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## Coxsackievirus Infections

Coxsackieviruses are part of the enterovirus family of viruses (which also includes polioviruses and hepatitis A virus) that live in the human digestive tract. They can spread from person to person, usually on unwashed hands and surfaces contaminated by feces, where they can live for several days.

In cooler climates, outbreaks of coxsackievirus infections most often occur in the summer and fall, though they cause infections year-round in tropical parts of the world.

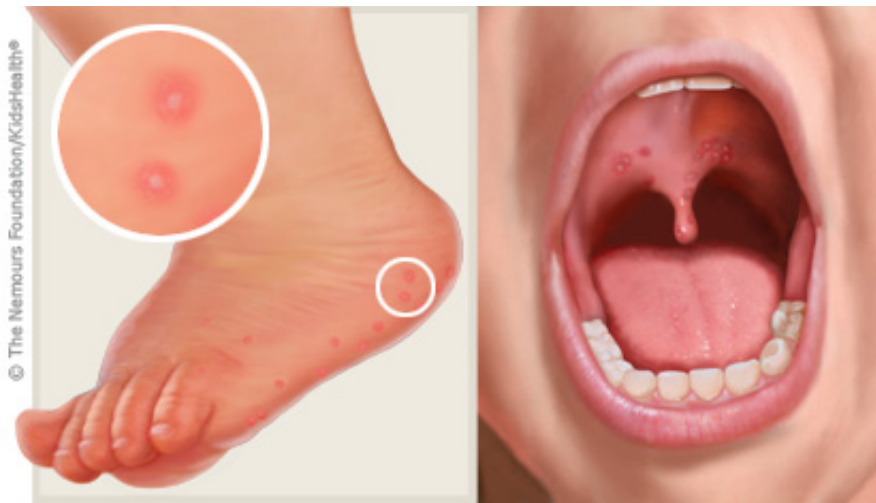
In most cases, coxsackieviruses cause mild flu-like symptoms and go away without treatment. But in some cases, they can lead to more serious infections.

### Signs and Symptoms

Coxsackievirus can produce a wide variety of symptoms. About half of all kids infected with coxsackievirus have no symptoms. Others suddenly develop high fever, headache, and muscle aches, and some also develop a sore throat, abdominal discomfort, or nausea. A child with a coxsackievirus infection may simply feel hot but have no other symptoms. In most kids, the fever lasts about 3 days, then disappears.

Coxsackieviruses can also cause several different symptoms that affect different body parts, including:

- **Hand, foot, and mouth disease**, a type of coxsackievirus syndrome, causes painful red blisters in the throat and on the tongue, gums, hard palate, inside of the cheeks, and the palms of hands and soles of the feet.



- **Herpangina**, an infection of the throat which causes red-ringed blisters and ulcers on the tonsils and soft palate, the fleshy back portion of the roof of the mouth.
- **Hemorrhagic conjunctivitis**, an infection that affects the whites of the eyes. Hemorrhagic conjunctivitis usually begins as eye pain, followed quickly by red, watery eyes with swelling, light sensitivity, and blurred vision.

Occasionally, coxsackieviruses can cause more serious infections that may need to be treated in a hospital, including:

- viral meningitis, an infection of the meninges (the three membranes that envelop the brain and spinal cord)
- encephalitis, a brain infection
- myocarditis, an infection of the heart muscle

Newborns can be infected from their mothers during or shortly after birth and are more at risk for developing serious infection, including myocarditis, hepatitis, and meningoencephalitis (an inflammation of the brain and meninges). In newborns, symptoms can develop within 2 weeks after birth.

## Contagiousness

Coxsackieviruses are very contagious. They can be passed from person to person on unwashed hands and surfaces contaminated by feces. They also can be spread through droplets of fluid sprayed into the air when someone sneezes or coughs.

When an outbreak affects a community, risk for coxsackievirus infection is highest among infants and kids younger than 5. The virus spreads easily in group settings like schools, childcare centers, and summer camps. People who are infected with a coxsackievirus are most contagious the first week they're sick.

## Prevention

There is no vaccine to prevent coxsackievirus infection. Hand washing is the best protection. Remind everyone in your family to wash their hands frequently, particularly after using the toilet (especially those in public places), after changing a diaper, before meals, and before preparing food. Shared toys in childcare centers should be routinely cleaned with a disinfectant because the virus can live on these objects for days.

Kids who are sick with a coxsackievirus infection should be kept out of school or childcare for a few days to avoid spreading the infection.

The duration of an infection varies widely. For fever without other symptoms, a child's temperature may return to normal within 24 hours, although the average fever lasts 3 to 4 days. Hand, foot, and mouth disease usually lasts for 2 or 3 days; viral meningitis can take 3 to 7 days to clear up.

## Treating Coxsackievirus Infections

Depending on the type of infection and symptoms, the doctor may prescribe medications to make your child feel more comfortable. However, because antibiotics only work against bacteria, they can't be used to fight a coxsackievirus infection.

Acetaminophen may be given to relieve any minor aches and pains. If the fever lasts for more than 24 hours or if your child has any symptoms of a more serious coxsackievirus infection, call your doctor.

Most kids with a simple coxsackievirus infection recover completely after a few days without needing any treatment. A child who has a fever without any other symptoms should rest in bed or play quietly indoors. Offer plenty of fluids to prevent dehydration.

## When to Call the Doctor

Call the doctor immediately if your child develops any of the following symptoms:

- fever higher than 100.4°F (38°C) for infants younger than 6 months and higher than 102°F (38.8°C) for older kids
- poor appetite
- trouble feeding
- vomiting
- diarrhea
- difficulty breathing
- convulsions
- unusual sleepiness
- pain in the chest or abdomen
- sores on the skin or inside the mouth
- severe sore throat
- severe headache, especially with vomiting, confusion, or unusual sleepiness
- neck stiffness
- red, swollen, and watery eyes
- pain in one or both testicles

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Note: All information is for educational purposes only. For specific medical advice, diagnoses, and treatment, consult your doctor.