HEALTH BASICS

Enterovirus D68

Enterovirus D68 is a respiratory virus that can occasionally cause severe breathing problems or neurological complications.

WHAT IT IS
A non-polio enterovirus that mainly infects the airways

WHERE IT COMES UP
Respiratory illness, laboratory results, outbreaks, or neurological investigations

WHY IT MATTERS
Infection can worsen breathing and is linked with rare paralysis

WHAT IT IS NOT
Not a disease or a type of polio

WHO TO ASK
A primary care clinician, pediatrician, or respiratory specialist

HOW IT IS CHECKED
PCR testing of a respiratory sample, sometimes with virus typing

Overview

Enterovirus D68, usually shortened to EV-D68, is a virus. It is not itself a disease or diagnosis. Infection with the virus can cause respiratory illness, ranging from a mild cold-like illness to serious breathing problems.

EV-D68 belongs to a large group called non-polio enteroviruses. Despite its name, it behaves more like a respiratory virus than many other enteroviruses. It mainly affects the nose, throat, and lungs.

Anyone can become infected. Children and teenagers are identified most often, partly because adults may have some immunity from earlier exposure. People with asthma or another long-term lung condition may be more likely to develop serious breathing problems.

EV-D68 is also associated with acute flaccid myelitis, or AFM. AFM is a rare but serious condition that affects the spinal cord and can cause sudden muscle weakness. Most people with EV-D68 infection do not develop AFM, and other infections or causes may also be involved.

The virus may circulate at any time. In countries with temperate seasons, infections have often increased during summer and autumn. The timing and size of outbreaks are not predictable.

How it works

EV-D68 contains genetic material called RNA. After entering the body, it uses human cells to make more copies of itself. It mainly reproduces in cells lining the respiratory tract.

The virus can spread through respiratory secretions. These are small drops and particles released when an infected person coughs, sneezes, talks, or breathes. It may also spread when contaminated hands or objects carry secretions to the eyes, nose, or mouth.

An infected person may have no noticeable illness or may develop cold-like symptoms. Respiratory illness associated with EV-D68 can include a runny nose, cough, sneezing, fever, muscle aches, or wheezing. Wheezing is a high-pitched sound caused by narrowed airways.

These symptoms cannot identify EV-D68 by themselves. Many viruses, including rhinoviruses, respiratory syncytial virus, influenza, and COVID-19, can cause similar illnesses.

Laboratories can look for viral RNA using a test called polymerase chain reaction, or PCR. A swab from the nose or throat is usually the most useful sample for a respiratory infection.

Some hospital respiratory panels report a combined "rhinovirus/enterovirus" result. That result does not confirm EV-D68 because the test may not distinguish between the two virus groups. More specific PCR testing or genetic sequencing is needed to identify the exact enterovirus type.

Why it matters for your health

Most EV-D68 infections are managed in the same way as other uncomplicated viral respiratory infections. Identifying the exact virus often does not change care for a mild illness.

Testing can matter when someone has serious respiratory disease, when several related cases suggest an outbreak, or when public health teams are monitoring virus circulation. It may also be considered during an investigation for AFM.

EV-D68 is important for people with asthma. Infection can trigger narrowing and inflammation of the airways, known as an asthma flare or exacerbation. A person may need closer assessment if their usual reliever medicine is not controlling wheezing or breathlessness.

There is no specific antiviral medicine routinely used to treat EV-D68 infection, and antibiotics like amoxicillin or doxycycline do not work against viruses. Medical care focuses on supporting breathing, maintaining fluids, and treating problems such as an asthma flare. People with severe illness may need oxygen or other breathing support in hospital.

A positive result must be interpreted alongside the person's condition. It does not by itself

show how severe an illness will become. It also does not mean that AFM will develop.

What can go wrong

EV-D68 infection is linked with several named conditions or situations:

A routine appointment is reasonable when respiratory symptoms are not improving as expected, wheezing keeps returning, or an existing asthma plan is not providing adequate control. A clinician can assess breathing and decide whether testing would change care.

Seek urgent medical assessment for increasing breathlessness, difficulty drinking, signs of dehydration, or worsening wheezing despite prescribed reliever treatment.

Call emergency services for severe trouble breathing, blue or grey lips or skin, marked pulling-in around the ribs, inability to speak normally because of breathlessness, unusual difficulty waking, or confusion.

Sudden arm or leg weakness needs immediate medical assessment. New facial drooping, trouble swallowing, slurred speech, a weak neck, or breathing difficulty alongside weakness also requires emergency care. These signs can have several causes and should not be attributed to EV-D68 without evaluation.

- Lower respiratory tract illness: Infection can extend into the airways and lungs, causing wheezing, shortness of breath, or low oxygen levels.
- Asthma exacerbation: The virus can trigger a significant asthma flare, particularly in children with a history of asthma or wheezing.
- Respiratory failure: In severe cases, the lungs may not provide enough oxygen or remove enough carbon dioxide without medical support.
- Acute flaccid myelitis: AFM affects the spinal cord and causes sudden weakness, usually in an arm or leg. It may also affect the face, swallowing, speech, or breathing.

What you can do

If EV-D68 is mentioned in connection with an illness or test result, ask what the result actually detected. A combined rhinovirus/enterovirus result is different from a confirmed EV-D68 result.

You can also ask whether identifying the exact virus would change medical care or public health action. Specific typing is not always available and is often unnecessary for an uncomplicated respiratory illness.

If you or your child has asthma, keep the written asthma action plan available. Follow the prescribed plan and note whether reliever treatment is lasting for the expected amount of time. Do not change prescribed doses solely because EV-D68 is suspected.

Useful information to record includes:

Standard respiratory hygiene can reduce opportunities for spread. Wash hands, cover coughs and sneezes, clean frequently touched surfaces, and avoid sharing cups or utensils. Follow current local advice about staying home when you have a respiratory illness.

There is no routine vaccine specifically for EV-D68. A person with a positive result does not need repeated testing simply to prove that the virus has gone unless a clinician or public health service gives a specific reason.

- When respiratory symptoms began
- Changes in breathing effort or wheezing
- Reliever medicine use, if prescribed
- Fluid intake and urination
- Any new weakness, facial drooping, or swallowing difficulty
- The exact wording and date of any laboratory result

Common questions

Is EV-D68 the same as polio?

No. EV-D68 is a non-polio enterovirus. It is not poliovirus and does not cause polio. Its association with AFM can cause confusion because AFM may resemble some forms of paralysis caused by polio.

Does a positive enterovirus result mean EV-D68?

Not necessarily. There are many enteroviruses. Some respiratory tests also combine rhinovirus and enterovirus into one result. Confirming EV-D68 requires a test that can distinguish the specific virus type.

Can symptoms confirm the virus?

No. Cough, congestion, fever, wheezing, and breathing problems have many possible causes. Laboratory testing is needed to confirm EV-D68, although testing is not required for every mild respiratory illness.

Does EV-D68 always cause serious illness?

No. Infection may cause no noticeable illness or only mild respiratory symptoms. Serious breathing problems can occur, especially in people with asthma or recurrent wheezing, but a test result alone cannot predict severity.

Does EV-D68 always lead to AFM?

No. AFM is rare, and most people infected with EV-D68 do not develop it. However, sudden limb weakness or related neurological changes need immediate assessment regardless of whether EV-D68 has been confirmed.

Sources

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