Chapter 13: "Why do we fall ill?"

KEY CONCEPTS :

CONCEPTS
Significance of Health
Disease and Its causes
Infectious diseases
Principles of prevention of diseases

1."Health" is a state of being well enough to function well physically, mentally, and socially.

2."Disease"(disturbed ease) means being uncomfortable. One or more systems of the body will change, give rise to "Symptoms" (Cough, loose motions, pus formation, headache, fever, breathlessness, vomiting, fits, unconsciousness, inflammation , swelling and general effects - a Doctor look for the basis of symptoms). Diseases are basically two types- Acute Disease & Chronic Disease

3. Acute Disease: The disease which lasts for only a short period of time is called Acute Disease Ex. Common Cold.

4.Chronic Disease: The disease which lasts for long period of time is called Chronic Disease Ex. Tuberculosis.

Acute Disease	Chronic Disease
They are short duration disease	They are long lasting disease
Patient recovers completely after the cure	Patient does not recover completely
There is no loss of weight or feeling of tiredness afterward	There is often loss of weight of feeling of tiredness
There is short duration loss of work and efficiency	There is a prolonged loss of work and efficiency

5. Causes of Diseases : Most of the diseases have many causes, rather than one single cause, like unclean water, nourishment, genetic differences, genetic abnormalities e.g. Based on the causes diseases are of two types: Non-Infectious Diseases and Infectious Diseases.

6. Non-Infectious Diseases: Not caused by infectious agents, mostly internal and non-infectious cause. Ex. Cancer

7. **Infectious Diseases:** Caused by infectious agents.

SN	**Type Of Disease**	Example
1	**Bacterial diseases**	- Typhoid, Cholera, Tuberculosis, Acne, Anthrax,
2	**Viral diseases**	- Common Cold, Influenza, Dengue fever, AIDS, Japanese encephalitis or brain fever
3	**Fungal diseases**	Skin diseases
4	**Protozoan diseases**	-Malaria (Plasmodium), Kalaazar (Leishmania), Sleeping sickness(Trypanosomes)
5	**Worm diseases**	- Ascariosis (Round worm), Elephantiasis(Wuchereria)

a)The infectious diseases spread by agents are called as **Communicable Diseases.**

SN	**Type of Disease**	Example
1	**Air born Diseases**	- Pneumonia, common cold, Tuberculosis;
2	**Water born diseases**	- Cholera, hepatitis
3	**Sexual Diseases**	- HIV, Syphilis.
4	**Animal born Disease**	- Rabbis. *(Vector- the animal carrying infectious agent from a sick person to another potential host without getting affected Ex. Mosquito carrying Malaria Parasite).

9. Principles of Treatment:

1. **Antibiotics-** many bacteria make a cell wall to protect themselves, the antibiotic (Penicillin) blocks the bacterial process that builds cell wall and blocks the biochemical pathways. Antibiotics do not work against viral infections. Antiviral medicine is harder than making Antibacterial medicine because Virus has only few biochemical mechanisms of their own. Other medicines bring down fever, reduce pain or loose motions. We can take bed rest to conserve energy.

10 Principles of Prevention : Following three limitation are normally confronted while treating an infectious disease:

- Once someone has disease, their body functions are damaged and may never recover completely.
- Treatment will take time, which means that someone suffering from a disease is likely to be bedridden for some time even if we can give proper treatment.
- The person suffering from an infectious disease can serve as the source from where the infection may spread to other people.

General ways of preventing infectious disease :

- Air-borne – We can prevent exposure by providing living condition that are not overcrowded.
- Water-borne – prevent by providing safe drinking water. This is done by treating the water to kill any microbial contamination.
- Vector-borne – We can provide clean environment, which would not allow mosquito breeding.

11. **Immunity:** Even in cells there is repair mechanism called" **Immunity".** Immune cells manage to kill off the infectious agents. **Smallpox disease** is eliminated by developing memory cells for particular infection by mimics the microbes, called" **Vaccine"**. The **basis of Immunization**- if you had smallpox once, there was no chance of suffering from it again. Proper nutrition is essential to maintain body immunity. There are vaccines against tetanus, diphtheria, whooping cough, measles, polio and many other diseases.

12. **Prevention of disease is better than cure. Hygiene is the basic key to maintain good health.**

(Even in cells there is repair mechanism called" Immunity". Immune cells manage to kill off the infectious agents.)

9. Explain with an example the term Vaccine. (Smallpox disease is eliminated by developing memory cells for particular infection by mimics the microbes, called" Vaccine").

10. State reasons to support "Prevention of disease is better than cure".