



# Non-Polio Enterovirus

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## Enterovirus D68

### EV-D68 and AFM

Acute flaccid myelitis (AFM) is an uncommon but serious neurological condition, mostly in young children. 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. Viruses, including EV-D68, likely play a role in causing AFM. [Read more about AFM on our website.](#)

### What is enterovirus D68?

First identified in California in 1962, enterovirus D68 (EV-D68) is one of more than 100 non-polio enteroviruses. EV-D68 typically causes respiratory illness, which can be mild (like a common cold) or more severe.

### How common is EV-D68 in the United States?

Non-polio enteroviruses, like EV-D68, are thought to be very common, with most infections causing no symptoms or only mild symptoms. Beginning in 1987, small numbers of EV-D68 had been reported to CDC regularly. However, between August and November in 2014, EV-D68 caused a nationwide outbreak of respiratory illness in the US. This raised awareness of EV-D68-associated illness and, beginning 2014, US surveillance for EV-D68 expanded. EV-D68 was subsequently detected in the US in the late summer and early fall of 2016, 2018 and, to a lesser degree, in 2020.

### What time of the year are people most likely to get infected?

In the United States, you are more likely to get infected with enteroviruses in the summer and fall. However, you can get infected year-round.

### What are the symptoms of EV-D68 infection?

EV-D68 can cause mild to severe respiratory illness, or no symptoms at all.

- Mild symptoms may include runny nose, sneezing, cough, body aches, and muscle aches.
- Severe symptoms may include wheezing and difficulty breathing.

Anyone with respiratory illness should contact their doctor if they are having difficulty breathing or if their symptoms are getting worse.

EV-D68 can also cause acute flaccid myelitis (AFM), an uncommon but serious neurologic condition which mostly affects children and causes the muscles and reflexes in the body to become weak. [Read more about AFM on our website.](#)

Seek immediate medical attention if you or your child develops any of these [symptoms](#), especially following a respiratory illness:

- arm or leg weakness
- pain in the neck, back, arms, or legs
- difficulty swallowing or slurred speech
- difficulty moving the eyes or drooping eyelids
- facial droop or weakness

### How does the virus spread?

Since EV-D68 causes respiratory illness, the virus can be found in an infected person's respiratory secretions, such as saliva, nasal mucus, or sputum (mucus-like secretions from the lungs). EV-D68 likely spreads from person to person when an infected person coughs, sneezes, or touches a surface that is then touched by others.

## Who is at risk?

In general, infants, children, and teenagers are most likely to get infected with enteroviruses and become ill. That's because they do not yet have immunity (protection) from previous exposures to these viruses. We believe this is also true for EV-D68. Adults can get infected with enteroviruses, but they are more likely to have no symptoms or mild symptoms.

Children with asthma may have a higher risk for severe respiratory illness caused by EV-D68 infection.

## How is it diagnosed?

EV-D68 can only be diagnosed by doing specific lab tests on specimens from a person's nose and throat, or blood. Many hospitals and some doctor's offices can test ill patients to see if they have enterovirus infection. However, most cannot do specific testing to determine the type of enterovirus, like EV-D68. CDC and some state health departments can do this sort of testing using molecular sequencing methods or using a real-time reverse transcription polymerase chain reaction (rRT-PCR) lab test. Health departments may contact CDC for further enterovirus typing.

CDC suggests that clinicians consider EV-D68 as a possible cause of acute, severe respiratory illness, and consider laboratory testing of respiratory specimens for RVs and EVs (typically part of multiplex respiratory assays) when the cause of respiratory infection in severely ill patients is unclear, if not already part of typical diagnostic routine. For more information, see [Enterovirus D68 for Health Care Professionals](#).

## What are the treatments?

There is no specific treatment for people with respiratory illness caused by EV-D68. Talk to a doctor about your symptoms and the best way to control them.

Some people with severe respiratory illness may need to be hospitalized and receive intensive supportive therapy.

There are no antiviral medications currently available for people who become infected with EV-D68.

## How can I protect myself?

You can help prevent yourself from getting and spreading EV-D68 by following these steps:

- Wash your hands often with soap and water for 20 seconds. See [Handwashing: Clean Hands Save Lives](#).
- Avoid touching your eyes, nose, and mouth with unwashed hands.
- Avoid close contact such as kissing, hugging, and sharing cups or eating utensils with people who are sick, and when you are sick.
- Cover your coughs and sneezes with a tissue or your upper shirt sleeve, not your hands.
- Clean and disinfect frequently touched surfaces, such as toys and doorknobs, especially if someone is sick.
- Stay home when you are sick.



See our infographic that shows [these prevention steps](#).

There are no vaccines to prevent EV-D68 infections.

## What should people with asthma and children suffering from reactive airway disease do?

Children with asthma may have a higher risk for severe symptoms from EV-D68 and other respiratory illnesses. They should follow CDC's guidance to maintain control of their illness during enterovirus season, which occurs each year in the U.S. during summer and fall.

CDC recommends the following:

- Discuss and update your [asthma action plan](#) with your primary care provider.
- Take your prescribed asthma medications as directed, especially long-term control medication(s).
- Be sure to keep your reliever medication with you.
- Get a flu vaccine when available each year.
- If you develop new or worsening asthma symptoms, follow the steps of your asthma action plan. If your symptoms do not go away, call your doctor right away.
- Parents should make sure the child's caregiver and/or teacher is aware of his/her condition, and that they know how to help if the child experiences any symptoms related to asthma.

For additional information, see "What Parents Need to Know about Enterovirus D68" in

- [English](#)
- [Spanish](#)

## A large outbreak of EV-D68 occurred in 2014. How many people got sick?

In summer and fall 2014, the United States experienced a nationwide outbreak of EV-D68 associated with severe respiratory illness. From mid-August 2014 to January 15, 2015, CDC or state public health laboratories confirmed 1,395 people in 49 states and the District of Columbia with respiratory illness caused by EV-D68. Almost all of the confirmed cases were among children, many whom had asthma or a history of wheezing. Additionally, there were likely many thousands of mild EV-D68 infections for which people did not seek medical treatment and/or get tested. This was the first documented nationwide outbreak of EV-D68. Although illness associated with EV-D68 is not notifiable, circulation of this virus occurs most often in late summer and fall, which is the typical enterovirus season.

CDC received about 2,600 specimens for enterovirus testing during 2014, which was substantially more than usual. About 39% of those tested positive for EV-D68. About 40% tested positive for an enterovirus or rhinovirus other than EV-D68.

Since 2014, US surveillance for EV-D68 has expanded. CDC monitors EV-D68 detections using two surveillance systems: 1) the New Vaccine Surveillance Network ([NVSN](#)) and the National Enterovirus Surveillance System ([NESS](#)). EV-D68 was detected in the US at higher levels during the late summer and early fall of 2016 and 2018, but at lower levels in 2015, 2017 and 2019. In 2020, CDC observed some detections but to a lesser degree than in 2018. In 2020, EV-D68 circulation may have been affected by the use of mitigation measures (such as masking and social distancing) early in the COVID-19 pandemic.

## Will we see another EV-D68 outbreak this year or in future years?

Enteroviruses are ever-present in the community. A mix of enteroviruses circulates every year, and different types of enteroviruses can be common in different years. Each year we expect to detect EV-D68 cases, but the number of cases identified in the U.S. varies from year to year. CDC is working to better understand the seasonality and annual trends of EV-D68. Additionally, CDC continues to work with states to test specimens for enteroviruses to determine virus type, support the identification and investigation of outbreaks, and monitor seasonal activity.

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