

9th Standard Science

Why Do we Fall ill

Introduction

Health is a state of complete physical, mental and social well-being.

Basic conditions for good health:

- Proper balanced and nutritious diet.
- Personal hygiene.
- Clean environment and surroundings.
- Healthy air, no pollution in the surrounding.
- Regular exercise.
- Proper rest.
- Good standard of living and economic status.

Disease: when the body is not at ease i.e., comfortable then it is said to have a disease.

When there is a disease, the functioning or appearance of one or more systems of the body changes.

Depending on the duration—disease is classified as acute or chronic.

Acute disease: Diseases that last for only short period of time, e.g., headache, common cold etc.

Chronic disease: Diseases that last for long time, are called chronic diseases, e.g., elephantiasis, tuberculosis, etc.

Causes of diseases: Immediate cause and contributory cause.

Immediate cause: The organisms that enter our body and causes disease is called immediate cause. For example, virus, bacteria, protozoa etc.

Contributory cause: The secondary factors which led these organisms enter our body are called as contributory cause. For example, dirty water, unclear surroundings, contaminated food, improper nourishment, poverty, poor standard of living etc.

Diseases may be due to infectious and non-infectious causes.

(a) Infectious causes: Diseases where microbes are the immediate causes are called infections diseases. The infection spreads from one person to another.

(b) Non-infectious causes: Some diseases that do not spread in the community, but remains internal are called non-infectious diseases. Example, cancer, genetic abnormalities, high blood pressure etc.

Infectious diseases (Communicable diseases): When a disease causing organism enters our body it causes infection, it multiplies and grows in the body called host and micro-organisms multiplies in the host body.

Cause of Infections	Diseases
Bacteria	Tuberculosis, tetanus, typhoid, cholera
Virus	AIDS, polio, chickenpox, rabies, measles
Fungi	Skin diseases, food poisoning
Protozoan	Malaria, amoebiasis, kala-azar
Worm	Filariasis

Infectious diseases spread through:

- **Air:** Causes air-borne diseases due to bacteria, virus e.g., common cold, influenza, measles, tuberculosis.
- **Food and water:** Is caused due to contaminated food and water that contains bacteria, virus, worm etc. Example, cholera, typhoid and hepatitis.
- **Contact:** Many diseases spread by contact of infected person with the healthy person. Examples, fungal infection, scabies etc. AIDS and syphilis spread due to sexual contact.
- **Body fluids:** Body fluids like blood, semen, mother milk when infected can also cause disease. Example, AIDS.

Antibiotics: These are the chemicals (medicine, drugs) that block biochemical pathways important for bacteria. They are used for diseases caused by bacteria.

Inflammation: When an active immune system release many cells to the affected tissue to heat-off the disease-causing microbes it is called inflammation. Local effects caused on body due to inflammation are—swelling, pain, fever and redness.

Principles of treatment

- To reduce the effects of the diseases.
- To kill the cause of the disease i.e., to kill the microbes like bacteria fungi, protozoa.

Principles of Prevention

- General method
- Specific method

General ways of preventing infections relate to preventing exposure.

Prevention of exposure can be done tin following ways:

- For air borne infections—valid -visiting public place, cover your nose and mouth while coughing.

- for water borne infections- Drink, clean and boiled thinking water.
- For vector borne infections Keep the surroundings clean, do not keep any puddle of water open in the surrounding as it allows the breeding of mosquitoes.
- Self immune system that can (fight off and kill microbes when it enters our body.
- Availability of proper and sufficient -food for everyone.

Specific ways: 1% (giving vaccines, a childhood immunisation that its given to the children for (preventing infectious diseases.

