**Why Do We Fall Ill?**

**Organ specific and tissue specific manifestation:**

When a microbe infects the tissues of the body of an individual in a particular type of disease, it is termed as tissue specific manifestation for ex- in HIV the virus infects the tissue and cells of the organisms making decreasing his her immunity.

If any microorganism affect certain organs in an individual like lungs or kidneys then it is known as organ specific manifestation.

Different microbes have evolve to affect different parts of the body. The selection is generally connected to their point of entry.

1. If the entry point is nose then they usually go to lungs. Ex- TB bacteria
2. If the entry point is mouth they may stay in the gut lining or go the liver. Ex- typhoid bacteria remains in the gut whereas that causes jaundice go the liver.
3. The AIDS causing virus enters into the body through sexual organs and then spread to lymph nodes all over the body.
4. Malaria causing microbes enter into our body through mosquito bite and goes to liver and then to the RBC.
5. The virus causing Japanese encephalitis or brain fever enters through a mosquito bite and goes to the brain.

Inflammation:

**Principles of Treatment:**

There are two ways for treatment of infectious disease

(i) To reduce the effects of the disease: The main focus is to reduce the symptoms which are usually due to inflammation. For example rest is taken to conserve energy, medicines are taken to bring down fever or to reduce pain or loose motion.

(ii) To kill the disease causing microorganisms: The main focus on this is to get rid of the disease causing microbes for the body. For ex- medicines like antibodies are taken to kill microbes.

**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.
 **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.

**Ways of prevention of disease**

**(1) 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.