

## STD 10-BIOLOGY-FIRST BELL-CLASS-26 DATE 20/10/2020

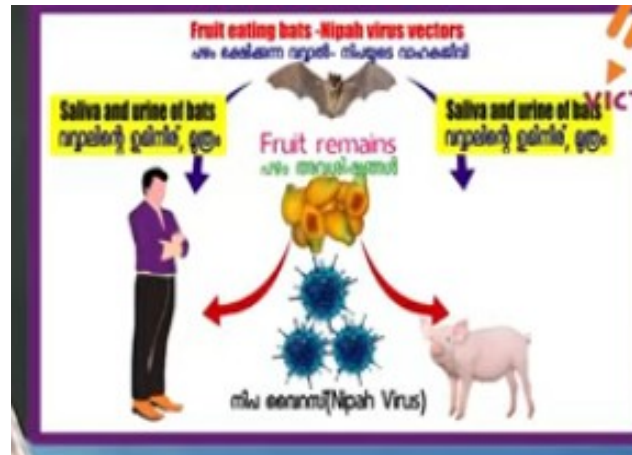
### Chapter – 4 Keeping Diseases Away

#### Virus

- Virus has the simple structure with a DNA or RNA molecule within a protein coat.
- Virus has no cell organelles as seen in normal cells. Hence virus multiplies by taking control over the genetic mechanism of the host cells.
- Viruses infect not only human beings but also plants, other animals and even bacteria.

#### Viral Diseases

**Nipah** was the most fatal of the diseases that Kerala faced recently. This is a viral disease.



#### Modes of transmission:

- Directly from bats through its saliva and urine,
  - Through remains of fruits eaten by bats,
  - Through pig which eat the remains of fruits eaten by bats,
  - from patient to healthy person through atmospheric air.
- Nipah virus was first observed in Malaysia in 1998.
  - **Vectors of Nipah virus:** Fruit eating bats.

#### Symptoms of Nipah

- Fever
- Headache
- Cough
- Dizziness
- Unconsciousness

#### Precautions to prevent transmission :

- Wear mask and gloves
- Avoid eating fruits eaten by other organisms
- While taking care of animals wear mask and gloves
- Wash hands with soap and clean water

#### AIDS(Acquired Immuno Deficiency Syndrome )

**Causative agent:** HIV( Human Immunodeficiency Virus)

• **How does HIV multiply in the human body?**

- The virus enters the body.
- Then it multiplies using the genetic mechanism of the lymphocytes.

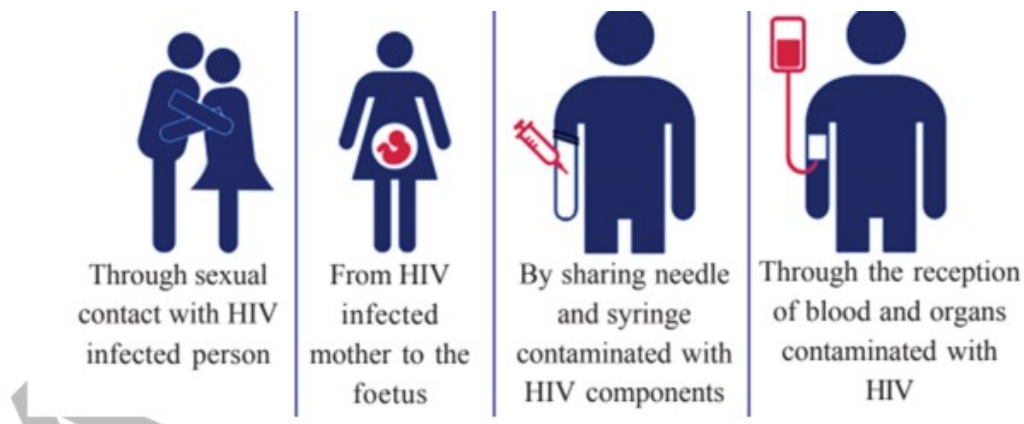
➤ **The number of lymphocytes and AIDS**

- HIV (Human Immuno deficiency Virus) enters the body and multiplies using the genetic mechanism of lymphocytes.
- Hence the number of lymphocytes decreases considerably and reduces the immunity of the body.

➤ **Condition that makes AIDS fatal**

*In Aids patient the number of lymphocytes decreases considerably and reduces the immunity of the body. Various other pathogens which enter the body in such a situation make the condition of AIDS fatal.*

➤ **What are the way by which a person gets infected with HIV?**



- Through sexual contact with HIV infected person
- From HIV infected mother to foetus
- By sharing the syringe and needle contaminated with HIV components
- By receiving blood or organ from an AIDS patient

➤ **AIDS does not spread under the following situations:**

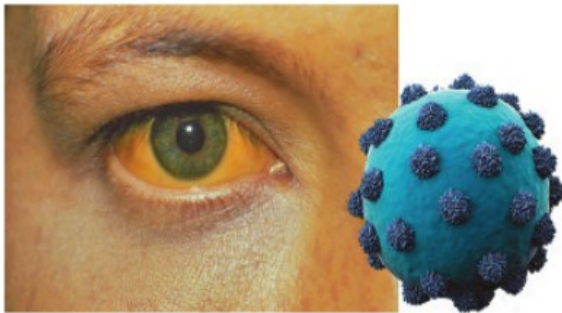
- By touch, shaking hands, coughing, sneezing

- Bites of mosquitoes, house flies etc.
- By staying together and sharing food.
- By using the same toilet.
- By bathing in the same pond.
- **What should be our attitude towards AIDS patients. Discuss.**
- Never hate an AIDS patient.
- Let's be sympathetic towards them.
- Give them love and care.
- Create awareness among the patients and their relatives and Publics

## Hepatitis

- Hepatitis is a liver disease.
- Hepatitis is also caused by virus.

### Symptoms of hepatitis



- Inflammation of the liver is its major symptom.
- When the flow of bile secreted by the liver is blocked, an increase in the level of bile pigment called bilirubin in blood is noticed.
- This imparts dark yellow colour to the mucus membrane, white portion of the eyes and the nails. This is the external symptom of the disease.

### Modes of transmission

- Through contaminated food and water,
- Blood components and excreta of the patient.
- Certain hepatitis do get transmitted in the same way as the transmission of HIV.

**Dengue fever and Chikunguya** are viral diseases. These diseases are transmitted through mosquitoes.

### Precautions to be taken to prevent the transmission :

- We must avoid the presence of mosquitoes in and around the house.
- Use mosquito repellents to keep away mosquitoes.

- Fix nets on doors and windows.
- Avoid all situations of water being stagnant.
- Observe Dry Day at least once in a week.

**EVALUATION**

1.

<b>DISEASE</b>	<b>MODE OF TRANSMISSION</b>
-----	<b>SPREAD THROUGH CONTAMINATED WATER</b>
-----	<b>SPREAD THROUGH WATER</b>
<b>AIDS</b>	-----

2. Collect information on other viral diseases and their modes of transmission and prepare a table.