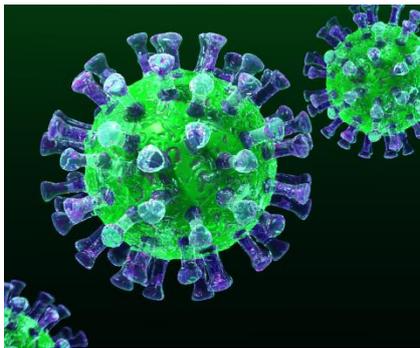


Coronavirus (COVID-19) infection – what you can do to protect yourself against infection – and how to make sure you do not spread infection to others



Coronaviruses are common across the world. Typical symptoms of coronavirus infection include fever and cough that may progress to a severe pneumonia causing shortness of breath and breathing difficulties. In the event that cases start to appear in your community, or if you are travelling to an infected area, here are some things you can do to reduce your risk of becoming infected. Equally important: what can you do to prevent the spread of the virus to other people in the event that you *do* become infected, helping to halt the spread of the outbreak?

COVID-19 is a new strain of coronavirus first identified in Wuhan City, China. Typical symptoms are the same as for other coronaviruses and include a cough, sneezing, shortness of breath, and/or a fever. The coronavirus, like other respiratory viruses, can cause more severe symptoms in people with weakened immune systems, older people, and those with long-term conditions like diabetes, cancer and chronic lung disease. Information about the global and local situations on the spread of the virus can be found on [this map developed by Johns Hopkins CSSE](#).

How does the coronavirus spread?

Currently the suspected source of the virus is a market in Wuhan selling live animals. Scientists believe the virus probably jumped species from animals to humans and is now spreading from person to person. It is assumed that the routes of transmission from person to person are the same as for colds and influenza viruses:

- **Airborne transmission** involves very small infected droplets (droplets of size $< 5\mu\text{m}$) which are expelled into the air from the infected person by sneezing. The droplets can spread via air currents and settle from the air slowly onto surfaces. During this time the virus can be drawn down directly into the lungs where they cause an infection. How long the virus remains infectious in droplets is not known, but the viruses will gradually die out.



- **Contact transmission** involves hands and surfaces. Infected droplets of mucous can settle or be deposited on surfaces (either by settling of airborne droplets or being touched with contaminated fingers). An individual can pick up the virus if they touch a contaminated surface or shake hands with an infected individual with contaminated hands. They can then become infected if they rub their eyes or the lining of their nose with contaminated hands, where the virus can infect the nasal mucosa.

Surfaces which, if contaminated by droplets of infected mucous shed from the nose, are most likely to spread infections include frequent touch surfaces such as handkerchiefs and tissues, tap and door handles, telephones, mobile devices, television remotes etc.



- **Droplet transmission** occurs when the infected individual directly sprays large droplets of infected mucous by coughing or sneezing, which propels the droplets onto the eyes or the lining of the nose of an uninfected person. Compared to airborne transmission, this transmission route requires close face-to-face contact with the infected individual.

Currently there is no information on which pathway/s are the most important for spreading coronavirus, so we must assume that all 3 may be involved

Practical advice to prevent the risk of infection

In time it is likely that an effective vaccine will be available. Meanwhile, public health agencies worldwide believe that the support of the public will play a crucial role in halting the spread of the epidemic.

1. How to reduce the risk of becoming infected

There are a number of things you can do to help protect you from becoming infected which can really work. The more people who follow the advice, the greater the impact on preventing spreading the infection. **Tackling this outbreak is everyone's responsibility!**

Here are some things you should do, in particular if you live in an infected area:



- **Avoid spending unnecessary time in crowded places** where the virus will spread most easily, such as airports, trains or offices.
- **Avoid shaking hands with people you meet;**
- **Where possible and safe, avoid touching hand rails and door handles** – if this is unavoidable, remember to wash your hands;
- **Wash your hands frequently with soap and water**, especially after using the toilet, after using public transport, before eating, etc. If water and soap are unavailable you can use a hand disinfectant*;

- **Avoid touching your eyes, nose and mouth as much as you can**, even though this is something we do all the time without realising;
- **In an aircraft**, keep the personal ventilation system going above your seat. This help to ensure that any viruses circulating around you are directed away from you down to the floor of the cabin;
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- Keep your office space well ventilated if possible;
- Health agencies are **not advising people to wear face masks** in order to reduce the risk of breathing in the virus. However, wearing a face mask could help to reduce risks of being infected by preventing you from touching the lining of your nose with your fingers.

2. What to do if you think you are infected?

Health agencies are advising anyone who *a)* is experiencing respiratory symptoms and *b)* has visited an infected area within the past 14 days, to contact their local medical facility by phone and mention your symptoms and your recent travel to the infected area.

Good respiratory hygiene, together with other measures reduces the risks or spread of infection to others. This means:

- Stay at home until you receive advice from your medical facility;
- Avoid touching your nose as much as possible;
- Block coughs or sneezes preferably with a tissue, or if you don't have a tissue, use the crook of your arm to save your hands from becoming contaminated;



- Use disposable tissues rather than a cotton handkerchief to blow your nose. Dispose of tissues immediately and safely. Flush down the toilet if possible. DO NOT leave them lying around for other people to pick up and become infected;
- Wash your hands regularly and thoroughly using soap and water. Make sure you use good mechanical action and rinse your hands under clean running water to remove any infected mucus. Make sure to dry your hands afterwards, as wet or moist hands are more likely to spread the virus;
- If you do not have access to a washbasin, use a hand disinfectant* to clean your hands;



Other things which can help to prevent the spread of the virus, are:

- Avoid close contact with other family members;
- Remember that you can transmit the virus to other people in your home via computer keyboards, TV remotes, telephones, door handles, tap handles, toilet seats and flush handles etc. Wash your hands frequently and thoroughly and disinfect the high frequency touch surfaces with a suitable disinfectant product or wipe that kills viruses* - or if this is not possible (e.g the surface or object would be damaged) avoid touching the surface at all;
- Cleaning cloths and sponges can readily spread viruses from one surface to another. Replace them directly after use or disinfect them with a product that kills viruses*. Thoroughly dry the cloth until next use. Alternatively, use a disposable cloth or wipe;
- Do not share your towels, facecloths, toothbrushes, eating utensils, etc. with other family members;

- Wash your laundry (especially handkerchiefs, towels, face-cloths) used by ill people separately from other laundry, and at a higher temperature (at least 60°C) to ensure viruses are inactivated;
- If you are infected, stay indoors and keep contact with other people to a minimum until seven days after your symptoms have improved and you have had no fever for at least 48 hours.



And remember: antibiotics do NOT work against viral infections!

** When using (hand)disinfectant products for COVID-19 infections or prevention, it is important to check that the products used are effective against viruses. Read the label before use and follow use instructions closely.*

Sources:

- International Scientific Forum on Home Hygiene (www.ifh-homehygiene.org)
- Sattar S. Human Pathogenic Coronaviruses: Understanding their Environmental Survival for better Infection Prevention and Control, a review by Dr. Syed Sattar <http://www.cremco.ca/en-US/news/1044>
- Kampf G, Todt D, Pfaender S, Steinmann E. [Persistence of coronaviruses on inanimate surfaces and its inactivation with biocidal agents](#). J Hosp Infect. 2020 Feb 6. pii: S0195-6701(20)30046-3. doi: 10.1016/j.jhin.2020.01.022. [Epub ahead of print]