

Board – CBSE

Class – 9

Topic – Why do we fall ill?

Introduction

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Health

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Community Health

Maintaining proper hygienic and sanitary conditions of the environment.

Providing good socio-economic conditions.

Providing health care services.

Imparting health education and promoting public awareness.

Providing proper facilities for preventing diseases.

Differences between Being Healthy and Disease-free

Being Healthy	Being Disease-free
It is a state of being well enough to function well physically, mentally and socially.	It is a state of absence from diseases.
It refers to the individual, physical and social environment.	It refers only to the individual.
The individual has good health.	The individual may have good health or poor health.

Disease and Its Causes

What does the disease look like?

A disease is any abnormal condition of the body or mind that causes discomfort or malfunctioning of a body or body organ.

Acute and Chronic Diseases

(i) **Acute Diseases:** A disease that occurs suddenly and lasts for a short period of time.

Example: Malaria

(ii) **Chronic Diseases:** A disease that lasts for a long time.

Example: Tuberculosis

Causes of Diseases

Intrinsic Factors: Factors present within the body.

Diseases caused by:

1. Malfunctioning of the body
2. Genetic disorders
3. Hormonal imbalances
4. Allergies

Extrinsic factors: Factors present in the external environment.

Diseases caused by:

1. Microorganisms
2. Pollution
3. Imbalanced diet
4. Habit-forming substances.

Infectious and Non-infectious Causes

(i) **Infectious Diseases:** The diseases which spread due to infection by **microorganisms**. It is communicated from diseased person to healthy person, caused by some biological agents/pathogens like viruses, bacteria, fungi, protozoans, fungi worms.

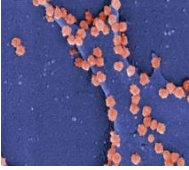
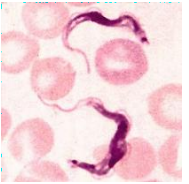
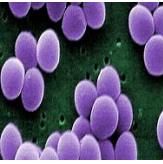
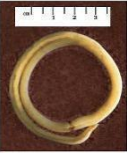
(ii) **Non-infectious Diseases:** The disease which does not spread by contact between infected and healthy persons through air and water.

Infectious Disease

Infectious Agents: are bacteria, viruses, fungi, protozoans, and worms.

Infectious Agents	Diseases
Viruses	Common cold, influenza, measles, chickenpox, AIDS, Hepatitis-B, etc.

Bacteria	Cholera, typhoid, TB, tetanus, anthrax, food poisoning, etc.
Fungi	Skin infections
Protozoan	Malaria, kala-azar, amoebic dysentery, sleeping sickness
Worms	Intestinal infections, elephantiasis

Micro-organisms	Image	Disease
SARS Viruses		Acute respiratory distress (severe breathing difficulty) and sometimes death.
Trypanosoma		sleeping sickness
Staphylococcus bacteria		Acne
Adult roundworm		Infection of the small intestine

<p>Leishmania</p>		<p>kala-azar.</p>
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Means of Spread of Infectious Diseases

Infectious diseases are transmitted from person to person by direct or indirect contact.

Through air: Microbial agents can move from an affected person to someone else through the air.

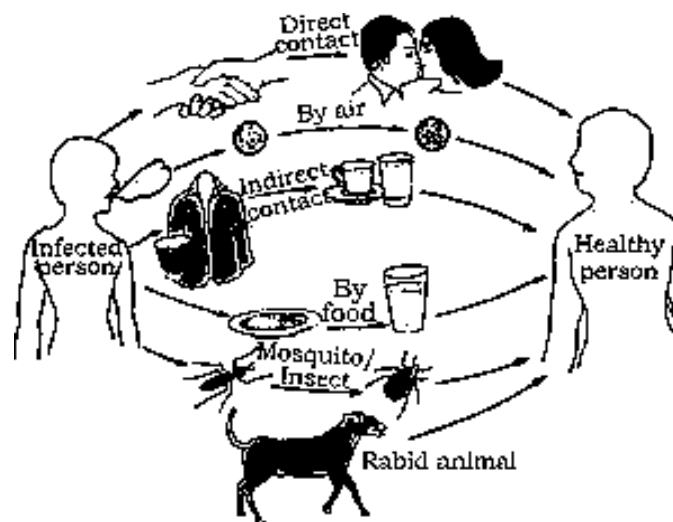
Example: Common cold, pneumonia, tuberculosis

Through water: The microbes enter into our body by drinking/eating polluted and contaminated water/food, like cholera, amoebic dysentery, etc.

Through Vectors: Some organisms like the female anopheles mosquito also work as a vector of disease, like malaria, dengue, yellow fever, etc.

Through sexual contact: These diseases are transmitted by sexual contact from one partner to another. However, these diseases are not transmitted by casual physical contact.

Example: AIDS



Common methods of transmission of diseases.

ORGAN-Specific and Tissue-Specific Manifestations

Microbes which enter through the nose are likely to go to the lungs. (Bacteria which cause tuberculosis of the lungs).

Microbes which enter through the mouth are likely to stay in the gut (bacteria that causes typhoid) or liver (bacteria that causes jaundice).

Virus which causes AIDS enters the body through sexual organs during sexual contact and spreads through the lymph to all parts of the body and damages the immune system.

Virus which causes Japanese encephalitis (brain fever) enters the body through a mosquito bite and goes and infects the brain.

Principles of Treatment

The treatment of infectious diseases consists of two steps. They are to reduce the effects of the disease (symptoms) and to kill the microbes which caused the disease.

(i) To reduce the effects of the disease: This can be done by taking medicines to bring down the effects of the disease like fever, pain, or loose motions, etc., and by taking bed rest to conserve our energy.

(ii) To kill the microbes: This can be done by taking suitable antibiotics and drugs which kill the microbes and the disease is cured.

Principles of Prevention

Drink clean boiled or purified water.

Cover the food, to prevent contamination by flies and cockroaches.

Eliminates sites of breeding by clearing stagnant water.

Maintain personal hygiene like taking bath daily, keeping nails short and clean, wearing clean clothes, etc.

Take a balanced diet.

List of Few Diseases

Disease	Pathogen	Carrier	Symptoms
Malaria	Protozoa	Female anopheles mosquito, Cockroaches etc.	Recurrent fever, chills
Typhoid	Bacteria – Salmonella	"	High fever and intestinal infections
AIDS	Virus – HIV	-	Not a disease in itself, it affects our lymph glands thereby decreasing our immunity
Dengue	Virus	Female aedes Egypte mosquito	Headache + fever
Kala-azar	Protozoa – Leishmania	Sandfly	Brain fever
Round worms	Ascaris in intestine	-	Stomach ache
SARS	Bacteria	-	-