



# How to Control Norovirus Outbreaks in the Workplace

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## How the Norovirus is Spread

Outbreaks of Norovirus-related *stomach flu* are most often associated with cruise ships. However, the reality of the matter is that outbreaks can occur most anywhere people congregate.

According to the U.S. *Centers for Disease Control and Prevention* (CDC), Norovirus (genus Norovirus, family Caliciviridae) are a group of related, single-stranded RNA, non-enveloped viruses that cause *acute gastroenteritis* in humans. Norovirus was recently approved as the official genus name for the group of viruses provisionally described as "Norwalk-like viruses" (NLV). Currently, human Noroviruses belong to one of three genogroups (GI, GII, or GIV), each of which is further divided into greater than 25 genetic clusters.

Norovirus are transmitted primarily through fecal-contaminated food and drink. They can also be spread person to person through touching, kissing, hugging, sneezing and coughing. Because people shed viruses, the disease can be passed along by *deposits* left [by infected persons] on environmental *shared-contact* surfaces, such as doorknobs, keyboards, pens, touch-pads, faucet handles and the like. When the Norovirus is picked-up on one's hand, it can be introduced to the body through hand-feeding or simply touching the mouth. What makes the NOROVIRUS outbreak so difficult to control is that the viral contagion can remain viable on environmental surfaces for three or more weeks. In crowded situations, Norovirus-contaminated aerosols created by coughing or sneezing travel up to six feet where they can be inhaled and ingested, or they can simply settle-out of the air on shared-contact surfaces where they are later encountered by unsuspecting individuals.

Simply stated, Norovirus infections result in *severe intestinal distress*. The average incubation period (time to the onset of symptoms) for Norovirus-associated gastroenteritis is 12 to 48 hours, with a median of approximately 33 hours. Illness is characterized by acute-onset vomiting; watery, non-bloody diarrhea with abdominal cramps, and nausea. In addition, myalgia, malaise, and headache are commonly reported. Low-grade fever is present in about half of cases. Dehydration is the most common complication and may require intravenous replacement fluids. Gastrointestinal symptoms usually last from 24 to 60 hours while illness-related fatigue may continue for an extended period of time. Volunteer studies suggest that up to 30% of infections may prove to be asymptomatic (with no symptoms developing).

Remember, when it comes to health and safety, there is no substitute for sound medical advice; if you are ill, call a doctor or seek medical attention!



## **Basic Recommendations**

- If you're sick, stay home. If you suspect someone else is sick, suggest they go home. Policies related to infection control in the workplace should be created before their need arises.
- Wash your hands with soap and hot water after each bathroom use.
- Cover your mouth when you cough or nose when you sneeze. If you see someone else cough or sneeze without covering-up, politely remind them that they could be spreading disease. If you use a tissue to blow your nose, dispose of it immediately in the trash. Think about others and always wash your hands and face after *cover-up* coughing and sneezing or blowing your nose. If you are ill and must go out in public, wear a surgical mask or bandana to prevent yourself from accidentally discharging aerosols when you cough or sneeze.
- Wash or sanitize your hands often, especially after touching shared-contact surfaces. Markets and pharmacies sell sanitizing skin gels and wipes that you should always keep handy. Use them regularly! It is also a good idea for employers to have these personal hygiene products strategically placed and readily available for their employees to use.
- Keep shared-contact surfaces such as doorknobs, faucet handles, phone handsets and keypads, desktops, break-tables, chairs, countertops, coffee pot handles, copy machine control panels, etc. clean. Keep sanitizing wipes and spray cleaners (with disposable towels) readily available and encourage their proactive use on shared-contact surfaces.
- Don't share food, drinks or personal items (including pens). Don't let sick children share their toys with other children.
- Keep small containers of sanitizing skin gel handy for use while out in public and running errands.
- Try to avoid crowds during times of heightened alert. Increase the spatial distance between workers and minimize the need to congregate in small areas for meetings and breaks.
- If you are caring for an ill person, cover your mouth and nose with a mask when you are near them and clean your hands and face often. Follow expert advice for patient care and caregiver safety.

## **Environmental Hygiene**

Stepped-up environmental hygiene for Norovirus outbreaks is generally recommended by healthcare professionals, but should not be used as a substitute for common sense and risk-reducing measures. If the situation dictates, a professional service specialized in *cleaning* and *disinfecting* should be retained. This service provider should be aware of the potential risk to their employees and have them trained in the specialized chemicals and methodologies required. Worker protection should include increased ventilation, disposable suits, gloves and eye protection. It may also include N-95 respirators. Sometimes dust control measures, such as negative pressure ventilation and/or HEPA air purification, may be warranted. HEPA-filtered vacuums should be used to clean excess dust from porous and fibrous surfaces that cannot be disinfected.

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Hard, inanimate *shared-contact* surfaces should first be cleaned to remove excess grime. Then a disinfectant should be applied. The most widely recommended disinfectant for the Norovirus is a dilute bleach solution (typically 4 to 12 ounces household bleach to a gallon of fresh water; always follow manufacturer instructions). Remember that some materials are chlorine-sensitive, and the use of a bleached-based disinfectant could result in damage (e.g., fading, loss of structural integrity, corrosion, etc.).

Generally speaking, a single-use disposable towel saturated with the bleach solution is more effective than spray-type applicators used with dry-wiping towels. It should also be noted that, since a bleach solution may leave spots or streaks, it may be necessary to follow-up with more suitable finish cleaning (e.g., complete the cleaning process with the application of furniture polish, plastic cleaner, stainless cleaner, glass cleaner, etc.).

The most important surfaces to clean are those that people contact regularly. Examples of these *shared-contact* surfaces in the workplace include the following:

- Doorknobs
- Door push-bars
- Desks
- Drawer pulls
- Chair arms & backs
- Computers
- Keyboards & mice
- Printers
- Telephones
- Calculators
- Pens & staplers
- Fax machines
- Copiers
- Scanners
- Paper shredders
- Trash can lids
- Toilets & stall doors
- Faucets
- Towel dispensers
- Light switches
- Counters
- Refrigerator pulls
- Coffee pot handles
- Stair railings

Keep yourself fit. Get plenty of rest and eat well. Stay home if you're sick. Send people home if they start to get sick at work. Once symptoms clear, allow at least 72 hours for the viral contagion to clear the body (and the chance of spreading the Norovirus minimizes).

Start clean and stay clean. Respect those around you by covering-up when you cough or sneeze, and always wash your hands and face after such an episode. Be careful not to touch your face or environmental surfaces with contaminated hands. And diligently wash your hands with hot soapy water after each bathroom use.

We may not be able to predict or prevent the Norovirus outbreak, but once it occurs, we can work to minimize its impact on our work environment and community.

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