Keeping yourself safe from norovirus infection this winter

When, where, how - a practical guide

DEC 2022
What are the risks of Norovirus infections this winter...

Norovirus, commonly known as the winter vomiting bug, is a stomach bug that causes sickness and diarrhoea. Following lower levels than normal throughout the COVID-19 pandemic, we have started to see an increase in norovirus activity compared with the last two years as we head into the winter period, although it is still currently at a lower level than the same period in 2019.

Norovirus is able to spread easily through families in their own homes. It also spreads rapidly through communities where individuals have close contact such, hospitals, care homes, schools, nurseries and offices, so outbreaks are common in these settings.

For most people norovirus is an unpleasant, short-lived illness (2-3 days maximum) without needing medicine. However, some groups, including young children, the elderly or those with weakened immunity, are at risk of suffering more serious and prolonged illness requiring medical treatment.

Symptoms include sudden onset of nausea, projectile vomiting and diarrhoea and also high temperature, stomach pain and aching limbs. The incubation period, the time between catching the virus and developing symptoms, is 12-48 hours. People are most infectious when symptomatic. Before developing symptoms and for some days after symptoms have stopped, our body can be infected with the virus and spread it to others via our hands or via poo.

Our Practical Guide gives advice on the habits we need to adopt, as part of daily life routine, to reduce the risk of catching norovirus or spreading it to someone else. The information is presented in a way that will build your understanding of how the virus spreads and enable you to adapt your behaviour to suit your individual need and lifestyle - and adapt to changes when they happen.

Hygiene in public spaces, as well as at home

A key issue highlighted by COVID-19 is the importance of hygiene in our shared use of public spaces (schools, workplaces, supermarkets, public transport, leisure settings etc). After lockdown, facilities had to implement strategies to make them “COVID Secure”, this fundamentally depended on whether the public using these facilities practised effective hygiene. The basic principles to spread norovirus are the same whether we are at home or in a public space.

By understanding when, where, how to practise hygiene at home, we can also understand when, where and how to practise hygiene in public spaces.
The most important thing to understand is that infected people are the source of norovirus.

If someone around you has, or has recently had, a norovirus infection:

They will spread virus particles when they vomit. This involves:

- large droplets of infected vomit which travel only short distances.
- tiny aerosol particles that can travel longer distances.
- virus particles can settle onto surfaces that we touch and can remain infectious for long periods of time.

Virus particles can get onto our hands if we touch our mouth – and be transferred to contact surfaces and our clothing.

Virus particles may also be spread to the toilet via faeces (especially if the infected person has diarrhoea), and then via aerosols generated by toilet flushing onto hand contact surfaces around the toilet (tap and flush handles, toilet seat etc).

People can become infected:

- by inhaling airborne particles.
- by touching contaminated surfaces and then touching our mouth, or ready to eat foods which we then consume.
- by eating “ready to eat” foods which have been handled by contaminated hands.

Note:

- Our body can remain infected for some time after we have recovered and pass on the virus via our hands or our poo. That is why we need to Practise Hygiene as part of our daily life routine.
- Norovirus cannot live and breed outside the human body, but can survive on hands, surfaces and in droplets/aerosols long enough (sometimes days) to cause infection.
By looking at how noroviruses are spread, we can see the 6 places where we need to practise to prevent further spread.
Here is a checklist of the 6 places where Practising Hygiene works to reduce spread of norovirus infections.

It also advises what actions to take in order to prevent spread of infection.

<table>
<thead>
<tr>
<th>Checklist for cleaning or intervention</th>
<th>Decontaminate by*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hands</td>
<td>Handwashing with soap, followed by thorough rinsing under running water or use alcohol hand sanitizer if there is no access to handwashing facilities</td>
</tr>
<tr>
<td>Surfaces touched by hands</td>
<td>Clean with detergent, then disinfect as directed, or use a disinfectant cleaner</td>
</tr>
<tr>
<td>Cleaning cloths</td>
<td>Immediately after use, rinse in hot soapy water, disinfect as directed and dry thoroughly</td>
</tr>
<tr>
<td>Eating and drinking utensils</td>
<td>Machine dishwash, or clean with a cloth in hot soapy water, then rinse under clean running water</td>
</tr>
<tr>
<td>Items of laundry in close contact with the body – Clothing, towels, bedlinens, face cloths</td>
<td>Launder at 60°C, or at 40°C with a detergent that contains an active oxygen bleaching agent</td>
</tr>
<tr>
<td>Preventing airborne spread during vomiting phase</td>
<td>if possible the sick person should isolate in one room until vomiting has stopped</td>
</tr>
<tr>
<td>Social distancing</td>
<td>Wear a well fitting mask which has at least 3 layers of material if entering the isolation room</td>
</tr>
<tr>
<td>Ventilation</td>
<td>Keep other indoor spaces as well ventilated as possible</td>
</tr>
<tr>
<td>Mask wearing</td>
<td></td>
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</tbody>
</table>

Notes:

Obviously, in daily life – it is not feasible to decontaminate contact surfaces every time we touch them. However, just knowing these surfaces contribute to spreading infection acts as a prompt to practise good hand hygiene, to ensure you do not pass infection to others, or they to you.
Maximizing protection against infection – The Swiss Cheese effect

It is important to realize that the "when, where, how" approach to hygiene is not a set of "hygiene tips", it is a "system" where behaviours and actions like social distancing, hand, surface and air hygiene work together to minimize risk of exposure to norovirus.

No single hygiene behaviour or practise is 100% effective.

The "Swiss Cheese" model is a good way of seeing this. Each cheese slice is a behaviour or action everyone can take. The holes show that no individual barrier is 100% effective. The more of the behaviours and actions we adopt, the smaller the risk of being infected. The Swiss Cheese model also shows how these must be a combined effort. Failing to Practise Hygiene affects others, both at home and in public places.

Source adapted from Ian M. Mackay (virologydownunder.com and James T. Reason)
To reduce virus spread – the other things to understand and consider

Preventing spread of norovirus infection is a joint responsibility

A particular problem with norovirus is that it is very infectious and spreads very easily. This because it has a very low “infectious dose” i.e. it may require exposure to less than 10 virus particles to cause infection. The virus can also survive for long periods on hands and surfaces that have become contaminated.

This does not make spread of infection inevitable. If someone in your household develops infection, practising rigorous Hygiene Practises can prevent it spreading to other household members. Equally, practising good hygiene as part of our daily routine when we are in public spaces such as schools, the workplace, leisure facilities and on public transport or visiting a hospital is vital to halt further outbreaks, which further increase levels of norovirus infections in the community.

This winter, it is particularly important, when there will be added pressure on hospitals from higher than usual levels of influenza and a possible spike of COVID-19. Norovirus outbreaks in hospital cause ward closures, putting added pressure on the system. Outbreaks arise from admission of infected patients, visitors and staff. Reducing spread in the community, reduces the spread into hospitals and care homes.

Make it easier to Practise Hygiene behaviours

If we make it easier to Practise Hygiene, we are more likely to comply with hygiene advice. Conversely if there are barriers to action we will not:

- Although carrying hand sanitizer when in public spaces means we are more likely to Practise Hygiene in situations where there is no ready access to handbasins, data shows that, whereas alcohol hand sanitizer is as effective as handwashing against viruses like COVID-19 and flu, it is less effective than handwashing against norovirus.
- The toilet is a place multiple people use regularly whether in a household, school, office or other public setting. Fixing a hand sanitizer dispenser on the toilet entrance door at home - as we now do in public spaces - encourages us to sanitize our hands before entering, thereby helping to reduce risk of spread of infection via door, tap and flush handles, toilet seats etc.

When not to Practise Hygiene

There is still a belief ‘hygiene is synonymous with cleanliness’ aimed at eradicating dirt – dirt being inappropriately regarded as the main source of harmful microbes. This belief prompts us to practise routine cleaning behaviours on surfaces that pose little infection risk.

Since infected people are the source of norovirus, it is impossible to “rid” an occupied space of virus particles. The most effective way to protect ourselves is by practising good hygiene at the Key Moments where there is greatest risk of spread, to prevent direct contact with virus particles.

The fact is that “if we are not exposed to the virus, we cannot be infected”.

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