

ENTEROVIRUS D68 (EV-D68)

EV-D68 Symptoms include:

- Runny nose
- Cough
- Sneezing
- Wheezing
- Increased respiratory rate
- Fever

Not everyone will experience all these symptoms, and not everyone who has these symptoms has EV-D68. If your child has any of these symptoms, contact your healthcare provider — especially if your child has any breathing/respiratory issues.

Special Points of interest:

- Children less than 5 years old and children with asthma seem to be most at risk for the illness.

Enterovirus D68 is one of more than 100 types of enteroviruses, a group of ssRNA viruses containing the polioviruses, coxsackieviruses, and echoviruses. Unlike all other enteroviruses, EV-D68 displays acid lability and a lower optimum growth temperature, both features of the human rhinoviruses. It was previously called rhinovirus 87 by some researchers. EV-D68 was first identified in California in 1962.

Since 1962, EV-D68 has been found mostly sporadically in isolated cases. Between 2005 and 2011, six clusters of about 10 cases each, have been reported in the Philippines, Japan, the Netherlands, and in Georgia, Pennsylvania and Arizona in the U.S. It was also found in 2 of 3 children during a 2012/2013 cluster of polio-like disease in California. Cases usually occur later in summer and fall and begin to decline by late fall in the U.S.

This year the number of people reported with confirmed EV-D68 infection in the U.S. is much greater than that reported in previous years. In August 2014, the virus caused clusters of respiratory disease in eleven, mostly Midwestern states in the U.S – first confirmed in Kansas City, Missouri and in Chicago. By mid-September there were 145 suspected cases in the states. According to the CDC, 538 people from 43 states have been confirmed between mid-August to October as having the virus. There have been reports specifically among younger children of muscle paralysis, and a few deaths. The first death to be blamed on the virus was that of a 4 year old New Jersey boy, who had no signs of any illness that night and then he suddenly passed away. A 21 month old child died in Michigan from the virus. Several people have also exhibited neurological symptoms similar to polio, although the enterovirus is considered a non-polio strain.

Children less than 5 years old and children with asthma seem to be most at risk for the illness. However, the illness has been reported in adults with asthma and immunosuppression.

Initial EV-D68 symptoms are similar to those for the common cold, including a runny nose, sore throat, cough and fever. Although, only 25 – 30 % of children have had a fever. EV-D68 does not seem to follow the classic pattern of a respiratory virus. As the disease progresses, more serious symptoms may occur, including difficulty breathing as in pneumonia, reduced alertness, a reduction in urine production, and dehydration, and may lead to respiratory failure. Like all enteroviruses, it can cause variable skin rashes, abdominal pain and soft stools. A couple of children in California who tested positive for the virus had muscle weakness or paralysis of one or more limbs reaching peak severity within 48 hours of onset. Recovery of motor function was poor at 6 month follow up. As of October 2014, CDC is investigating 10 cases of paralysis and/or cranial dysfunction in Colorado and several other places around the country where there has been increased EV-D68 activity.

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EV-D68—Continued

The virus is found in an infected person's respiratory secretions, such as saliva, nasal mucus, or sputum. EV-D68 likely spreads from person to person when an infected person coughs, sneezes, or touches a surface that is then touched by others.

There is no specific antiviral treatment for EV-D68 and there is no vaccine. Treatment is symptomatic and most often requires breathing support, i.e. oxygen therapy for those serious enough to require hospitalization. Most people recover on their own after the virus runs its course. Five severe paralysis cases were treated with steroids, intravenous immunoglobulin and/or plasma exchange. Again no recovery of motor function lost was seen.

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Diagnosis is by doing specific lab tests on specimens from a person's nose and throat. While testing can determine the presence of an enterovirus, most cannot determine the type, i.e. EV-D68. CDC recommends that doctors only consider EV-D68 testing for patients with severe respiratory illness and when the cause is unclear. Earlier testing is not of much value since treatment is based on a patient's symptoms.

CDC recommendations for preventing and spreading EV-D68 are transmission based precautions – contact precautions and droplet precautions. The single most effective way to prevent and stop the spread of respiratory illness is to wash hands often with soap and water for at least 20 seconds. Avoid touching 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. Cover your coughs and sneezes with a tissue or 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.

For people with asthma and children who suffer from reactive airway disease should discuss and update their action plan with their doctor. Take medication as prescribed and keep reliever medication with them at all times. Make sure to get a flu vaccine. Contact the doctor if symptoms worsen or do not go away. Parents should make sure that caregivers and/or teacher is aware of the child's condition and know what to do if symptoms appear.

References:

www.cdc.gov/non-polio-enterovirus

http://en.v.wikipedia.org/wiki/Enterovirus_68

<http://webmd.com/children/news/20140909/enterovirus-d68>

PHLEBOTOMY TODAY – STAT! E-NEWSLETTER

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WHAT'S NEW FOR THE 2014-2015 FLU SEASON

Flu season generally runs from October to May. CDC recommends that everyone six months and older get a yearly flu vaccine, especially given how severe the 2013-2014 season was. During that season, 107 children, of whom approximately 90% had not been vaccinated and nearly half of whom had no prior health issues, died from the flu.

Adults from 18 to 64 years old have been increasingly affected by the flu in recent years. One reason for the increase is that while 46% of all Americans age six months and older got the flu vaccine, only 33.9% of adults aged 18 to 64 were vaccinated last year. Getting the flu vaccine is crucial for people in high-risk populations. They include children younger than 5, adults 65 years and older, pregnant, American Indians, Alaskan natives, and people with health issues like asthma, heart disease, and chronic lung issues.

CDC says that everybody is vulnerable and no one is exempt from the flu. People should get vaccinated as soon as possible since it takes about two weeks before you gain immunity. It is never too late to get your shot unless you wait until June when the season is officially over.

CDC has issued a few new guidelines and recommendations. For starters, adults 65 and older are now urged to get two vaccines against pneumococcal disease, a potential complication of the flu that can be deadly, causing pneumonia, meningitis, and blood poisoning. If you have never been vaccinated against pneumococcal disease, you will need to get one dose of pneumococcal conjugate vaccine first. Six to 12 months later, you will need to get a second vaccine called the pneumococcal polysaccharide vaccine. You will only need one dose of each vaccine during your lifetime. These shots can be given at the same time as the flu vaccine.

The nasal spray vaccine is the preferred delivery method for children ages 2 to 8 without contraindications, including a weakened immune system, a history of egg allergy, kids receiving aspirin therapy, and children ages 2 – 4 that have had asthma or wheezing during the last 12 months. Another update for children, specifically for those ages six months through 8 years: They may require two doses, especially if they are getting vaccinated for the first time. That is because they may not be protected against the H1N1 virus, which was not added to the seasonal vaccine until the 2010-2011 flu season, according to CDC. Ask your physician if your child needs two doses; if so, they will need to be given at least 28 days apart.

Besides getting vaccinated, follow the CDC's flu-fighting strategies which include frequent handwashing, not to touch your eyes, nose and mouth, covering your nose and mouth when coughing or sneezing and avoiding close contact with sick people. If you get sick, stay home till your fever is gone. Taking anti-viral medications may shorten the duration of the flu and decrease the chance of complications.

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NEW PHLEBOTOMY TITLES

The Center for Phlebotomy Education has just released three new videos. You can watch their full length preview on line.

Seizing Control of Blood Culture Contamination Rates
Ending Hemolysis in the ED...and Everywhere Else
Mastering Pediatric Phlebotomy

The videos will show you how to save thousands of dollars on resources chasing after contaminated blood cultures and hemolyzed samples. You will learn how to minimize anxiety about a blood draw from your youngest patients and collect adequate volumes of blood without compromising test results.

These videos are from the ***Applied Phlebotomy Lecture Collection.***

<http://www.phlebotomy.com/LectureCollection.cpe>

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Patient Rights	Routine Venipuncture
Seasonal Flu	Summertime Hazards
Vitamin D (New!)	Workplace Violence