



Public Health

Whatcom County Health Department

Gastroenteritis (Norovirus) Infection Control Packet

September 2012

Contents:

- Gastroenteritis Infection Control Checklist
- Gastroenteritis Case Log
- CDC Q&A
- CDC Q&A for Food Handlers
- Cleaning up Vomit & Diarrhea

NOROVIRUS (VIRAL GASTROENTERITIS) CONTROL MEASURES FOR LONG-TERM CARE FACILITIES

- Facility managers should immediately report any residents or staff members with symptoms of viral gastroenteritis to the appropriate administrator.
- Notify your Local Health Department at (360) 676-6724 during regular business hours or (360) 715-2588 (after hours).
- New cases should be recorded daily using a case log, which will help with the investigation of the outbreak (name, age, room #, onset date, symptoms, duration of illness).

CLEANING	
<input type="checkbox"/>	Wash hands frequently and vigorously with soap and water especially: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>After:</p> <input type="checkbox"/> Using the toilet <input type="checkbox"/> Cleaning up vomit or diarrhea <input type="checkbox"/> Changing diapers <input type="checkbox"/> Handling soiled clothes or linens <input type="checkbox"/> Contact with a symptomatic person (i.e., diarrhea, vomiting)</div> <div style="width: 45%;"> <p>Before:</p> <input type="checkbox"/> Eating <input type="checkbox"/> Preparing food <input type="checkbox"/> Serving food to patients</div> </div>
<input type="checkbox"/>	Clean up vomit and fecal spillage promptly and <u>wear proper protective equipment</u> , including a mask, gown and gloves.
<input type="checkbox"/>	Flush any vomit and/or stool in the toilet and disinfect the surrounding area with 10% bleach solution.
<input type="checkbox"/>	Use a freshly prepared 10% bleach solution to clean environmental surfaces.
<input type="checkbox"/>	Increase frequency of routine cleaning in the facility, especially bathroom and toilet cleaning. Give special attention to frequently touched objects such as doorknobs, faucets, toilet rails and bath rails.
<input type="checkbox"/>	Immediately wash clothing or linens that may be contaminated with the virus, especially after an episode of illness. Launder with hot water and detergent on the maximum cycle length and machine dry.
<input type="checkbox"/>	Clean carpets and soft furnishings with hot water and detergent or steam clean, dry. Vacuuming is not recommended since the viruses may become airborne.
<input type="checkbox"/>	Wear gloves and mask (if vomit/feces present) when entering the room of an ill resident (keep gloves available in rooms).
<input type="checkbox"/>	Remove gloves and wash hands after contact with an ill resident.
<input type="checkbox"/>	Dispose of any food that may have been contaminated by an ill kitchen employee.
PATIENT CARE / STAFF PRECAUTIONS	
<input type="checkbox"/>	Educate staff, residents and visitors about methods of transmission.
<input type="checkbox"/>	Confine symptomatic residents to their rooms (cohort ill patients together if possible) and minimize movement of all residents. Consider closing dining area.
<input type="checkbox"/>	Place an instruction card on the outside of the doors' of symptomatic patients to alert staff and visitors to the need for contact precautions (for incontinent individuals) and airborne precautions (only in presence of vomit and/or feces).
<input type="checkbox"/>	Require all symptomatic staff (including kitchen staff), visitors and volunteers to stay home until symptom free for 48 hours.
<input type="checkbox"/>	Limit staff from moving between affected and unaffected units, and exclude any nonessential personnel from affected units.
<input type="checkbox"/>	Maintain the same staff-to-resident assignments.
<input type="checkbox"/>	Cancel group activities until ill individuals are asymptomatic for at least 48 hours.
<input type="checkbox"/>	Limit new admissions until the incidence of new cases has reached zero.
<input type="checkbox"/>	Consider use of antiemetics for patients with vomiting and maintain hydration.
<input type="checkbox"/>	Discontinue self-service in the cafeteria/dining room to minimize food handling by residents.

I have read and understand the control and prevention measures presented to me regarding norovirus.

Facility Representative (Print Name) _____ Title _____ Facility Name and address _____

Facility Representative (Signature) _____ Date _____

To be completed by Local Health Department Visiting Facility

Local Health Department Representative (*Print and Sign Name*) _____ Title _____ Date of Visit _____

Noroviruses: Q&A

What are noroviruses?

Noroviruses are a group of viruses that cause the “stomach flu,” or gastroenteritis (GAS-tro-en-ter-I-tis), in people. The term norovirus was recently approved as the official name for this group of viruses. Several other names have been used for noroviruses, including:

- Norwalk-like viruses (NLVs)
- caliciviruses (because they belong to the virus family *Caliciviridae*)
- small round structured viruses.

Viruses are very different from bacteria and parasites, some of which can cause illnesses similar to norovirus infection. Viruses are much smaller, are not affected by treatment with antibiotics, and cannot grow outside of a person’s body.

What are the symptoms of illness caused by noroviruses?

The symptoms of norovirus illness usually include nausea, vomiting, diarrhea, and some stomach cramping. Sometimes people additionally have a low-grade fever, chills, headache, muscle aches, and a general sense of tiredness. The illness often begins suddenly, and the infected person may feel very sick. The illness is usually brief, with symptoms lasting only about 1 or 2 days. In general, children experience more vomiting than adults. Most people with norovirus illness have both of these symptoms.

What is the name of the illness caused by noroviruses?

Illness caused by norovirus infection has several names, including:

- stomach flu – this “stomach flu” is *not* related to the flu (or influenza), which is a respiratory illness caused by influenza virus.
- viral gastroenteritis – the most common name for illness caused by norovirus. Gastroenteritis refers to an inflammation of the stomach and intestines.
- acute gastroenteritis
- non-bacterial gastroenteritis
- food poisoning (although there are other causes of food poisoning)
- calicivirus infection

How serious is norovirus disease?

Norovirus disease is usually not serious, although people may feel very sick and vomit many times a day. Most people get better within 1 or 2 days, and they have no long-term health effects related to their illness. However, sometimes people are unable to drink enough liquids to replace the liquids they lost because of vomiting and diarrhea. These persons can become dehydrated and may need special medical attention. This problem with dehydration is usually only seen among the very young, the elderly, and persons with weakened immune systems. There is no evidence to suggest that an infected person can become a long-term carrier of norovirus.

How do people become infected with noroviruses?

Noroviruses are found in the stool or vomit of infected people. People can become infected with the virus in several ways, including:

- eating food (see [food handler fact sheet](#)) or drinking liquids that are contaminated with norovirus;
- touching surfaces or objects contaminated with norovirus, and then placing their hand in their mouth;
- having direct contact with another person who is infected and showing symptoms (for example, when caring for someone with illness, or sharing foods or eating utensils with someone who is ill).

Persons working in day-care centers or nursing homes should pay special attention to children or residents who have norovirus illness. This virus is very contagious and can spread rapidly throughout such environments.

When do symptoms appear?

Symptoms of norovirus illness usually begin about 24 to 48 hours after ingestion of the virus, but they can appear as early as 12 hours after exposure.

Are noroviruses contagious?

Noroviruses are very contagious and can spread easily from person to person. Both stool and vomit are infectious. Particular care should be taken with young children in diapers who may have diarrhea.

How long are people contagious?

People infected with norovirus are contagious from the moment they begin feeling ill to at least 3 days after recovery. Some people may be contagious for as long as 2 weeks after recovery. Therefore, it is particularly important for people to use good handwashing and other hygienic practices after they have recently recovered from norovirus illness.

Who gets norovirus infection?

Anyone can become infected with these viruses. There are many different strains of norovirus, which makes it difficult for a person's body to develop long-lasting immunity. Therefore, norovirus illness can recur throughout a person's lifetime. In addition, because of differences in genetic factors, some people are more likely to become infected and develop more severe illness than others.

What treatment is available for people with norovirus infection?

Currently, there is no antiviral medication that works against norovirus and there is no vaccine to prevent infection. Norovirus infection cannot be treated with antibiotics. This is because antibiotics work to fight bacteria and not viruses.

Norovirus illness is usually brief in healthy individuals. When people are ill with vomiting and diarrhea, they should drink plenty of fluids to prevent dehydration. Dehydration among young children, the elderly, the sick, can be common, and it is the most serious health effect that can result from norovirus infection. By drinking oral rehydration fluids (ORF), juice, or water, people can reduce their chance of becoming dehydrated. Sports drinks do not replace the nutrients and minerals lost during this illness.

Can norovirus infections be prevented?

Yes. You can decrease your chance of coming in contact with noroviruses by following these preventive steps:

- Frequently wash your hands, especially after toilet visits and changing diapers and before eating or preparing food.
- Carefully wash fruits and vegetables, and steam oysters before eating them.
- Thoroughly clean and disinfect contaminated surfaces immediately after an episode of illness by using a bleach-based household cleaner.
- Immediately remove and wash clothing or linens that may be contaminated with virus after an episode of illness (use hot water and soap).
- Flush or discard any vomitus and/or stool in the toilet and make sure that the surrounding area is kept clean.

Persons who are infected with norovirus should not prepare food while they have symptoms and for 3 days after they recover from their illness ([see food handler information sheet](#)). Food that may have been contaminated by an ill person should be disposed of properly.

Noroviruses and Food Handlers

What are noroviruses?

Noroviruses are members of a group of viruses called caliciviruses also known previously as “Norwalk-like viruses.” Infection with norovirus affects the stomach and intestines, causing an illness called gastroenteritis, or “stomach flu.” This “stomach flu” is *not* related to the flu (or influenza), which is a respiratory illness caused by influenza virus. In addition, noroviruses are not related to bacteria and parasites that can cause gastrointestinal illnesses. Norovirus is not a “new” virus, but interest in it is growing as more is learned about how frequently noroviruses cause illness in people (see – [“Why is norovirus infection important for food handlers?”](#)).

What are the symptoms of infection with norovirus?

Norovirus infection causes gastroenteritis, which is an inflammation of the stomach and the small and large intestines. The symptoms of gastroenteritis are nausea, vomiting, and/or diarrhea accompanied by abdominal cramps. Some people also complain of headache, fever/chills, and muscle aches. Symptoms are usually brief and last only 1 or 2 days. However, during that brief period, people can feel very ill and vomit, often violently and without warning, many times a day. Symptoms usually begin 24 to 48 hours after ingestion of the virus, but can appear as early as 12 hours after exposure (see – [“How is norovirus spread?”](#)). There is no evidence that sick persons can become long-term carriers of the virus, but the virus can be in the stool and vomit of infected persons, from the day they start to feel ill to as long as 2 weeks after they feel better.

Other infectious and non-infectious agents can cause symptoms similar to those of norovirus gastroenteritis; people who have these symptoms and have questions about the cause of their illness should consult a physician.

How serious is norovirus gastroenteritis?

Norovirus gastroenteritis is usually not a serious illness, and other than drinking liquids to prevent dehydration, there is no specific treatment. Most people recover completely within 1 to 2 days, with no long-term complications of norovirus illness. However, persons who are unable to drink enough liquids to replace those lost with vomiting and/or diarrhea may become dehydrated and require special medical attention. These people include young children, the elderly, and persons of any age unable to care for themselves.

How is norovirus spread?

Noroviruses are found in the stool or vomit of infected people. People can become infected with the virus in several ways, including:

- eating food ([see food handler fact sheet](#)) or drinking liquids that are contaminated with norovirus;
- touching surfaces or objects contaminated with norovirus, and then placing their hand in their mouth;
- having direct contact with another person who is infected and showing symptoms (for example, when caring for someone with illness, or sharing foods or eating utensils with someone who is ill).

Food and drinks can very easily become contaminated with norovirus because the virus is so small and because it probably takes fewer than 100 norovirus particles to make a person sick. Food can be contaminated either by direct contact with contaminated hands or work surfaces that are contaminated with stool or vomit, or by tiny droplets from nearby vomit that can travel through air to land on food. Although the virus cannot multiply outside of human bodies, once on food or in water, it can cause illness.

Some foods can be contaminated with norovirus *before* being delivered to a restaurant or store. Several outbreaks have been caused by the consumption of oysters harvested from contaminated waters. Other produce such as salads and frozen fruit may also be contaminated at source.

Why is norovirus infection important for food handlers?

People working with food who are sick with norovirus gastroenteritis are a particular risk to others, because they handle the food and drink many other people will consume. Since the virus is so small, a sick food handler can easily – without meaning to – contaminate the food he or she is handling. Many of those eating the contaminated food may become ill, causing an outbreak.

Outbreaks of norovirus gastroenteritis have taken place in restaurants, cruise ships, nursing homes, hospitals, schools, banquet halls, summer camps, and family dinners – in other words, places where often people have consumed water and/or food prepared or handled by others. It is estimated that as many as half of all food-related outbreaks of illness may be caused by norovirus. In many of these cases, sick food handlers were thought to be implicated.

What can I do to prevent norovirus gastroenteritis?

Many local and state health departments require that food handlers and preparers with gastroenteritis *not* work until 2 or 3 days after they feel better. In addition, because the virus continues to be present in the stool for as long as 2 to 3 weeks after the person feels better, strict hand washing after using the bathroom and before handling food items is important in preventing the spread of this virus. Food handlers who were recently sick can be given different duties in the restaurant so that they do not have to handle food (for example, working the cash register or hostessing).

People who are sick with norovirus illness can often vomit violently, without warning, and the vomit is infectious; therefore, any surfaces near the vomit should be promptly cleaned and disinfected with bleach solution and then rinsed. Furthermore, food items that may have become contaminated with norovirus should be thrown out. Linens (including clothes, towels, tablecloths, napkins) soiled to any extent with vomit or stool should be promptly washed at high temperature. Oysters should be obtained from reputable sources and appropriate documentation kept. Washing raw vegetables thoroughly before eating and appropriate disposal of sewage and soiled diapers also help to reduce the spread of norovirus and prevent illness. In small home-based catering businesses or family owned or operated restaurants, sick children and infants in diapers should be excluded from food preparation areas.

How is norovirus gastroenteritis diagnosed?

In special cases, when there is an outbreak of gastroenteritis there is a need to identify norovirus as the cause of the illness. In these cases, norovirus can often be found in stool samples of infected persons by using special tests. Sometimes blood tests looking for antibodies against norovirus are also performed, when the stool tests are inconclusive or were not done. Food handlers will often be asked for a stool sample or even a blood sample to help investigate the cause of an outbreak.

Can a person have norovirus gastroenteritis more than once?

Yes, a person can be infected with norovirus more than once in their lifetime. This is because there are many different noroviruses, and being infected with one type does not prevent infection from another type later. For this reason, it is difficult to develop a vaccine against norovirus.

CLEANING UP VOMIT AND DIARRHEA IN NURSING HOMES AND SIMILAR SETTINGS

Staff should use the following precautions to reduce their risk of infection



GENERAL PRINCIPLES

- Anything soaked with norovirus-laden vomit or diarrhea should be carefully handled to prevent transmission to handlers by direct contact or aerosols, and the surrounding area should be decontaminated.
- Careful handling includes:
 - using personal protective equipment (gloves, masks, and gowns)
 - soaking up vomit and diarrhea with paper towels or other disposable cloths
 - handling contaminated material as little as possible and with minimal agitation to reduce aerosols (don't shake soiled linen for example)
 - removing contaminated material from the contaminated area in impervious bags
- Area decontamination includes:
 - using freshly-made 1000 ppm (0.1%) hydrochlorite (bleach) solution - (1/3 cups bleach to one gallon of water) - left in place 10 minutes to ensure adequate disinfection and followed by a hot water rinse **OR**
 - using a product that is EPA-registered for noroviral disinfection according to the manufacturers' instructions. For approved list, see *List G: EPA's Registered Antimicrobial Products Effective Against Norovirus (Norwalk-like virus), January 1, 2009* at www.epa.gov.

SPECIFIC SITUATIONS

Cleaning specific things

Bed linens, curtains, pillows & non-disposable mop heads: place contaminated, washable objects directly into washing machines without mixing with other objects and launder with water temperature 140° - 160°F

Carpets and upholstery: carefully remove vomit and diarrhea; clean contaminated carpet or upholstery w/ detergent and hot water; steam clean at 158°F for 5 minutes or 212°F for 1 minute; do not vacuum.

Furniture, floors, and other vertical & horizontal hard, non-porous surfaces (including the vicinity of the contaminated area): carefully remove vomit and diarrhea; clean contaminated furniture and other hard surfaces w/ detergent and hot water; decontaminate with 0.1% bleach solution above.

Fixtures and fittings in toilet areas: carefully remove vomit and diarrhea; clean contaminated fixtures and fittings w/ detergent and hot water; decontaminate with 0.1% bleach solution above.

Cleaning up vomit in the kitchen

Work restrictions: kitchen staff must not be allowed to work if they are vomiting or have diarrhea; furlough anyone with vomiting or diarrhea for 48 hours after the vomiting and diarrhea stops

If a vomiting or diarrhea accident occurs in the kitchen: carefully remove the vomit and diarrhea and decontaminate the area surrounding the accident w/ 0.1% bleach solution as described above.

- if the contaminated area is a food contact surface, decontamination must be followed by a clear-water rinse and a second, final wipe down with 200ppm sanitizing bleach solution (the "regular" food-service sanitizer concentration).

Food: destroy any exposed food, food that may have been contaminated, and food that was handled by the worker who had the accident.