

What is a norovirus?

Noroviruses are a group of very contagious viruses. They cause inflammation of the stomach and lining of the large intestine. This inflammation is called gastroenteritis. Noroviruses are the leading cause of gastroenteritis and diarrhea in the United States.

The Centers for Disease Control and Prevention (CDC) estimates that noroviruses are responsible for more than half of all food-borne disease outbreaks each year.

Symptoms

Symptoms include stomach pain, nausea, vomiting, and/or diarrhea. People with these symptoms often say they have “food poisoning” or “stomach flu.” People who come down with a norovirus may go from being completely healthy to feeling absolutely miserable within a day or two after being exposed to the virus. Other symptoms that occur less commonly include low-grade fever, chills, headache, muscle aches, and fatigue.

Most norovirus symptoms are not serious. However, diarrhea and vomiting can deplete the body of essential fluids and result in dehydration. Children and the elderly are most susceptible to dehydration and malnutrition from not getting enough nutrients. Dehydration causes a dry mouth and a decrease in urination, and sometimes dizziness when standing. Norovirus also poses greater risks for individuals with weakened immune systems, such as individuals with diabetes or who are undergoing chemotherapy.

Symptoms typically appear one or two days after exposure to the virus but may occur within the first 12 hours. The illness typically lasts one to three days but mild symptoms may linger for a week or more.

Modes of transmission

People become infected with noroviruses when they eat food or drink liquids that have been contaminated. Raw fruits and vegetables and raw or undercooked oysters and have been implicated in some outbreaks. People can also become infected from other sources because noroviruses are hardy and highly contagious. They can become infected by contact with an infected person, such as by shaking hands. They can also pick up the virus from contaminated surfaces or shared utensils, especially if they then touch their nose, mouth or eyes. People who have a weakened immune system are particularly susceptible to catching noroviruses.

Noroviruses thrive at times and in places where people congregate closely together. That is why outbreaks occur on cruise ships, and in daycare centers, restaurants, nursing homes, and other close quarters. That is also why most outbreaks in Minnesota occur between November and April when people spend more time indoors.

The setting of a norovirus outbreak is not always identified – sometimes, the virus just seems to be “going around.” Among outbreaks where the setting has been identified, about a third have been in a restaurant; about a third have been in a long-term care facility such as a nursing home; and the

remaining third have been split between schools, community settings, and vacation settings such as cruise ships.

Preventing transmission

Good hygiene is the key to preventing an infection with norovirus, especially when in close surroundings with a lot of other people. This includes:

- Avoiding preparing food when you are sick or for at least three days after you feel better.
- Avoid eating food that has been prepared by someone else who is sick.
- Stay home when ill, and keep children home when they are ill.
- Washing hands often with soap and water for at least 20 seconds, or using an alcohol-based hand sanitizer, especially after going to the bathroom, after changing a baby's diaper, and before preparing or eating food.
- Cleaning and disinfecting surfaces with a mixture of detergent and chlorine bleach after someone is sick.
- Carefully disposing of any contaminated items (such as dirty diapers).

To prevent transmission, employers and supervisors may want to consider whether their workplace policies, attitudes, and behaviors support sick employees in staying home and keeping sick children home in order to prevent further spread of illness among their own employees and others in the community.

Tracking outbreaks

According to the CDC, one in six Americans get sick each year as a result of foodborne illness, for which noroviruses are the most common cause. That translates to roughly 67,000 Minneapolis residents, and does not include the large number of people who reside elsewhere but work or attend school in the city or visit the city for dining, shopping, or other recreational purposes. Food service, child or elder care, and other occupations that involve a great deal of people-to-people contact put workers and the people they serve or care for at higher risk of contracting noroviruses.

Finding the source of and tracking the spread of a norovirus outbreak can be hard for a few reasons. Many people may dismiss their symptoms without realizing they may have an illness that can be transmitted to others. They also have no way of knowing that others may be experiencing the same symptoms unless family members or friends attended the same event or ate at the same restaurant.

Most people who contract a norovirus do not see a doctor or check in with a medical help line. Few people know how to report a case of suspected norovirus to the state health department (see sidebar above). Cases of possible food-borne illness are more likely to be reported when restaurant food or food served at a public event is suspected as a potential source of illness because the experience common to the victims may be apparent relatively quickly. However, only a small number of cases are brought to the attention of health departments which can begin an investigation to identify the source of an outbreak.

What should I do if I think I or a family member has a norovirus?

If you think you or someone in your household has norovirus or “food poisoning” or “stomach flu” symptoms, please report your symptoms to the Minnesota Foodborne Illness Hotline at 1-877-FOOD ILL (1-877-366 3455).

If severe dehydration develops, contact your doctor. It is sometimes necessary to treat severe dehydration with intravenous (IV) fluids.

An apparent cluster of cases is recorded as a norovirus outbreak if the agent was laboratory-confirmed as norovirus or if the investigating health department suspected norovirus, based on the etiology and epidemiology of the outbreak.

Most of the restaurants that have been involved in norovirus outbreak in Hennepin County are located in Minneapolis. Norovirus outbreaks in restaurants are usually traced to an ill food worker. The following table provides information on outbreaks investigated by the City of Minneapolis or Hennepin County health departments.

Norovirus outbreaks investigated by the City or County health department				
Year	Sick restaurant patrons	Sick restaurant employees	Total Minneapolis norovirus outbreaks	Total Hennepin County norovirus outbreaks (includes Minneapolis numbers)
2006	45	3	10	14
2007	69	16	8	9
2008	86	17	9	12
2009	11	0	2	4
2010	75	10	9	13
2011	12	5	3	7
2012	22	1	2	6
2013	42	9	5	8
2014	10	6	2	9
2015*	2	3	1	2

* through August 11, 2015

Larger norovirus outbreaks are more likely to be reported to the Minnesota Health Department. In Minneapolis, norovirus outbreaks investigated by the state health department have occurred in a variety of settings, including long-term care facilities, schools, catered events, and restaurants as seen in the following table.

Norovirus outbreaks investigated by the Minnesota Department of Health*			
Year	Total number of sick people	Total number of Minneapolis outbreaks	Settings
2009	4	1	Restaurant
2010	8	2	Restaurant
2011	8	1	Restaurant
2012	45	4	Event, restaurant
2013	89	2	School, restaurant
2014	148	2	Long term care facility, event

*These outbreaks are in addition to those conducted by the City and County health departments

For questions related to this report, please contact Mageen Caines at 612/ 673-2993 or mageen.caines@minneapolismn.gov.

For reasonable accommodations or alternative formats please contact the Minneapolis Health Department at 612-673-2301 or health@minneapolismn.gov. People who are deaf or hard of hearing can use a relay service to call 311 at 612-673-3000. TTY users call 612-673-2157 or 612-673-2626. Para asistencia 612-673-2700 - Rau kev pab 612-673-2800 - Hadii aad Caawimaad u baahantahay 612-673-3500.