

POLIO OUTBREAKS 2023

Authored by [Staff](#)

Last reviewed March 12, 2023

Fact checked by [Robert Carlson, MD](#)

Fact checked by [Holly Lutmer PharmD](#)

CONTENT OVERVIEW

Poliovirus detection in Montreal, New York, London, Israel in wastewater continue in 2023. Polio outbreak information is fact-checked by medical professionals.

Polio Outbreaks March 2023

Poliovirus ([Poliomyelitis](#)) has been recently confirmed in wastewater and ground samples in non-endemic countries in [Africa](#), the [Americas](#), [Asia](#), [Canada](#), [Europe](#), [India](#), Israel, the [United Kingdom](#), and [New York](#) (NY).

To notify the international community, the U.S. Centers for Disease Control and Prevention (CDC) issued an updated Global Polio [Alert - Level 2](#), Practice Enhanced Precautions notice on March 7, 2023, regarding polio outbreaks and poliovirus detections in [various countries](#). As of March 10, 2023, the [New York](#) Department of Health informed New Yorkers planning to visit Israel in 2023 and other countries with circulating poliovirus to confirm their polio immunization status prior to traveling abroad.

On September 13, 2022, the [U.S.](#) was added to a list of about thirty countries where circulating vaccine-derived poliovirus ([cVDPV](#)) was recently identified. On September 1, 2022, the CDC's Clinician Outreach and Communication Activity Call [presented](#): How to Recognize and Report Polio and Reinforce [Routine](#) Childhood Polio Vaccination.

As of [March 2, 2023](#), there has been 1 confirmed polio (acute flaccid paralysis) case and 7 reports of patients under investigation in the U.S. ([Washington](#)) during 2023. There have been 723 confirmed polio cases in the U.S. since August 2014. An [interactive timeline](#) traces polio outbreaks from 1580 B.C. to 2022.

WHO Polio Public Health Emergency of International Concern 2023

On February 2, 2023, the World Health Organization ([WHO](#)) confirmed the spread of poliovirus remained a Public Health Emergency of International Concern ([PHEIC](#)) concerning Wild poliovirus type 1 ([WPV1](#)) and Circulating vaccine-derived poliovirus and recommended the extension of Temporary Recommendations for three months. This WHO issued a report ([EB152/19](#), Dec. 2022) on implementing the [Strategic Action Plan](#) on Polio Vaccine Transition (2018–2023). In addition, the polio-endemic countries of [Afghanistan](#) and [Pakistan](#) have been associated with recent polio outbreaks in other countries, according to the Global Polio Eradication Initiative ([GPEI](#)).

Poliovirus Wastewater Detections 2023

Related poliovirus type 2 (PV2) isolates were identified in sewage samples collected in [Canada](#), [London](#), [Israel](#), and [New York](#) in 2022. As a result, the U.S. CDC announced on November 30, 2022, that it would expand wastewater testing in the U.S. Dr. [José R. Romero](#), Director of CDC's National Center for Immunization and Respiratory Diseases, indicated that poliovirus testing would continue into early 2023.

Poliovirus Detroit, Michigan

The U.S. CDC announced plans to collect wastewater samples in communities near [Detroit, Michigan](#). Preliminary testing will last at least four months. Oakland County, Michigan's population is about 1.2 million. On [August 23, 2022](#), Michigan reported 31% of young children were overdue for routine vaccinations, including polio.

Poliovirus Philadelphia, Pennsylvania

The U.S. CDC [announced](#) it would begin collecting wastewater samples from [Chester County](#), with a population of about 500,000 near Philadelphia, PA, for analysis at CDC's polio laboratory.

Poliovirus New York March 2023

As of March 8, 2023, the U.S. Centers for Disease Control and Prevention ([CDC](#)) and the State of New York confirmed sequencing analysis confirmed the presence of circulating vaccine-derived poliovirus ([cVDPV2](#)) in [100](#) samples collected genetically linked to a polio patient ([Acute flaccid myelitis](#)) identified in July 2022 in Rockland County, NY, signaling its continued circulation and a health risk to residents.

To enhance local detections, the [New York State Department of Health](#) announced on January 23, 2023, that it received \$21.6 million in funding to expand its wastewater surveillance and infectious disease monitoring capabilities. NY's [wastewater network](#) reaches all 62 New York counties and, during 2023, will increase the number of participating sewer sheds from 125 to over 215, reaching 16 million New Yorkers, about 81% of the population served by public sewer systems.

Beginning in April 2022, genetically related poliovirus has been detected in wastewater samples collected in Rockland County, Orange County, Sullivan County, Nassau County, Brooklyn (Kings County), and Queens County. On September 28, 2022, a '[Declaration of an Imminent Threat](#) to Public Health for poliovirus' was issued by Mary T. Bassett, M.D., M.P.H. Commissioner of Health, NY.

In response to these poliovirus wastewater findings, the Governor of NY, Kathy [Hochul](#), announced on October 9, 2022, she extended [Executive Order 21.1](#), expanding the vaccination authorities for certain NY [health providers](#). And New York State issued HEALTH ADVISORY [Update #3](#) Regarding Poliovirus, which says [unvaccinated New Yorkers](#) or those not up to date with immunizations who live, work, go to school in or visit Rockland County, Orange County, New York City, Sullivan County, and Nassau County are at risk of contracting the paralytic disease and should speak with their healthcare provider regarding polio vaccination options.

As of March 2023, the [New York Health](#) Department states that under specific situations, a one-lifetime booster dose of IPV should be offered to adults who have previously completed their polio vaccination series and are at the highest risk of infection. Areas considered to have community transmission of poliovirus include those where poliovirus has been repeatedly detected in wastewater. As of January 27, 2023, polio booster doses are [not recommended](#) for individuals traveling to the New York City metropolitan area, including Rockland, Orange, or Sullivan Counties, merely because of their travel status.

Local polio vaccination resources: Nassau County, NY, [webpage](#), New York City [locations](#); Orange County, NY, [webpage](#), Rockland County, NY, [areas](#), Sullivan County, NY, [Public Health](#) at 845-513-2249, and [Cattaraugus County](#), (NY) Public Health.

Polio in the Americas

As of March 2023, the Pan American Health Organization ([PAHO](#)) published AFP Surveillance Data segmented by Country for 2022.

Poliovirus Montreal Canada

On December 23, 2022, the Canada IHR National Focal Point [reported](#) detecting a vaccine-derived poliovirus type 2 ([VDPV2](#)) in various wastewater samples collected in August 2022 from a wastewater treatment plant and a target site in the city of Montreal, Quebec. Genetic sequencing confirmed it was linked to the cVDPV2 recently detected in New York. Additionally, in January [2023](#), two cVDPV2-positive environmental samples were collected in Canada. As of January 30, 2023, there have been [no](#) confirmed or suspected cases of acute flaccid paralysis ([AFP](#)) being investigated in the affected Canadian jurisdiction in 2022 - 2023.

Polio Israel 2023

As of March 10, 2023, [Israel](#) has been [confirmed](#) with both cVDPV2 and cVDPV3, and there is evidence of the continued existence of poliovirus in the wastewater sewage of many localities. In early March 2023, [JPost](#) reported the Health Ministry announced that an unvaccinated child from the Safed region in Galilee arrived at [Ziv Medical Center](#) and was found positive for ([cVDPV2](#)) acute flaccid paralysis ([AFP](#)). On March 2, 2023, the [Times of Israel](#) reported the Health Ministry confirmed three other children tested positive for poliovirus.

Poliovirus London

The UK Health Security Agency (UKHSA) declared a "[national incident](#)" in June 2022 after poliovirus detection in sewage in London, England. Detection of [118 genetically](#) linked poliovirus isolates related to the [serotype 2 Sabin vaccine strain](#) collected in 2022, reported [The BMJ](#) and [The Lancet](#). In addition, vaccine-derived poliovirus type 2 isolates [environmental samples](#) were found in several north and east London boroughs that were [genetically linked](#) to a polio case reported in New York and Israel.

Acute Flaccid Myelitis Polio-Like Virus

The U.S. CDC reported on March 2, 2023, there has been one confirmed AFM case in 2023 out of 7 reports of patients under investigation. [AFM](#) is an uncommon but serious neurologic condition caused by viruses, including enteroviruses ([EV-D68](#)). It affects the nervous system, specifically the area of the spinal cord called gray matter, which causes the muscles and reflexes in the body to become weak.

During 2022, the CDC reported 43 confirmed AFM cases in 24 states, indicating about a 35% increase from 2021. There have been 723 confirmed cases (children) since the CDC began tracking AFM in August 2014.

Acute Flaccid Paralysis

Acute Flaccid Paralysis ([AFP](#)) surveillance is the [standard](#) for detecting cases of poliomyelitis in anyone under 15 years of age. For AFP [surveillance](#) standards, please visit the WHO-recommended surveillance standard of [poliomyelitis](#). Date of last update: 10/09/2022.

Post-Polio Syndrome

As polio survivors progress through life, a significant proportion develops neurological symptoms known as Post-Polio Syndrome (PPS), says the U.S. NIH. [Characterized](#) by new, gradual, and progressive muscle weakness and wasting, difficulty swallowing, joint or muscle pain, and general fatigue after being stable for many years, the non-contagious PPS typically [develops 15 to 40 years](#) after people have recovered from polio.

The first medical reports of PPS appeared in [France in 1875](#). Further research published in the 1950s identified significant damage to nerve cells within the spinal cord. However, as the UK-based [Polio Survivors Network](#) concludes, PPS has no set pattern of nerve damage. The U.S. CDC posts additional clinical and diagnostic information about poliovirus infection as of August 10, 2022.

Poliovirus Shedding

The [WHO](#), the [UK Health Services Agency](#), the [European CDC](#), and the U.S. National Institutes of Health ([NIH](#)) say three types of vaccines can prevent polio but they may indirectly enable [virus shedding](#). However, research demonstrates that poliovirus transmission predominantly follows the oral-fecal route. In addition, concerns remain about the potential for [persistent](#) transmission of OPV viruses, as these viruses are known to revert toward [wild-type neurovirulence](#).

Polio Vaccines Approved

Polio is a vaccine-preventable disease, says the U.S. CDC. For the latest polio vaccine information, visit this PrecisionVaccinations [webpage](#).

Polio Outbreak News 2023

[March 10, 2023](#) - New York issued a travel advisory for anyone visiting Israel.

[February 23, 2023](#) - Wastewater sequencing analysis by the CDC confirmed the presence of poliovirus in a total of 100 positive samples of concern in New York.

[December 23, 2022](#) - Canada reported detections of VDPV2 in wastewater samples.

[December 19, 2022](#) - The WHO announced polio had become a high-risk disease in Indonesia.

[December 7, 2022](#) - The WHO reported 2.61 million under-five children were immunized with the trivalent oral polio vaccine in Somalia.

[November 30, 2022](#) - "Wastewater testing can be an important tool to help us understand if poliovirus may be circulating in communities in certain circumstances," said Dr. José R. Romero, Director of CDC's National Center for Immunization and Respiratory Diseases. "Vaccination remains the best way to prevent another case of paralytic polio.

[November 17, 2022](#) - The latest [Annenberg Science Knowledge](#) national panel survey finds that a sizable portion of the U.S. public is unfamiliar with the risks of polio. Only a third of U.S. adults know there is no cure for polio, and over 22% of adults do not know whether they've been vaccinated against polio.

[October 27, 2022](#) - New York State Health Department issued a Polio Letter to Providers & Polio Publication Request Form - Notification ID: 109528 - This is an urgent plea: as the most trusted source of medical guidance

for your patients and their families, we need your help to make sure that any child who is not vaccinated or up to date with polio immunizations gets all the recommended doses immediately. This is particularly urgent for providers and patients in Rockland, Orange, and Sullivan Counties, where poliovirus has been detected in wastewater repeatedly.

[October 19, 2022](#) - The UK Health Security Agency is investigating the extent of poliovirus transmission across north-east and north-central London. Based on recent sampling, poliovirus is considered present in sub-areas of the Beckton plant covering all or parts of the following London boroughs: Barnet, Brent, Camden, Enfield, Hackney, Haringey, Islington, and Waltham Forest. The sampling has also detected the virus in lower concentrations and frequency in areas adjacent to the Beckton catchment area to the South (immediately below the Thames) and the East.

[October 12, 2022](#) - The Lancet published: Sustained detection of type 2 poliovirus in London sewage between February and July 2022. Interpretation: Environmental surveillance allowed early detection of poliovirus importation and circulation in London, including whole-genome sequences generated through nanopore sequencing, established linkage of isolates and confirmed transmission of a unique recombinant poliovirus lineage that has now been detected in Israel and the USA.

[October 9, 2022](#) - New York state extends and expands [Executive Order 21.1](#) - Continuing the Declaration of a Statewide Disaster Emergency Due to the Ongoing Spread of Polio in the State of New York.

[September 28, 2022](#) - New York State Department of Health issued Advisory #3 regarding poliovirus detections. It recommended polio-preventive vaccinations, and the Commission issued a [Declaration of an Imminent Threat](#) to Public Health for poliovirus.

[September 9, 2022](#) - NY State Health Department confirmed that of the 50 wastewater samples, 31 poliovirus samples were collected in Rockland County, 13 in Orange County, 6 in Sullivan County, and 1 in Nassau County. In response, NY's governor declared a [State of Disaster Emergency](#).

[September 2, 2022](#) - The UKHSA reported following advice from the Joint Committee on Vaccination and Immunisation that all children aged 1 to 9 years in London need to have a dose of polio vaccine now – whether it's an extra booster dose or to catch up.

[September 1, 2022](#) - The U.S. CDC is investigating a case of poliomyelitis, or paralytic polio, in New York state.

[August 26, 2022](#) - The New York State Department of Health confirmed that sequencing analysis performed by CDC has now detected poliovirus in four samples from [Sullivan County](#), two collected in July and two collected in August, which are genetically linked to the case of paralytic polio previously identified in Rockland County. Already, poliovirus had been identified in samples collected in Rockland County, Orange County, and NYC, the types of poliovirus that can cause paralysis in humans.

[August 25, 2022](#) - The JAMA Network published a Perspective: What Physicians Need to Know About the Polio Resurgence in New York State.

[August 19, 2022](#) - New York Department of Health HEALTH ADVISORY: Update #2 Regarding Poliovirus in New York State: All children, adolescents, and adults who are unvaccinated or under-vaccinated should be brought up to date with all routine [CDC-recommended IPV doses](#). This is particularly important and urgent if they live, work, attend school, or have frequent social interactions with Rockland and Orange Counties communities.

[August 19, 2022](#) - The U.S. CDC published: Public Health Response to a Case of Paralytic Poliomyelitis in an Unvaccinated Person and Detection of Poliovirus in Wastewater — New York, June–August 2022. Twenty

specimens from wastewater samples collected during May, June, and July were genetically linked to viruses from the patient's stool samples. This case highlights the risk of paralytic disease among unvaccinated persons.

[August 17, 2022](#) - Long-Term Immunogenicity of Inactivated and Oral Polio Vaccines: An Italian Retrospective Cohort Study. Protective antibodies against all three polioviruses persisted for at least 18 years after administration of the last vaccine dose.

[August 16, 2022](#) - The U.S. CDC issued an MMWR - Public Health Response to a Case of Paralytic Poliomyelitis in an Unvaccinated Person and Detection of Poliovirus in Wastewater — New York, June–August 2022.

[August 12, 2022](#) - Poliovirus Confirmed in NYC's wastewater by the [New York State](#) Department of Health. and NYC Health issued: [2022 Health Alert #20](#): Update on Poliovirus in New York City.

[August 4, 2022](#) - "Based on earlier polio outbreaks, New Yorkers should know that for every one case of paralytic polio observed, there may be hundreds of other people infected," State Health Commissioner Dr. Mary T. Bassett said. [HEALTH ADVISORY #1](#): Update Regarding Poliomyelitis in Rockland County, New York State.

[July 13, 2022](#) - Israel's Ministry of Health published updated polio vaccination [guidelines #6](#).

[July 3, 2022](#) - Israel's Operation [Two Drops 2022](#) polio vaccine program reached over two million children.

[April 2, 2022](#) - Israel reported potentially eight polio cases in 2022.

[March 15, 2022](#) - The Israeli Ministry of Health, under guidance from the Consultant Committee on Poliovirus, launched a nationwide vaccine operation, 'Two-Drops 2022,' for additional vaccination against polio for children.

[1997](#) - Duration of Poliovirus Excretion and Its Implications for Acute Flaccid Paralysis Surveillance: A Review of the Literature.

<https://www.precisionvaccinations.com/polio-outbreaks-2023>