



## Poliomyelitis (Polio)

What is Polio?

Poliomyelitis (Polio) is a highly infectious viral disease that largely affects children under 5 years of age. The virus spreads from person to person and can infect spinal cord, causing paralysis.

Variations:

There are three variations of Poliovirus known as wild poliovirus type 1, 2, 3 (WPV1, WPV2, WPV3).

Type 2 & 3 have been eradicated while type 1 only exist in few parts of world. Type 1 most likely to cause paralysis. Virus that caused disease was first identified in 1909 by Austrian immunologist Karl Landsteiner.

Prevalence:

Cases due to polioviruses have decreased by over 99% since 1988 from an estimated 350,000 cases in more than 125 countries, to just two countries as of October 2023, as reported by World Health Organization (WHO).

Acc. to Pakistan Polio Eradication Programme total number of cases reported in year 2022 were 20, while in year 2023 6 cases have been documented. These cases are mainly clustered among children of KPK Province.



## Symptoms:-

According to Centre for Disease Control & Prevention (CDC) Most people who get infected with Poliovirus will not have visible symptoms. about 1 out of 4 people (25 out of 100) will have flu-like symptoms that can include:

Sore throat, fever, tiredness, Nausea, Headache, Stomach pain. these symptoms usually last 2 to 5 days, then go away <sup>on their own</sup>

A small portion of people may develop more severe symptoms that affect brain & spinal cord.

## Meningitis:

Its infection of coating of spinal cord or brain occurs in about 1-5 out of 100 people with polio infection.

## Paralysis:

In Paralysis, person can't move parts of body, or weakness in arms, legs or both occurs in 1 out of 200 to 1 out of 2000 people depending on type of virus.

Paralysis is most severe symptom that can lead to permanent ~~death~~ <sup>disability</sup> or death. even children who seem to fully recover can develop new muscle pain or paralysis as adult 15 to 40 years later. This is called Post-Polio Syndrome.



## Causes:

Polio is a highly contagious disease that is spread from person to person by several mode of transmission. It can enter through person's mouth, poor hand washing, eating or drinking contaminated food or water. It can be spread when infected child cough or sneeze infected droplets into the air.

Once contracted, the virus resides in infected person's intestine and throat. then it is taken up by blood vessels & lymphatic channels. The time from being infected to developing symptoms range from 5-35 days.

## Treatment

Polio is disease for which there is no cure. treatment therefore, focuses on systematic care and physical therapy to speed up muscle rehabilitation & avoid complications. following measures are used:

- 1- Getting enough rest & providing intimate care.
- 2- Using pain relievers such as "Ibuprofen" to alleviate pain.
- 3- Using warm compresses to help relieve muscle pain.
- 4- Swallowing exercises of the oral and tongue muscles; Practice drinking water or liquid diet.
- 5- Using splint or body braces to help align the spine and limbs in a proper position.



6- Using Physical therapy to prevent bone deformity and loss of muscle mass.

### Preventive Measures:

These are two types of vaccine that can prevent Polio. Inactivated Poliovirus vaccine (IPV) given as injection in leg or arm. oral Poliovirus vaccine (OPV) is still used throughout much of the world.

These vaccines protect children by preparing their bodies to fight the Poliovirus. European countries have shifted from OPV to IPV over the last decade.

Provision of clean water, improved hygiene practices & sanitation are imp. for reducing the risk of transmission.

Acc. to "Pakistan Polio Eradication Programme" new programme named "National Emergency Action Plan (NEAP)" is the annual document that outline the eradication strategy and for Polio.

As per NEAP the programme is committed to stop Poliovirus type 1 and type 2 transmission in Pakistan. Strategies have been designed to engage stakeholders, dispel misconceptions around vaccine safety and addressing causes of parents refusal the vaccine.

WHO provide support to NEAP including support to success training of more than 300,000 frontline workers.