

# Infection

## → Infection :

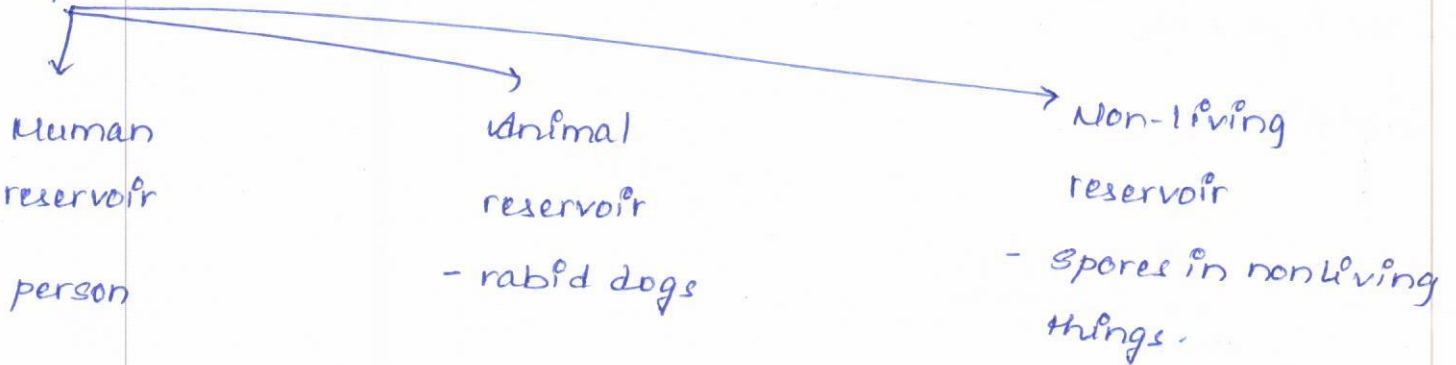
- The entry & multiplication of infectious agent in body of man & animals
- A disease resulting from an infection is called infectious disease.

## → Reservoir & source of Infection :

### a) Reservoir :

- It is a natural habitat in which infectious agent lives & multiplies.

### - Types



### b) Source of Infection :

- The person, animal, object or substance from which an infectious agent passes or is distributed to host."
- Contamination: refers to presence of disease causing agent in non-living material used by host
- Infestation: refers to lodgement, development & reproduction of parasites on the surface of body or in clothing.

## → Classification of Infection:

- Primary Infection: The first infection of a parasite
- Secondary Infection
- Cross Infection
- Zoonotic Infection
- Nosocomial Infection
- Exogenous Infection
- Endogenous Infection
- Subclinical Infection
- Clinical Infection
- Re-infection.

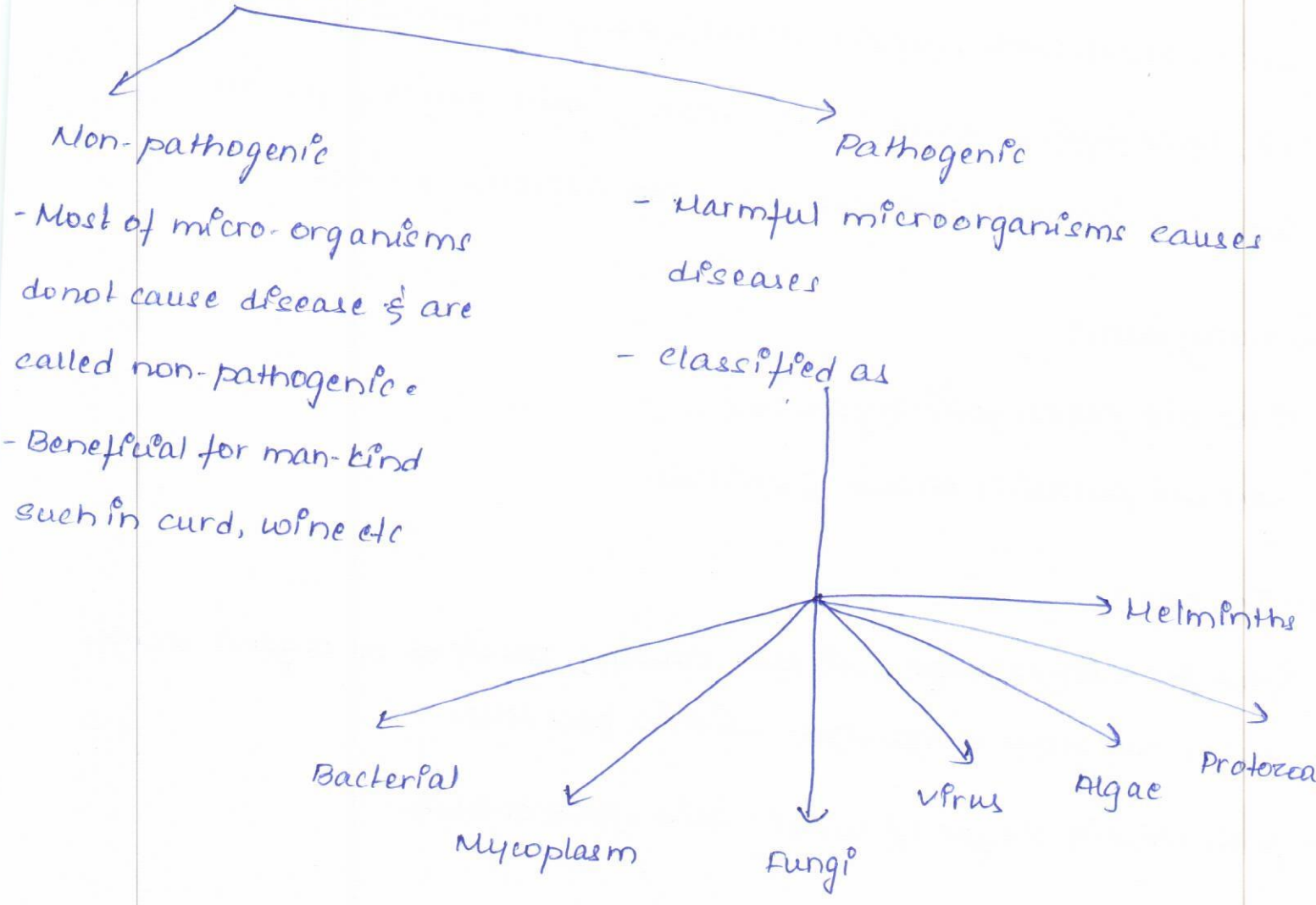
## → Causes of Infection:

- No. of invading organisms
- Virulence of organisms
- Resistance of body to disease
- Immunity

## → Classification & characteristics of Micro-organisms:

- Micro-organisms are usually single celled organisms, not visible to naked eye.

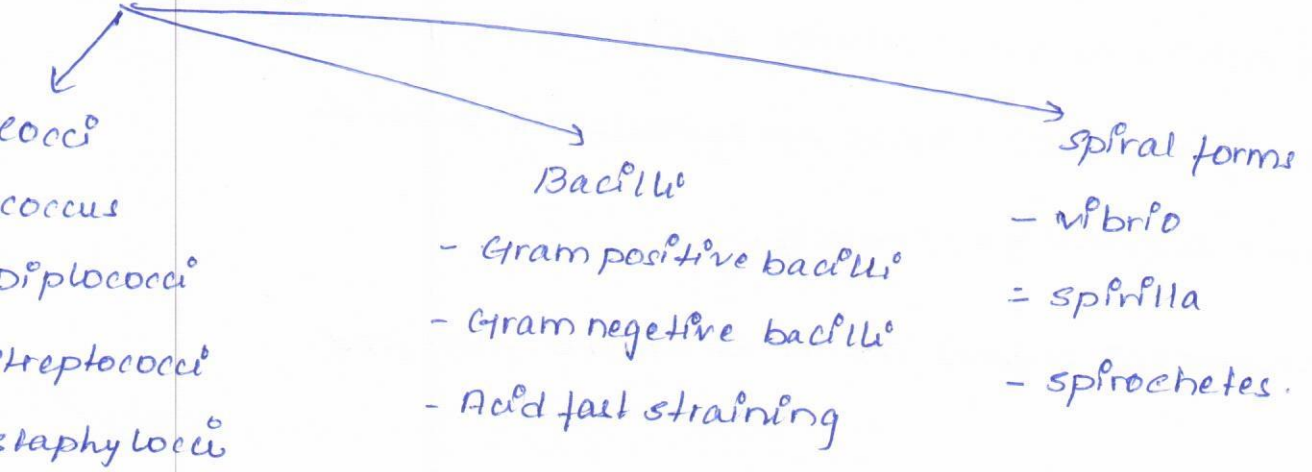
→ Classification



→ Characteristics:

- 1) Bacteria:
- one-celled organisms
  - Reproduce asexually

Types:



## 2) Rickettsia

- small, unicellular, gram negative, obligate intracellular parasites
- They have typical bacterial cell wall & multiply by fission
- They are intermediate form between bacteria & virus

## 3) Mycoplasma:

- These are prokaryotic organisms
- More are parasites on man & animals.

## 4) Poisons:

- These are non-cellular, disease causing particles of organic matter which can grow & multiply within host cells.
- They contain 1 type of nucleic acid, RNA or DNA.

## 5) Protozoa:

- These are lowest & simplest forms of all animal life
- These are unicellular organisms.
- They multiply by binary fission.

## 6) Fungi:

- These unicellular or multicellular eukaryotic organisms
- They have rigid cell wall made up of cellulose or chitin
- They produce asexually, sexually.
- They can decompose organic matter to absorb their food.

### 7) Algae :

- They are chlorophyll bearing, unicellular or multicellular plants
- mostly aquatic
- They may produce asexually or sexually

### 8) Helminths :

- They are multi-cellular animals
- Adult stage : definite host
- Larval stage : intermediate host.

#### - Types

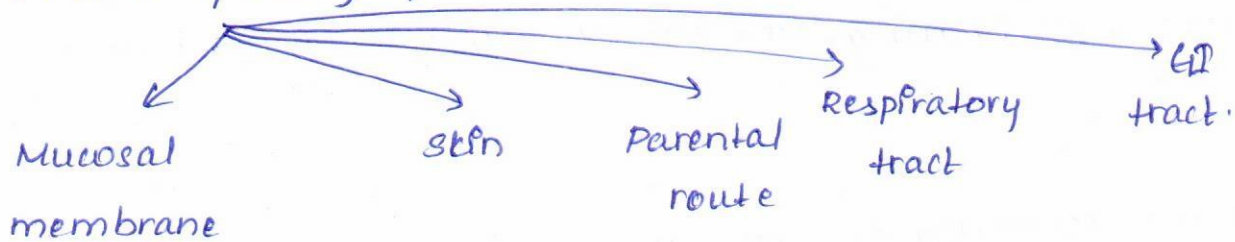


### ⇒ Incubation Period & Spread of Infection:

→ Incubation period : when pathogen infect a person, the microbes multiply till they produce enough toxin or tissue damage to make symptoms of disease begin to appear

- The interval between infection & 1st appearance of disease is called incubation period.
- It may vary from 24 hrs to several months.

→ Portal of Entry of Microbes :



→ Transmission of Infection :

1.) Contact transmission :

- Transmission directly from patient by physical contact
- contaminated objects are called fomites.

2.) Vehicle Transmission :

- Transmission through water, food, milk or blood.

3.) Vector Transmission

- Transmission of disease through arthropods (mosquitoes)

4.) Air borne Transmission :

- Transmission of disease through air, water droplets

5.) Transplacental Transmission :

- Disease from infected mother to fetus by placenta eg. AIDS.