



Norovirus

What is norovirus?

- A virus that causes diarrhea and vomiting.
- Currently, the leading cause of diarrhea outbreaks in the United States.
- Disease occurs more frequently in cooler months (ie, late autumn to early spring) than other times of the year.
- Common cause of foodborne and cruise ship outbreaks.

What are the signs or symptoms?

- Fever.
- Non-bloody, watery diarrhea.
- Nausea.
- Abrupt onset of vomiting.
- Muscle ache.
- Headache.
- Dehydration in severe cases.
- Generally lasts 1 to 5 days but may be longer in young children.
- Some children may have very mild or no symptoms.

What are the incubation and contagious periods?

- Incubation period: 12 to 48 hours.
- Contagious period: Virus may be present before vomiting or diarrhea begins and can persist for 4 weeks or more.

How is it spread?

- Fecal-oral route: Contact with feces or vomit of children or adults who are infected. This generally involves an infected person contaminating their own fingers and then touching an object that another person touches. The person who touched the contaminated surface then puts their fingers into their own mouth or another person's mouth.
- Water or food contaminated by human feces.

How do you control it?

- Use good hand-hygiene technique at all the times listed in Chapter 2, especially after toilet use or handling soiled diapers and before anything to do with food preparation or eating. For norovirus, washing hands with soap and water is better than alcohol-based hand sanitizer, which does not adequately kill the virus. Norovirus is highly contagious.

- Ensure proper surface disinfection that includes cleaning and rinsing of surfaces that may have become contaminated with stool (feces) with detergent and water and application of a US Environmental Protection Agency-registered disinfectant according to the instructions on the product label.
- Ensure proper cooking and storage of food.
- Exclude infected staff members who handle food.
- Exclude children and adults who have specific symptoms (see the section Exclude from educational setting?).

What are the roles of the educator and the family?

- Usually, educators will not know that a child has a norovirus infection because the condition is not distinguishable from other common forms of watery diarrhea. The following recommendations apply for a child or staff member with diarrhea from any cause (see Diarrhea Quick Reference Sheet):
 - Report the condition to the staff member designated by the early childhood education program or school for decision-making and action related to care of ill children and staff members. That person, in turn, alerts possibly exposed family and staff members to watch for symptoms and notifies the Child Care Health Consultant.
 - Ensure staff members follow the control measures listed in the section How do you control it?
 - Report outbreaks of diarrhea (more than 2 children and/or staff members in the group) to the Child Care Health Consultant, who may report to the local health department.
- If a child or staff member has a known norovirus infection, follow these steps.
 - Follow the advice of the child's or staff member's health professional.
 - Report the infection to the local health department, as the health professional who makes the diagnosis may not report that the infected child or staff member is a participant in an early childhood education program or school, and this could lead to delay in controlling the spread of the disease.
 - Reeducate staff members to ensure strict and frequent handwashing, diapering, toileting, food handling, and cleaning and disinfection procedures.
 - In an outbreak, follow the direction of the local health department.

Exclude from educational setting?

Yes, if

- The local health department determines if exclusion is needed to control an outbreak.
- Stool is not contained in the diaper for diapered children.
- Diarrhea is causing “accidents” for toilet-trained children or for adults (ie, failing to reach the toilet without having some stool leakage).
- Stool frequency exceeds 2 stools above normal for that child during the time the child is in the program because this may cause too much work for educators and make it difficult for them to maintain sanitary conditions.
- There is blood or mucus in stool.
- The ill child’s stool is all black.
- The child has a dry mouth, no tears, or no urine output in 8 hours (suggesting the child’s diarrhea may be causing dehydration).
- The child is unable to participate and staff members determine they cannot care for the child without compromising their ability to care for the health and safety of the other children in the group.
- The child meets other exclusion criteria (see Conditions Requiring Temporary Exclusion in Chapter 4).

Readmit to educational setting?

Yes, when all the following criteria are met:

- Once diapered children have their stool contained by the diaper (even if the stools remain loose) and when toilet-trained children do not have toileting accidents
- Once stool frequency is no more than 2 stools above normal for that child during the time the child is in the program, even if the stools remain loose
- When the child is able to participate and staff members determine they can care for the child without compromising their ability to care for the health and safety of the other children in the group

