

# Hand, Foot, and Mouth Disease

## What is Hand, Foot and Mouth Disease (HFMD)?

Hand, Foot and Mouth Disease (HFMD) is caused by a group of viruses called enterovirus which includes the coxsackievirus and the enterovirus. Symptoms include fever, sores in the mouth, and a rash with blisters.

- Symptoms usually start with a mild fever, poor appetite, tiredness and a sore throat.
- One to two days after the fever begins, painful sores develop in the mouth – initially small red spots that blister and often become ulcers. These sores can be found on the tongue, gums, and the inside of the cheeks.
- One to two days after the mouth sores appear, a skin rash develops, and there may also be blisters. The rash does not itch, and is usually located on the palms of the hands and soles of the feet, and sometimes on the buttocks. It is possible that someone with HFMD may have only the rash or mouth sores.

The usual incubation period (time between contracting the virus to when the person first become ill) is from 3 to 6 days. HFMD is not a serious disease and complications are uncommon.

HFMD should not be confused with foot and mouth disease seen in pigs, sheep and cattle. These two diseases are not related and are caused by different viruses.

## Who is at risk?

HFMD is common in infants and children under 10 years of age and is often spread among children in child care settings, but adults may also be at risk. Infections occur more frequently when hygiene is poor and also during summer and early fall.

## How is it spread?

HFMD is spread from person-to-person by exposure to nose and throat secretions, saliva, fluid from the blisters, or the stool of infected persons. An infected person is most contagious during the first week of illness. The viruses that cause HFMD may survive on surfaces for long periods; it is possible to become infected with HFMD from contact with soiled objects.

A person can shed virus from their respiratory tract for about a week and up to several weeks in their stool. Some people excreting the virus, including most adults, have no symptoms at all.

## Treatment

No specific treatment is available for HFMD. Physicians may recommend an over-the-counter drug such as acetaminophen (Tylenol) for fever or pain. Most people recover in 7 to 10 days without medical treatment.

## Prevention

Specific prevention for HFMD is not available, but the risk of infection can be lowered by good hygiene practices.

- **Thorough handwashing** is the best prevention. Make sure hands are properly washed after using the toilet, changing diapers, wiping a child's nose, helping others toilet, before preparing food, etc.  
**Proper handwashing includes 6 steps:**
  - **Wet hands** with warm running water
  - **Apply liquid soap**
  - **Lather hands and scrub for 20 seconds**
  - **Rinse** under running water
  - **Dry** your hands with paper towels
  - **Use the towel to turn off the taps**
- **An alcohol-based hand rub can be added to your hand hygiene routine:**
  - **Apply the sanitizer to your hands.** About a thumbnail size amount is sufficient.
  - **Rub your hands together until the alcohol has evaporated.** Hands will feel dry in about 15 seconds.
- **Clean and sanitize** washroom surfaces, and all hand contact surfaces at least daily.
  - Regular cleaning schedules in child care centres and health care facilities with HFMD should be enhanced. A 1:50 household bleach solution (approximately 1000 ppm) is recommended for use and can be prepared by mixing 100ml (7 tablespoons) household bleach with 5000ml (20 cups) water. Bleach should be used after surface is cleaned with soap and water.
- **Stay home when ill.** Children in group settings should stay home if they are not well enough to participate. Staying home may reduce the spread of the infection, but will not completely interrupt it. Children, who feel well enough to participate in activities, can return to child care or school, even if they still have the rash. Routine exclusion is not necessary.

For more information contact the Communicable Disease and Sexual Health Service at 663-5317 ext. 2330 or go to [www.healthunit.com](http://www.healthunit.com)

### References:

Centers for Disease Control and Prevention website, Respiratory and Enteric Viruses Branch, "Hand, Foot and Mouth Disease", February 2010. Accessed on March 23, 2010 <http://www.cdc.gov/ncidod/dvrd/revb/enterovirus/hfhf.htm>

Pickering, L. K. (ed.). (2009). *Enterovirus (Nonpoliovirus) Infections*. In 2009 Red Book: [Report of the Committee on Infectious Diseases](#) (28<sup>th</sup> ed; pp. 206-208). Elk Grove Village, IL: American Academy of Pediatrics.

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