



# Polio

## Why in News

Recently, India has decided to vaccinate Afghanistan returnees against [Polio](#) for free as a preventive measure against the **Wild Polio Virus**.

- **Afghanistan** and **Pakistan** are the only two countries in the world where polio is still [Endemic](#).

## Key Points

### ▪ About:

- Polio is a crippling and potentially **deadly viral infectious disease** that affects the nervous system.
- There are three individual and immunologically **distinct wild poliovirus strains**:
  - **Wild Poliovirus type 1 (WPV1)**
  - **Wild Poliovirus type 2 (WPV2)**
  - **Wild Poliovirus type 3 (WPV3)**
- Symptomatically, all three strains are identical, in that **they cause irreversible paralysis or even death**. However, there are **genetic and virological differences, which make these three strains separate viruses** which must each be eradicated individually.

### ▪ Spread:

- The virus is transmitted by **person-to-person mainly through the faecal-oral route** or, less frequently, by a common vehicle (for example, through contaminated water or food).
- It largely **affects children under 5 years of age**. The virus **multiplies in the intestine, from where it can invade the nervous system and can cause paralysis**.

### ▪ Symptoms:

- Most people with polio do **not** feel sick. Some people have only minor symptoms, such as fever, tiredness, nausea, headache, pain in the arms and legs, etc.
- In rare cases, polio infection **causes permanent loss of muscle function (paralysis)**.
- Polio can be fatal **if the muscles used for breathing are paralysed or if there is an infection of the brain**.

### ▪ Prevention and Cure:

- There is no cure, but it can be prevented through [Immunisation](#).

### ▪ Vaccines:

- [Oral Polio Vaccine \(OPV\)](#): It is given orally as a birth dose for institutional deliveries, then primary three doses at 6, 10 and 14 weeks and one booster dose at 16-24 months of age.
- [Injectable Polio Vaccine \(IPV\)](#): It is introduced as an additional dose along with the 3<sup>rd</sup> dose of [DPT \(Diphtheria, Pertussis and Tetanus\)](#) under the [Universal Immunisation Programme \(UIP\)](#).

### ▪ Recent Outbreaks:

- In 2019, polio outbreaks were recorded in the **Philippines, Malaysia, Ghana, Myanmar, China, Cameroon, Indonesia and Iran**, which were mostly vaccine-derived in which a rare strain of the virus genetically mutated from the strain in the vaccine.
  - According to the [WHO \(World Health Organisation\)](#), if the **oral vaccine-virus** is excreted and allowed to circulate in an unimmunised or under-immunised population for at least 12 months, it can **mutate to cause infections**.

#### ▪ **India & Polio:**

- India received **polio-free certification by the WHO in 2014**, after three years of zero cases.
  - This achievement has been spurred by the successful [Pulse Polio Campaign](#) in **which all children were administered polio drops**.
  - The last case due to wild poliovirus in the country was detected on 13<sup>th</sup> January 2011.

### **Polio Eradication Measures**

#### ▪ **Global:**

##### ◦ **Global Polio Eradication Initiative:**

- It was launched in 1988 by the **Global Polio Eradication Initiative (GPEI)**, by national governments and WHO. Presently, 80% of the world's population is now living in certified polio-free regions.
  - An estimated 1.5 million childhood deaths have been prevented, through the systemic administration of vitamin A during polio immunization activities.

##### ◦ [World Polio Day:](#)

- It is observed every year on **24<sup>th</sup> October** in order to call on countries to stay vigilant in their fight against the disease.

#### ▪ **Indian:**

##### ◦ [Pulse Polio Programme:](#)

- It was started with an objective of achieving hundred percent coverage under Oral Polio Vaccine.

##### ◦ [Intensified Mission Indradhanush 2.0:](#)

- It was a nationwide immunisation drive to mark the 25 years of [Pulse polio programme](#) (2019-20).

##### ◦ **Universal Immunization Programme (UIP):**

- It was launched in 1985 with the modification to '**Expanded Programme of Immunization (EPI)**'.
- The **objectives of the Programme include:** Rapidly increasing immunization coverage, Improving the quality of services, Establishing a reliable cold chain system to the health facility level, Introducing a district-wise system for monitoring of performance, Achieving self-sufficiency in vaccine production.

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