

Norovirus Infection



Centre for Health Protection



Department of Health

Causative agent

Norovirus is a non-enveloped RNA virus that belongs to the family *Caliciviridae*. Norovirus infection typically causes acute gastroenteritis. It is a common cause of food poisoning. Norovirus can also cause outbreaks of acute gastroenteritis in settings where people are staying close together such as schools, elderly homes, hotels, play facilities and cruise ships. The disease affects people of all age groups and tends to be more common during winter. The virus is previously known as 'Norwalk-like viruses'.

Clinical features

Symptoms include nausea, vomiting, diarrhoea, abdominal pain, low-grade fever and malaise. The symptoms are usually self-limiting and most people will get better within 1 – 3 days.

Modes of transmission

The infection can be transmitted via the following ways:

- by consuming food or water contaminated with the virus;
- by contact with vomitus or faeces from infected persons;
- by contact with contaminated objects; or
- by aerosol spread with contaminated droplets of splashed vomitus.

Incubation period

The incubation period is usually 12 – 48 hours.

Management

Given adequate fluids to prevent dehydration and supportive treatment, the patient usually recovers within 1 – 3 days. Antibiotics are of no value in treatment.

Prevention

No vaccine is available for norovirus infection. As a general measure to prevent gastroenteritis, members of the public are advised to:

- 1. Maintain good personal hygiene**
 - Perform hand hygiene frequently, especially before handling food or eating, and after using the toilet. Wash hands with liquid soap and water, and rub for at least 20 seconds. Then rinse with water and dry with a disposable paper towel or hand dryer. If hand washing facilities are not available, or when hands are not visibly soiled, hand hygiene with 70 to 80% alcohol-based handrub may be considered. As alcohol does not effectively kill norovirus, alcohol-based handrub should not substitute hand hygiene with liquid soap and water.
 - Wear gloves and a surgical mask while disposing of or handling vomitus and faeces, and wash hands thoroughly afterwards.
 - Refrain from work or attending class at school, and seek medical advice if suffering from fever, vomiting or diarrhoea.
 - Exclude infected persons and asymptomatic carriers from handling food and from providing care to children, the elderly and immunocompromised people.
- 2. Maintain good food hygiene**
 - Adopt the 5 Keys to Food Safety in handling food, i.e. Choose (Choose safe raw materials); Clean (Keep hands and utensils clean); Separate (Separate raw and cooked food); Cook (Cook thoroughly); and Safe Temperature (Keep food at safe temperature) to prevent foodborne diseases.
 - Drink only boiled water from the mains or bottled drinks from reliable sources.
 - Avoid drinks with ice of unknown origin.
 - Purchase fresh food from hygienic and reliable sources. Do not patronise illegal hawkers. In general, you can eat fruit skin after thorough washing. However, if you would like to reduce the risk of illness especially when you travel abroad, peel raw fruit before you eat and do not eat the peelings.

- Cook all food, particularly shellfish, thoroughly before consumption.
- Susceptible populations (e.g. pregnant women, infants, young children, the elderly and people with weakened immune systems) should avoid eating foods that are consumed without heat treatment (e.g. shellfish, especially oyster, to be consumed raw) or foods containing ingredients that are not cooked (e.g. pre-prepared or pre-packaged salads).

* Please visit the website of Centre for Food Safety for more information on food safety.

3. Maintain good environmental hygiene

- Maintain good indoor ventilation.
- Clean vomitus/ faeces and disinfect the contaminated areas properly and immediately (please refer to the guidance on disinfection below for details). Keep other people away from the contaminated areas during cleaning.
- Maintain proper function of sanitary facilities and drainage system.
- Clean and disinfect toilets used by infected persons and the soiled areas.

Guidance in disinfection of area contaminated by vomitus/ faecal spillage from patients with norovirus infection

- Keep other people away from the contaminated area during the cleaning process.
- Wear gloves and a surgical mask throughout the disinfection procedure.
- Discard all food if vomiting and diarrhoea occurs in an area where open food is displayed.
- Remove the bulky waste cautiously from all soiled linens and clothing, soak them in 1:49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes and then wash thoroughly. If immediate washing cannot be arranged, place the soiled linens and clothing inside sealed bags and wash them as soon as possible.

- Use disposable towels to wipe away all the vomitus or faecal spillage from outside inward. Then apply 1:49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) to the contaminated surface and the adjacent areas liberally (e.g. disinfect areas within 2 metres from the edge of the vomitus/ faecal spillage), especially the frequently touched surfaces such as door knobs, hand rail, etc. Leave for 15 – 30 minutes to allow time for the bleach to inactivate viruses; then rinse with water and wipe the area dry.

- Never use floor mops for cleaning up the vomitus.
- After disinfection, soak all cleaning tools in 1:49 diluted household bleach (mixing 1 part of household bleach containing 5.25% sodium hypochlorite with 49 parts of water) for 30 minutes and then rinse thoroughly and air-dry before re-use.
- Wash hands thoroughly afterwards.



Centre for Health Protection Website www.chp.gov.hk

Health Education Infoline of the Department of Health 2833 0111

*Centre for Food Safety Website www.cfs.gov.hk

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