

BIOLOGY

CLASS NOTES FOR CBSE

Chapter 04. Why Do We Fall Ill

01. Introduction

Health is described as the state of complete physical, mental and social well being. Thus, being healthy means that one feels good physically, has a positive outlook and is able to cope with the social and mental pressures without much difficulty. being healthy is far more than just being free from diseases. A disease regularly usually indicate malfunction in the body. A doctor is able to diagnose disease is by indentifying the symptoms. Symptoms of a disease may be physical, mental or both. Our health is affected not only by unbalanced diet but also by disease causing organism which may be water-borne, air-borne or food-borne. Some diseases are caused by infection through microorganisms, insects and parasites.

<i>Healthy</i>	<i>Disease free</i>
• It is a state of complete physical mental and social well being. • It depends upon the individual as well as on • A healthy person will be disease free. • Healthy person is energetic and able to perform as per requirement.	• It is state of absence of discomfort or derangement in any part of body. • It is related to the individual only. • A disease free person can be healthy or unhealthy. • Performance of a disease free person depends upon environment and personal attitude.

02. Disease and Its Causes

Occasionally, human health gets negatively affected due to physiological malfunctioning, psychological reasons or pathogenic (disease-causing) organisms. The term disease means Dis-ease or without ease or discomfort. Disease can also be defined as an impairment (malfunctioning) of the normal state of the living organism that disturbs or modifies the performance of the vital functions. Disease may be a response to

- Environmental factors (as malnutrition, industrial hazards or climate),
- Specific infective agents (as worms, protozoans, fungi, bacteria or viruses),
- Inherent defects of the organism (as genetic anomalies)
- Combination of these factors.



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03. Sources of Disease

(i) Intrinsic or Internal Factors

The disease causing factors which exist within the human body are called intrinsic factors. The important intrinsic factors which affect human health are following :

- Malfunctioning or improper functioning of various body parts such as heart, kidney, liver, etc.;
- Genetic disorder ;
- Hormonal imbalances
- Malfunctioning of immune system of body, e.g., allergy.

<i>Disease</i>	<i>Hormone involved</i>	<i>Level of hormone</i>
• Grave's disease (Exophthalmic goitre)	• Thyroid hormones	• Hypersecretion
• Cretinism (in infants)	• - do -	• Hypersecretion
• Myxoderma (in adults)	• - do -	• Hypersecretion
• Addison's disease	• Aldosterone	• Hyposecretion
• Diabetes mellitus	• Insulin	• Hyposecretion

The diseases caused by intrinsic sources are called organic or metabolic diseases. Some of the diseases caused by intrinsic sources or factors are : Cardiac failure(Heart attack), Kidney failure, Osteoporosis, Myopia, Cataract, Sick cell anaemia, Haemophilia, Dwarfism, Gigantism, Cretinism, Diabetes, Allergies (e.g., asthma), Arthritis, Cancer

<i>Type of disease</i>	<i>Causes of disease</i>	<i>Example</i>
• Physical	• Temporary or permanent to body parts.	• Bone fracture, leprosy
• Infectious	• Invasion of the body by other organisms (viruses, bacteria, fungi, protozoans, nematodes, insects, etc.)	• Typhoid, diarrhoea, malaria, hepatitis, AIDS, T.B., polio, influenza, cholera.
• Deficiency	• Inadequate diet	• Kwashiorkor, marasmus, scurvy, rickets, anaemia, goitre, xerophthalmia, beri-beri
• Inherited	• Defective genes passed on from parents to offspring.	• Haemophilia, sickle-cell anaemia, cystic fibrosis.
• Degenerative	• Organs and tissues wear away and do not work so well with age.	• Arthritis, poor sight and hearing defects.
• Mental	• Brain damage or psychological	• Depression, paranoia
• Social	• Social interaction with family friends and strangers.	• Drug dependence, alcoholism, smoking unhealthy life-styles, social isolation