

Polio: Five things to know about this serious disease

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Public Health authorities have warned health care workers to be on the alert for polio, yet most physicians will not be familiar with presentation of this highly infectious, life-threatening disease.

An article in the *Canadian Medical Association Journal (CMAJ)* outlines five things to know about [polio](#).

The oral polio vaccine is used internationally, but not in Canada since 1996

Poliovirus used in the oral polio vaccine is shed in stool for weeks and is transmissible. When circulating among underimmunized populations, it can mutate and revert to a form that causes paralysis in underimmunized or immunocompromised people. Communities with low vaccine coverage are at risk of outbreaks. Inactivated polio vaccine is used in Canada and cannot cause disease.

Poliovirus could be circulating in Canada

Vaccine-derived polio was detected in 2022 in the United States and the United Kingdom in wastewater.

People who've received fewer than 4 doses of the vaccine are at risk of infection

Poliovirus is highly infectious, spreads through the fecal-oral route, and people can shed the virus asymptomatically for weeks. The incubation period is 3-6 days, with paralysis onset in 7-21 days. Children under 5 years of age are at highest risk.

Clinical presentation of polio varies from asymptomatic to paralysis and death

Most [poliovirus](#) infections (75%) are asymptomatic. Symptoms in the remaining 24% may include gastrointestinal illness, followed in 1-3

weeks by rapid weakness then paralysis. One in 200 patients develop paralytic polio, and 5%-15% of [patients](#) with paralysis die from paralysis of respiratory muscles.

Polio should be considered in all patients with sudden flaccid paralysis

Stool sample should be sent for enterovirus polymerase chain reaction and enterovirus molecular serotyping. Patients and [public health](#) should be notified immediately if there is clinical suspicion, even without laboratory confirmation.

"Polio is a rare infectious disease owing to the success of global immunization," says Dr. Marina Salvadori, Department of Pediatrics, McGill University, Montreal, Quebec and the Public Health Agency of Canada. "As elimination is within our grasp, [health](#) care workers need to be alert to this diagnosis in any patient with acute flaccid [paralysis](#)."

More information: Five things to know about polio, *Canadian Medical Association Journal* (2022). [DOI: 10.1503/cmaj.221320](https://doi.org/10.1503/cmaj.221320)

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