



Poliovirus: An eliminated disease reemerged

Poliovirus, or poliomyelitis (most often referred to simply as “polio”), is a disabling and potentially fatal viral illness only found in humans. Polio outbreaks used to be common in the United States (U.S.) in the 1940s and 1950s. In fact, more than 35,000 people were infected each year with more than 15,000 cases of paralysis occurring in those infected in the 1950s. Following the advent of vaccines, cases of polio declined rapidly leading to **elimination** of wild poliovirus in the U.S., with the last US-derived case occurring in 1979. Like other diseases, poliovirus can be brought into the U.S. through travel from other countries where wild poliovirus exists, with the last known case occurring in 1993.

In **July 2022**, a case of vaccine-derived poliovirus (see below for what vaccine-derived polio is) in an unvaccinated person occurred in Rockland County, New York, suggesting person-to-person transmission of the virus. The Centers for Disease Control and Prevention (CDC) are working to investigate the origin of this infection.

What is the difference between vaccine-derived and wild poliovirus?

Vaccine-derived poliovirus is a form of polio that develops from reactivation of the weakened polio strain used in the live-attenuated oral polio vaccine (OPV). Wild poliovirus is the strain of poliovirus that occurs naturally. OPV is not currently used in the U.S. for routine vaccination.

How is poliovirus spread?

The poliovirus, which is highly contagious, is spread from person-to-person through the oral route, primarily from:

- **fecal contamination** of food and water or hand to mouth (most common)
- large **respiratory droplets** from sneezing or coughing (less common)

The poliovirus can still be spread from those that are asymptomatic (i.e., not showing any visible signs and symptoms of infection).

What are the symptoms of polio?

Common [symptoms](#) of polio infection vary from asymptomatic (no symptoms) to flu-like symptoms, including:

- Sore throat
- Fever
- Fatigue
- Nausea
- Headache
- Stomach pain

Sometimes more **serious symptoms** can occur (less than 1% of 100 infected cases), including:

- Paresthesia, or feeling of pins and needles in legs
- Meningitis, or infection of the spinal cord and/or brain
- Paralysis, or the inability to move parts of the body or weakness in the upper and lower extremities

How do you diagnose polio?

Poliovirus can be diagnosed through laboratory [testing](#) by viral isolation, serologic testing, and genetic sequencing from clinical specimens collected from the throat, stool, blood, and/or cerebral spinal fluid.

How do you treat polio?

Poliovirus has no cure. Treatment involves supportive care of symptoms.

What can I do to protect myself from polio?

The CDC recommends staying up to date with [vaccine](#) regimens, including for poliovirus. When the recommended number of doses are given, the vaccine can protect up to 99 of 100 individuals from polio disease. In the U.S., inactivated poliovirus vaccine (IPV), is the only vaccine given. [Adults](#) who are incompletely vaccinated should get or complete their polio vaccination with IPV.

More Resources

CDC - "What is Polio?" https://www.cdc.gov/polio/what-is-polio/index.htm#anchor_1634321274586

CDC - "Polio Elimination in the United States"

<https://www.cdc.gov/polio/what-is-polio/polio-us.html>

CDC—" Polio Vaccination in the U.S." <https://www.cdc.gov/polio/what-is-polio/vaccination.html>

CDC—" Poliovirus Laboratory Testing" <https://www.cdc.gov/polio/what-is-polio/lab-testing/index.html>

8/22/22



The Association for Professionals in Infection Control and Epidemiology (APIC) is the leading professional association for infection preventionists (IPs) with more than 15,000 members. Our mission is to create a safer world through the prevention of infection.

[apic.org](https://www.apic.org)
[infectionpreventionandyou.org](https://www.infectionpreventionandyou.org)

