



## **POLIOMYELITIS**

Poliomyelitis can lead to paralysis, but severe disease is preventable through vaccination. Polio is transmitted through contact with the faeces and secretions of an infected person, or food contaminated with them. Most infected people have no symptoms, but those who do can become seriously ill, suffer paralysis or die.

### **WHAT IS POLIOMYELITIS?**

Poliomyelitis (polio) is a highly infectious disease caused by one of three wild poliovirus types (1, 2 & 3); it is spread through contact with infected faeces and nasal secretions/ saliva, or food contaminated with them.

The disease was prevalent early last century, causing the deaths of many thousands of young children until the introduction of an effective poliomyelitis vaccination in the 1950s.

Two wild virus strains – types 2 and 3 were declared eradicated by the WHO in 2015 and 2019, respectively. Type 1 remains with us and continues to be reported from two countries – Afghanistan and Pakistan.

### **WHAT ARE THE SYMPTOMS?**

The incubation period of polio averages from 7-10 days but can range anywhere from 3 days to over a month. Unless an individual has had a primary series of poliomyelitis vaccinations, once ingested, the poliovirus multiplies in the intestines and, in the vast majority of cases, it produces no symptoms (it is excreted through the bowels for several weeks, however). Around one-quarter of those infected will report mild symptoms such as fever, headache, vomiting and tiredness which resolve after a few days.

In a very small number of these cases, the infection will spread to the central nervous system, resulting in meningitis or, more seriously, enter the brainstem or spinal cord resulting in 'paralytic poliomyelitis' with characteristic asymmetric flaccid paralysis and loss of tendon reflexes.

While paralysis usually affects the legs, it can also spread to the chest muscles/ diaphragm with assisted ventilation required. Long-term effects of polio for those who survive can include disability and post-polio syndrome.

### **SALK POLIOMYELITIS VACCINE VS SABIN POLIOMYELITIS VACCINE**

Regarding poliomyelitis vaccination, the Salk vaccine of the 1955 was replaced with the live, oral poliovirus vaccine or Sabin vaccine in the early 1960s, which had the advantage of being cheaper, easy to administer and provided herd immunity. Unfortunately, one outcome of the weakened poliovirus used in OPV being excreted for a period of time, it can mutate and in areas of poor sanitation and little or no polio immunisation, become capable of causing disease - circulating vaccination-derived poliovirus (cVDPV). The polio vaccine used now in Australia is IPV, an inactivated polio vaccine, or viral vaccine (IPOL or in various combination vaccines).

In 2014, the WHO declared a Public Health Emergency of International Concern (PHEIC) under the International Health Regulations (IHR) and introduced temporary recommendations aimed at reducing the spread of poliovirus. Data on wild poliovirus (WPV1) and cVDPV (1 - 3) are regularly reviewed to provide advice to existing and newly affected countries on the management of cases and border controls.

In some cases, travellers may require poliomyelitis vaccination to enter or leave a risk country – this would be documented with an International Certificate of Vaccination or Prophylaxis to record the vaccine dose and serve as proof of poliomyelitis vaccination.

## WHERE IS IT FOUND?

The global incidence of polio has declined by around 99% since widespread vaccination programs were introduced and now the only endemic countries reporting wild poliovirus (WPV1) are Afghanistan and Pakistan. However, polio eradication eludes us due to the reasons previously explained and strains of cVDPV have continued to cause infections in several regions across the globe including Africa, Asia and the Middle East, and more recently they have been detected during wastewater surveillance in the UK and the USA (which also confirmed one cVDPV2 case with acute flaccid paralysis). [Read more](#)

## RISK TO TRAVELLERS

The risk of polio infection in travellers is generally low, however poliomyelitis vaccination is generally recommended if travelling to affected regions, particularly in the case of travellers visiting friends and relatives, for stays of long duration, anyone having contact with a polio-infected person or visiting areas of poor sanitation.

Poliomyelitis vaccination requirements may also be in place for some countries, according to outbreaks as specified by the PHEIC, and there are several WHO member states that have mandated polio vaccination at border entry or departure.

Speak to your travel health doctor for the recommendations or requirements for polio vaccination on your itinerary.

## HOW IS POLIOMYELITIS TREATED?

There is no cure for polio, and any treatments are directed at limiting and alleviating symptoms. The only way to protect yourself is through poliomyelitis vaccination.

## WHAT IS POLIOMYELITIS VACCINATION?

Type: Injection

Children:

- Inactivated viral vaccine
- Inactivated combination vaccine with Diphtheria/Tetanus/Pertussis and others.

Adults:

- Inactivated viral vaccine
- Inactivated vaccine in combination with Diphtheria/Tetanus/Pertussis

## SCHEDULE

Australian children receive poliomyelitis vaccinations using an inactivated vaccine (IPV) as part of the standard immunisation schedule – the primary series is given from 6-8 weeks of age with 3 doses administered at least 4 weeks apart. A booster dose at 4 years of age is the last scheduled vaccine dose.

Following the routine childhood vaccines, which include a series of polio vaccinations, a booster dose may be recommended every 10 years for travellers at risk, such as for travelling to polio-endemic or epidemic countries, as well as healthcare workers or laboratory workers who may come in contact with poliomyelitis cases.

To comply with the temporary recommendations under the PHEIC, it may be a requirement for some travellers to show proof of polio vaccination in the previous 4 weeks to 12 months. Check with your doctor for more information.

**Contraindications:** Poliomyelitis vaccination should not be administered to individuals who have previously experienced a serious reaction to this vaccine or those who are known to be hypersensitive to any of the vaccine components.

## LEVEL OF PROTECTION

The poliomyelitis vaccination provides over 95% of protection against severe infection with the poliovirus.

## POSSIBLE SIDE EFFECTS

Poliomyelitis vaccination side effects are generally mild with a severe allergic reaction rare. The mild symptoms may include:

- Pain, redness or swelling at the injection site occurs in 10-15% of individuals but resolves in 3 days.
- In young babies, decreased appetite, fever and crying.
- As with all vaccines, there is a small risk of an allergic reaction.

## THE HISTORY OF POLIO VACCINATION IN AUSTRALIA

By the late 1800s, after polio had been prevalent in many countries for countless years, it arrived in Australia. By 1911 polio was a notifiable disease in Tasmania and the other states followed in 1922. From 1937 to 1938 1,000 Tasmanian children contracted polio, and more than 1,000 Australians died from polio or were paralysed by it in the decade prior to 1955.

Even though the Australian government knew polio was faecally-transmitted in the 1950s, it took until 1972 for the National Sewerage Program to be introduced. Until then, hundreds of thousands of both poor and affluent homes were not connected to sewerage systems.

Australia began a mass poliomyelitis vaccination campaign in 1956 and was officially declared polio-free in the year 2000.

## IF TRAVELLING TO ENDEMIC OR EPIDEMIC AREAS, BOOK A POLIO VACCINATION TODAY

If you are travelling to Afghanistan or Pakistan, the two countries where the disease is endemic, or any country with an outbreak of poliomyelitis, it is strongly advised to seek medical advice on polio vaccination or a booster dose.

Polio vaccination for international travel is highly recommended (and may be a requirement in some cases) for endemic countries that haven't interrupted transmission of indigenous wild poliovirus. These countries may also be experiencing outbreaks of circulating vaccine-derived poliovirus.

In addition, outbreak countries may be those that had ended indigenous wild poliovirus transmission, but have been re-infected, either via imported wild or vaccine-derived poliovirus from another country. They may also be where vaccine-derived poliovirus has emerged and is circulating.

The bottom line is that all countries are at risk of polio until the disease has been completely eradicated from the world. Until then, the necessary measures needed by countries to reduce the risk to their populations and to minimise the health and economic consequences of polio infection are to keep strong population immunity levels through high vaccination coverage, as well as intensive disease surveillance for rapid detection and response.

**The current outbreak regions are:**

- Africa
- Asia
- North America
- Middle East
- Europe

To ensure you are vaccinated against polio or if you need a polio vaccination appointment, contact [Travelvax](#) today. We offer a convenient travel health consultation tailored to each individual's personal needs and itinerary. We're here for both individual and corporate travellers who want full immunisation or catch-up doses. Our information line [1300 360 164](#) is for both travellers and agents. Call us for answers to general travel questions about polio vaccinations or any other vaccines.

*References:*

WHO: <https://www.who.int/news-room/feature-stories/detail/two-out-of-three-wild-poliovirus-strains-eradicated>

GPEI: <http://polioeradication.org/polio-today/polio-now/public-health-emergency-status/>

Australian Immunisation Handbook: <https://immunisationhandbook.health.gov.au/vaccine-preventable-diseases/poliomyelitis>

PHEIC: <http://polioeradication.org/polio-today/polio-now/public-health-emergency-status/>

## **FAQS**

**More information on Poliomyelitis is available during your pre-travel consultation with Travelvax.  
Call 1300 360 164 for the location of the clinic nearest to you.**