



North Carolina Department of Health and Human Services

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The Control of Norovirus in a Food Service Facility

Noroviruses are a group of viruses that cause acute gastroenteritis in humans. The symptoms of Norovirus infection include nausea, vomiting, diarrhea, cramping and low-grade fever. Noroviruses are transmitted through the fecal-oral route—either by consumption of fecally-contaminated food or water, direct person-to-person spread or environmental contamination.

Food Service Workers

All food service workers that are symptomatic, have been in close contact with the virus or with symptomatic family members should be excluded from the food service facility until they are asymptomatic for at least 48 hours or have a physician's note. All food that has been potentially contaminated by a symptomatic food worker should be discarded.

Cleaning Procedure

If a food service establishment has been exposed to employees or customers with symptoms of a norovirus, it is important to thoroughly clean and disinfect the establishment.

Preparation is important. Be sure to use disposable gloves, a mask, a form of eye protection and protective clothing while thoroughly cleaning.

It is best to use chlorine bleach (sodium hypochlorite-NaOCl) as the main disinfecting agent. Open bottles of concentrated chlorine will lose effectiveness after 30 days. Change bottles of bleach every 30 days for accurate concentrations. For disinfecting, use an unopened bottle of chlorine bleach. Prepare the solution as indicated below, using fresh bleach each day. Discard unused portions.

Disinfectants such as quaternary compounds, Ethanol or anionic compounds are ineffective at disinfecting an environment exposed to noroviruses. However, new products may be introduced that meet the EPA guidelines for efficacy against norovirus. Please check with your local health department before using a non-chlorine disinfectant.

Warning: chlorine bleach may impact fabrics and other surfaces. Please spot test area before applying to visible surface.

Concentrations:

- For stainless steel, food/mouth contact items: 1 tablespoon of bleach in 1 gallon of water.
- For non-porous surfaces such as tile floors, counter-tops, sinks, etc.: a third (1/3) cup of bleach in 1 gallon of water.
- For porous surfaces such as wooden floors: one and two-thirds (1²/₃) cups of bleach in 1 gallon of water.

Leave bleach solution on the surface for 10 to 20 minutes, and then rinse the area with clean water.

After the disinfection process is complete, close off the area, if possible, for at least one hour. If there are windows, air out the area.

Wash and sanitize hands thoroughly before resuming work.

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Special Cases/Areas

For "hot spots" (areas most likely to become environmentally-contaminated with viral particles and then spread through subsequent use):

- Emphasize hand-washing for all employees, including wait and bus staff.
- Maintain clean restroom areas to prevent the potential for cross contamination.
- Install supplemental hand wash signs in restrooms to encourage customers to wash their hands.
- Monitor the customer self-service areas (e.g. buffet bar) to prevent contamination, or eliminate self-service.
- Consider wrapping ready-to-eat items individually to reduce the chance of transmission.
- Change serving utensils often.
- Ensure thorough cleaning and sanitization of plates, tableware, utensils, etc.
- Wash raw fruits and vegetables thoroughly.
- Repeat disinfection of heavy hand-contact areas and surfaces daily.

For areas exposed to vomiting or feces contamination:

- Use paper towels to soak up as much of the contaminated material as possible, being careful not to drip or splash the material.
- Clean and disinfect the entire area with disposable cloths.
- Dispose of all waste material in sealed plastic bags.

For carpeted areas:

- Remove all visible debris with absorbent material. Discard in a plastic bag to minimize vapors.
- Steam clean the carpet to 170 degrees Fahrenheit for five minutes or 212 degrees Fahrenheit for one minute for complete inactivation of the virus.

For linens, clothing or textiles:

- If soiled, vomit or stool should be carefully removed to minimize aerosols.
- Keep contaminated and uncontaminated clothes separate.
- Reduce disruption of soiled linens and laundry.
- Wash items in a pre-wash cycle. Then, use a regular wash cycle—using detergent—and dry separately from uncontaminated clothing at high temperature greater than 170 degrees Fahrenheit.
- Make sure clean and soiled linens, clothing or textiles remain separated.

For surfaces corrodible or damageable by bleach:

The Environmental Protection Agency registered phenolic solutions (such as concentrated Lysol® or concentrated Pinesol®) mixed at two to four times the manufacturer's recommended concentration as best for surfaces that could be damaged by bleach.