human Immunodeficiency Virus **(HIV)**.

Targets and destroys the immune system.

Transmitted through sexual contact, transfusion of contaminated blood, sharing infected needles, and from an infected mother to her child.

Cancer:

Uncontrolled growth of cells.

Caused by chemicals (**carcinogens**), radiation, viral oncogenes.

Types: Carcinoma, Sarcoma, Lymphoma, Leukemia .

Detection: Biopsy and X-ray imaging. **Treatment:** Surgery, radiotherapy, chemotherapy.

Drugs and Alcohol Abuse:

Adverse effects on the body and behavior.
Drug addiction, physical and psychological dependence.

Harmful effects: Kidney and liver failure, cardiovascular diseases, mental disorders.
Adolescence and Drug/Alcohol Abuse:

Peer pressure and desire for experimentation make adolescents more vulnerable.

Need for educational programs for awareness.

Prevention and Control of Infectious Diseases:

Immunization programs.

Public health hygiene measures.

Use of antibiotics and drugs (responsible usage to prevent resistance).