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### Assignments

Write Note on following diseases.

Polio: (Poliomyelitis, infantile paralysis)

Polio is a highly infectious disease, mostly affecting young children, that attacks the nervous system and can lead to spinal and respiratory paralysis, and in some cases death.

It was formally recognized as a condition in 1840 by German physician Jakob Heine. (WHO)

U.S physician Jonas Salk created its vaccine in 1950s. (Ref: WHO)

Symptoms include sore throat and fever, headache, neck stiffness and paresthesia.

It mainly affects children under 5 years of age.

Poliovirus, the causative agent of polio (also known as poliomyelitis), is a serotype of the species Enterovirus C.

Polio-Eradication, the goal of permanent global cessation of circulation of the poliovirus and hence elimination of poliomyelitis. The effort began in 1988, led by the World Health Organization, the United Nations Children Fund and Rotary Foundation.

These organization launched the campaign through the Global Polio Eradication Initiative. Since 1994, the Pakistan Polio Eradication Programme has been working to end the crippling polio virus.

### Prevention Of Disease:-

Prevention of disease is accompanied by vaccination. There are two types of vaccines

- (i) Oral polio vaccine (OPV)
- (ii) Inactivated polio vaccine (IPV)



## Polio Treatment,

There is no cure for polio. However, pain relievers, ventilator, physical therapy, Antispasmodic medication, antibiotics, corrective braces, wheelchair may help to recover from symptoms.

## Malaria

Malaria is an acute febrile illness caused by plasmodium parasites through the bites of infected female Anopheles mosquitoes.

## Symptoms and Diagnosis:

First symptoms begin within ten to fifteen days after the mosquito bite.

Fever, headache and chills are mostly experienced. Malaria can be diagnosed through these two tests; microscopic examination of blood smears.

and rapid diagnostic test.

## Treatments Available for Malaria:

Malaria is a treatable disease. Artemisinin-based combination therapies are most effective anti-malarial medicines.

## Preventions Of Malaria:

Malaria is a preventable disease.

### Vector Control Interventions:

It is the main approach to prevent malaria. Usage of insecticide-treated nets, indoor residual sprays

### Chemopreventive Therapies:

These therapies are used to treat malarial patients but some medicines are used to prevent malaria. Chemoprophylaxis drugs are recommended by WHO to prevent Malaria.



# Hepatitis

Hepatitis is an inflammation of the liver that is caused by variety of infectious viruses

Caustive Agent: There are five main strains of the Hepatitis virus, referred to as types A, B, C, D and E.

In particular, types B and C lead to chronic disease

WHO says,

"An estimated 354 million people worldwide live with Hepatitis B and C."

Symptoms: Many people with Hepatitis A, B, C, D or E exhibit mild symptoms or no symptoms at all. Symptoms of Hepatitis may include fever, malaise, loss of appetite, diarrhoea, nausea, abdominal discomfort and jaundice.

## Treatment:

Safe and effective vaccines are available to prevent hepatitis B virus (HBV) and D virus (HDV).

Chronic hepatitis infections can be treated with anti-viral agents.

There is no specific treatment for HBV and HEV.

## Prevention of Hepatitis:

Vaccines exist to prevent hepatitis B, E, A. There is no vaccine for hepatitis C.

“WHO study found that an estimated 4.5 million premature deaths could be prevented.”



# Dengue

Dengue (break-bone fever) is a viral infection that spreads from mosquitoes to people. It is more common in tropical climates. Aedes aegypti is the main causal agent.

## Symptoms

Most people with dengue have mild or no symptoms and will get better in 1-2 weeks.

Rarely, dengue can be severe and lead to death.

Symptoms occur after 4-10 days after infection and last for 2-7 days.

Symptoms may include:

- \* High fever ( $40^{\circ}\text{C}$  /  $104^{\circ}\text{F}$ )
- \* Severe headache
- \* Pain behind the eyes
- \* Muscle and joint pains
- \* Nausea and vomiting
- \* Swollen glands
- \* Rash
- \* Bleeding gums or nose
- \* Weakness and pale skin

5.2 million cases were reported in 2019 of dengue fever." WHO

### Diagnosis and Treatment:

There is no specific treatment for dengue. The focus is on treating symptoms.

Acetaminophen (paracetamol) is often used to control pain. Non-steroidal anti-inflammatory drugs like ibuprofen and aspirin are avoided.

### Facts and Figures:

The largest number of dengue cases was reported in 2023. WHO reported 4.5 million cases, with 2300 deaths. A high number of cases were reported in Asia:

Bangladesh  $\Rightarrow$  521000

Malaysia  $\Rightarrow$  111400

Thailand  $\Rightarrow$  150,000

Viet Nam  $\Rightarrow$  369000



## Transmission:

- \* The dengue virus is transmitted to humans through the bites of infected female mosquito, the *Aedes aegypti*.
- \* Mosquitoes can become infected by people who are viremic with the dengue virus.
- \* Maternal transmission from a pregnant mother to her baby is also possible.
- \* Rare cases of transmission via blood products, organ donation and transfusion have been recorded.

## Prevention and Control:

Lower the risk of dengue fever by protecting yourself from mosquito bites by using:

clothes that cover as much of your body as possible;

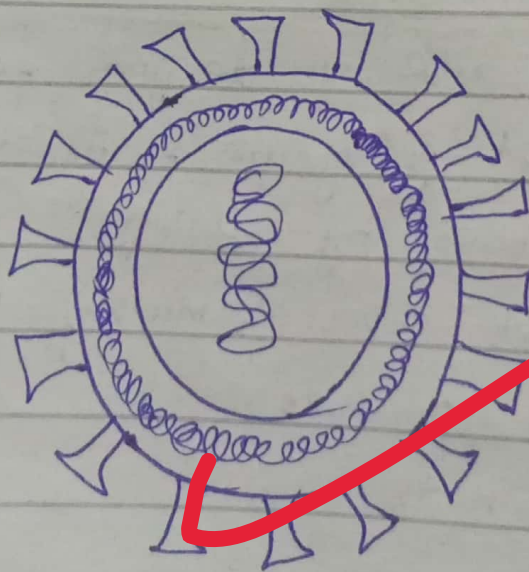
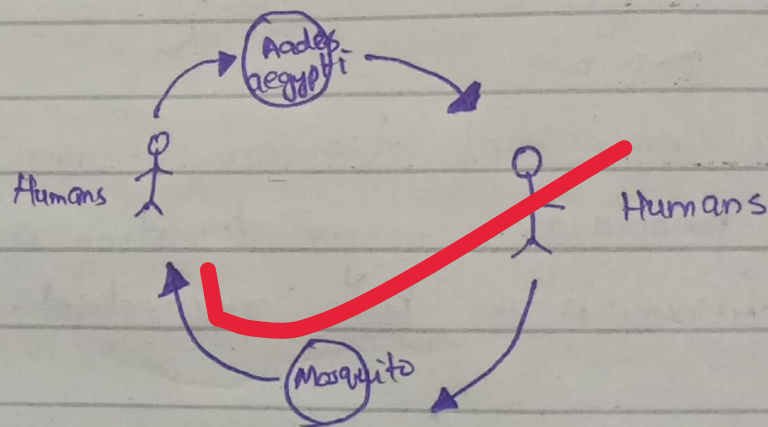
mosquito nets.

Window screens

Disposing of solid waste properly

covering, emptying and cleaning domestic water storage containers.  
Applying appropriate insecticides.

WHO Reports about half of the world population is now at risk of dengue with an estimated 100-400 million infections occurring each year.



Dengue Virus



# Diarrhoea

Diarrhea is loose, watery stools three or more times a day. It may be acute, persistent and chronic.

Researches estimate that about 179 million cases of acute diarrhea occur in the United States each year.

## Types Of Diarrhea:

- (i) Acute diarrhea is a common problem that typically lasts 1 or 2 days and goes away on its own.
- (ii) persistent diarrhea lasts longer than 2 weeks and less than 4 weeks
- (iii) Chronic diarrhea lasts at least 4 weeks

## Symptoms and Causes Of Diarrhea:

Loose, watery stools  
Cramping

Loss of control of bowel movement  
Nausea  
Abdominal pain.

## Treatment for Diarrhoea:

- \* Acute diarrhoea can be treated with medicines such as Imodium, Bismuth subsalicylate
- \* Doctor may prescribe anti-biotics for bacterial and parasitic infections
- \* Pro-biotics are also recommended in its treatment.
- \* Use of pedetral and saline water may recover your lost salts and water.

## Prevention:-

You can reduce your chances of getting infections by washing your hands  
Rotavirus vaccines  
Avoid drinking tap water



Foodborne illness can be prevented by properly storing, cooking, cleaning and handling foods.

Use drinks that contain electrolytes.

Good structure, arguments and presentation