

Hand, foot and mouth disease

Symptoms



Hand-foot-and-mouth disease on the hand



[Hand-foot-and-mouth disease on the foot](#)

Hand-foot-and-mouth disease may cause all of the following signs and symptoms or just some of them. They include:

- **Fever**
- **Sore throat**
- **Feeling of being unwell (malaise)**
- **Painful, red, blister-like lesions on the tongue, gums and inside of the cheeks**
- **A red rash, without itching but sometimes with blistering, on the palms, soles and sometimes the buttocks**
- **Irritability in infants and toddlers**
- **Loss of appetite**

The usual period from initial infection to the onset of signs and symptoms (incubation period) is three to six days. A fever is often the first sign of hand-foot-and-mouth disease, followed by a sore throat and sometimes a poor appetite and malaise.

One or two days after the fever begins, painful sores may develop in the mouth or throat. A rash on the hands and feet and possibly on the buttocks can follow within one or two days.

When to see a doctor

Hand-foot-and-mouth disease is usually a minor illness causing only a few days of fever and relatively mild signs and symptoms. Contact your doctor if mouth sores or a sore throat keep your child from drinking fluids. And contact your doctor if after a few days, your child's signs and symptoms worsen.

Definition

Hand-foot-and-mouth disease — a mild, contagious viral infection common in young children — is characterized by sores in the mouth and a rash on the hands and feet. Hand-foot-and-mouth disease is most commonly caused by a coxsackie virus.

There's no specific treatment for hand-foot-and-mouth disease. You can reduce your child's risk of infection from hand-foot-and-mouth disease by practicing good hygiene and teaching your child how to keep clean.

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Summer is not only the season for watermelon and zucchini. It's also the time for Hand, Foot and Mouth Disease. Typically found in younger kids, it's a [contagious viral illness](#) marked by a fever and rash — either skin or mouth blisters.

Hand, Foot and Mouth swept through several WBUR employees' families recently, so we checked in with an expert: Dr. Clement Bottino, a pediatrician at Boston Children's Hospital in the Division of General Pediatrics who sees a lot of the illness in the Primary Care Center. "Nothing unusual," he says, "just the summertime viruses."

"Viruses are kind of like vegetables," he explains. "There are winter and summer varieties. The winter ones cause illnesses like the

common cold, while those in the summer cause fever-plus-rash-type illnesses, like Hand, Foot and Mouth.”

Hand, Foot and Mouth typically affects children under the age of 5, but older children and even adults can catch it as well. Symptoms can vary. Some children may only have a fever and mouth blisters, while others have the characteristic rash without other symptoms. The rash may present with classic red bumps on a child’s hands and feet, or a more diffuse rash that includes the diaper area.

Some people, particularly adults, may show no symptoms at all, but they can still spread the illness to others. Hand, Foot and Mouth is transmitted through direct contact with saliva, mucus or feces. Daycare is notorious as a hotbed of activities for spreading infection: hugging, sharing cups, coughing and sneezing, and touching infected objects. While patients are most contagious during their first week of illness, they can spread the virus for weeks after the symptoms fade.

According to Dr. Bottino, the most important thing for parents to know is that the virus is mild and “self-limited,” meaning it usually goes away on its own, causing no scars or lasting problems. Most patients feel better in seven to 10 days without any treatment at all. I asked Dr. Bottino what else parents should know about Hand, Foot and Mouth Disease. Our conversation, edited:

The [CDC outlines the basic steps](#) to prevent the spread of Hand, Foot and Mouth. What else can parents do to protect their children? Since these viruses enter and exit our bodies through our digestive system, I recommend optimizing a child’s “gut health” to maximize their defense. This means eating plenty of leafy green vegetables — organic and locally farmed if possible — which help support the gut’s innate immune system. Spending time outdoors in the sun helps boost vitamin D levels, which we have learned are also crucial for a healthy immune system. Vitamin D, along with vitamins A, E and K, are fat soluble, meaning they are best assimilated in the presence of healthy fats. I recommend whole and full-fat meat and dairy foods — grass-fed and locally farmed if possible — for their omega-3s and other healthy fat content.

Finally, and perhaps most important, is to eat foods containing probiotics — “good bacteria” — that help support healthy digestion and a healthy immune system. Fermented foods, like yogurt and sauerkraut, are excellent sources of probiotics that are relatively inexpensive and easy to make at home.

What about hand sanitizer and antibacterial hand soaps?

I talk to many parents who feel quite anxious about sanitizing everything and washing their kids’ hands with antibacterial soaps. I recommend hand washing, but not with heavy-duty or antibacterial cleansers containing harsh chemicals. These products may actually kill the good bacteria naturally living on our skin and create opportunities for more virulent strains to take their place.

We know there’s no treatment for Hand, Foot and Mouth Disease. But should parents give their kids any medication for the pain or fever?

If the child is uncomfortable with fever or is very fussy, then an over-the-counter fever reducer or pain reliever like acetaminophen or ibuprofen, can be helpful. But if the child is acting well and drinking fluids, then parents shouldn’t feel obliged to give any medicines. I tell parents that all medicines carry the possibility of adverse, or negative, effects. Fortunately, with Hand, Foot and Mouth, kids are almost always playful and running around. In short, if it doesn’t look like a child needs medication, then they most likely don’t.

Complications of Hand Foot and Mouth Disease are [extremely rare](#). When should parents start worrying that something else might be wrong?

Like the common cold, most cases of Hand, Foot and Mouth, will resolve within a week. Some may last a little longer. On day 1-2 there is usually a fever. Often the temperature is so mild that parents aren’t even aware of it. As the fever resolves, the skin and/or mouth symptoms emerge. Usually it’s the rash and mouth blisters that bring parents to the pediatrician. These tend to resolve over the next five days or so. The rash and blisters may change in appearance or migrate — this is all normal. The main thing I counsel parents is to monitor their child’s intake of fluids. Oftentimes, if the blisters in the mouth are painful, then intake of fluids may decrease. Giving cold liquids, slush or frozen liquids can be helpful. Medications like acetaminophen or ibuprofen can help take the edge

off if the child is very uncomfortable. A good way to measure fluid intake is urine output — no wet diapers in six-12 hours is a good reason to call the pediatrician.

Parents are often worried by the height of their child's fever. Seeing a temp of 103 can be scary. However, it's not the height of the fever but rather the duration that is most concerning. Viral infections can routinely cause fevers of 104 degrees. We become more concerned if fevers have been persisting for more than five days in a row. Most viruses "burn themselves out" after five days. Once a fever (which we define as 38 degrees Celsius, or 100.4 degrees Fahrenheit or higher) has been persistent — meaning it hasn't come down — but has stayed elevated for more than five days, we start to consider other sources for the fever. These include bacterial infections that may be "hiding" in a child's body, such as a urinary tract infection or pneumonia. Fever for more than five days is certainly a reason to call the pediatrician.