

HOW COVID-19 SPREADS	HOW TO STOP IT
<p>The virus gets out of infected people through:</p> <ul style="list-style-type: none"> • respiratory droplets - tiny droplets that are breathed, sneezed, or coughed out, • feces (poop), even without diarrhea¹⁴ • blood¹⁴ – but not breastmilk or amniotic fluid²⁵ <p>People who are infected shed virus <u>even if they never get symptoms</u>, somewhere from 3-11 days after being infected. If symptoms develop, they start 1-14 days (median 5-6 days) after infection. <u>Shedding starts 1-2 days before symptoms.</u>²</p> <ul style="list-style-type: none"> • Shedding virus without ever having symptoms is more likely in younger, healthy people. • Virus is shed in droplets for 7-12 days by most sick people, but up to 2-3 weeks in children and really sick people, and longer in feces.^{4,10} • Virus shed later, e.g. after 10 days in mild COVID-19 illness, is likely not that infectious.⁵ 	<p>You can be shedding virus without knowing it, so:</p> <ul style="list-style-type: none"> • To cut down the number of respiratory droplets you put out into shared airspace: <ul style="list-style-type: none"> ○ wear a mask that can catch tiny droplets ○ don't sing or shout ○ catch coughs and sneezes in your elbow or upper arm sleeve. Tissues don't work as well¹² and may not keep your hands clean. • Keep your hands clean: don't touch your face or contaminated surfaces if possible. • After touching your face or contaminated surfaces or using the toilet, wash your hands with warm running water and regular soap (not anti-bacterial). Sanitizing your hands will work as long as your hands look clean. • Don't shake hands: bow hello, wave goodbye. • Treat blood as possibly infectious.
<p>Question: How can I tell if I'm shedding virus? You can be pretty sure you are not shedding virus if:</p> <ul style="list-style-type: none"> • You live where no-one has COVID-19 yet (the International Space Station, Antarctic research station) • MAYBE if you tested + for COVID-19, got better, then tested negative, and <u>might</u> be immune.^{8,11,16} <p>Otherwise, at any time you can be infected and shedding virus without knowing it. This is why many countries encourage wearing masks whenever out and around other people – <u>to protect others.</u>¹⁵</p> <p>Question: Any substitutes for masks or hand sanitizers?</p> <ul style="list-style-type: none"> • <u>Mask</u>: next best is to catch coughs and sneezes in the sleeve of your elbow/upper arm. • <u>A stretchy neck warmer worn over your sleeve</u> will catch droplets and be easier to wash than a coat. • <u>Hand sanitizer</u>: mix up a 70% ethanol in water solution, or use 140 proof liquor (but don't drink it!) <ul style="list-style-type: none"> ○ Spray bottles work best for sanitizing surfaces, and snap-top bottles to carry for hand sanitizer. <p>Question: how do I kill the virus on surfaces, in air, and on clothing?</p> <ul style="list-style-type: none"> • <u>Surfaces</u>: wash visibly dirty surfaces, then apply either a 70% ethanol and water mixture or 1:50 dilution of 5% household bleach in water, using good ventilation so you don't breathe in fumes. Don't wipe dry – let surfaces dry naturally. Hydrogen peroxide, even diluted to 0.5%, also works.¹⁸ • <u>Air</u>: bright sunshine, germicidal UVC light either in stand-alone air cleaners or in ductwork. • <u>Laundry</u>: hot water wash – with a bit of bleach if the fabric will take it – and dry in the dryer. <p>The virus is infectious for 3 hours in the air. On surfaces: 4 hours on copper, up to 24 hours on cardboard and 2-3 days on stainless steel and plastic.³ The SARS virus is killed in 15 minutes at 56°C.¹³</p>	
<p>The virus gets into new people:</p> <ul style="list-style-type: none"> • by being breathed in, or • by getting onto to the nose, eyes, or mouth. <p>The virus has special spikes on it that latch on to lung, intestine, liver, and other body tissues.</p> <p>The more virus gets into a new person, the longer the head start the virus has over the person's immune system and the more new virus it will be able to make.</p>	<p>When COVID-19 is circulating (i.e., now):</p> <ul style="list-style-type: none"> • We all should wear masks if we need to be out close to other people¹⁵ <ul style="list-style-type: none"> ○ if no masks are available, everyone should cough and sneeze into their sleeves¹² • Practice "social distancing"⁹ <ul style="list-style-type: none"> ○ share indoor airspace only if you must ○ work remotely if possible ○ keep 2 metres (6.5 feet) between people

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<p>** Hint: check your emergency stocks ** <i>For self-isolation (to cut down on shopping trips): 2 weeks of food (including pet food), favourite cold remedies, regular soap & other sanitary supplies</i> <i>Plus: 1 month's supply of essential medications, nicotine gum or patch if you're quitting smoking</i> <i>PETS: we haven't yet seen any COVID-19 illness in pets, although one dog who didn't get sick tested positive for the virus.⁶ Protect pets by washing your hands and not coughing or sneezing on them!</i></p>	<ul style="list-style-type: none"> • Try to be around other people only outside in sunshine, or with clean outside or UV-sanitized air flowing from the ceiling downwards. • Walking outdoors is a good way to get out. • If you have to be close to someone sick who can't wear a mask, an N95 mask plus goggles or face shield gives you the best protection. • Do not touch your face or eat or drink except right after washing your hands – or, if your hands look clean, after sanitizing them.
<p>Once viruses attach to body tissues, they get into cells and start to reproduce.</p> <ul style="list-style-type: none"> • The virus tries to reproduce faster than the body's immune system can kill it. • Once the body's immune system gets ahead of the virus, the virus is killed off. If the person was sick, she or he recovers. • If the body's immune system takes a long time to get ahead of the virus, the person can be left with permanent lung or heart damage. • If the body's immune system can't get ahead of the virus at all, the person dies. <ul style="list-style-type: none"> ○ Most likely to die are the elderly and those with chronic medical conditions. ○ In China, more men are dying than women, maybe because more men in China smoke¹⁹ 	<p>Look after your immune system:</p> <ul style="list-style-type: none"> • Don't smoke or vape or breathe exhaust fumes • Healthy diet, enough sleep, stay warm • Avoid being low in nutrients; e.g., vitamins A, B, C, E, zinc.²⁴ • Avoid being low in vitamin D (associated with more severe lung infection and lung failure)^{20,21} • Most adults can take 10,000 IU vitamin D (D3 is best) without risk of toxicity.^{22,23} • If you have any chronic medical condition, be as healthy as you can; e.g., get your blood pressure, blood sugar, etc., under the best control possible. <p>Get your flu shot. Influenza + COVID-19 together can cause worse illness than either one alone.¹⁷</p> <p>** Hint: fever helps the body fight off infections ** <i>Don't take aspirin, acetaminophen, or other medicine unless the fever is getting too high.</i></p>
<p>Question: I think I'm coming down with something. How can I tell if I might have COVID-19? Testing is the only way to tell for sure, although sometimes tests are wrong. Clues from symptoms:</p> <ul style="list-style-type: none"> • Allergies: sneezing, runny stuffy nose, itchy watery eyes, wheezing if asthma – but not fever. • Plain old common cold: sore throat, stuffy runny nose, sneezing, dry cough • COVID-19: in China: fever (87.9%), dry cough (67.7%), fatigue (38.1%), sputum (33.4%), shortness of breath (18.6%), sore throat (13.9%), headache (13.6%), sore muscles or joints (14.8%), chills (11.4%), nausea or vomiting (5.0%), stuffy nose (4.8%), diarrhea (3.7%), coughing up blood (0.9%), red eyes (0.8%).² In Washington State: shortness of breath (76%), fever (52%), cough (48%).²⁶ <ul style="list-style-type: none"> ○ Phone your doctor or local COVID-19 advice number to find out if you should be tested. ○ If you feel really bad, especially if you are getting worse fast, phone to arrange medical care. 	
<p>Question: When is this all going to stop? Humans win when enough people are immune that virus getting out of the last people who are infected can't find anyone else to infect. IF this happens, it will probably take a year or two.</p> <ul style="list-style-type: none"> • But – if the virus can change enough to re-infect people, it continue to circulate. (<i>like influenza</i>) • If COVID-19 doesn't change, expect several waves of people getting infected, each a little smaller than the wave before, until the virus finally stops circulating. (<i>like SARS and MERS</i>) 	

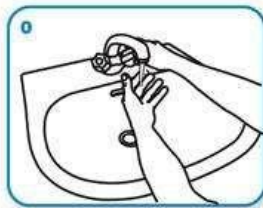
In British Columbia:

<http://www.bccdc.ca/health-info/diseases-conditions/covid-19>

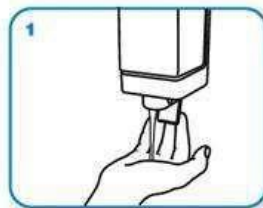
<https://www.healthlinkbc.ca/health-feature/coronavirus-disease-covid-19>

For health care workers: <http://www.bccdc.ca/health-professionals/clinical-resources/covid-19-care>

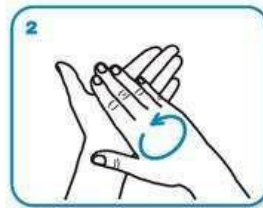
If you are sick, check <https://covid19.thrive.health/> before calling 811



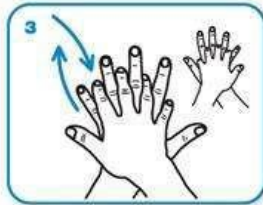
Wet hands with water



apply enough soap to cover all hand surfaces.



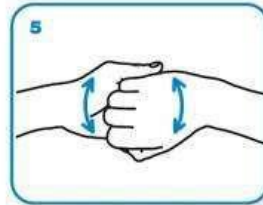
Rub hands palm to palm



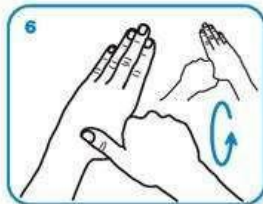
right palm over left dorsum with interlaced fingers and vice versa



palm to palm with fingers interlaced



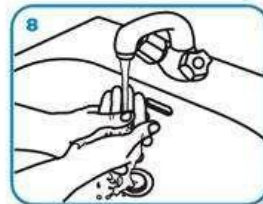
backs of fingers to opposing palms with fingers interlocked



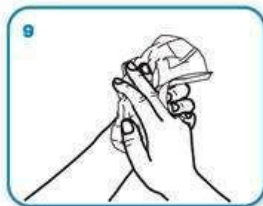
rotational rubbing of left thumb clasped in right palm and vice versa



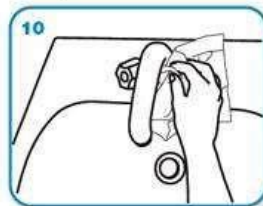
rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa.



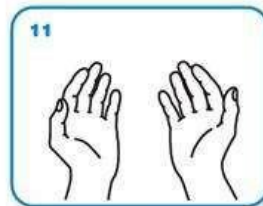
Rinse hands with water



dry thoroughly with a single use towel



use towel to turn off faucet



...and your hands are safe.

<https://globalnews.ca/news/2635537/squeaky-clean-here-are-the-6-steps-to-washing-hands-killing-germs/>

Making cloth masks

- <https://www.regmedctr.org/w ebres/File/032020%20How%20to%20Sew%20Face%20Mask%20with%20Filter%20Pocket.pdf>
- <https://www.regmedctr.org/se rvices/public-health/health-alerts/covid-19-%28novel-coronavirus%29/default.aspx>



Making face shields

<https://buzz.definitelyfilipino.net/articles/2020/03/health-worker-creates-diy-face-shield-to-address-lack-of-personal-protective-equipment-supply-in-their-hospital-to-combat-covid-19/> (or, attach the plastic sheet to a washable headband.)

Coronavirus inactivation

Wet: hot water wash, then dryer
Dry: slow cooker on warm (60°C or more) x 2 hrs or more

Pressure cooker sterilization

Put masks in canning jars with lids finger-tight, then put the jars on a rack or towel in the cooker with 1-2" of water. Process at 10-15 psi x 10-20 minutes.