

Increased Incidence of Norovirus in the United States

Norovirus

Introduction

Norovirus has been called the “stomach flu” or “stomach bug.” However, it is not related to the flu. It is the leading cause of vomiting and diarrhea, and foodborne illness in the United States.¹ Norovirus is classified into 10 genogroups; genogroups (G) I and GII are mainly responsible for infections in humans.² Norovirus is very contagious and can be spread very easily.¹

Epidemiology

In the United States, norovirus is responsible for causing illness in 19 to 21 million people each year. Annually, this results in 109,000 hospitalizations, 465,000 emergency room visits (mostly in young children), 2.7 million outpatient clinic visits (mostly in young children), and 900 deaths.³ Norovirus is responsible for many outbreaks in settings such as long-term care facilities, schools, childcare centers, and cruise ships. The incubation period once exposed is 12 to 48 hours. Transmission occurs through the fecal-oral or vomitus-oral route. Norovirus can be spread either person-to-person or indirectly. Indirect spread can occur by consuming contaminated food or water or by coming into contact with contaminated surfaces.²

Prevention⁴

- Do not prepare, handle food, or care for others for at least 48 hours after symptoms stop.
- Hand hygiene: wash with soap and water for at least 20 seconds after using the toilet or changing diapers; before eating, preparing, or handling food; and before handling medication.
 - Hand sanitizers do not work against norovirus. Use in conjunction with hand washing.
- Handle and prepare food safely: wash fruits and vegetables thoroughly; cook oysters and

shellfish to an internal temperature of at least 145°; clean and sanitize utensils, cutting boards, countertops and surfaces, especially after handling shellfish; keep raw oysters away from ready-to-eat food in the grocery cart, refrigerator, and cutting boards; throw away foods that might contain norovirus.

- Norovirus is relatively resistant to heat and can survive temperatures as high as 145°.
- Quick steaming will not heat foods to temperatures high enough to kill norovirus.
- Clean and disinfect surfaces after someone vomits or has diarrhea.
 - Wear rubber or disposable gloves and wipe area with paper towels and throw away in a plastic trash bag.
 - Disinfect the area using a chlorine bleach solution with a concentration of 1,000 to 5,000 ppm (5 to 25 tablespoons of household bleach [5-8%] per gallon of water). Or use an EPA-registered disinfecting product against norovirus (<https://www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-norovirus-feline>).
 - Leave bleach on the affected area for at least 5 minutes.
 - Clean area again with soap and hot water.
 - Wash hands after cleaning area, wash laundry, and dispose of trash.
- Wash laundry well by immediately removing and washing clothes or linens that have vomit or fecal matter on them.
 - Wear rubber or disposable gloves.
 - Do not shake items.

- Wash items with detergent and hot water at the maximum available cycle length and then machine dry them at the highest setting.
- Wash hands after with soap and water.

Signs & Symptoms

Norovirus can infect anyone and cause illness. Symptoms include sudden onset of vomiting and/or watery diarrhea, abdominal cramps, and nausea.² Most people recover within 1-3 days.¹ Prolonged illness can occur in the elderly, young children, and hospitalized patients. Other symptoms that may also occur include fever, myalgia, malaise, anorexia, and headaches.²

Diagnosis & Testing

Diagnostic methods can detect viral RNA or viral antigens.¹ The preferred method is using the reverse transcriptase quantitative polymerase chain reaction (RT-qPCR). It can detect genogroup I, genogroup II, genogroup VIII, and GIX noroviruses as well as provide an estimate of the viral load.⁵ Please contact Nevada State Public Health Laboratory for test information and specimen collection requirements.

Treatment

While there is no specific medication to treat norovirus, treatment can include supportive care for dehydration. Drink plenty of liquids to replace fluids lost during vomiting and diarrhea events. Sports drinks, drinks without caffeine and alcohol, and over the counter oral rehydration fluids may help with mild dehydration. Seek medical attention for severe dehydration. Treatment may require hospitalization for intravenous fluid replacement.²

Reporting

The list of reportable communicable diseases and reporting forms can be found at:

<http://tinyurl.com/WashoeDiseaseReporting>

*Individual cases of norovirus are not reportable conditions nationally or in the state of Nevada, however, **suspected or confirmed outbreaks of norovirus are immediately reportable to Northern Nevada Public Health.***

Report communicable diseases to Northern Nevada Public Health. To report a communicable disease, please call 775-328-2447 or fax your report to the NNPH at 775-328-3764.

Acknowledgement

Thank you to all health care providers, infection control practitioners, laboratory staff, as well as schools and daycares for their reporting and collaboration to make this work possible.

References

- 1 Centers for Disease Control and Prevention. About Norovirus. Accessed January 2025. <https://www.cdc.gov/norovirus/about/index.html>
- 2 Red Book: 2024–2027 Report of the Committee on Infectious Diseases By: Committee on Infectious Diseases, American Academy of Pediatrics Edited by: David W. Kimberlin, MD, FAAP, Ritu Banerjee, MD, PhD, FAAP, Elizabeth D. Barnett, MD, FAAP, Ruth Lynfield, MD, FAAP, Mark H. Sawyer, MD, FAAP. <https://doi.org/10.1542/9781610027373>
- 3 Centers for Disease Control and Prevention. Norovirus Facts and Stats. Accessed January 2025. <https://www.cdc.gov/norovirus/data-research/index.html>
- 4 Centers for Disease Control and Prevention. How to Prevent Norovirus. Accessed January 2025 <https://www.cdc.gov/norovirus/prevention/index.html>
- 5 Centers for Disease Control and Prevention. Laboratory Testing for Norovirus. Accessed January 2025 <https://www.cdc.gov/norovirus/php/laboratories/index.html>