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Hand, Foot and Mouth Disease

Hand, foot and mouth disease is usually a short mild illness that mainly affects children. Most children fully recover within ten days, and usually less. Serious complications occur rarely. This disease is **not** related to the disease with a similar name which affects animals.

What is hand, foot and mouth disease?

Hand, foot and mouth disease (HFMD) is due to an infection that usually causes a typical illness, including a typical rash. It is most commonly caused by the Coxsackie A16 virus. Some cases are caused by a different but related virus called enterovirus 71. Rarely, the same illness is caused by other strains of Coxsackievirus.

Hand, foot and mouth disease symptoms

Like many viral infections, the illness often starts with feeling unwell for a day or so. This might include a high temperature (fever). After this, a sore throat commonly occurs, quickly followed by small spots that develop inside the mouth (mouth sores). These soon progress into small mouth ulcers. Spots may appear on the lips or around the mouth as well or instead of inside the mouth.

What does hand, food and mouth disease look like?



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In many cases of hand, foot and mouth disease, red spots also develop on the skin. This is typically a day or so after the mouth ulcers develop. The spots are small lumps that are a few millimetres in diameter and usually appear on the palms of the hands and soles of the feet. As well as the hands and feet, spots sometimes also appear on the buttocks, legs and genitals. They rarely develop on other parts of the body. The spots are similar to chickenpox but are smaller. Unlike chickenpox, they are not usually itchy but sometimes they can be a little bit sore.



By Grook Da Oger, via Wikimedia Commons

Can adults get hand, foot and mouth disease?

Hand, foot and mouth disease most commonly affects children under 10 years of age. Older children and adults are sometimes affected. Adults and older children with hand, foot and mouth disease tend to develop a milder form of the illness compared with young children. But adults can sometimes have quite severe symptoms.

How long does hand, foot and mouth disease last?

The symptoms of hand, foot and mouth disease usually resolve within 7-10 days, without needing any treatment.

Is hand, foot and mouth disease contagious?

Yes. The incubation period for hand, foot and mouth is 3-5 days. This means it takes 3-5 days to develop symptoms after being infected by another person. Most cases of hand, foot and mouth are passed on by a cough or sneeze which transmits the virus into the air. It can also be passed on by touching the fluid in the blisters.

Hand, foot and mouth can also be passed in stools (faeces). So if you go to the toilet while suffering with hand, foot and mouth disease and you dont wash your hands well, you can pass it on to someone else because you pass on one of the viruses that cause the disease. Hand, foot and mouth disease is mainly infectious until the spots and mouth ulcers have gone. Sometimes small outbreaks of hand, foot and mouth disease occur in nurseries and schools.

However, children can still be mildly infectious with hand, food and mouth disease for several weeks longer, as the virus may be passed out with the faeces for several weeks after the symptoms have gone. Therefore, it is sensible to maintain good hygiene to reduce the chance of hand, foot and mouth disease spreading. For example:

- Make sure that children wash their hands thoroughly with soap and water after using the toilet.
- Aim to keep mouth and nose covered when coughing and sneezing. Wipe the nose and mouth with disposable tissues.
- Adults should take particular care when handling nappies and tissues. Wash hands thoroughly after handling nappies and tissues.
- Soiled clothes, bedding and towels should be washed on a hot cycle of the washing machine.
- Avoid close contact. It is best not to share cups, eating utensils, towels, etc, whilst ill with this infection and for several weeks
 afterwards.
- Do not deliberately pierce blisters, as the fluid is infectious.

Can you go to school, nursery or other childcare with hand, foot and mouth disease?

Guidance from Public Health England is that children should not routinely be kept from school or nursery/childcare if they have hand, foot and mouth disease if they are well enough in themselves to attend. Although there is a risk of passing it on to others, the illness is usually mild. If your child feels unwell or miserable or has a severe loss of appetite, you may wish to keep them off school until they feel well enough to attend. See the separate leaflet called School Exclusion for Infections for more information.

Hand, foot and mouth disease treatment

There is no treatment that will take away the hand, foot and mouth disease. The aim is to ease symptoms and make the person as comfortable as possible until the illness goes away. Treatment is the same for children and adults.

Keep the temperature down

A high temperature (fever) can make anyone feel uncomfortable and irritable. The following are things that you can do that may bring the temperature down and make the person with hand, foot and mouth disease feel more comfortable:

- You can give paracetamol or ibuprofen. Both of these medicines can lower a temperature. Because these are painkillers, they will also help the soreness in the mouth. For children you can buy these medicines in liquid form or flavoured tablets that melt in the mouth. They come in various brand names. The dose for each age is given with the medicine packet. You do not need to use these medicines if the person is comfortable or does not have a fever.
- **Keep the person or child cool.** Remove clothes or use light cotton clothes or bedding. Open windows or use a fan in the room where appropriate. Do not cold-sponge a child who has a fever. This used to be popular but it is now not advised. This is because the blood vessels under the skin become narrower (constrict) if the water is too cold. This reduces heat loss and can trap heat in deeper parts of the body. The child may then become worse. Many children also find cold-sponging uncomfortable.

Give plenty to drink

Give the person suffering with hand, foot and mouth disease plenty to drink. This helps to prevent lack of fluid in the body (dehydration). They might find this easier if their mouth is less sore, and if their temperature is down. So, if they are not keen to drink, it may help to give some paracetamol or ibuprofen first.

Then, try the infected person with drinks half an hour or so later when the medication has started to work. If breastfeeding a child, then keep breastfeeding, as breast milk is the best fluid. However, you can offer feeds more often to increase the amount of fluid.

Treatments for a sore mouth

For those suffering with foot and mouth it often proves difficult or painful to eat or drink. Soft foods may be easier to eat with a sore mouth, so try foods such as soups, ice cream, smoothies and mashed potato.

There are a few treatments available for ulcers in the mouth caused by hand foot and mouth disease. However, it is not known how effective they are. Also not all of them can be used for children. If other measures are not helping, here are some of the possible treatments:

- Lidocaine gel. This is a local anaesthetic, which means it numbs the area. This can be used in children.
- Benzydamine mouthwash or spray. The spray can be used from 5 years of age, the mouthwash from 12 years of age.
- Choline salicylate gel (Bonjela®). This cannot be used in children under the age of 16 years. Pregnant women should also not use it.
- Warm salty mouthwashes. A mouthwash with a warm solution of salt and water may help. It should only be used if you are certain your child is old enough to spit it out and not swallow it.
- As mentioned above, paracetamol or ibuprofen may also help with soreness in the mouth.

Tell a doctor if a child stops drinking due to a sore mouth as, rarely, dehydration may develop. Also, see a doctor promptly if you are concerned about any unusual symptoms of hand, foot and mouth disease that develop to reduce the risk of any serious complications.

Is hand, foot and mouth disease serious?

Usually not. The high temperature (fever) and spots usually clear within a few days. The mouth ulcers can be painful and may last up to a week. The sore mouth may make a child miserable for a few days.

In a very small number of cases of hand, foot and mouth disease, the virus affects the heart, lung or brain to cause a serious inflammation of the heart, lung or brain, which is fatal in some cases. But it has to be stressed - these serious complications are very rare.

Is hand, foot and mouth disease dangerous for a pregnant woman?

There does not seem to be a risk to the developing baby if a pregnant woman contracts hand, foot and mouth disease. It does not appear to cause miscarriages or abnormalities in the developing baby.

However, if you have symptoms of hand, foot and mouth disease close to your delivery date (within three weeks), see your doctor. This is because there is a possibility you may pass the infection to your baby when it is born. Usually newborn babies have a very mild illness if they get hand, foot and mouth disease. However, occasionally it can be very severe at this age.

Further reading & references

- Hand foot and mouth disease; DermNet NZ
- Health protection in schools and other childcare facilities; GOV.UK Guidance, September 2017 last updated February 2023
- Guerra AM, Waseem M, Hand Foot And Mouth Disease. StatPearls Publishing; 2022 Jan.
- Hand, foot and mouth disease; NICE CKS, August 2020 (UK access only)

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