

HEALTH EDUCATION CORNER



POLIO

Summary

Poliomyelitis (polio) is caused by a poliovirus that affects the digestive system and, in some cases, the nervous system. Symptoms vary from mild, flu-like symptoms to life-threatening paralysis and possibly death. If you are not immunised, you could contract polio if your food, water or hands are contaminated with the faeces (poo) of an infected person

Poliomyelitis (polio) is a serious disease, caused by infection with one of the three types of poliovirus. The virus is spread through contact with food, water or hands that are contaminated with the faeces (poo) or throat secretions of an infected person.

Symptoms vary from mild, flu-like symptoms to life-threatening paralysis. In one to two per cent of cases, polio affects the nerves, resulting in paralysis of the arms, legs or the diaphragm (which controls breathing). Between two and five per cent of people who develop paralytic polio will die. Half of those who survive will have permanent paralysis.

Polio can be prevented with immunisation. All children and adults should receive the vaccine.

Symptoms of polio

Polio symptoms generally appear between three and 21 days after infection. However, many people infected with poliovirus have no symptoms and may not even know they are affected.

In mild polio cases, symptoms include:

- Fever
- Tiredness and weakness (malaise)
- Headache
- Nausea and vomiting
- Muscle stiffness.

If the virus spreads to the nervous system, major illness such as meningitis (brain infection) and paralysis can occur. The onset of paralysis is generally quite rapid – usually within three to four days. Symptoms include:

- Severe muscle pain
- Stiffness of the neck and back, with or without paralysis
- Swallowing and breathing problems
- Long-term disability, due to paralysis of the muscles
- Death in severe cases, when breathing and swallowing muscles are paralysed.

How polio is spread

The poliovirus enters the body through the ‘orofaecal route’. That means it is spread when food, water or hands that are contaminated with the faeces (poo) or oropharyngeal (throat) secretions of an infected person are put into the mouth of another person.

A person may develop symptoms within three to 21 days of coming into contact with the virus. They will be most infectious seven to 10 days before and after the start of symptoms. However, they remain infectious as long as the virus continues to be excreted in their faeces (poo). This may continue for several weeks. Typically, the virus remains in the throat for one to two weeks.

Risk factors

You are most at risk of infection with the poliovirus if you haven’t been immunised against polio. Pregnant women, the elderly, the very young and people with a compromised immune system, such as those with HIV, are especially susceptible to infection. This is especially the case in parts of the world where sanitation is poor and immunisation programs are inadequate.

Factors that increase a person’s risk include:

- Travel to an area where polio is common or where an outbreak has recently occurred
- Living with or caring for someone who may be infected with the poliovirus
- Contact with someone recently immunised by oral polio vaccine (if you have not received the vaccine).

Diagnosis of polio

Diagnosis involves a doctor taking a medical history of the person and performing a physical examination for symptoms such as neck and back stiffness, abnormal reflexes, and swallowing and breathing problems. It usually involves ruling out other possible explanations for the person’s symptoms.

To confirm the diagnosis, the doctor will take a sample of throat secretions, stool or cerebrospinal (brain and spinal cord) fluid to test for the poliovirus.

Treatment for polio

There is no cure for polio. Treatment aims to manage the effects of the disease. Supportive treatment options include:

- Antibiotics – for secondary infections
- Painkillers (analgesics)
- Portable ventilators to assist breathing
- Medications – to reduce muscle spasms
- Moderate exercise
- Massage
- Physiotherapy
- Heat treatments
- A nutritious diet.

Preventing the spread of polio

All children and adults should be immunised to prevent polio infection. Children should receive the polio vaccine at two, four and six months, and at four years of age. Adults should have had at least three doses of polio vaccine in the past.

You should also arrange with your doctor to get a booster if you:

- Intend to travel to areas where polio is present
- Are a health care worker where contact with people with polio is possible
- Are likely to handle laboratory specimens that contain live poliovirus.

In Victoria, the polio vaccine is given free of charge to children and is combined with vaccines for other diseases, including diphtheria, tetanus and pertussis (whooping cough). Adults having the polio vaccine for the first time should receive a course of three injections with an interval of four weeks between the doses. If you have not received at least three doses of polio vaccine, speak to your doctor about catch-up doses.

Travellers should be immunised

Check with your doctor about whether you need a booster polio immunisation before travelling outside Australia. As of 2008, polio was still prevalent in Nigeria, India, Pakistan and Afghanistan. Several other countries that were free of polio have been re-infected, including Angola, the Central African Republic, Chad, the Democratic Republic of Congo, Ethiopia, Nepal, Niger, Somalia, Sudan and Yemen.