



## **Technical Information Sheet Communicable Disease Information**

### **Noroviruses (Norwalk-Like Viruses) Preventing Viral Infections or Outbreaks**

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#### **What are Noroviruses?**

**Noroviruses** are a group of related 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). NLS viruses are much smaller than bacteria or parasites, are not affected by treatment with antibiotics, and cannot grow outside of a person's body.

#### **What are the infection symptoms of Noroviruses?**

Infection symptoms of Norwalk-like viruses include nausea, vomiting, diarrhea and abdominal cramps. Sometimes people additionally have a low-grade fever, chills, headache, muscle aches, and a general sense of tiredness. It is estimated that nearly 65% of nonbacterial gastroenteritis in the US is attributable to Norwalk and Norwalk-like viruses. Approximately 181,000 cases occur annually, with no known associated deaths.

#### **How serious is the 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 the Noroviruses?**

Noroviruses are found in the stool or vomit of infected people. Norwalk and Norwalk-like viruses have been associated with outbreaks in communities, on cruise ships, camps, schools, institutions and within families. Foods such as shellfish, salads, as well as drinking water, have been identified as a source of viral infection in several outbreaks. Transmission is of special concern for the fishing industry, since molluscan shellfish, being filter feeders, are readily contaminated with the stool-shed viruses present in human sewage.

People can become infected with the virus in several ways, including:

- ✓ Eating or drinking foods and liquids that are contaminated with norovirus;
- ✓ Touching surfaces or objects contaminated with norovirus, and then placing their hand in their mouth;
- ✓ Direct contact with an infected person with infection symptoms

## **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.

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.

## **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.

## **How are Norovirus infections treated?**

Currently, there is no antiviral medication that works against noroviruses and there is no vaccine to prevent infection. Norovirus infections 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.

## **How can norovirus infections be prevented?**

Contact with noroviruses can be reduced or eliminated by following some basic and simple principles:

- ✓ Encourage frequent and thorough hand washing, especially after toilet visits and changing diapers and before eating or preparing food. CDC says hand washing is the most effective way to prevent the spread of illness. Hand sanitizers should not replace hand washing but can be used when soap and water are not readily available.
- ✓ Thoroughly wash fruits, vegetables and steam oysters before eating them.
- ✓ Immediately remove and wash clothing or linens that may be contaminated with virus after an episode of illness. Use appropriate laundry detergents and clothes washing procedures.
- ✓ Flush or discard any vomitus and/or stool in the toilet and make sure that the surrounding area is kept clean and disinfected.
- ✓ Properly clean and disinfect contaminated surfaces immediately after an episode of illness by using an appropriate cleaner and EPA registered disinfectant like Coastwide Virustat TBQ. Chlorine bleach solutions can also be used but care should be taken to prevent the bleach from contacting surfaces damaged or discolored by the bleach. Most chlorine bleach solutions are disinfectants only. This means that all surfaces must be pre-cleaned before the chlorine bleach is effective. Virustat TBQ does not require pre-cleaning except when there is gross contamination on the surface.
- ✓ Routine cleaning and disinfecting of areas such as kitchens, health rooms, bathrooms and surfaces such as door knobs and drinking fountains. Virustat TBQ can be used or Germicidal detergents like Virustat DC or Hepastat 256 are also very effective disinfectants against a wide range of pathogenic microorganisms.
- ✓ Wear appropriate gloves when cleaning or disinfecting and whenever likely exposure to germs exists.
- ✓ Cover the vomitus or stool with paper towels and spray the towels with disinfecting solution (Virustat TBQ). Remove large debris and discard in a trash bag.

## **What are the principles of cleaning and disinfecting environmental surfaces?**

Below is a summary of the section titled "Principles of Cleaning and Disinfecting Environmental Surfaces" found on pages 71-77 in the CDC publication titled, "Guidelines For Environmental Infection Control in Health-Care Facilities" published in 2003.

- ✓ Microbiologically contaminated surfaces can serve as reservoirs of potential pathogens, but these surfaces generally are not directly associated with the transmission of infections in either staff or patients.
- ✓ The transmission of microorganisms from environmental surfaces to patients is primarily by hand contact with the surface.
- ✓ Hand hygiene is important to minimize the impact of the transmission.
- ✓ Cleaning and disinfecting is fundamental in reducing the potential for incidence of healthcare-associated infections.
- ✓ Good cleaning and disinfecting principles take into account the intended use of the surface or item in patient care.
- ✓ CDC considers "environmental surfaces" to represent surfaces that generally do not come into direct contact with patients during care.
- ✓ Environmental surfaces carry the least risk of disease transmission and can be safely decontaminated using less rigorous methods than those used on medical instruments and devices.
- ✓ Housekeeping surfaces can be divided into two groups – those with minimal hand-contact such as floors and ceilings and those with frequent hand-contact known as "high touch surfaces".
- ✓ High touch surfaces like doorknobs, light switches, wall areas around toilets and urinals and fixture knobs should be cleaned and/or disinfected more frequently than surfaces with minimal hand contact.
- ✓ Cleaning is the necessary first step of any disinfection process. Cleaning is a form of decontamination that renders the environmental surface safe to handle or use. This decontamination is accomplished by removing organic matter, salts and visible soils, all of which interfere with microbial inactivation.
- ✓ The physical action of scrubbing combined with the detergency of surfactants in the cleaning agents remove large numbers of the microorganisms from surfaces.

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- ✓ Housekeeping surfaces require regular cleaning and removal of soil and dust.
- ✓ Most, if not all, housekeeping surfaces need to be cleaned only with detergent and water or a detergent-disinfectant, depending upon the nature of the surface and the type and degree of the contamination.
- ✓ Disinfectant-detergent formulations registered by EPA are used for environmental surface cleaning, but the actual physical removal of microorganisms and soil by wiping or scrubbing is probably as important, if not more so, than any antimicrobial effect of the disinfecting agent used.
- ✓ Therefore, cost, safety, product-surface compatibility and acceptability by housekeepers can be the main criteria for selecting an EPA registered product.
- ✓ Extraordinary cleaning and decontamination of floors in health-care settings is unwarranted. Studies have demonstrated that disinfection of floors offers no advantage over regular detergent/water cleaning and has minimal or no impact on the occurrence of health-care associated infections.
- ✓ Minimize contamination of cleaning solutions and cleaning tools.
- ✓ Cleaning solutions should be replaced frequently. Bucket solutions become contaminated almost immediately during cleaning, and continued use of the solution will transfer increasing number of microorganisms to each subsequent surface to be cleaned. A variety of "bucket" methods have been designed to address the frequency with which cleaning solutions are replaced.
- ✓ Mop heads and cleaning cloths can also be a source for spreading contaminants. Laundering of cloths and mop heads after use and allowing them to dry before re-use can minimize the degree of contamination. Microfiber wipes and microfiber mops can also be helpful.

## **What factors influence the choice of disinfection procedures for environmental surfaces?**

- ✓ Nature of the item to be cleaned and disinfected
- ✓ Number of microorganisms present
- ✓ Innate resistance of those microorganisms to the inactivating effects of the germicide
- ✓ Amount of organic soil present
- ✓ Type and concentration of germicide used
- ✓ Duration and temperature of germicide contact

## **Where can I get more information?**

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