

Norovirus is very contagious and causes gastrointestinal illness such as “food poisoning” or “the stomach flu.” According to the CDC norovirus is the leading cause of foodborne illnesses and outbreaks in the United States.

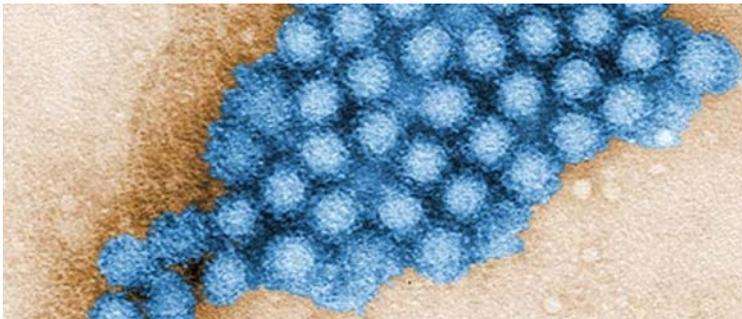
Norovirus is a non-enveloped virus which means it is a small virus surrounded by a hard shell of proteins. This shell or capsid allows norovirus to remain viable for long periods of time on surfaces. The capsid also makes norovirus resistant to some disinfectants.

WHAT ARE THE SYMPTOMS OF NOROVIRUS?

Norovirus causes inflammation of the stomach or intestines, the most common symptoms being diarrhea, vomiting, nausea and stomach pains.

Other symptoms can include fever, headache, or body aches. People who are ill can become dehydrated, especially young children, older adults, or individuals with other illnesses. Signs of dehydration include decreased urination, dry mouth or throat, and feeling dizzy when standing up.

Figure 1. Norovirus



Source: Federal Laboratory Consortium

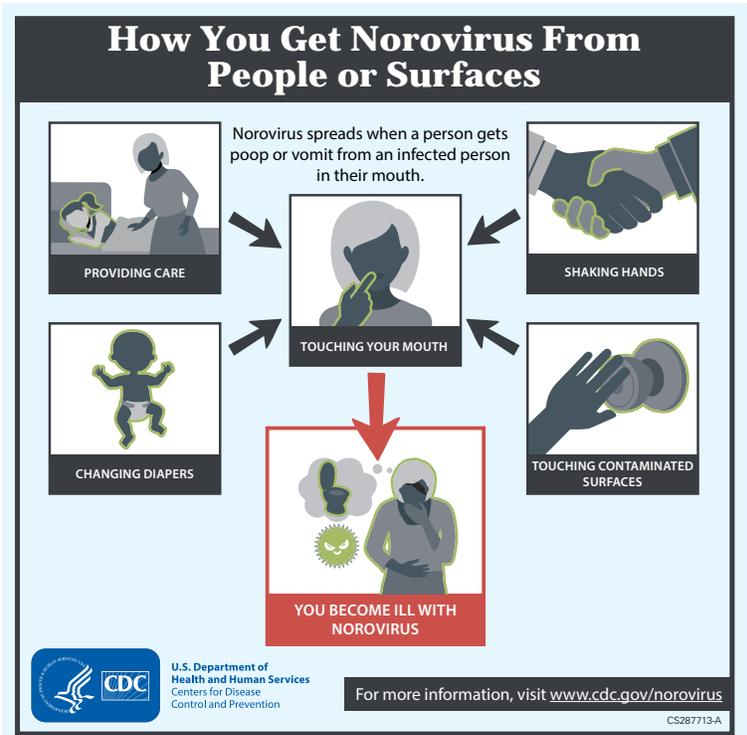
HOW IS NOROVIRUS SPREAD?

Norovirus is spread through the consumption of contaminated food or water by infected people who do not practice good hand hygiene after going to the restroom or vomiting, or through contact with contaminated surfaces touched by infected people (see CDC infographic "[How You Get Norovirus from People or Surfaces](#)" in Figure 2). Aerosolized particles from contaminated water or vomit are also considered a source of the disease.

WHAT I NEED TO KNOW...

- Norovirus is transmitted through consumption of contaminated food/water or contact with contaminated surfaces.
- Practice good hand hygiene by washing hands thoroughly with soap and water after going to the restroom.
- Effective disinfectants (e.g., household bleach) will neutralize the virus.
- Contact biosafety@usc.edu or (323) 442-2200 for more information.

Figure 2. How You Get Norovirus from People or Surfaces



Source: CDC

ARE HAND SANITIZERS EFFECTIVE?

Alcohol-based hand sanitizers do not kill norovirus and so should not be used as a substitute for washing hands with soap and water. Only those disinfectants that are EPA-approved to kill norovirus should be used.



WHO IS AT RISK?

Anyone can become ill due to norovirus. There are many different types of norovirus and you can become ill more than once. Norovirus spreads quickly and easily especially in enclosed areas such as daycare centers, nursing homes, schools, and cruise ships.



CAN NOROVIRUS BE PREVENTED?

There is no vaccine available for norovirus. Norovirus cannot be treated with antibiotics as they are not effective against viral infections.

In order to prevent the spread of norovirus, individuals must practice good hand hygiene by washing hands with soap and water after going to the restroom and before preparing food.



Carefully wash all raw foods such as fruits and vegetables. Sick individuals should not prepare food or be in the vicinity of food preparation.

Thoroughly clean and disinfect potentially contaminated surfaces with a chlorine bleach solution using one cup of household bleach per gallon of water or other disinfectant registered as effective against norovirus by the Environmental Protection Agency (EPA) - see [CDC Norovirus Illness: Key Facts](#).



Immediately remove and wash clothing or linens that may be contaminated with feces or vomit. Use detergent and hot water and set washing machine to the longest cycle. Place clothes/linens in a dryer on the highest heat setting. Handle such contaminated items with disposable gloves.

WHAT ABOUT INFECTIOUS DOSE, INCUBATION PERIOD AND COMMUNICABILITY?

Norovirus is highly contagious; as few as 10 to 100 viral particles can make a person ill. Symptoms typically will develop within 12 to 48 hours after exposure to viral particles. Those with symptoms typically become better within one (1) to three (3) days. Even after the symptoms have abated, individuals can still shed the viral particles for up to two weeks.

REFERENCES

- [CDC Norovirus](#)
- [CDC Norovirus Illness: Key Facts](#)
- [CDC How You Get Norovirus from People or Surfaces](#)
- [CDC Preventing Norovirus Outbreaks infographic](#) (see image below)

