

General Science and Ability

Assignment Topic

Q:- Define Polio? Write down its causes and symptoms. Also Explain the treatment and prevention measures?

Polio :-

Updated January 9 2023, Polio or poliomyelitis is a disabling and life threatening disease caused by the poliovirus. The virus spread person to person.

Polio is an illness caused by a virus that mainly affected nerves in the spinal cord or brain stem, leading to paralysis in some cases.

In the mid-20th century, "Jonas Salk & Albert Sabin" independently developed vaccines for Polio, Salk's inactivated polio vaccine (IPV) was introduced in the 1950s, while Sabin's oral polio vaccine (OPV) followed in the early 1960s.

Polio virus is commonly found in developing countries such as (Africa, Asia) and other places with poor sanitation/hygiene.

Causes of Polio

Polio is caused by the poliovirus, which is a member of the enterovirus genus.

(1) Polio virus Infection

(2) Fecal oral Transmission

(3) Person to person spread

(4) Respiratory Droplets

(5) Contaminated objects

The widespread use of polio vaccines has played a crucial role in reducing the incidence of polio globally. The IPV and OPV are effective in preventing poliovirus infection and have been key tools in global efforts to eradicate the disease.

In the 19th and early 20th centuries, frequent epidemics saw polio become the most feared disease in the world. A major outbreak in "New York City" in 1916 killed over 2000 people and was the recorded US outbreak in 1952 killed over 3000.

Symptoms of Polio virus

Paralytic Polio
Paresthesia or abnormal
Sensation
Paralysis
Respiratory illness
Loose and floppy limbs
Meningitis

Non-paralytic polio
Sore throat
Fever
Tiredness
Headache
Back pain
Trouble swallowing and
breathing.

Treatment of Polio:

"There is no cure for polio, only treatment to alleviate the symptoms. Heat and physical therapy is used to stimulate the muscles and antispasmodic drugs are given to relax the muscles. While this can improve mobility, it cannot reverse permanent polio paralysis. Polio can be prevented through immunization."

Many who survived the disease faced lifelong consequences. An artificial respirator invented for treatment of polio patients but not successful.

GPEI \Rightarrow In 1988, the "Global Polio Eradication Initiative" was launched.

Prevention Measures:

There are two types of vaccines that can prevent polio.

(1) IPV \Rightarrow Inactivated Polio virus/Vaccines.

(2) OPV \Rightarrow Oral polio vaccines.

- Almost all children 99% who get all the recommended doses of IPV will be protected from polio.
- It is also important to practice good hand hygiene and wash hands often with soap and water.
- Alcohol-based hand sanitizers do not kill poliovirus.

