

Hand, Foot, and Mouth Disease



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

- Viral syndrome with symptoms of
 - Fever
 - Painful sores/blisters in the mouth
 - Begin as small, red spots that later form blisters (vesicles) and sometimes become ulcers
 - Usually located in the posterior part of the mouth (soft palate, tonsils, uvula, cheeks, gums, tongue)
 - Red spots or blisters on the palms of the hands and soles of the feet
 - Frequently, sore throat, malaise, and poor appetite

Photos of HFMD Lesions



[www.accesskent.com/.../ Hand_Foot_Mouth.jpg](http://www.accesskent.com/.../Hand_Foot_Mouth.jpg)



<http://dermnetnz.org/viral/hand-foot-mouth.html>



[www.med.sc.edu:85/ virol/hand-foot2.jpg](http://www.med.sc.edu:85/virol/hand-foot2.jpg)

Is HFMD the same as foot-and-mouth disease?

- No, foot-and-mouth disease is a disease of cattle, sheep, and swine
- Despite the similar names, the two diseases are caused by different viruses and are not related

Cause and Incubation Period

- Viral disease caused by enteroviruses
 - Coxsackievirus type A16 is the most common
 - Sometimes, Enterovirus 71 or other strains of coxsackievirus
- Incubation period
 - Usually 3–5 days

Occurrence

- Worldwide
- Sporadic cases or epidemics
 - Schools
 - Childcare centers
- Increased incidence in summer and early fall
- Usually in children aged <10 years, but can occur in adolescents and adults

Transmission

- Moderately contagious
- Person-to-person spread, by direct contact with:
 - Mouth or respiratory secretions (such as saliva on hands or toys)
 - Aerosol droplets
 - Feces
- Not transmitted to or from animals

Communicability

- Patients are most infectious during the time of acute illness—typically the first week
- Patients may be infectious longer, since virus persists in the stool for several weeks

Course and Duration

- Illness is mild for nearly all patients
- Occasional complication: dehydration
 - Mouth sores can be quite painful, preventing patients from taking in adequate amounts of liquids
- Very rare complication: viral meningitis
 - One of the causes of HFMD—Enterovirus 71—can also cause viral meningitis
- Rash may last for 7–10 days

How is HFMD Diagnosed?

- A physician can usually distinguish HFMD from other infections that cause mouth sores or body rashes based on
 - the appearance of the lesions,
 - the pattern of symptoms reported, and
 - the age of the patient
- A throat swab or stool specimen can be sent for viral culture, but results won't be known for 2–4 weeks, so this is rarely done

Treatment

- No specific treatment is available
- Symptomatic treatment
 - Fever reduction
 - Analgesics for mouth and throat pain, body aches

Control and Prevention

- Exclude children from child care or school if there is fever OR ulcers in mouth and child is drooling
- Frequent hand washing, especially after going to the bathroom or changing diapers
- Cover mouth and nose when coughing or sneezing
- Wash toys and other contaminated surfaces

Resource

- CDC Respiratory and Enteric Viruses Branch at

<http://www.cdc.gov/ncidod/dvrd/revb/enterovirus/hfhf.htm>