

## Fact Sheet

# Hand, Foot, and Mouth Disease

Also Known As: (HFMD)



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## What is Hand, Foot, and Mouth Disease?

Hand, foot, and mouth disease (HFMD) is a common illness of infants and children. It is often confused with “hoof-and-mouth” disease of cattle, sheep, and swine. Although the names are similar, the two diseases are not related at all and are caused by different viruses.

## Spread of Disease

HFMD is moderately contagious. Infection is spread from person to person by direct contact with nose and throat discharges, saliva, fluid from blisters, or the stool of infected persons. A person is most contagious during the first week of the illness. HFMD is not transmitted to or from pets or other animals.

## Signs and Symptoms



It is characterized by fever, sores in the mouth, and a rash with blisters. HFMD begins with a mild fever, poor appetite, malaise or “feeling sick”, and frequently a sore throat. One or two days after the fever begins, painful sores develop in the mouth. They begin as small red spots that blister and then often become ulcers. They are usually located on the tongue, gums, and inside of the cheeks. The skin rash develops over one to two days with flat or raised red spots, some with blisters.

The rash does not itch, and it is usually located on the palms of the hands and soles of the feet. It may also appear on the buttocks. The usual period from infection to onset of symptoms or “incubation period” is three to seven days.

## Treatment and Complications

No specific treatment is available for this or other enterovirus infections. Symptomatic treatment is given to provide relief from fever, aches, or pain from the mouth ulcers. Nearly all patients recover without medical treatment in seven to 10 days. Complications are uncommon.

## Diagnosis

HFMD is one of many infections that result in mouth sores. A throat swab or stool specimen may be sent to the laboratory to determine which enterovirus caused the illness. Since the testing often takes two to four weeks to obtain a final answer, the physician usually does not order these tests. The physician may diagnose based on the pattern of symptoms, age, and appearance of the rash.

## Prevention

Specific prevention for HFMD or other enterovirus infections is not available, but the risk of infection can be lowered by good hygienic practices. Preventive measures include frequent hand washing, especially after diaper changes, cleaning of contaminated surfaces and items by diluted solution of chlorine-containing bleach (made by mixing approximately  $\frac{1}{4}$  cup of bleach with one gallon of water), and washing soiled articles of clothing. Children are often excluded from group settings during the first few days of the illness, which may reduce the spread of infection, but will not completely interrupt it.

## People at Risk

HFMD occurs mainly in children under 10 years old, but adults may also be at risk. Everyone is susceptible to infection, but not everyone who is infected becomes ill. Infection results in immunity to the specific virus, but a second episode may occur following infection with a different member of the enterovirus group.

### **If an outbreak occurs in a school or child care setting:**

- Encourage frequent handwashing using warm, running water and scrub with soap for 20 seconds minimum. Hand sanitizer is not a substitute for frequent handwashing. Wash hands after using bathroom, diapering, touching hands, face or hair, before and frequently during food preparation.
- Use bleach instead of quaternary ammonium compound for cleaning and sanitizing food contact surfaces and high touch areas (tables, chairs, desks, tray lines, key pads, and toys). Utilize a chemical test kit to ensure proper concentration.
- Avoid student/child use of scoops, tongs, ladles, etc. on food service line. Allow staff to scoop foods or use pre-portion cups. Avoid utensils which are touched by multiple individuals.
- Use disposable trays and silverware if possible. For items which must be reused, such as cookware and cooking utensils, ensure that your dish washing machine is sanitizing. For home day care centers using residential dishwashers, use chlorinated detergent and the sanitize setting with a heated dry time. If manually dishwashing, use the three compartment method and use bleach per manufacturer instructions.
- Increase the cleaning frequency of bathrooms to twice daily and use bleach based disinfection products.
- Exclude sick children from group activities including children with fever, draining sores that cannot be covered, or sores in the mouth.
- The virus may be excreted for weeks after the symptoms have disappeared. Some persons excreting the virus, including most adults, may have no symptoms.



### **For more sources of information on this topic visit:**

ST. CLAIR COUNTY HEALTH DEPARTMENT [www.scchealth.co](http://www.scchealth.co)

MICHIGAN DEPARTMENT OF HEALTH AND HUMAN SERVICES [www.michigan.gov/mdhhs](http://www.michigan.gov/mdhhs)

CENTERS FOR DISEASE CONTROL AND PREVENTION [www.cdc.gov](http://www.cdc.gov)