

## WHY DO WE FALL ILL

## SUMMARY

- ❖ **Health** is defined as a state of physical, mental and social well being.
- ❖ A **disease** is an unhealthy condition caused by microorganisms, improper diet or it may be inherited.
- ❖ **Classification of diseases** is based on prevalence, occurrence or spread and duration.
- ❖ **Epidemics** are outbreak diseases that attack many people at the same time and spread very quickly.
- ❖ **Classification of diseases based on occurrence or spread** includes Infectious and Non-Infectious Diseases.
- ❖ **Infectious diseases** spread from one person to another through air, water, food, physical contact and insects, hence also called **communicable diseases**.
- ❖ Non-Infectious Diseases such as blood pressure are caused by nutritional deficiencies, hence called **non-communicable diseases**.
- ❖ **Classification of diseases based on duration** includes acute and chronic diseases.

Diseases that last for a short period are called **acute diseases**.

Diseases that last for a lifetime are called **chronic diseases**.

- ❖ **Causes of diseases** might be due to contaminated water, lack of good nourishment and genetic abnormalities.
- ❖ Bacteria, viruses, fungi, protozoa and worms that cause diseases are called **infectious agents**.
- ❖ **Diseases caused by bacteria** are typhoid, cholera, tuberculosis and anthrax.
- ❖ **Diseases caused by viruses** are common cold, influenza, dengue fever and AIDS.
- ❖ **Diseases caused by fungi** are commonly skin infections.
- ❖ **Diseases caused by protozoa** are Kala-Azar and Sleeping Sickness.
- ❖ **Diseases caused by worms** are intestinal infections and lymphatic infections like elephantiasis.
- ❖ **Organ and Tissue specific Manifestations of microbes** depends on the mode of entry of microbes. Acquired Immuno Deficiency Syndrome or **AIDS** is so called because the **AIDS** virus breaks down the body's immune cells and organs that comprise the immune system.
- ❖ **Common ways of transmission of diseases** includes direct contact, air, water, food and other animals. Overcrowded and poorly ventilated housing is a main factor in the spread of **airborne diseases**.
- ❖ Cholera is water **borne disease**.
- ❖ Syphilis and AIDS are **diseases caused by physical contact**.

## WHY DO WE FALL ILL

- ❖ Organisms that carry microbes from a sick person to a healthy person are called **vectors**. Rabies and malaria are **diseases caused by animals**.
- ❖ **Common effects of a infectious disease** is activation of immune system and inflammation. Immune system recruits many cells to the affected tissue to kill the infectious agents, a process called **inflammation**.
- ❖ **Treatment of infectious diseases** involves either reducing the effects of the disease or eliminate the cause of the disease. **Antibiotics** are more effective against bacterial infections.
- ❖ **Anti-viral drugs** are meant for treating viral diseases.
- ❖ **Problems faced in treatment of diseases** involves damage of body functions or may never recover completely.
- ❖ **Prevention of infectious diseases** is better than cure. There is an important **role of immune system in prevention of infectious diseases**.
- ❖ Person infected with **chicken pox** won't get the disease again, because of our body cells that react against microbes and remember by producing memory cells.
- ❖ **Immunization** is the protection of individuals from communicable diseases by administration of a suspension of killed micro-organisms.
- ❖ A hundred years ago, **smallpox epidemics** were common throughout the world. Virus like smallpox was eliminated from the world through vaccines, a process called **vaccinations**.

First vaccine was developed against small pox by **Edward Jenner**, hence called "**Father of Immunology**".