



# Coxsackie Virus

## What it is?

The Coxsackie virus is responsible for the common childhood illnesses HFMD (hand, foot, and mouth disease) and herpangina. The most common strains are A-16 and A-6. It can be spread to adults, but typically is seen in children (most commonly those 6 months-4yrs.) It is spread through contact with secretions such as when coughing, sneezing, or drooling or when touching fluid from a blister. Additionally, it can be shed in the stool for months!

### Photos



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## Symptoms

Symptoms of the virus can vary widely. Some children are only mildly affected (a few blisters on hands and feet), while others have much more significant symptoms. A fever (up to 102 °F) may accompany the onset of the rash and should last 3 days at most. Presentations include:

- **Herpangina** presents as ulcers in the back of the throat. The ulcers cause mild to significant discomfort. Children may drool more and have a decreased appetite and desire to drink. **Mouth ulcers take about 7 days to resolve.**
- **HFMD** can also vary in severity. We expect to see mouth ulcers as well as small red or pink bumps or blisters to hands, feet, around mouth, and possibly diaper area. The blisters may be painful, especially to the feet. Mouth ulcers take about 7 days to resolve and **lesions to hands and feet take about 10 days to resolve.**
- **Eczema Coxsackium** occurs when children with a history of eczema get this virus. This causes a widespread rash to the locations listed above, plus all common eczema areas. This condition is often fairly miserable and causes significant itching.

Additionally, the following may occur:

- 1-2 weeks after onset you may see **peeling of the fingers and toes**. This typically resolves by the 4 week mark.
- 3-6 weeks after onset, some **fingernails and toenails** may fall off. While this is very uncommon (4% of severe cases) they will grow back and look normal. Fingernails should grow back by 3-6 months and by 9-12 months, toenails will grow back.

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## Treatment

Unfortunately, there is no medication that speeds rash resolution or prevents it from spreading to others, but there are symptomatic care options.

**Treatment for Itching** includes:

1. Over the counter antihistamine like Zyrtec or Benadryl (see next page)
2. Sitting in a cool bath
3. With a history of eczema, we recommend treating the skin like an eczema flare which includes less frequent and shorter baths, applying prescribed steroid ointments as directed, and frequent application of an emollient (hypoallergenic and fragrance free ointment like Eucerin, Aquaphor, etc.)



## Symptom relief for itching and pain

| Name   | Strengths   | Dose   |  |
|--|---|--|--|
| <b>Zyrtec (cetirizine)</b><br>Can be sedating in 10% of people | Dissolve Tab: 10 mg<br>Liquid: 1 mg/mL<br>Swallow: 10 mg              | TIMING: EVERY 12-24 HOURS  |  |
|  |   | 6-12 months: 2.5 mg (2.5 mL liquid)<br>12 months- 5 years: 2.5 to 5mg (2.5-5mL liquid)<br>6 and older: 5 to 10 mg (5-10 mL liquid or 1 of 10 mg dissolve tab or swallow tab) |  |
| <b>Benadryl (diphenhydramine)</b><br>**Sedating in most people | Liquid: 12.5 mg/5mL<br>Child chewable: 12.5 mg<br>Adult tablet: 25 mg | TIMING: EVERY 6-8 HOURS or JUST BEFORE BED (due to sleepiness)   |  |
|  |   | 17-21 lbs: 3.75 mL<br>22-32 lbs: 5 mL or 1 chewable<br>33-42 lbs: 7.5 mL or 1.5 chewable<br>43-53 lbs: 10 mL or 2 chewable   | 54-64 lbs: 12.5 mL or 2.5 chewable<br>65-75 lbs: 15 mL or 3 chewable<br>76-86 lbs: 17.5 mL or 3.5 chewable<br>>86 lbs: 20 mL or 4 chewable |

\*\*Though Benadryl typically causes sleepiness, it can have the opposite effect in some children. For this reason, avoid trying Benadryl for the first time before bed. Also, you can try starting with ½ of the recommended dose above.\*\*

### Treatment for pain includes:

1. Over the counter ibuprofen (Motrin/Advil) or acetaminophen (Tylenol)
2. Consistent offering of cool fluids and a soft diet, as tolerated. A greatly diminished appetite for a few days is expected and is okay as long as your child is drinking sufficient fluids. See dehydration symptoms below.
3. Liquid antacids like Mylanta may help with mouth pain. For those 1-5 years use a few drops in mouth (or swabbed on sores in mouth with q-tip) up to 4 times/day (after meals is most helpful). Those 6 years and up can use 1 teaspoon (5 milliliters) as a mouth wash, keeping on ulcers as long as possible before spitting out. Do not use mouthwash like Listerine; this will cause significant discomfort.

**Like all rashes, the spots will appear redder when the body is warm** (during/after a bath), upon waking up when wearing warm clothes to bed, when bundled up in blanket, with fever, and after playing outside. This is not concerning and should lessen as the body cools off.

**Dehydration symptoms:** no tears with crying, dry tongue/inside mouth, and/or diminished urination (<2 yrs: < 4-5 times/24 hrs., >2 yrs: < 4 times/24 hrs.). If alert, happy, and playful, dehydration is very unlikely.

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**Return to School** It takes about 3-6 days after contact with HFMD for children to develop symptoms. It's okay to return to school/resume contact with others once:

- Fever is gone, and
- If widespread blisters are present, they are all crusted over, and no new lesions are developing

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### When to call

- Symptoms are severe or are worsening
- Fever lasts more than 3 days
- There are signs of dehydration
- There are signs of skin infection (numerous yellow crusted lesions)
- If you believe your child needs to be seen.