



## Enterovirus Infection

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Enteroviruses refer to a group of viruses including coxsackie virus, echo virus and enterovirus 71 (EV71). Enterovirus infection is commonly seen in children under 5. Main symptoms include hand, foot and mouth disease (HFMD) and herpangina. The incubation period is 3 to 7 days and the course of illness is usually a week. As blisters, rashes, ulcers and fever subside, the patient will recover. Complications are not common. In rare occasions, it causes complications of the central nervous system such as viral meningitis and encephalitis which can be fatal.

### **Hand, foot and mouth disease**

HFMD is one of the manifestations of enterovirus infection. Patients develop raised spots, usually with small blisters, on the hands, feet and buttocks. Ulcers are also found in the front and rear oral cavity. The spots are usually non-itchy.

### **Herpangina**

Herpangina is another manifestation of enterovirus infection. Blisters are found in the rear oral cavity and often develop into ulcers. In serious cases, ulcers may appear in the front oral cavity. When ulcers appear, attention should be given to the gums for red, swollen infection which is another disease caused by herpes simplex virus known as herpetic gingivostomatitis. Thus, not all oral ulcers are caused by enteroviruses.

### **Mode of transmission**

It is transmitted by oral-fecal or oral routes, as well as by saliva and direct contact with contaminated objects. Patients have infectivity a few days before the onset of symptoms and viruses can be found in the throat and stool. Viruses can be detected in the stool for up to 5 or 6 weeks and even longer.

### **Clinical features**

- Initial symptoms resemble those of a cold, with fever persisting for 4 to 5 days;
- Small blisters and non-painful red spots develop on the body, mainly located on the oral mucous membrane, tongue, palms, in between fingers and toes, and will subside in 7 to 10 days;



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- Patients may have a poor appetite owing to oral ulcers and pain;
- No specific treatment. Symptomatic treatment is given to relieve discomfort.

### Management

1. When children develop the aforementioned symptoms, particularly extreme fatigue, sleepiness, irritability, consciousness disturbance, convulsions and persistent vomiting:
  - Notify parents and consult the doctor immediately to prevent complications;
  - Sick children should stay at home and return to school only after the ulcers and blisters have dried and crusted
2. Reduce interaction and activities between the class the sick child belong to and other classes;
3. Disinfect the inside and outside of classroom, facilities and toys;
4. **Criteria for reporting**

#### ➤ Schools

- When, within 2 days, the number of students/staff in the same class with similar symptoms/ infectious diseases meets any of the following conditions:

Class size	No. of cases/Percentage
<25 people	3 people
≥25 people	15%

- Notify the Centre for Disease Control and Prevention (CDC) of the Health Bureau, provide relevant information, complete and fax the **【Notification Form of Collective Illness related to Infectious Diseases in School】** to CDC to facilitate investigation, so that timely control measures can be implemented;
- Report daily the number of new cases/absentees and provide information of relevant students/staff until the disease stops spreading.

#### ➤ Nursery

- When, within 2 days, 3 students/staff in the same class with similar symptoms/ infectious diseases .Notify the Centre for Disease Control and Prevention (CDC) of the Health Bureau and Social Welfare Bureau, provide



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relevant information, complete and fax the 【Notification Form of Collective Illness related to Infectious Diseases in Nursery】 to CDC and Social Welfare Bureau to facilitate investigation, so that timely control measures can be implemented;

- Report daily the number of new cases/absentees and provide information of relevant students/staff until the disease stops spreading.

### **Preventive measures**

1. Observe personal, environmental and food hygiene
  - All staff should observe personal hygiene, particularly frequent hand washing;
  - Teach the children how to wash hands properly. Liquid soap should be used for washing hands before meals and after using the toilet;
  - Open windows to maintain good ventilation;
  - Ensure cleanliness and ventilation of toilets;
  - Pay attention to proper food hygiene. Eat only thoroughly cooked food. Staff (including kitchen staff) with respiratory and/or gastrointestinal symptoms should seek prompt medical advice and rest at home;
  - Avoid sharing of food, pacifiers, milk bottles, eating utensils and towels among children;
  - Cleanse the floor and wall surface below 1 metre, wash toys, desks and chairs with 1:100 diluted household bleach regularly (once a day)
  
2. Personnel taking care of sick children should pay special attention, particularly to their stool and vomit. Masks and gloves should be worn when cleaning vomit and stool (e.g. changing diapers). Cleaning and disinfection should be done according to standard procedures. Wash hands thoroughly and wash and disinfect soiled clothing with 1:100 diluted household bleach afterwards.