

MONTANA
**COMMUNICABLE
DISEASE EPIDEMIOLOGY**

Norovirus Outbreaks in Schools and Childcare Facilities

Guidelines for the response, control, and reporting of confirmed and suspected norovirus outbreaks

Montana Department of Public Health and Human Services (DPHHS)

Communicable Disease Epidemiology Program

This toolkit is intended to be used by schools and childcare facilities to aid in the investigation of confirmed and suspected norovirus outbreaks. It should not replace communications with the local health department.

The following guidance has been adapted from the Washington Food Safety Center of Excellence Norovirus Toolkit for School and Childcare Center Outbreaks, as well as from materials developed by the Flathead City-County Health Department.

What is Norovirus?

Norovirus is a very contagious virus that causes vomiting and diarrhea. Anyone can get infected and sick with norovirus. You can get norovirus from:

- Having direct contact with an infected person (see infographic below)
- Consuming contaminated food or water
- Touching contaminated surfaces then putting your unwashed hands in your mouth

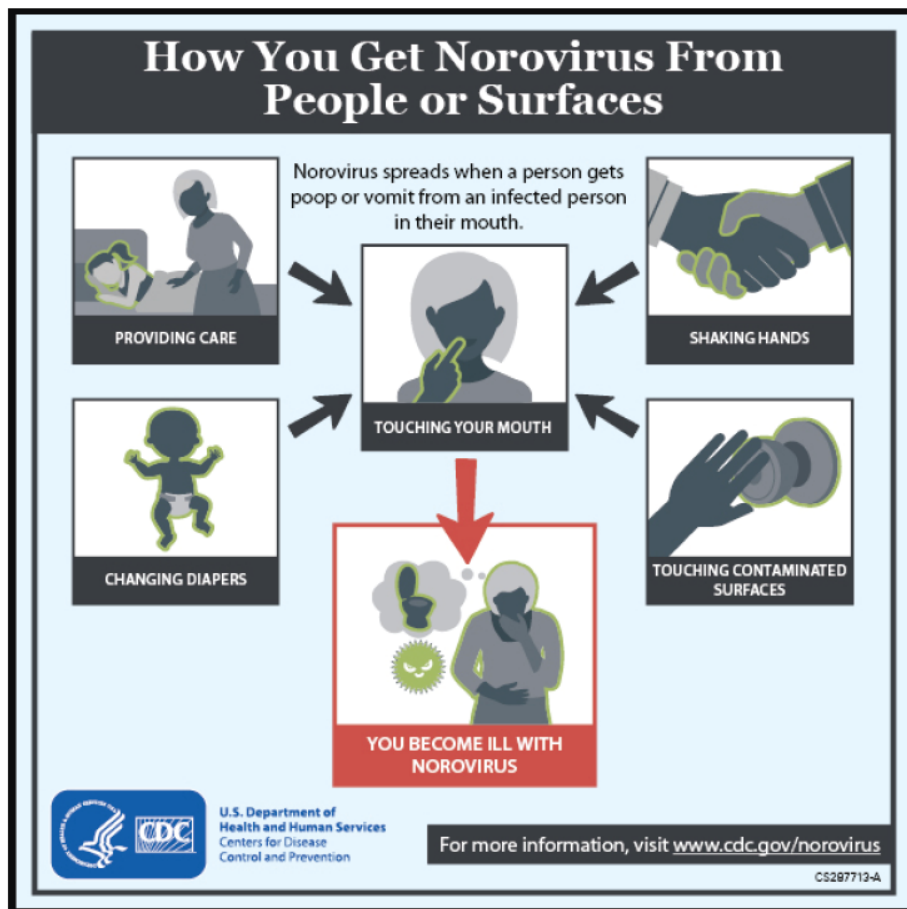
The most common symptoms are:

- Vomiting
- Diarrhea
- Nausea
- Stomach Pain

Other symptoms include:

- Fever
- Headache
- Body aches

A person usually develops symptoms 12 to 48 hours (typically 1-2 days) after being exposed to norovirus. Most people with norovirus get better within 1 to 3 days after symptoms start. People are most contagious when they have symptoms of norovirus, and during the first 48-72 hours after symptoms resolve.



The provided information is from the Center for Disease Control and Prevention (CDC). More information can be found at <https://www.cdc.gov/norovirus/index.html>

How to Respond to an Outbreak

What is an outbreak?

An outbreak is an increase in cases of a disease, more than what would typically be expected, with cases closely related in time and place and with a common exposure. Outbreaks of norovirus and gastrointestinal illness are reportable under the Administrative Rules of Montana [37.114.203](#). As soon as a norovirus outbreak is suspected or confirmed, call your local health department to report it.

Setting: Most outbreaks of norovirus reported in the United States occur in healthcare facilities. However, schools and daycares are also often affected. Montana responded to 22 norovirus outbreaks reported in school and daycare settings between 2017 and 2021, with nearly 400 cases among students and staff linked to these outbreaks.

Specimen Submission: DPHHS is asking our partners at schools and daycares to help improve our understanding of norovirus in Montana by submitting stool samples to a laboratory for testing during suspected norovirus outbreaks. Public health needs to have at least two positive specimens in order to confirm an outbreak. Please contact your local public health department to ask them about specimen collection and submission.

Your local health department is here to help!

Your local health department is available to help during norovirus outbreaks, or any type of communicable disease outbreak. All norovirus or gastrointestinal illness outbreaks in a school or childcare setting are reportable to your local health department within 24 hours.

To find contact information for your local health department, visit the Montana DPHHS webpage: <https://dphhs.mt.gov/publichealth/FCSS/countytribalhealthdepts>

If your school or daycare is experiencing a norovirus outbreak, reach out to your local health department for assistance related to infection control practices, environmental cleaning, and outbreak mitigation strategies.

Some common recommendations during an outbreak of norovirus in a school or daycare include:

1. Promote good hand hygiene for students/staff: after using the toilet, after having contact with an ill individual, after changing a diaper, and before preparing food, eating, or drinking.
 - Hand washing should be performed using soap and water - hand sanitizer is not effective against norovirus.
2. Exclusion of ill individuals will decrease the total number of sick people during the outbreak. Students and staff with vomiting and diarrhea should stay home until at least 48 hours after their symptoms have resolved.
 - Food service employees and employees in direct care of children (for example, a staff member who works in the infant room at a daycare) should stay home for 72 hours after their symptoms have resolved.
3. Disinfect all high-touch surfaces and areas contaminated with diarrhea and vomit.
 - Use a chlorine bleach solution with a concentration of 1000 - 5000ppm to clean and disinfect. This can be made by combining 3/4 cup household bleach (5.25% concentration) per gallon of water.
 - See page 4 for specific details on how to clean up after diarrhea or vomit.
4. Submit at least two stool samples for laboratory testing in order to confirm the diagnosis.

Checklist for Norovirus Outbreaks in Schools and Childcare Settings

NOTIFY THE LOCAL HEALTH DEPARTMENT

- Upon suspicion of a norovirus outbreak, **notify and report to your local public health department**
- Maintain a line listing of symptomatic students and staff
- Collect and submit at least two specimens from affected students or staff as soon as an outbreak is suspected, until the cause of illness is identified**
- Outbreak is considered resolved when 4 days (2 incubation periods) have passed since resolution of symptoms in last case

ASSIGN STAFF ROLES AND RESPONSIBILITIES : Designate facility staff to handle duties related to outbreak management

- Coordinate communications
- Provide medical care to ill students and staff
- Obtain additional cleaning supplies
- Clean and disinfect contaminated areas
- Track illnesses using the line list on page 5 of this toolkit
- Oversee meals and group activities for good dining and hygiene practices

IMPLEMENT FACILITY-WIDE CONTROL MEASURES

- Enforce strict hand hygiene for all facility staff and students
 - Handwashing with soap and water is the most effective way to prevent norovirus. Hand sanitizer may be used as a supplement to handwashing, but not as a replacement.
- Disinfect all high-touch surfaces (faucets, door handles, toilets, and toilet or bath rails) multiple times per day
- Use EPA-registered disinfectants or detergents/disinfectants approved for use against norovirus for routine cleaning and disinfection
 - CDC recommends cleaning with a bleach solution; combine 3/4 cup of household bleach per 1 gallon of water
 - https://www.epa.gov/sites/production/files/2018-04/documents/list_g_disinfectant_list_3_15_18.pdf
- Clean soiled carpets and soft furnishings with hot water and detergent or steam clean as appropriate
- Handle soiled linens carefully using appropriate infection control precautions
 - <https://www.cdc.gov/norovirus/about/prevention.html>
- Conduct thorough cleaning of affected personal and communal areas 48 hours after resolution of the last case

Administrative Controls:

- Ill students should stay home from school until at least 48 hours after symptoms have resolved
- Exclude ill staff from work for at least 48 hours after symptoms have resolved; 72 hours for food-handling staff and those in direct care of children (for example, daycare providers in an infant room)
- Post signage about the outbreak and encourage proper hand hygiene

Internal and External Communication

- Identify contact person for communicating with Health Department
- Nurse/Sanitarian/Infection Control visit to facility as needed/requested

How to Clean Up After a Norovirus Incident

Step 1: Protect yourself. Put on disposable gloves and mask.

Step 2: Wipe up vomit and poop with paper towels and put them in a plastic trash bag.

Step 3: Pour a bleach cleaner on all surfaces that may have vomit or poop on them. Leave the bleach on surfaces for at least 5 minutes.

-Make your own bleach cleaner by adding $\frac{3}{4}$ cup of bleach to 1 gallon of water

Step 4: Clean all surfaces AGAIN with hot water and soap.

Step 5: Remove your disposable gloves and mask and throw away

Step 6: Remove and wash all laundry

Step 7: Wash your hands with soap and water

lean up right away and keep others from getting sick.



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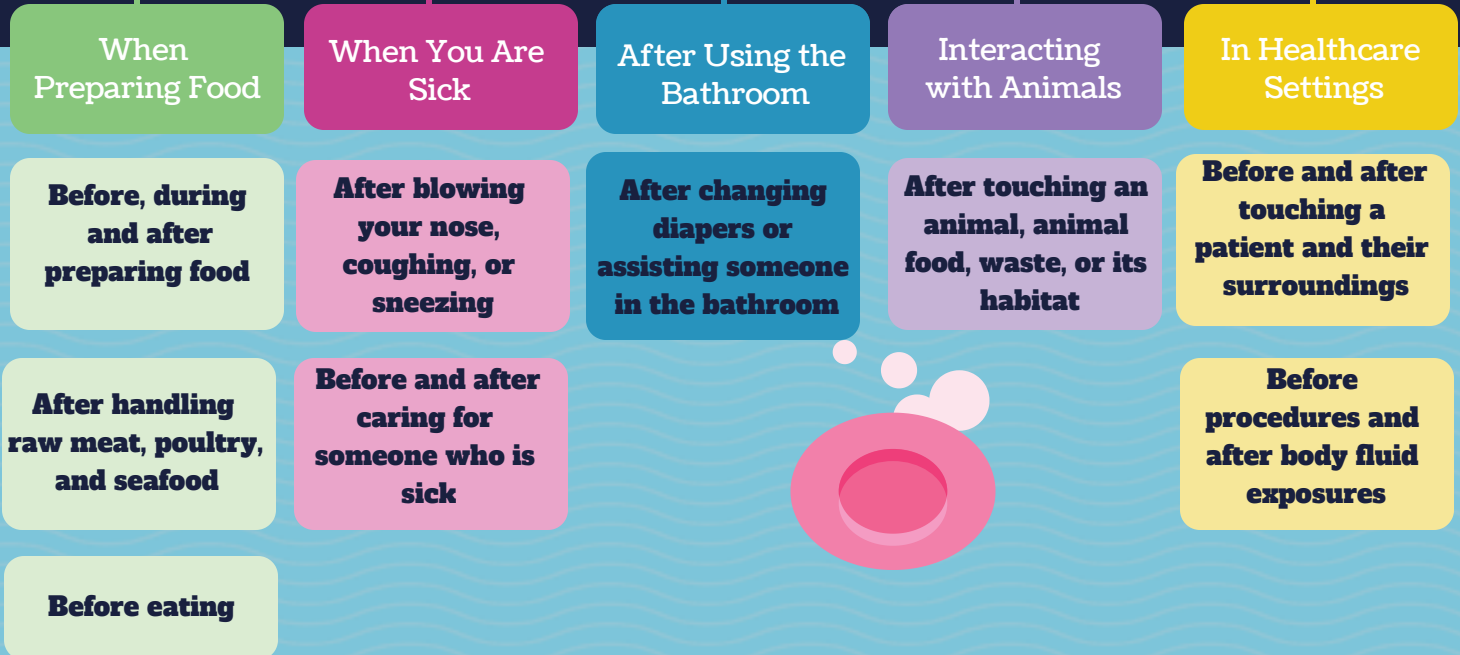


Clean Hands Save Lives

Many communicable diseases could be prevented by proper hand hygiene.

Handwashing is the most important way to prevent the spread of infectious diseases.

When should you wash your hands?



Handwashing can reduce the risk of respiratory infections by 16%

Routine handwashing can prevent 1 million deaths a year, worldwide

Appropriate handwashing can reduce the risk of foodborne illness



Ways to Encourage Handwashing:

1. Find soap and products that you like
2. Make handwashing stations accessible at events and in workplaces
3. Supervise young children during handwashing
4. Post handwashing signs near sinks



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Hands that look clean can still have icky germs!

WASH YOUR HANDS!



www.cdc.gov/handwashing



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

This material was developed by CDC. The Life is Better with Clean Hands campaign is made possible by a partnership between the CDC Foundation, GOJO, and Staples. HHS/CDC does not endorse commercial products, services, or companies.

Additional Norovirus Resources

CDC Handwashing Posters (with versions in multiple languages): <https://www.cdc.gov/handwashing/posters.html>

Washington Integrated Food Safety Center of Excellence Norovirus Toolkit for School and Childcare Center Outbreaks: <https://foodsafety.uw.edu/sites/foodsafety.uw.edu/files/documents/norovirus/noro-toolkit-school-or-childcare-center-outbreaks.pdf>

OSHA Norovirus Fact Sheet: <https://www.osha.gov/Publications/norovirus-factsheet.pdf>

Updated Norovirus Outbreak Management and Disease Prevention Guidelines, MMWR: https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6003a1.htm?s_cid=rr6003a1_e

Key Infection Control Recommendations: <https://www.cdc.gov/hai/pdfs/norovirus/229110a-noroviruscontrolrecomm508a.pdf>