HEALTH BASICS

Noroviruses

Noroviruses are contagious viruses that can cause sudden vomiting and diarrhoea.

WHAT IT IS
A group of highly contagious viruses that infect the gut

WHERE IT COMES UP
Gastroenteritis, outbreaks, food safety, and stool test results

WHY IT MATTERS
It can cause dehydration and spread quickly between people

WHAT IT IS NOT
Not a diagnosis; norovirus gastroenteritis is the illness

WHO TO ASK
Primary care, urgent care, or public health services

HOW IT IS CHECKED
Stool molecular testing, mainly for outbreaks or selected cases

Overview

Noroviruses are a group of viruses. They are not themselves a disease or diagnosis. When one of these viruses infects the gut, it can cause acute gastroenteritis -a short-term inflammation of the stomach and intestines.

Norovirus infection commonly causes sudden vomiting, watery diarrhoea, nausea, and stomach cramps. Some people also have a headache, body aches, or a mild fever. These are features of the infection, not of the viruses as a health concept.

The illness is sometimes called "stomach flu," but noroviruses are unrelated to influenza viruses. Influenza mainly affects the breathing system.

Noroviruses are a common cause of outbreaks in places where people share rooms, food, bathrooms, or care. Examples include schools, childcare centres, hospitals, care homes, cruise ships, and restaurants. Infection can also occur in a household without being part of a recognised outbreak.

How it works

Noroviruses enter through the mouth and infect cells in the gut. It takes only a small amount of virus to spread infection.

The virus can reach another person through:

These routes are often described as faecal-oral transmission . This means that microscopic amounts of infected stool reach another person's mouth, usually through unwashed hands, food, water, or surfaces.

Symptoms usually begin 12 to 48 hours after exposure. Most people improve within one to three days, although tiredness or changes in bowel movements may last longer. A person can continue releasing virus in their stool after feeling better, so careful handwashing remains important.

Having one norovirus infection does not provide reliable long-term protection. There are many types of norovirus, and immune protection may not last. A person can therefore be infected more than once.

- Direct contact with someone who is infected
- Food or drink contaminated with the virus
- Hands that have touched contaminated surfaces
- Tiny droplets released during vomiting

Why it matters for your health

The main health concern during norovirus gastroenteritis is dehydration , meaning the body has lost more water and salts than it has taken in. Vomiting and frequent diarrhoea can make it difficult to replace these losses.

Babies, young children, older adults, and people with serious health conditions may become dehydrated more easily. People with weakened immune systems can sometimes have a longer illness.

Noroviruses also matter because they spread easily. One infected food handler can contaminate food for many people. In hospitals and care homes, an outbreak can affect people who are already medically vulnerable and may disrupt normal care.

Antibiotics like amoxicillin or doxycycline do not treat norovirus infection because antibiotics act against bacteria, not viruses. Treatment is usually focused on replacing fluids and managing discomfort while the immune system clears the infection.

What can go wrong

Acute gastroenteritis is the illness most directly linked with noroviruses. Vomiting and diarrhoea are usually brief, but they can interfere with drinking, eating, medicines, sleep, and care needs.

Dehydration can develop when fluid losses are not replaced. Possible signs include a dry mouth, unusual thirst, dark urine, urinating less often, dizziness, or marked tiredness. In babies and young children, fewer wet nappies, no tears when crying, or unusual drowsiness may be warning signs.

Foodborne outbreaks can happen when infected people handle ready-to-eat food or when food is contaminated during growing, harvesting, or preparation. Raw shellfish can be involved because shellfish filter water and may collect viruses from contaminated water.

Outbreaks in shared settings can spread quickly through contact, shared bathrooms, contaminated objects, food, or vomit droplets. Public health teams may investigate to identify the source and limit further spread.

Prolonged infection can occur in some people with severely weakened immune systems. This is different from simply detecting small amounts of viral genetic material after recovery.

Blood in the stool, severe constant abdominal pain, or a high or persistent fever is not typical of uncomplicated norovirus gastroenteritis. These features can have other causes and need medical assessment.

What you can do

If you feel well and have not been linked to an outbreak, there is usually nothing you need to test, track, or treat.

If you have vomiting or diarrhoea, focus on taking frequent small amounts of fluid. An oral rehydration solution contains water, sugar, and salts in proportions designed to replace losses. A pharmacist or clinician can advise whether one is appropriate, especially for a child or an older adult. Continue breastfeeding an infant if possible.

Keep a simple record if fluid loss is becoming a concern. Useful details include:

Wash hands thoroughly with soap and water after using the toilet, changing nappies, and before handling food. Alcohol hand sanitiser does not work as reliably against norovirus as soap and water.

Do not prepare food for other people or care for others while ill. CDC advice is to wait at least 48 hours after symptoms stop before returning to these activities. Wash contaminated

laundry promptly, and clean vomit or diarrhoea using a disinfectant labelled as effective against norovirus.

Testing is not routinely needed for a brief, uncomplicated illness. A clinician or public health team may request a stool sample during an outbreak, when illness is severe or prolonged, or when another diagnosis needs to be considered. Molecular tests, often called PCR tests, look for the virus's genetic material.

Arrange routine primary care follow-up if the illness is not settling after a few days, keeps returning, or is affecting an ongoing health condition.

Seek urgent medical advice if you cannot keep fluids down, are urinating much less than usual, feel faint when standing, see blood or black material in vomit or stool, or develop severe abdominal pain. Seek urgent advice sooner for a baby, a frail older adult, or someone with a weakened immune system.

Call emergency services for collapse, severe confusion, or difficulty waking the affected person normally. These can be signs of severe dehydration or another serious problem.

- When vomiting and diarrhoea started
- How often they are happening
- Whether you can keep fluids down
- How often you or your child urinates
- Any blood, severe pain, or significant fever
- Recent travel, shared meals, or contact with an outbreak

Common questions

Is norovirus the same as food poisoning?

Norovirus infection can be foodborne, but "food poisoning" is a broad term. Many viruses, bacteria, toxins, and parasites can cause illness linked to food.

Can I know from symptoms alone that it is norovirus?

No. Several infections and non-infectious conditions can cause vomiting and diarrhoea. A stool test can identify norovirus in selected situations, but most short-lived cases are managed without testing.

Does hand sanitiser kill norovirus?

Alcohol-based hand sanitiser may reduce some germs, but it is less reliable against norovirus. Washing with soap and water is the preferred method after using the toilet, changing nappies,

or cleaning up vomit or diarrhoea.

Can norovirus spread before or after the illness?

Yes. A person may spread the virus around the time symptoms begin and after symptoms have stopped. The risk is greatest while vomiting or diarrhoea is present and during the first days after recovery.

Can pets give people norovirus?

The noroviruses that commonly cause human outbreaks mainly spread between people. Pets can still carry contaminated material on their fur or paws, so normal hand hygiene is sensible after cleaning an illness-related mess.

Sources

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- Centers for Disease Control and Prevention. "How to Prevent Norovirus."
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