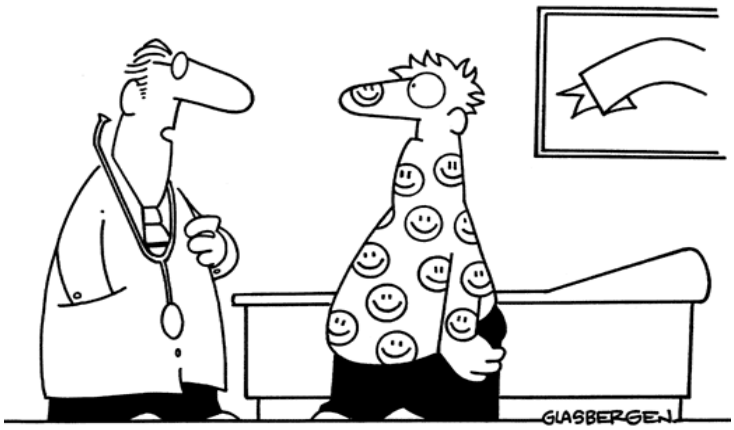
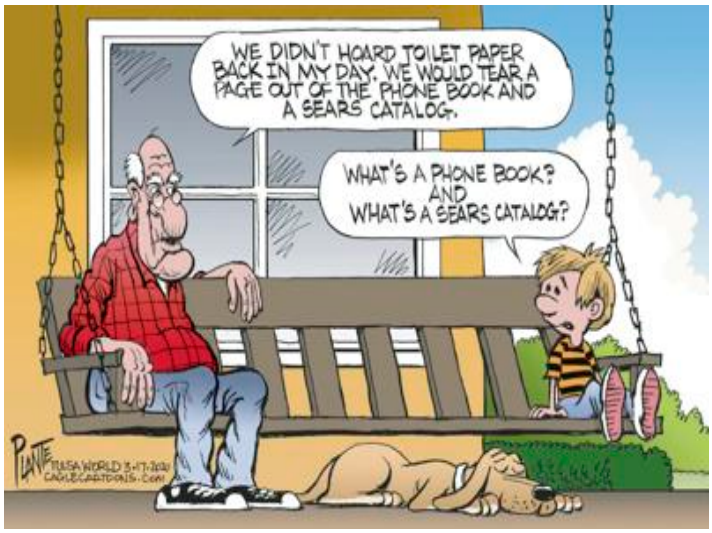
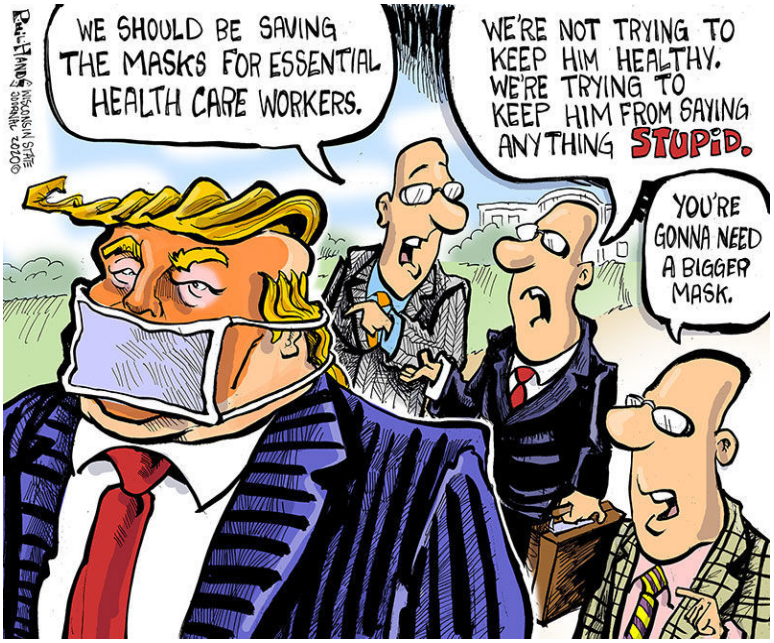
RETIRED TEACHERS' ASSOCIATION
NEWSLETTER # 33 – April, 2020
For Powell River Retired Teachers

Courtesy of Cathy Van Herwaarden: Parksville/Qualicum President



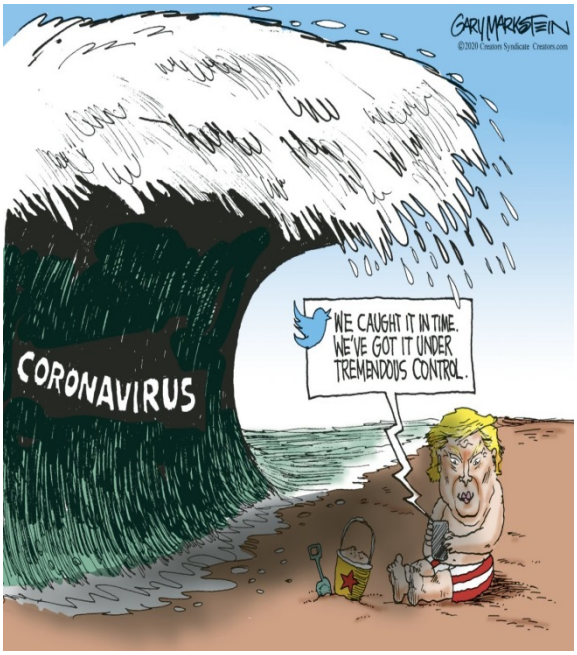
"You probably came in contact with someone who has an infectious smile."



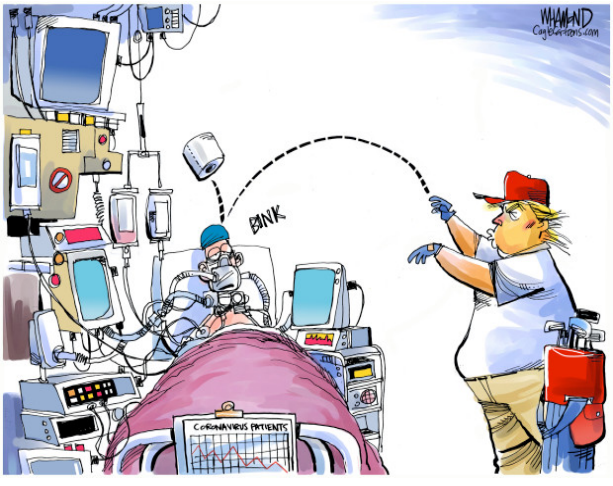

WE SHOULD BE SAVING THE MASKS FOR ESSENTIAL HEALTH CARE WORKERS.
WE'RE NOT TRYING TO KEEP HIM HEALTHY. WE'RE TRYING TO KEEP HIM FROM SAYING ANYTHING STUPID.
YOU'RE GONNA NEED A BIGGER MASK.


Corona Virus is a hoax orchestrated by the soap companies to make everyone wash their hands.
NEW THEORY


I WASH MY HANDS FOR EVERY CRISIS— CORONA VIRUS PANDEMIC, STOCK MARKET COLLAPSE, CLIMATE CHANGE, DOMESTIC TERRORISM...
RESPONSIBILITY
WEYANT
BostonGlobe


GARY MARKSTEIN
CORONAVIRUS
WE CAUGHT IT IN TIME. WE'VE GOT IT UNDER TREMENDOUS CONTROL.


IT IS NOT TRUE THAT WE LACK READINESS AND RESOURCES...
WE HAVE PLENTY OF PAPER TOWELS LEFT OVER FROM PUERTO RICO!
CORONA VIRUS
Pence
WASSERMAN


WHAMAND
BINK
CORONAVIRUS PATIENTS

TimeLine of COVID-19

https://www.cnn.com/2020/02/06/health/wuhan-coronavirus-timeline-fast-facts/index.html

December 31, 2019 - Cases of pneumonia detected in Wuhan, China are first reported to the WHO (World Health Organization).

January 1, 2020 - Chinese health authorities close the Huanan Seafood Wholesale Market after it is discovered that wild animals sold there may be the source of the virus.

January 7, 2020 - Chinese authorities confirm that they have identified the virus as a novel coronavirus, initially named 2019-nCoV by the WHO.

January 11, 2020 - The Wuhan Municipal Health Commission announces the first death caused by the coronavirus. A 61-year-old man, exposed to the virus at the seafood market, died on January 9 after respiratory failure caused by severe pneumonia.

January 17, 2020 - Chinese health officials confirm that a second person has died in China.

January 21, 2020 - Officials in Washington State confirm the first case on US soil.

January 23, 2020 - The Beijing Culture and Tourism Bureau cancels all large-scale Lunar New Year celebrations in an effort to contain the growing spread of Wuhan coronavirus. Chinese authorities enforce a partial lockdown of transport in and out of Wuhan.

February 2, 2020 - A man in the Philippines dies from the Wuhan coronavirus -- the first time a death has been reported outside mainland China, since the outbreak began.

February 4, 2020 - The Japanese Health Ministry announces that ten people aboard the Diamond Princess Cruise ship moored in Yokohama Bay are confirmed to have the coronavirus.

February 11, 2020 - The WHO names the coronavirus COVID-19.

February 14, 2020 - A Chinese tourist who tested positive for the virus dies in France, becoming the first person to die in the outbreak in Europe.

February 19, 2020 - Passengers who have tested negative for the novel coronavirus begin disembarking from the stricken Diamond Princess cruise ship; despite mounting evidence from infectious disease experts they could unknowingly be carrying the virus back into their communities.

March 9, 2020 - Canada confirms its first death related to COVID-19 and Italian Prime Minister Giuseppe Conte announces that the whole country of Italy is on lockdown.

March 11, 2020 – The World Health Organization declares the novel coronavirus outbreak to be a pandemic.

March 30, 2020 – British Columbia has 970 COVID-19 patients throughout the province.

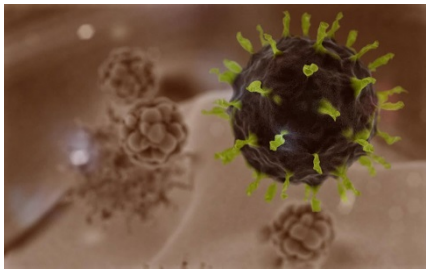
March 31, 2020 – In Canada: 8467 Coronavirus cases, 95 deaths, and 1162 recovered.

COVID-19 Primer: What We Know and What We Don't Know

SOURCES: https://www.theguardian.com/us-news/2020/mar/25/how-long-coronavirus-lasts-on-surfaces-packages-groceries

https://www.medicalnewstoday.com/articles/coronaviruses-how-long-can-they-survive-on-surfaces?utm_source=facebook&utm_medium=social&utm_campaign=owned&utm_term=covid&utm_content=2020-03-13#How-long-do-coronaviruses-persist?

https://www.seriouseats.com/2020/03/food-safety-and-coronavirus-a-comprehensive-guide.html



What is this virus?

COVID-19, as its been named by the WHO, belongs to a family of viruses that include the common cold, influenza and Severe Acute Respiratory Syndrome (SARS), an outbreak of which in 2002/03 killed 774 people — including 44 in Toronto and 349 in China. This new, or novel, coronavirus, is named for spikes on its surface that resemble a crown, allowing it to attach to cells in the lungs and duplicate. Cases began to appear in late December in the Yangtze River port city of Wuhan, China, centred around the Huanan Seafood Market, where wild animals were also sold. The novel coronavirus has spread from Wuhan, China, to every continent on Earth except Antarctica.

By the end of January, Chinese scientists had sequenced the virus's genome, which showed it had more in common with two bat-related SARS-like viruses that originated in eastern China in 2018 than it did with SARS and the Middle East Respiratory Syndrome (MERS). The results suggested the virus may have originated in bats, but was likely transmitted to another animal before jumping to humans. Researchers believe the intermediary may have been a pangolin — a scaly mammal, which is said to be eaten and used for medicine throughout China and other countries in Asia although officially its trade is illegal.

Pangolin Facts:

Pangolins are the only mammals wholly-covered in scales and they use those scales to protect themselves from predators in the wild. If under threat, a pangolin will immediately curl into a tight ball like an armadillo. They can release a stinky fluid from a gland at the base of their tails as a defense mechanism and they will use their sharp-scaled tails, to defend themselves.

Pangolins live in India, China, south-east Asia and parts of Africa. They are monotremes, egg-laying mammals like the platypus and echidna of Australia. Pangolins range in size from a large housecat to more than four feet long. Pangolins are solitary animals and active mostly at night. Most live on the ground, but some also climb trees. Pangolins eat ants, termites and larvae and are often known as "the scaly anteater." Pangolins have not teeth and they pick up food with their sticky tongues, which can sometimes reach lengths greater than their body.

Pangolins are one of the most trafficked mammals in Asia. Their meat is considered a delicacy and pangolin scales are used in traditional medicine and folk remedies. They are an endangered species at risk for extinction.

Scientists believe the virus may have originated in bats, but was likely transmitted to another animal before jumping to humans. Researchers believe the intermediary may have been a pangolin (right).

How Does The Virus Work?
The spikes on the virus surface are protein. The viral genome dictates how every protein is made. The genome is fully sequenced, so scientists know that these spikes are similar to the ones on the first SARS virus that had an outbreak in 2003.

These spikes interact with something called angiotensin-converting enzyme 2 or ACE2 in humans. When it enters the lower lung, it injects its RNA and hijacks the lung cell to create viral materials instead of letting the cell live its normal life. It kills the cell while creating more virus. Viruses only replicate inside a living cell - outside the cell, they're on a path of their own destruction or to infect us.

But the lungs aren't the only place where humans have ACE2. The stomach and the intestines have it. Specific parts of the male anatomy have it. It's on the kidneys. And, it's in the heart, which could explain a patient's damaged heart.

Problems in the stomach probably won't kill someone immediately. Problems in male anatomy probably won't kill someone immediately. But a problem of the heart or lungs can kill someone in minutes, which brings us back to pneumonia.

When the body's immune system detects viral damage in the lungs, it reacts. It expands the blood vessels, so more immune cells can enter, but this also means fluid fills the lungs. This makes breathing harder, because now the lungs can't exchange oxygen and carbon dioxide with the blood.

Fever and pneumonia are present in almost all cases of COVID-19. Other problems like with the heart and kidneys and stomach, it depends.

But if the illness keeps getting worse: pneumonia, fever. Secondary infection. Bacteria breaks off and starts floating around in the blood. Organs start to shut down because blood pressure is too low from the immune system trying to attack the bacteria in blood. Metabolic waste and acid build up in the blood, causing the heart to stop beating.

For more detailed information about three COVID-19 cases in Wuhan, described by doctors: https://www.medpagetoday.com/infectiousdisease/covid19/85361

Is there a vaccine? A vaccine to stop the spread is at least a year away.

What is the incubation period of the virus?
It varies between patients, but 0-14 days represents the current official estimated range with most people developing symptoms 5-6 days after infection. However, the exact figure may still be a moving target with reports of possible outliers where incubation may have taken up to 27 days. Researchers found the virus remains infectious in airborne droplets for at least three hours. This doesn't mean infected humans produce enough virus in a cough to infect another person; but they might, so keep your distance!

March 30, 2020 - What are the symptoms of COVID-19?

SOURCE: https://www.medicalnewstoday.com/articles/coronavirus-symptoms-severity-levels?utm_source=Sailthru%20Email&utm_medium=Email&utm_campaign=newsAlerts&utm_term=coronavirus&utm_content=2020-03-31&apid=32290074

Most research on COVID-19 has focused on people who sought treatment for the disease. This means that the existing data have a bias toward people with more severe symptoms.

Some people who have COVID-19 are asymptomatic, which means they do not have any symptoms. This means that they might spread the virus to others without even realizing it.

MILD SYMPTOMS

- **A fever:** The majority of people with COVID-19 experience a fever.
- **Muscle pain:** Some people might notice increased muscle aches or weakness.
- **Fatigue:** Some people might have less energy or need more sleep.

While viruses such as the flu often hit babies and young children very hard, most research around COVID-19 suggests that young people are likely to experience mild symptoms or no symptoms at all. Doctors do not really know what mild symptoms of the disease may include, but it is possible that any cold-like symptoms could be due to COVID-19.

MODERATE SYMPTOMS – similar to a bad flu

- a dry cough
- muscle pain
- fever
- fatigue
- nausea, sometimes from excessive coughing

While early reports on COVID-19 focused primarily on respiratory symptoms, new research indicates that 50.5% of people experience gastrointestinal symptoms, such as diarrhea.

Some people also report changes in their sense of smell or taste, often before other symptoms appear. Doctors do not understand what causes this, but other viruses can also attack the sense of smell, sometimes permanently.

SEVERE SYMPTOMS

Data on how prevalent severe symptoms are hard to interpret, but usually include:

- high fever
- difficulty breathing
- chest pain
- shortness of breath
- chest pain
- severe nausea
- pneumonia in one or both lungs

On average, people who develop severe symptoms, such as shortness of breath, do so within 8 days of other symptoms first appearing. People with pre-existing medical conditions may notice that their symptoms get worse. For example, a person with asthma may experience more severe asthma attacks or more difficulty breathing.

EXTREME SYMPTOMS

In addition to the milder symptoms described above, people who develop severe life-threatening COVID-19 symptoms are likely to experience:

- **Sepsis:** This is a type of systemic infection that occurs when the body's immune response overreacts to pathogens, causing potentially life-threatening damage.
- **Respiratory failure:** This occurs when damage to the lungs is so severe that they cannot function without assistance.
- **Organ failure:** This is a life-threatening situation that occurs when one or more organs stop working properly.

In China, 49% of critical cases led to death. Certain medical conditions increase the risk of death or developing critical symptoms of COVID-19.

- heart disease
- diabetes
- chronic respiratory disease such as chronic obstructive pulmonary disease (COPD)
- high blood pressure (hypertension)
- cancer

Symptoms tend to be more severe in older populations. The Chinese fatality rate in people over 70 was 8%, while the death for those over 80 was 14.8%.

Extended exposure to the virus may also increase the severity of symptoms. In China, several otherwise healthy health care workers died.

SUMMARY

Symptoms can vary significantly in severity, from being non-existent to extremely severe, in some cases leading to organ failure and death. Without more data, the safest strategy is to assume that COVID-19 is potentially deadly, spreads easily, and people without symptoms can transmit it.

Recent research in Wuhan, China, suggested that most people develop symptoms within 4 days of exposure, but the virus may remain dormant for up to 2 weeks.

It's currently being investigated if the virus can be transmitted to others if someone is not showing symptoms. While experts believe that it is possible, it is considered less common.

In a review of cases in Canada, Public Health Agency of Canada (PHAC) says commonly reported symptoms include cough (78%), chills (51%) and fever (49%).

The only way to confirm infection is with a lab test.

March 28, 2020 - Loss of Smell and Taste Significant Symptoms, too!

SOURCE: https://www.bloomberg.com/amp/news/articles/2020-03-28/have-coronavirus-and-can-t-smell-harvard-scientists-explain-why

Doctors around the world are reporting anecdotal Covid-19 cases in which patients have experienced an abrupt and unexplained total or partial loss of smell and taste. The conditions, known medically as anosmia and dysgeusia, respectively, are significant symptoms associated with the pandemic.

Harvard Medical School researchers found that the Virus is capable of attacking key cells in the nose which may explain this loss of taste and smell. Certain cells at the back of the nose harbor the distinctly shaped proteins that the coronavirus targets to invade the body. Infection of these cells could directly or indirectly lead to an altered sense of smell.

Loss of smell and taste could serve as an early sign of infection, signaling people to self-quarantine before they develop a telltale cough or fever. People experiencing these symptoms, in the absence of other known causes, should consider self-isolation and get tested.

Symptoms	Coronavirus Symptoms range from mild to severe	Cold Gradual onset of symptoms	Flu Abrupt onset of symptoms
Fever	Common	Rare	Common
Fatigue	Sometimes	Sometimes	Common
Cough	Common* (usually dry)	Mild	Common* (usually dry)
Sneezing	No	Common	No
Aches and pains	Sometimes	Common	Common
Runny or stuffy nose	Rare	Common	Sometimes
Sore throat	Sometimes	Common	Sometimes
Diarrhea	Rare	No	Sometimes for children
Headaches	Sometimes	Rare	Common
Shortness of breath	Sometimes	No	No

Sources: World Health Organization, Centers for Disease Control and Prevention

CORONAVIRUS

- Fever
- Cough
- Shortness of Breath, or difficulty breathing
- Symptoms appear 2-14 days after exposure

FLU

- Fever
- Cough
- Muscle aches
- Fatigue & weakness
- Chills & sweats
- Congestion
- Sore throat

ALLERGIES

- Sneezing
- Itchy nose, eyes or roof of the mouth
- Runny, stuffy nose
- Watery, red or swollen eyes

WHAT TO DO?

If you think you've been exposed to COVID-19, people should **phone 811** for advice or check online: http://www.bccdc.ca/health-info/diseases-conditions/covid-19

Call your local public health unit 250.947.8222 if:

- You have even mild symptoms.
- You have been exposed to someone known to be infected.
- If you have symptoms and are concerned for any other reason that you may have COVID-19, you can call public health, but you could also call your provincial or territorial telehealth service, or call your doctor to talk about your risk.
- If you have been exposed to someone with COVID-19 and need immediate medical attention — for example, if you're having difficulty breathing — go to your doctor or the emergency department, but call them or public health in advance so they can prepare and put infection control precautions in place.

BC Covid-19 Self-Assessment Tool

This self-assessment tool, developed with the BC Ministry of Health, will help determine whether you may need further assessment or testing for COVID-19. Complete this assessment to determine if you may need care.
https://bc.thrive.health/covid19

Most people do not need to be tested for COVID-19, as it won't change their care.

People who do not need to be tested for COVID-19 include:

- People without symptoms
- People who have mild respiratory symptoms that can be managed at home
- Returning travellers

Who should be tested for COVID-19?

People with respiratory symptoms who may require testing for COVID-19 include people:

- Hospitalized, or likely to be hospitalized
- Health Care Workers
- Residents of long-term care facilities
- Part of an investigation of a cluster or outbreak

Anyone who has symptoms (including a fever, cough, sneezing, or sore throat) should self-isolate for 10 days.

For more information on Self Isolation:
http://www.bccdc.ca/health-info/diseases-conditions/covid-19/self-isolation

You should self-isolate while waiting for test results. If you do test positive for COVID-19, you'll need to be quarantined for 14 days.

Health experts say that the majority of people who get COVID-19 will only have mild to moderate symptoms. For others, especially people who are elderly or have compromised immune systems, COVID-19 is life-threatening. That's why it's critical that anyone with a cough, fever, shortness of breath — or anyone feeling unwell — stay home, until they are feeling better.

How is it transmitted?
Coronaviruses are zoonotic, which means they can pass from animals to humans. Similar to SARS, the novel coronavirus can also pass from human to human, primarily through the respiratory system. According to the Center for Disease Control (the CDC), the main transmission route is through person-to-person droplet infection—that is, the inhalation of aerosolized saliva or mucus carrying a viral load. (Viral load is the amount of virus particles in a given volume of liquid—higher viral loads equate with stronger chances of infection.)

People are most contagious when they are symptomatic. Coronaviruses are most commonly spread by coughing or sneezing; close personal contact, such as shaking hands; or touching an object or surface with the virus on it and then touching your mouth, eyes or nose. Airborne spread has not been reported for COVID-19 and it is not believed to be a major driver of transmission.

Chinese researchers have reported fecal-oral transmission is also possible, warning medical workers to protect themselves against vomit and feces from infected patients. Chinese health authorities urged vigilance by washing hands frequently, especially if citizens had mildly ill family members at home with them.

What is the risk?
Most people, about 80%, infected with COVID-19 have mild to moderate disease and recover on their own. So far more than 120,000 people have fully recovered. The Public Health Agency of Canada says that there is an increased risk of more severe outcomes for Canadians:

- aged 65 and over
- with compromised immune systems
- with underlying medical conditions

And confirming what was observed early in the outbreak, the WHO report found that individuals at highest risk for severe disease and death include people aged over 60 and those with underlying conditions such as hypertension, diabetes, cardiovascular disease, chronic respiratory disease and cancer.

One of the reasons older people can get sicker is comorbidity, which refers to pre-existing conditions. Type 2 diabetes causes your white blood cells to function less effectively and is called immune-metabolism. So, there's a real link between the immune system and the metabolic system, and older adults are at increased risk for Type 2 diabetes or have pre-diabetes.

Our immune system, which can wane with age, is also a factor. Older adults tend to have higher amounts of the virus because they can't get rid of it as much, and it tends to infiltrate deep into their lungs. Without a really robust immune system, it's really challenging.

If you have chronic health conditions like Type 2 diabetes it is important to keep your conditions managed. People who have Type 2 diabetes are more likely to be infected. But people who have well-managed disease — they keep their blood sugars stable — are always better off. Similarly, for people who have heart disease, keeping it well managed with exercise and healthy eating.

Keep your muscle mass, too, because when you're sick and you can't eat, that's what your body uses as energy. So building muscle helps older adults deal with infections. For this particular virus, the best advice it to stay away!

According to PHAC, physically distancing yourself from others is proven to be one of the most effective ways to reduce the spread of illness during an outbreak.

Precautions include:

- keeping a distance of at least 2 arm's length (approximately 2 metres or 6 feet) from others, as much as possible
- working from home and staying home as much as possible
- limiting contact with people at higher risk (e.g. older adults and those in poor health)
- using food delivery services or online shopping

CORONA VIRUS TRACKER: Stay informed with latest data
https://newsinteractives.cbc.ca/coronavirustracker/

WHO (World Health Organization) Advice for Public:
https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public

Updated World Statistics - Click here
https://www.worldometers.info/coronavirus/#countries

TOILET PAPER PHILOSOPHY – by Reen Rose - Mar 29, 2020

Source: https://www.castanet.net/edition/news-story-295786-1122-.htm#295786

Why toilet paper? COVID-19 doesn't have stomach flu symptoms; it is a respiratory illness, like influenza. Anyone suffering from it is unlikely to need more rolls than usual.

People have been advised to have enough supplies to last a quarantine of two weeks. I don't know about you, but I don't go through multiple rolls a day. However, this isn't the first time a crisis has led to the same mass buying of toilet paper.

During the oil crisis of 1973, an American congressman warned about a disruption to the toilet paper supply chain. Late night TV host Johnny Carson shared this undoubtedly hoping for a laugh from the nation. Instead, he got hysteria. Despite being assured that there was no shortage, and that the supply chain was fine, people ran out to stock up. This phenomenon lasted for four months.

Control and fear are two of the major issues when a frenzy to buy something such as toilet paper surfaces. Autonomy, or the desire for perceived control over your life, is one of the basic needs of all humans.

If you feel you are powerless, life is bleak. COVID-19 is causing many people to feel helpless and buying toilet paper is something that they can do. It may not be the most useful thing, but it is an opportunity to take some level of control during this unsettling time.

The crisis is also ramping up fear. Fear is contagious. If the strangers in front of you are piling toilet paper into their shopping cart, you are likely to start doing the same. You may recognize you don't have any reason to copy them, but then they may know something you don't. Thus, FOMO — fear of missing out.

Witnessing the actions of others, combined with news reports and social media posts, will have you following suit. It is the herd mentality.

Why Is Coronavirus A Bigger Deal Than Seasonal Flu?

Seasonal flu is an "all human virus". The DNA/RNA chains that make up the virus are recognized by the human immune system. This means that your body has some immunity to it, before it comes around each year. You get immunity two ways: through exposure to a virus, or by getting a flu shot.

Novel viruses come from animals. The WHO (World Health Organization) tracks novel viruses in animals, watching for mutations. Usually these viruses only transfer from animal to animal (pigs in the case of H1N1 and birds in the case of the Spanish flu). But once, one of these animal viruses mutates and starts to transfer from animals to humans, then it's a problem.

Why? Because we have no natural or acquired immunity: the RNA sequencing of the genes inside the virus isn't human, and the human immune system doesn't recognize it so, we can't fight it off.

Now Sometimes, the mutation only allows transfer from animal to human, for years it's only transmission is from an infected animal to a human before it finally mutates so that it can now transfer human to human... once that happens, we have a new contagion phase. And depending on the fashion of this new mutation, that's what decides how contagious or how deadly it's going to be.

H1N1 was deadly....but it did not mutate in a way that was as deadly as the Spanish flu. Its RNA was slower to mutate and it attacked its host differently, too.

Fast forward to the Coronavirus

It existed in animals only, for nobody knows how long...but one day, at an animal market, in Wuhan China, in December 2019, it mutated and made the jump from animal to people. At first, only animals could give it to a person. But here is the scary part…in just TWO WEEKS it mutated again and gained the ability to jump from human to human. Scientists call this quick ability, "slippery".

This Coronavirus, not being in any form of a "human" virus took off like a rocket because humans have no known immunity and doctors have no known medicines for it. And it just so happens that this particular mutated animal virus, changed itself in such a way the way that it causes great damage to human lungs.

That's why Coronavirus is different from seasonal flu or H1N1 or any other type of influenza. This one is slippery AF. And it's a lung eater...and, it's already mutated AGAIN, so that we now have two strains to deal with (strain S, and strain L) which makes it twice as hard to develop a vaccine.

We really have no tools in our shed, with this. History has shown that fast and immediate closings of public places have helped in the past pandemics. In 1918, during the Spanish Flu, Philadelphia and Baltimore were reluctant to close events and they were hardest hit in USA.

Factoid: Henry VIII stayed in his room and allowed no one near him, until the Black Plague passed...(honestly, I understand him so much better, now!). Just like us, he had no tools in his shed, except social isolation.

And right now it's hitting older folks harder... but this genome is so slippery, if it mutates again (and it will). Who is to say, what it will do next. Now, that's scary!!! STAY HOME!!!

Immune Function Declines With Age, So More Susceptible To More Severe Illness.
Source: https://www.vox.com/2020/3/12/21173783/coronavirus-death-age-covid-19-elderly-seniors

As we age, the systems our bodies use to fight disease wear down. Not only does the body have a harder time fighting off new infections like Covid-19; it's also more likely to be afflicted by chronic diseases that make the immune system weaker.

In older adults, the number of white blood cells that find and help eliminate infections can decline. The cells also become less adept at identifying new pathogens to fight. In the case of Covid-19, the virus can also damage the immune cells that might otherwise overcome the virus. If there are fewer of these cells to begin with, and they're also weaker than they once were, an illness can do more damage.

Immune function is not as robust as it is in younger people. Studies over the years have shown that in most people, their immune function is pretty okay in their 60s, or even in their 70s. The immune functions go down rather quickly after age 75 or 80.

When an older person's immune system responds to infections, it faces a higher chance of a dangerous overreaction known as a cytokine storm. Cytokines are proteins that serve as signals to the body to ramp up its infection-fighting machinery. But during a storm, these cytokines are overproduced, which causes severe inflammation, high fever, and organ failure. In other words, it's not just a sluggish response to infections that can harm older adults; the immune system's overreaction to an invader can also kill.

The cause of death of this virus is firstly respiratory failure, and then probably the cytokine storm. The good news is that we have treatments for cytokine storm syndrome, which could help save a significant number of lives in this outbreak.

Older people also have a higher prevalence of chronic disease
The longer we live, the more likely our cells are to replicate in dangerous ways, the more damage they accumulate, and the more likely our organs are to stop functioning normally. This puts us at a heightened risk of chronic health conditions, like cancer or diabetes. Along with already weakened immune systems, these underlying diseases can make it harder for the body to ward off infections. The takeaway: It's not just age alone that endangers people; it's being older with one or more chronic diseases.

Among the 105 patients who had died in Italy as of March 4, two-thirds had three or more pre-existing conditions. The most common was hypertension, followed by ischemic heart disease and diabetes mellitus. These chronic illnesses can leave organs degraded and more vulnerable to infection. Additionally, the treatments for these conditions can suppress the immune system, leaving the body susceptible to pathogens.

It's not clear why Covid-19 is especially risky for people with these diseases. But in general, respiratory diseases can be especially dangerous for people with cardiovascular disease. When the lungs don't function properly, the heart has to work even harder.

Researchers have also known that diabetes can damage the nervous system and impair the body's efforts to clear infections from lungs. Conditions like high blood sugar associated with diabetes can also suppress immune cells.

There are other problems associated with aging that play a role here as well. Older people may be less efficient at coughing and sneezing, making it harder for them to clear the Covid-19 virus, which infects the airways. Accumulated lung damage in older adults from habits like

smoking or breathing polluted air can further increase vulnerability, so when Covid-19 strikes, it can lead to problems like severe pneumonia.

On the other hand, it's still only a minority of older adults who are facing the most severe consequences of Covid-19. Many have recovered, and older people in otherwise good health will likely survive the infection. If you have a strong immune system to begin with, you can most likely fight against the virus.

Can the virus live on surfaces outside the body?
Unlike bacteria, viruses don't continue to grow outside the body. But they do survive. These viruses are on things and they usually survive on a surface longer if they're surrounded by a bodily fluid, such as saliva. But to infect you, the virus has to get from the surface inside your body — which means touching it and then putting your hand to your eyes, nose or mouth. Contact with infected people, rather than objects, is likely more of a risk.

Wash your hands often and thoroughly — for at least 20 seconds — with soap and water or use a 60 per cent or more alcohol-based sanitizer. It's not rocket science, but it is the No. 1 piece of advice from health authorities and experts. Coughing and sneezing into your elbow or a tissue, is the second. Part of why social distancing measures advise staying 2 metres (six feet) away from others is because sneezing or coughing can spread droplets that far.

Use best practices:
- Wash your hands and don't touch your face.
- Carry an alcohol-based sanitizer, when you don't have access to soap and water
- Don't go anywhere where people are sick.
- Don't go anywhere if you're sick.
- Don't let your friends and family go to work when they're sick.
- Get your flu shot

Mask or no mask?
The WHO advises "rational use" of medical masks, under the following circumstances: "Only wear a mask if you are ill with COVID-19 symptoms (especially coughing) or looking after someone who may have COVID-19. Disposable face mask can only be used once. If you are not ill or looking after someone who is ill then you are wasting a mask." There's no evidence that wearing a mask will protect you from becoming infected in your day-to-day life.

Health-care workers wear N95 masks — these are specialized masks that block smaller particles. It's important to preserve the supply of these masks for health-care workers. But if you are sick, there is some evidence that wearing a mask will help reduce the amount of virus around you, potentially offering a measure of protection to others.

As for wearing a medical mask or a N95 respirator, Dr. Mark Loeb, a researcher and professor at McMaster University in Hamilton who specializes in pathology, molecular medicine and clinical epidemiology, says health-care workers are the only ones who need to cover up. The evidence for people on the street having to wear a mask is zero and it's a total waste. Buying up masks just depletes the stock for people who need them and the cheap masks that you buy are not as effective as you'd want them to be.

In our country, influenza is going to cause more deaths than the coronavirus ever will. Seasonal influenza contributes to more than 3,000 deaths annually in Canada. Globally, it results in about three to five million cases of severe illness, and between 290,000 to 650,000 deaths.

Could you become infected from just a single particle of Covid-19?
There's a certain amount of viral particle that you need to be exposed to become infected. If you just had one viral particle on your finger, it's unlikely that you're going to be infected. Some viruses are very potent, you only need like 10 particles to get infected, while others you may need millions. The fewer viral particles you're exposed to, the less likely you're going to get infected. That's why the amount of virus on a surface is important.

Can I get COVID-19 from touching or eating contaminated food?
There is currently no evidence that COVID-19 has spread through food or food packaging According to multiple health and safety organizations worldwide, including the CDC, the USDA, and the European Food safety Authority, there is currently no evidence that COVID-19 has spread through food or food packaging. Previous coronavirus epidemics likewise showed no evidence of having been spread through food or packaging.

It's been found that most cases are linked to clusters of people, including hotel guests attending conferences, church groups, and shoppers, while none are linked to contaminated food or drink.

The fact that every person eats multiple times a day and thus far no link has been found between eating and viral clusters is strong evidence that no such link exists.

Even if a worker sneezes directly into a bowl of raw salad greens before packing it in a take-out container for you to take home, as gross as it is, it's unlikely to get you sick. Current Opinion in Virology (COVIRO) explains that respiratory viruses reproduce along the respiratory tract—a different pathway than the digestive tract food follows when you swallow.

So if ingesting the virus isn't a concern, what about this scenario: a worker coughs on a cutting board then assembles a hamburger directly on that board before placing it in a take-out container. You then come home and eat that burger with your bare hands, then pick your nose, or do something else that deposits the virus along your respiratory tract. In this situation, the viral load has been diluted several times. First when it was transferred from the board to the burger bun. Next, more viral load was shed when the bun was placed in the takeout container. It is diluted again when you pick up the burger before interacting with your face in inadvisable ways.

Eating food is not any riskier than any number of other activities you perform on a daily basis in which you come into contact with items other people have handled. Indeed, the hygiene standards in place at food service operations make that risk even smaller.

Am I more likely to get COVID-19 from take-out, delivery, or cooking at home?
The cook at your local restaurant most likely follows stricter hygiene and safety protocols than the supermarket worker stocking the shelves. A good rule of thumb is to treat anything that comes into your home from outside, whether food, mail, or other people, as potentially contaminated and act accordingly. Wash your hands after bringing it home, transfer to clean containers and/or sanitize packaging when possible, and wash your hands before, during, and after cooking. (And stop picking your nose.)

If I'm still concerned, does reheating food before eating it destroy the virus?
Yes. As with any bacteria or virus, safe cooking is a function of temperature and time. The hotter the temperature, the less time you'll need to reduce viral or bacterial load to a safe level. With salmonella, for instance, 165°F (75°C) is hot enough to make a 5-log reduction in bacterial load in under a second (that is, only one out of every 100,000 bacteria will survive that temperature and time). At 145°F (63°C), the same reduction in pathogens would take around 10 minutes. (Bear in mind this is the temperature of the food, not the oven.)

Temperatures and times for coronavirus are not yet fully researched, but scientists suggest a temperature of 149°F (65°C) for at least 3 minutes is sufficient. Experts assume that the virus will respond like other pathogens and that hotter temperatures will require shorter times, but we currently do not have experimental data to prove it.

- When reheating or cooking solid foods, such as a chicken breast, a steak, or a loaf of bread, it is very unlikely that any viral or bacterial load will have penetrated past the surface unless the food has been pierced or cut, so heating just the exterior is sufficient (for safety, if not for palatability).
- (heat to an internal temperature of at least 149°F/65°C, and hold it there for at least 3 minutes).
- If you want to be extra-careful, use a digital thermometer to check the temperature of your food inside and out before serving or eating.

The good news is that viruses require a host cell to replicate, which means that the coronavirus will not multiply on your food, even within the danger zone. Indeed, just as it does on other surfaces, the viral load on your food will decrease with time.

How Long Do Coronaviruses Persist?
Depending on the material and the conditions, human coronaviruses can remain infectious on inanimate surfaces at room temperature up to 9 days, such as tables and door handles. At temperatures of 30–40°C (86–104°F), coronaviruses tended to persist for a shorter time.

The virus can remain stable on different kinds of surfaces:

- On fabric it can survive for 6-12 hours. Normal laundry detergent will kill it.
- Lives on your hands for 5-10 minutes, but a lot can happen during that time!

How many people are being contaminated via surfaces as opposed to airborne particles or direct contact with an infected person?
People are much more likely to be infected by close contact with an infected person than by touching a contaminated surface. However, it's still important to be conscious of what we're touching, especially high-touch surfaces, and be careful about cleaning our hands after touching things. For example, public transit or grocery stores and places where there tend to be a lot of people. The virus is pretty stable on materials like plastic and steel – they can persist for a few days. So it's very possible that someone who's sick will deposit the virus on to the surface and then somebody else will touch it and touch their face.

Is it possible the contents of a package could have been contaminated by whoever packed it?
There's definitely a possibility of contamination, but it's much more likely that the outer cardboard itself will come into contact with a lot more people than what is inside. And if it takes days to get to your home, whatever virus that was inside will be deactivated already.

Is there a risk of being infected by packages that we have delivered?
It's a low risk, but it's possible that if someone is delivering a package to your house and they are sick, that may be a route for transmission. It is recommended that any time something new comes into your household, be conscious of washing your hands after handling it.

The virus's stability is pretty good on the cardboard for 24 hours. Once you get those packages, open them, quickly throw away the cardboard, wash your hands, and try to avoid touching your face. Take any measures that you can to minimize contact from the surface of the package to your face.

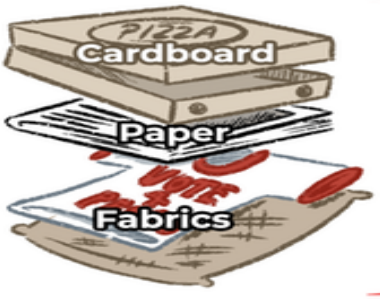
3 hours:

This is the amount of time we know that coronavirus can survive and remain infectious in **airborne droplets**, but we don't know if humans produce enough in a single cough to infect another person.

Up to 72 hours:

This is the amount of time coronavirus can stay active on **hard, shiny surfaces**. Think things like play equipment, door and public transport handles and your phone.

The virus does degrade over time, but you should avoid touching these surfaces in shared spaces, and if you can't do that, avoid touching your face afterward before thoroughly washing your hands.



Up to 24 hours:

This is the amount of time it took for researchers to find no more viable traces of the virus on cardboard. This is also a good guide for other **porous surfaces**.

Porous surfaces are much less likely to hold viable amounts of the virus.

Source: https://www.weforum.org/agenda/2020/03/this-is-how-long-coronavirus-lives-on-surfaces

These tips might seem simplistic; but during an epidemic, these are the best ways to make a difference.

All Canadians have been asked to practice **SOCIAL DISTANCING** to limit the spread of COVID-19.

That means:

1. **STAY HOME** and work from home if you can.
2. **LIMIT** the number of people you come into close contact with.
3. **SHOP** for essentials during off-hours.

If you go out:

- Avoid crowded areas and groups
- Maintain a 2-meter distance from other people
- Cough or sneeze into your elbow
- Wash hands thoroughly and frequently
- Greet others with a wave

Do your part, Stay apart!

Remember Dr. Bonnie says:
Be Kind.
Be Calm.
Be Safe.

YOU DON'T NEED TO SANITIZE YOUR GROCERIES – March 30, 2020

The CDC, WHO, and FDA do not recommend sanitizing groceries

Source: https://vitals.lifehacker.com/you-dont-need-to-sanitize-your-groceries-1842528397?utm_medium=sharefromsite&utm_source=_facebook

Even if you're following advice to stay home as much as you can, we all have to get food somehow, which means regular grocery trips or deliveries. If the idea of letting packages of food from The Outside into your home is nerve-wracking, it's important to remember that while the risk of picking up the coronavirus from the exterior surfaces of your groceries is not zero, it is very low.

If you want to be especially safe, there are some steps you can take to ameliorate the risk. But some folks out there going a bit overboard, including in one viral video in which a doctor sanitizes his groceries with extreme prejudice.

The CDC does not recommend sanitizing groceries in its coronavirus precautions, nor does the World Health Organization in theirs. The FDA released a document on March 24 about COVID-19 concerns in the food supply that specifically states: "There is no evidence of human or animal food or food packaging being associated with transmission of the coronavirus that causes COVID-19." While things may change as we learn more about this virus, our current understanding is that groceries, like mail and packages, are considered to be very low risk.

RECOMMENDATIONS: from David Schaffner - food micro-biologist at Rutgers University

First and foremost, that report from the CDC that indicates the virus remained detectable on surfaces for as long as 17 days is based on finding viral RNA—not exactly the same as finding an infectious viral particle. The presence of fragments of a virus isn't necessarily the same as an intact viral particle capable of infecting a person. Beyond that, the CDC does not provide the methods used to arrive at this 17 day figure, but instead cites personal communication—the scientific equivalent of passing off gossip as fact. Maybe it's right, maybe it's wrong, but you won't know until you've gotten the full details from the original source.

When it comes to making sure your groceries are safe, then, it's not necessary to keep them on the porch or in the garage for three days. For perishable items, that's actually a good way to end up with spoiled or rotting food, which is its own safety issue.

It's also a really bad idea to wash fruits and veggies with soap, as ingesting soap can cause nausea, vomiting and diarrhea. And we don't need anything else to worry about right now, do we?

If you're concerned about virus contamination on your groceries, Schaffner recommends the following:

- Use hand sanitizer before and after entering a grocery store.
- Minimize time in the store and your contact with other people.
- Wash fruits and veggies with cold water (*not* soap).
- Wash your hands often, especially after handling packages.

What we need to remember is that getting sick from touching your groceries would require two things: First that the groceries were contaminated with infectious viral particles at all; and second, that simply touching the package will get you sick. This cycle can be broken in a number of ways, most easily by washing your hands after you handle packages and before you eat—which is good advice even when we're not in the middle of a pandemic.

How to Protect Yourself when Grocery Shopping

Source: https://www.consumerreports.org/food-shopping/how-to-protect-yourself-from-coronavirus-when-grocery-shopping/

Use a grocery delivery service, if you are older and those with underlying health conditions.

If You're Getting Your Groceries Delivered

Even if a grocery store or warehouse is thoroughly cleaned on a regular basis, the delivery person needs to take the same precautions to prevent the spread of a virus to you. So follow these steps when ordering deliveries:

- Avoid a direct hand-off.
- Arrange to have the items delivered to your doorstep or a place nearby instead.
- Tip electronically. One benefit of ordering deliveries online or via an app is that you don't have to hand the delivery person money. Opportunities to tip the delivery person are included in most of the delivery apps and online ordering systems.
- Order earlier than you usually do. Though it's not a safety issue, you may find that in the midst of higher demand you have to wait longer.

If You're Picking Up Prepacked Groceries

The steps are basically the same for this option as for delivery. If you've ordered and are merely having someone put the groceries in your car in a parking lot, consider opening your car door yourself rather than having the person bringing the items to your car touch the handle.

If You're Buying Groceries in a Store

A key way to prevent the virus's spread is to stay two meters away from other people which is generally the distance within which people pick up coronavirus droplets through the air from a cough or sneeze. Such "social distancing" is a good strategy in any situation outside the home.

Other ideas:

- Go shopping at a time that's less busy. If you type in the store's name and location in Google search, a box often will pop up showing when foot traffic there is highest.
- Take germicide with you. Use it to wipe your hands and the cart before and after you shop.
- Commit to buying whatever you pick up.
- Make a list. Plan what to purchase to cover for two weeks
- Use a credit or debit card. That way, you don't have to handle bills or receive change.
- Use your own pen to sign receipts.
- If you can, use a virtual payment system, so that you don't have to open your wallet

Whether you buy groceries online or in stores, there are some simple steps you can take to limit your exposure to coronavirus. Be sure to:

Is it okay to buy produce from open bins?

So long as you are following proper food preparation procedures at home—clean, separate, cook, and chill—and following the basic hygiene guides. Not a single positive case has been linked to food.

Wash nonporous containers. There's no current evidence to support the transmission of the virus from food packaging, but it can't hurt to use soap or disinfectant wipes to wash down non-porous containers like glass or cans before storing in your home.

If that's not practical, wash your hands well after putting away all packaging, including paper boxes and bags. It all comes down to hand hygiene.

It also doesn't hurt to wash your hands after opening the containers and using their contents. But if you use a pasta box a few days after you get it, there is little likelihood that the virus could still be live on the box and cause an infection. Or remove the box when it enters your home and just keep the inner plastic bag of product that will free of the virus. Move items to alternate containers.

Wash your hands, counter, and other surfaces you've touched. Do this after you've put away the groceries. Keep in mind that using a disinfectant isn't necessary unless you're sharing a space with someone who is exhibiting signs of respiratory illness or has been exposed to the virus.

Wash produce. Rubbing fruit and vegetables under running water—and scrubbing those with hard skins—can help remove pesticides.

There's no data to show that COVID-19 is spread by consuming food. The risk of getting the virus from your food is considered low.

Other steps may not make much difference. For instance, buying frozen vegetables rather than fresh under the assumption that they're packed in a more sanitary way is not an approach that has been backed up by evidence.

What to have on hand, just in case - from a nurse who is also an activist.

- Kleenex
- Acetaminophen (Tylenol) in 325mg tablets
- Cough Medicine with cough suppressant and expectorant
- Vic's Vaporub for your chest
- Prescription Inhaler – if you have asthma (need a refill?)
- Favorite clear fluids: Sprite, juice, tea, etc.
- Soups
- Humidifier – to run when you are sleeping

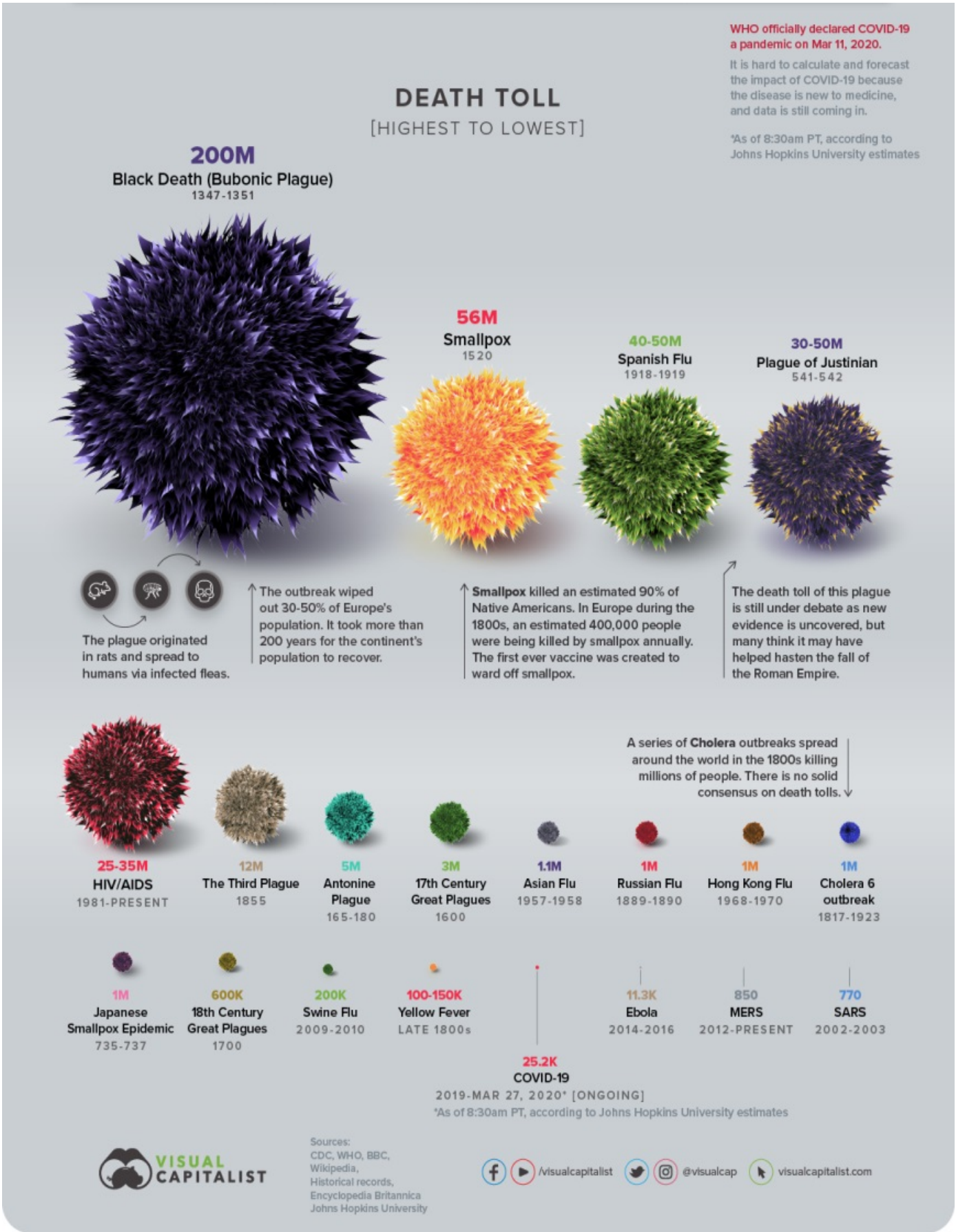
Avoid Ibuprofen says World Health Organization (March 21, 2020), as it may exacerbate acute kidney injury brought on by any severe illness, including severe COVID-19 https://www.jpost.com/HEALTH-SCIENCE/World-Health-Organization-backs-call-to-avoid-ibuprofen-for-coronavirus-621408

How to Care for a Person with COVID-19 At Home:
https://www.canada.ca/en/public-health/services/publications/diseases-conditions/how-to-care-for-person-with-covid-19-at-home-advice-for-caregivers.html

HUSBAND: We are a week into self- isolation and it's very upsetting for me to witness my wife standing at the living room window staring aimlessly into space, with tears running down her cheeks. It breaks my heart to see her like this. I've thought very hard of how I can cheer her up. I've even considered letting her come in…but rules are rules!

History of Deadly Pandemics: as of March 27th

Source: https://www.visualcapitalist.com/history-of-pandemics-deadliest/



What Are Doctors Up Against? COVID-19 as described by frontline Doctor: Luis Villarreal, Director of the Centre for Virus Research, California

- COVID-19 virus is not a living organism, but a protein molecule (RNA) covered by a protective layer of lipid (fat), which when absorbed by the cells of the ocular, nasal or buccal mucosa, changes their genetic code (a mutation) and convert them into aggressor and multiplier cells. RNA viruses can have higher mutation rates.
- Since the virus is not a living organism but a protein molecule, it is not killed, but decays on its own. The disintegration time depends on the temperature, humidity, and type of material where it lies.
- The virus is very fragile; the only thing that protects it is a thin outer layer of fat. That is why any soap or detergent is the best remedy, because the foam cuts the fat. That is why one needs to rub hands for a full 20 seconds, to make a lot of foam. By dissolving the fat layer, the protein molecule disperses and breaks down on its own.
- Heat melts fat; this is why it is so good to use water above 25 degrees Celsius for washing hands, clothes, and everything. In addition, hot water makes more foam and that makes it even more useful.
- Alcohol or any mixture with alcohol over 65% dissolves fat, especially the external lipid layer of the virus. Hand sanitizers with 65 to 70% alcohol can be effective.
- Any mix with 1 part bleach and 5 parts water directly dissolves the protein, breaks it down from the inside.
- Oxygenated water helps longer after soap, alcohol and chlorine because peroxide dissolves the virus protein, but one must use it pure and it hurts your skin.
- Antibiotics are useless. The virus is not a living organism like bacteria; one cannot kill what is not alive, and that is what anthobiotics do.
- Never shake used or unused clothing, sheets, or cloth. While the virus is glued to a porous surface like fabric, it is very inert and disintegrates between 3 hours; 4 hours on copper surfaces (copper is naturally antiseptic) and wood because the virus removes all the moisture and does not let it peel off; 24 hours for cardboard; 42 hours for metals; and 72 hours plastics. If one shakes a piece of cloth or use a feather duster, any virus molecules resting on these items can float in the air as fine particulate for up to 3 hours, not unlike dust, and could conceivably lodge in one's nose.
- The virus molecules remain very stable in external cold or artificially induced chilled areas, such as air conditioners in houses and cars. The virus molecules also need moisture to stay stable, and especially need darkness. Therefore, dehumidified, dry, warm, and bright environments will degrade it more quickly.
- UV light on any object that may contain the virus, breaks down the virus protein. But be careful, as it also breaks down collagen (which is protein) in the skin, eventually causing wrinkles and potentially skin cancer. UV light is antimicrobial, but has its limits depending on the surface and length of exposure. Grime can interfere with its ability to penetrate for example.
- The virus CANNOT penetrate healthy skin!
- Vinegar is NOT useful because it does not break down the protective layer of fat.
- Only alcohol that is 130 proof (65% alcohol) or higher will work to denature proteins and viral membranes. The strongest vodka is only 40% alcohol. Washing a surface using disinfects with 65 to 70% alcohol is key.
- Listerine will not work. It is not 65% alcohol.
- The more confined the space, the more concentration of the virus there can be. The more open or naturally ventilated, the less virus.

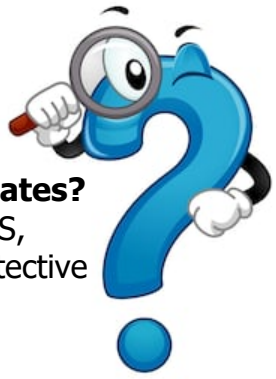
- This is a given: wash your hands before and after touching mucosa, food, locks, knobs, switches, remote control, cell phone, watches, computers, desks, TV, etc., and of course when using the bathroom.
- You should moisturize hands that are dry from too much washing, because the molecules can hide in the micro cracks. The thicker the moisturizer, the better.
- Keep your nails clipped so that the virus does not easily hide there.

What Singapore's and Hong Kong's success is teaching us about the pandemic.
The experience in Asia suggests that extraordinary precautions don't seem to be required to stop it. Those of us who must go out into the world and have contact with people don't have to panic, if we find out that someone with the coronavirus has been in the same room or stood closer than we wanted for a moment. **Transmission seems to occur primarily through sustained exposure in the absence of basic protection or through the lack of hand hygiene after contact with secretions.**
Source: https://www.newyorker.com/news/news-desk/keeping-the-coronavirus-from-infecting-health-care-workers?utm_source=onsite-share&utm_medium=email&utm_campaign=onsite-share&utm_brand=the-new-yorker

BEST ADVICE: Just act as if you have the virus and don't want to share it with others.

"I use so much alcohol-based hand sanitizer, my hands had to join a 12-step program!"

QUESTIONS answered by the World Health Organization
Source: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/myth-busters



Can COVID-19 virus be transmitted in areas with hot and humid climates?
From the evidence so far, the COVID-19 virus can be transmitted in ALL AREAS, including areas with hot and humid weather. Regardless of climate, adopt protective measures if you live in, or travel to an area reporting COVID-19.

Can cold weather and snow kill the new coronavirus?
There is no reason to believe that cold weather can kill the new coronavirus or other diseases. The normal human body temperature remains around 36.5°C to 37°C, regardless of the external temperature or weather.

Can taking a hot bath prevent the new coronavirus disease?
Taking a hot bath will not prevent you from catching COVID-19. Your normal body temperature remains around 36.5°C to 37°C, regardless of the temperature of your bath or shower. Actually, taking a hot bath with extremely hot water can be harmful, as it can burn you.

Can thermal scanners detect people with the corona virus?
Thermal scanners are effective in detecting people who have developed a fever (i.e. have a higher than normal body temperature) because of infection with the new coronavirus. However, they cannot detect people who are infected but are not yet sick with fever. This is because it takes between 2 and 10 days before people who are infected become sick and develop a fever.

Can vaccines against pneumonia protect you against COVID-19?
Vaccines against pneumonia, such as pneumococcal vaccine and Haemophilus influenza type B (Hib) vaccine, do not provide protection against the new coronavirus. The virus is so new and different that it needs its own vaccine. Researchers are trying to develop a vaccine against 2019-nCoV, and WHO is supporting their efforts. Although these vaccines are not effective against 2019-nCoV, vaccination against respiratory illnesses is highly recommended to protect your health.

Are there any specific medicines to prevent or treat the new coronavirus?
To date, there is no specific medicine recommended to prevent or treat the new coronavirus (2019-nCoV). However, those infected with the virus should receive appropriate care to relieve and treat symptoms, and those with severe illness should receive optimized supportive care. Some specific treatments are under investigation, and will be tested through clinical trials. WHO is helping to accelerate research and development efforts with a range of partners. The best way to protect yourself against COVID-19 is by frequently cleaning your hands. By doing this you eliminate viruses that may be on your hands and avoid infection that could occur by then touching your eyes, mouth, and nose.

Can Passive Anti-body therapy, an old method, help doctors fight COVID-19?
https://www.medicalnewstoday.com/articles/can-an-old-method-help-doctors-fight-covid-19?utm_source=facebook&utm_medium=social&utm_campaign=owned&utm_term=covid&utm_content=2020-03-18

For more info - Government of Canada - Corona Virus Resource:
https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19.html

MYTH BUSTERS:

As ever, when the word "pandemic" starts appearing in headlines, people become fearful, and with fear come misinformation and rumors.
Source: https://www.medicalnewstoday.com/articles/coronavirus-myths-explored

1. Spraying chlorine or alcohol on skin kills viruses in the body: FALSE
Spraying alcohol or chlorine all over your body will not kill viruses that have already entered your body. These products cannot kill viruses within the body.
Spraying such substances can be harmful to clothes or mucous membranes (i.e. eyes, mouth). Although people can use these chemicals to disinfect surfaces, they should not use them on skin.

2. Only older adults and young people are at risk: FALSE
SARS-CoV-2, like other coronaviruses, can infect people of any age. However, older people and individuals with pre-existing medical conditions (such as asthma, diabetes, heart disease) appear to be more vulnerable to becoming severely ill with the virus. People of all ages need to take steps to protect themselves from the virus, for example by following good hand hygiene and good respiratory hygiene.

3. Children cannot catch COVID-19: FALSE
All age groups can become infected. Most cases, so far, have been in adults, but children are not immune. In fact, preliminary evidence shows that children are just as likely to become infected, but their symptoms tend to be less severe.

4. COVID-19 is just like the flu: FALSE
SARS-CoV-2 causes illness that does, indeed, have flu-like symptoms, such as aches, fever, and cough. Similarly, both COVID-19 and flu can be mild, severe, or, in rare cases, fatal. Both can also lead to pneumonia. However, the overall profile of COVID-19 is more serious. Estimates vary, but its mortality rate seems to be between about 1% and 3%. Although scientists are working out the exact mortality rate, it is likely to be many times higher than that of seasonal flu.

5. Everyone with COVID-19 dies: FALSE
This statement is untrue. As we have mentioned above, COVID-19 is only fatal for a small percentage of people. In a recent report, the Chinese Center for Disease Control and Prevention concluded that 80.9% of COVID-19 cases were mild.

6. Cats and dogs spread coronavirus: FALSE
Currently, there is little evidence that SARS-CoV-2 can infect cats and dogs. However, in Hong Kong, a Pomeranian whose owner had COVID-19 became infected. The dog did not display any symptoms. Scientists are debating the importance of this case and need to find out more, but we don't need to panic — I doubt it could spread to another dog or a human because of the low levels of the virus. The real driver of the outbreak is humans."

7. Face masks protect against coronavirus: FALSE
Healthcare workers use professional face masks, which fit tightly around the face, to protect them against infection. However, disposable face masks are unlikely to provide such protection. As these masks do not fit neatly against the face, droplets can still enter the mouth and nose. Also, tiny viral particles can penetrate directly through the material.

However, if someone has a respiratory illness, wearing a mask can help protect others from becoming infected. There is very little evidence that wearing such masks protects the wearer from infection. Furthermore, wearing masks can give a false sense of reassurance and might lead to other infection control practices being ignored, e.g., hand hygiene.

The WHO recommends that people who are caring for someone with suspected COVID-19 should wear a mask. In these cases, wearing a mask is only effective if the individual regularly washes their hands with alcohol-based hand rub or soap and water.
Also, when using a mask, it is important to use it and dispose of it properly.

8. Hand dryers kill coronavirus: FALSE
Hand dryers do not kill coronavirus. The best way to protect yourself and others from the virus is to frequently wash your hands with soap and water or an alcohol-based hand rub. Once your hands are cleaned, you should dry them thoroughly by using paper towels or a warm air dryer.

9. SARS-CoV-2 is just a mutated form of the common cold: FALSE
Coronaviruses are a large family of viruses, all of which have spiky proteins on their surface. Some of these viruses use humans as their primary host and cause the common cold. Other coronaviruses, such as SARS-CoV-2, primarily infect animals. Both Middle East respiratory syndrome (MERS) and severe acute respiratory syndrome (SARS) began in animals and passed into humans.

10. You have to be with someone for 10 minutes to catch the virus: FALSE
The longer someone is with an infected person, the more likely they are to catch the virus, but it is still possible to catch it in less than 10 minutes.

11. Rinsing the nose with saline protects against coronavirus: FALSE
There is no evidence that regularly rinsing the nose with saline has protected people from respiratory infections with the new coronavirus. Some research suggests that this technique might reduce the symptoms of acute upper respiratory tract infections, but scientists have not found that it can reduce the risk of infection. There is some limited evidence that regularly rinsing nose with saline can help people recover more quickly from the common cold.

12. You can protect yourself by gargling bleach: FALSE
There are no circumstances in which gargling bleach might benefit your health. Bleach is corrosive and can cause serious damage.

13. Antibiotics kill coronavirus: FALSE
Antibiotics only kill bacteria; they do not kill viruses. The new coronavirus (2019-nCoV) is a virus and, therefore, antibiotics should not be used as a means of prevention or treatment. However, if you are hospitalized for the 2019-nCoV, you may receive antibiotics because bacterial co-infection is possible.

14. Thermal scanners can diagnose coronavirus: FALSE
Thermal scanners can detect whether someone has a fever. However, other conditions, such as seasonal flu, can also produce fever.

In addition, symptoms of COVID-19 can appear 2–10 days after infection, which means that someone infected with the virus could have a normal temperature for a few days before a fever begins.

15. Garlic protects against coronaviruses: FALSE
Some research suggests that garlic might have antibiotic properties. However, there is no evidence that it can protect people against COVID-19.

16. Parcels from China can spread coronavirus: FALSE
From previous research into similar coronaviruses, including those that cause SARS and MERS and are similar to SARS-CoV-2, scientists believe that the virus cannot survive on letters or packages for an extended time. The Centre for Disease Control explain that "because of poor survivability of these coronaviruses on surfaces, there is likely very low risk of spread from products or packaging that are shipped over a period of days or weeks at ambient temperatures."

17. Home remedies can cure and protect against COVID-19 : FALSE
No home remedies can protect against COVID-19, including vitamin C, essential oils, silver colloid, sesame oil, garlic, and sipping water every 15 minutes. The best approach is to adopt a good handwashing regimen and to avoid places where there may be unwell people.

18. You can catch coronavirus from eating Chinese food in the U.S. : FALSE
No, you cannot.

19. The virus will die off when temperatures rise in the spring: FALSE
Some viruses, such as cold and flu viruses, do spread more easily in the colder months, but that does not mean that they stop entirely when conditions become milder. As it stands, scientists do not know how temperature changes will influence the behavior of SARS-CoV-2.

20. Coronavirus is the deadliest virus known to man: FALSE
Although SARS-CoV-2 does appear to be more serious than influenza, it is not the deadliest virus that people have faced. Others, such as Ebola, have higher mortality rates.

21. The virus originated in a laboratory in China: FALSE
Despite the swathes of internet rumors, there is no evidence that this is the case. Some researchers believe that SARS-CoV-2 may have jumped from pangolins to humans. Others think that it might have passed to us from bats, which was the case for SARS.

22. The outbreak began because people ate bat soup: FALSE
Although scientists are confident that the virus started in animals, there is no evidence that it came from soup of any kind.

23. Water Will Prevent the Coronavirus from Entering Your Lungs: FALSE
https://www.snopes.com/fact-check/drinking-water-prevent-coronavirus/
It is true that COVID-19 infects the respiratory system by directly entering the body through the mouth or nose. If the virus were already in your mouth, then water would not help to wash it away. Although medical officials recommend drinking water during *any* infection, no evidence exists to support the notion that sipping water prevents a virus from infecting the respiratory system. If you are healthy or sick, it is important to keep up the fluid intake and keep mucous membranes moist.

First thing, every day, drink water: A serving of water first thing can hydrate the body while aiding digestion and metabolism. Get rid of bad bacteria in your system and allow good bacteria to grow in your gut.
https://www.msn.com/en-ca/health/wellness/why-you-should-drink-water-first-thing-every-day/ar-BBZq5hp?ocid=sf

130 YEAR HISTORY OF HANDWASHING

Religious handwashing rituals have been around for thousands of years in Islamic, Jewish and other cultures, but the notion of disease spreading by hand has been part of the medical belief system for only about 130 years.

In the 1840s, germs were yet to be discovered and it was believed that disease was spread by miasma – bad smells in the air – emanating from rotting corpses, sewage or vegetation. Doctors didn't bother washing their hands – they would go from dissecting a cadaver to delivering a child.

However, the first recorded discovery of handwashing's life-saving power came in 1848, when a Hungarian medic (Ignaz Semmelweis) made an essential, much-resisted breakthrough. Faced with a doctor-led maternity ward in which maternal deaths from the dreaded childbed fever were significantly higher than in the midwife-run clinic there, he racked his brain for clues as to why. He hypothesised that cadaverous particles from the morgue were to blame, and that such particles on the hands of doctors were making their way into women's bodies during childbirth and causing a higher than normal rate of death.

To test his theory, he ordered doctors to wash their hands and instruments in a chlorine solution; a substance he hoped would dispatch the deadly smell of cadaverous particles. The mortality rate of mothers dropped from 18% to 1%. Despite his success, his idea faced great resistance. Semmelweis lost his job, and is thought to have had a breakdown and ended up in a psychiatric institution where he died.

Over the next 40 years, an understanding of germs developed, and attitudes to hygiene gradually shifted. In 1857, while Semmelweis's mental health declined, Louis Pasteur, of pasteurisation fame, raised awareness of pathogens, and how to kill them with heat. In 1876, the German scientist Robert Koch discovered the anthrax bacillus, kicking off the new research field of medical bacteriology. Surgeons started handwashing in earnest.

Read more, here: https://www.theguardian.com/world/2020/mar/18/keep-it-clean-the-surprising-130-year-history-of-handwashing?CMP=fb_gu&utm_medium=Social&utm_source=Facebook#Echobox=1584543117

10 Germiest Places:

We all know by now that proper hand washing is the best way to stop the spread of bacteria; in fact 80% of germs are spread by hands alone! We do our very best to properly wash our hands after using the restroom, before and after we eat and multiple times in between. We also assume that others are doing the same thing. However, studies show that only 1 in 5 people wash their hands, and of those that do, only 30% use soap!

1. Public Restroom
2. Grocery Store
3. Public Transportation
4. Fitness Centres
5. Gas Pumps
6. Offices
7. Restaurants
8. Doctor's Office
9. Hotel Rooms
10. Schools

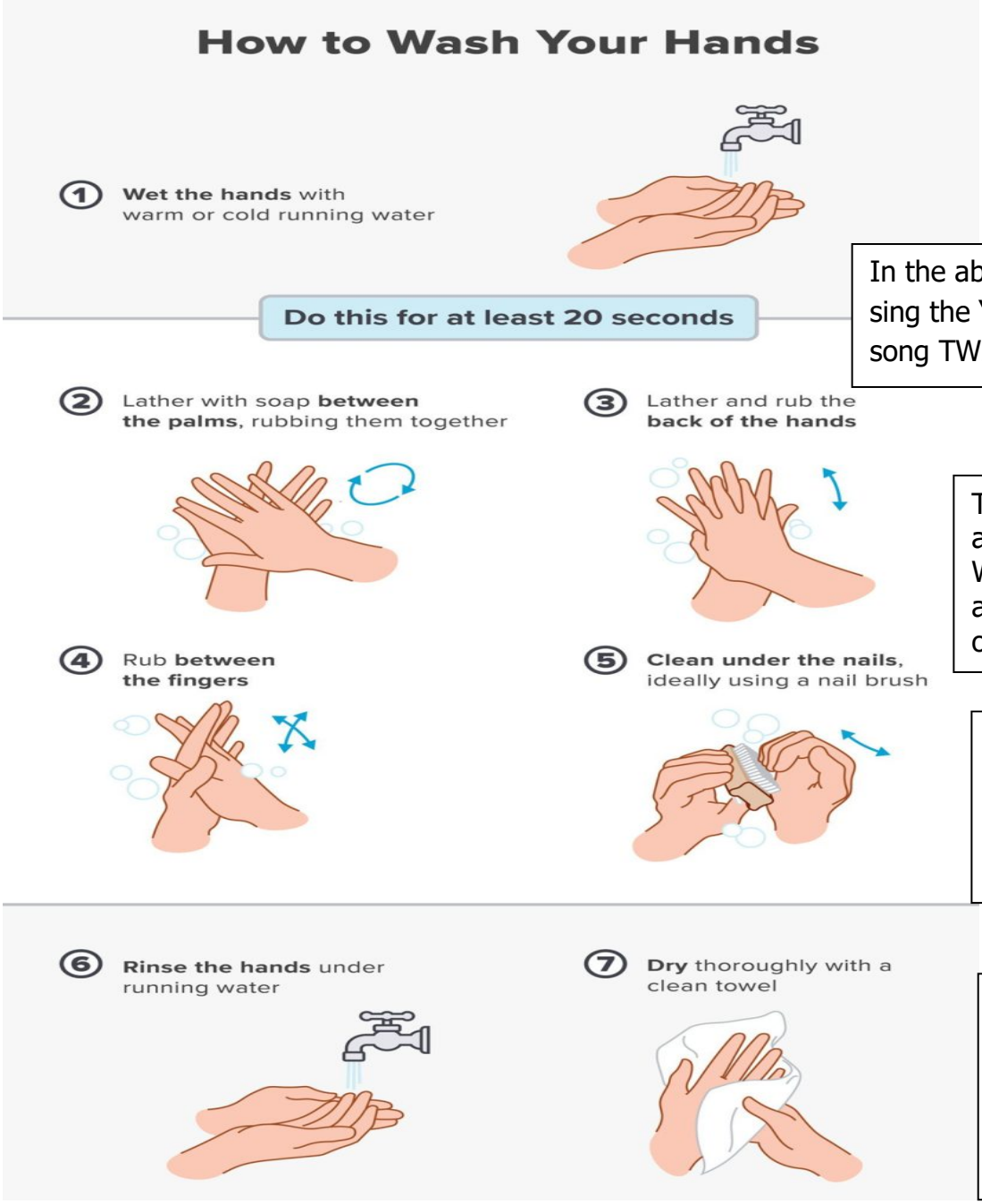
For more info on "how" and "why": https://info.debgroup.com/blog/top-10-germiest-places

VIDEO: Great visual with black "soap", on how to wash your hands!
https://www.instagram.com/p/B98_U5_Ds-7/?igshid=k7mhw3hgb8k6

Proper hand washing: Step-by-step guide

SOURCE: https://www.medicalnewstoday.com/articles/proper-hand-washing?utm_source=facebook&utm_medium=social&utm_campaign=owned&utm_term=covid&utm_content=2020-03-20&fbclid=IwAR0gLprxqOolOsITXZMhNTPcq8y-Z9v-iySnd5oXlurq7jJKpobqeMYrw60

Throughout the day, people's hands accumulate germs and dirt as they touch objects and other people. Individuals can then transfer these substances to others, or infect themselves when touching their face. Regular hand washing can limit the transfer of microbes, such as bacteria and viruses. However, many people do not wash their hands properly or for long enough to get rid of the germs that cause bacterial and viral illnesses.



In the absence of a timer, sing the "Happy Birthday" song TWICE while washing.

Think of your hands as the enemy. Wash them well, and much more often than usual.

Soap is able to breakdown the fatty layer that coats the coronaviruses.

If you are leaving a public washroom, remember to use the paper towel on the door handle before disposal.

Source: https://www.weforum.org/agenda/2020/03/coronavirus-soap-covid-19-virus-hygiene

Use Any Temperature Water
Research indicates that different temperature waters do not have a significantly different effect on the number of bacteria that hand washing removes. The thorough washing technique is what removes the bacteria. However, warm water can be more pleasant than cold water, especially when washing the hands for 20 seconds.

Use any type of soap
Plain soap and water are very effective at removing microbes from the skin. It does not matter what kind of soap a person uses. According to the Food and Drug Administration (FDA), there is not enough evidence to show that over-the-counter antibacterial soaps are any better at killing microbes than regular soaps.

Encourage Children To Wash Their Hands
It is important that children wash their hands regularly, especially after playing outdoors, touching pets, using the toilet, and at other key times. Adults should show children how to wash their hands correctly and encourage them to sing "Happy Birthday" twice to ensure they clean their hands for an adequate length of time.

Take Care When Drying The Hands
Microbes transfer more easily to and from wet hands, so individuals should always dry their hands after they wash them.

How A Person Dries Their Hands Also Matters.
Research indicates that both hot air hand dryers and cloth roller towels are less hygienic than disposable paper towels. Hot air hand dryers, for example, can cause particles and microorganisms to disperse into the air. These microorganisms then contaminate the environment. As an alternative to disposable paper towels, an individual can use a dry hand towel that they regularly wash at 140^{o}F. Individuals should not share this towel with others.

Combat Dry Skin With Hand Cream
If frequent washing causes dry or cracked skin, it can be helpful to use a moisturizing hand cream or lotion throughout the day. Cracked skin allows microbes to enter the body through the surface breaks more easily. If dry, chapped, or painful skin becomes a persistent problem, it can indicate that an individual is over washing their hands. They should discuss any concerns they have with a doctor.

Use Hand Sanitizer If Soap and Water Are Unavailable
While washing with soap and water is the best way to remove bacteria and viruses from the skin, these two things are not always readily available. At these times, an alcohol-based hand sanitizer containing **at least 60% alcohol** is an acceptable alternative.

To use a hand sanitizer:
- Apply the recommended amount of gel to the palm of one hand.
- Cover all surfaces of the hands and fingers.
- Rub the hands together for approximately 20 seconds.

Note that hand sanitizers do not kill all types of microbes, and they will not remove visible dirt, grease, and chemicals from the skin.

DIFFERENT TYPES OF HAND WASHING:

Routine, Or Social
This type of hand washing involves the use of soap and water. People perform this type to remove visible dirt, after using the toilet, before preparing food, and at other times. It usually lasts a few seconds.

Antiseptic
This type of hand washing uses water and antimicrobial soap. It removes or destroys microbes on the skin. Medical professionals may use this method before touching a high risk patient, or after contact with a person with an infection.

Surgical
Medical professionals perform this hand washing, involving water and antiseptic soap, before all surgical procedures. It lasts for at least 2 minutes.

OTTAWA DOCTOR PENS NURSERY RHYME TO TEACH PROPER HANDWASHING
Six steps to handwashing, sung to the tune of *Frère Jacques* or *Brother John*:
https://www.cbc.ca/news/canada/ottawa/washing-hands-song-1.5398385

- Scrub your palms.
- Between the fingers.
- Wash the back, wash the back.
- Twirl the tips around.
- Scrub them upside down.
- Thumb attack, thumb attack.

The Germiest Spots in Your Home – Banish the Bad Bugs

Source: https://www.everythingzoomer.com/style/home-garden/2020/03/03/germs-hotspots-in-your-homethe-germiest-spots-in-your-home/?utm_source=Newsletter&utm_medium=Email&utm_campaign=Zoomer+Living+Newsletter+-+March+9+2020&utm_content=Zoomer+Living+Newsletter

Where are germs lurking in your home?

We can't avoid having some germs in our homes — and in fact, some are actually good for us. But smart cleaning strategies and a regular routine can help to keep the bad bugs at bay and reduce our risk for illness.

So where are the germs lurking? Here, six of the top hot spots — and tips for banishing harmful bacteria and viruses.

1. Light switches and door and fridge handles.
It's no surprise that high traffic areas or commonly touched items tend to be a hotspot for germs. Be sure to sanitize these surfaces daily – and prevent the spreading and picking up of harmful bugs by frequent hand washing. *Note:* To disinfect most surfaces, you can use a simple solution of bleach or vinegar water. (For bleach, use 10 parts water to one part bleach; and for vinegar, use ½ vinegar and ½ water.)

2. Salt and pepper shakers.

The meal is over and you've wiped down the table, but what about the salt and pepper shakers? Research has shown that they consistently test positive for cold viruses. So make it part of your daily routine to wipe down the salt, pepper and other seasonings when you clean the table.

3. Kitchen sink, faucet taps and other culprits.

Did you know that your kitchen sink can contain more harmful bacteria than your toilet? Food from dishes left to soak (or rinsed before loading into the dishwasher) can become a breeding ground for illness-causing bacteria like E. coli and salmonella.
Unfortunately, rinsing your sink with water is not enough to kill bacteria. After cleaning your dishes, wash the sink, faucet tap and drain plugs thoroughly, preferably with an all-purpose cleaner with bleach or a solution of bleach (or vinegar) and water, allowing it to run down the drain. Follow by rinsing the sink well with hot water.

Another little known hiding place for germs is the faucet spigot. When you clean food like spinach or mushrooms, the dirt can splash back onto the spigot of your sink. To clean, you'll need to unscrew the spigot to remove the screen filter and run hot water through it. Afterward, wash the screen with hot soapy water, rinse and then reassemble.
Other kitchen culprits include surfaces, cutting boards, fridge handles, microwave control buttons and rubbish bins. Be sure to sanitize these surfaces before and after preparing food. Kitchen towels, cleaning clothes and sponges should be laundered or replaced at least once per week.

4. Tech toys.

They seem to be our constant companions: we work and relax with them, and sometimes even eat and sleep with them. They're sneezed at, coughed on, and often shared among family members. Use mild pre-moistened antibacterial wipes to clean your tech toys frequently, including your computer keyboard and mouse, telephone hand pieces, iPods, MP3 players, cell phones, video game controllers and television remote controls.

5. Bathrooms.

Clean and disinfect your bathroom frequently, including the toilet seat and flush handle, sink, bath and shower. Experts recommend cleaning and disinfecting all bathroom surfaces with a bleach solution or bathroom cleaner and then dry with a clean towel.

6. Your toothbrush.

Alas, your toothbrush is another popular breeding place for germs. Bacteria love moist areas, so it's important to place your toothbrush where it can air out and dry between uses — and also at some distance from the toilet.

Yes, germs that contaminate your toothbrush not only come from your own mouth, but from the toilet. Research has shown that flushing the toilet sends a spray of bacteria- and virus-contaminated water droplets into air. And the germs can float around the bathroom for two hours after each flush before landing on surfaces. The best bet: Close the toilet lid before flushing.

Banish Bugs the Old Fashioned Way

We've heard it many times before, but when it comes to protecting against illness-causing germs, the best advice is also the simplest: wash your hands, and do it often.

What about antibacterial soaps?

They've become popular in recent years, but experts say these soaps are no more effective at killing germs than regular soap and water. And using them could lead to the development of bacteria that are resistant to the products' antimicrobial agents — making it even harder to kill these germs in the future.

Alcohol-based hand sanitizer gels or wipes can also be used to kill germs, but they should not completely replace washing with soap and water. If your hands are visibly dirty, soap and water is best. And sanitizer can build up on the hands, so you should wash with soap and water after every fourth use.

Germs: Quick Facts

— Some germs cause disease, but not all microbes are harmful. They are, in fact, the foundation of the earth's food chain — and we would not survive without them.
— Germs enter the home mainly by people, food, pets and pests. Cross-contamination happens when germs are transferred from person to person or through direct or indirect contact with a surface — and back again.
— Bad bugs commonly found in the home include MRSA (meticillin-resistant Staphylococcus aureus), E. coli, Norovirus and Clostridium difficile.

What's the dirtiest item in most Canadian homes?

Not the toilet or even anything bathroom-related, but the simple kitchen towel. According to the Hygiene Council study, these 'dirty' towels were, in fact, highly contaminated with E. coli, which can cause severe cramping and bloody diarrhea. The explanation for the not so harmless kitchen towel may have less to do with not laundering them than not laundering them *properly*. In order to kill bacteria, researchers say, towels should be washed in water hotter than 60 C (140 F) or by using boiling water in a pot.

Do you have any tips for cleaning surfaces?

It's good to routinely clean any high-touch surfaces, like door handles and toilets. Regular household cleaners are effective, including bleach solutions and alcohol solutions of at least 70% alcohol. If somebody in your household has been diagnosed with Covid-19, then cleaning and disinfection becomes much more important and should be done more frequently Agents, including hydrogen peroxide, ethanol, and sodium hypochlorite (a chemical in bleach), quickly and successfully inactivate coronaviruses. For instance, hydrogen peroxide was effective with a concentration of 0.5% and an incubation time of 1 minute.

For items that are hard to clean, sunshine may be valuable. Leave your shoes outside, soles up, in the sun. Coronaviruses begin degrading quickly in temperatures higher than 56 degrees Celsius, and in direct UV light.

Spring Clean: 6 Common Cleaning Mistakes

Source: https://www.everythingzoomer.com/style/home-garden/2019/04/19/6-common-cleaning-mistakes/

In the ongoing war against harmful germs in our homes, we're making some basic mistakes. Here are some common cleaning blunders and how to avoid them.

1. Not cleaning regularly. Most homes should be cleaned on a weekly basis. The 'every week' rule also holds for laundering towels and bed linens. (Remember to wash linens in temperatures of 60 C or 140 F or above to kill bacteria and avoid cross-contamination

between infected and non-infected clothing and other items.) And when it comes to bedding, don't neglect to wash (or dry clean) duvets, comforters and pillows at least once per month to control for dust mites, dander and pollen. *Tip:* When drying heavier items like comforters or duvets, toss in a clean tennis shoe to help prevent lumping.

2. Rushing. We're all short on time — not to mention that cleaning isn't everyone's favourite activity! However, rushing the job can mean leaving some pretty scary germs behind. Take time to move furniture, rugs, plants and other items to clean surfaces thoroughly. Also, give your cleaning products time to do *their* job: most cleansers and disinfecting agents need 'contact' time of 1-3 minutes (or longer) to maximize their ability to kill bacteria and other microscopic organisms. (Check the label of your cleaning product for specific 'dwell' times.)

3. Overlooking germy hotspots. Experts recommend paying special attention to the 'hotspots' for germs including door and fridge handles, light switches, faucet taps, computer keyboards, telephone hand pieces, chopping boards and utensils, kitchen towels and sink, cleaning cloths and sponges, rubbish bin lids, bathrooms (including toilet seat and flush handle, sink, bath and shower) and water storage containers and filters. Be sure to clean these areas frequently, preferably at least once per day.

4. Not taking care of equipment. Be sure to change vacuum bags regularly and remove debris from the brushes. And don't forget to clean mops, sponges and cleaning cloths after each use to avoid spreading around more dirt and germs the next time you clean.

5. Unsafe use of cleaning products. While in pursuit of a hygienic home, it's important to keep in mind that certain cleaning agents or combinations of products can actually be unhealthy to use, particularly for people who suffer from allergies or asthma. When certain bleach and acids come into contact, for example, they can create chlorine gas, which is highly toxic. Another example: Combining bleach and ammonia can inflame your airways and damage the lining of your lungs. Avoid mixing your various cleaning products, and as a general rule, select the least toxic or 'green' product possible for tackling the job. For instance, a mixture of 10 per cent vinegar with water can remove up to 99.9 per cent of bacteria on surfaces, experts say.

6. Not wearing gloves. It's not only about keeping hands attractive and preventing them from becoming inflamed, cracked or chapped. Our skin is permeable, meaning it can absorb the chemicals and toxic substances from cleaning products. Some common solvents can cause serious damage to the liver and kidneys, and even potentially lead to cancer, according to health experts. Also cracked skin means that any contact you have with bacteria in your home can be transmitted directly into your blood stream. The best protection: wear either disposable latex or reusable rubber gloves while cleaning. (If using reusable rubber gloves, buy several pairs to use exclusively for certain tasks such as washing dishes and cleaning the bathroom. This will help to avoid cross-contamination.)
Finally, keep in mind that our hands are the biggest spreaders of germs in the home, and frequent hand washing with good old fashioned soap and water is still one of the best weapons we have for staying healthy.

How to make your own Cleaning Products:
https://www.everythingzoomer.com/style/home-garden/2020/03/20/natural-cleaners/

Coronavirus Pandemic Is a Disaster for the World, but a Few Good Things Might Emerge From It – March 18, 2020

http://theconversation.com/coronavirus-pandemic-is-a-disaster-for-the-world-but-a-few-good-things-might-emerge-from-it-133723

1. It will make us realise that national boundaries are artificial

The virus doesn't carry a passport or recognise frontiers. The only way of stopping its spread would be to shut borders wholly, and not even the most rabid nationalists advocate that. It would mean declaring that nations were prisons, with no one coming in or out – or at least not coming back once they'd left. In a world where we too casually assume that frontiers are significant, it doesn't do any harm to be reminded of the basic fact that humans occupy an indivisible world. Cooperation between nations is essential to combating the epidemic. That cooperation is likely to undermine nationalist rhetoric.

2. It will make us realise that people are not islands

The atomistic billiard-ball model of the person – a model that dominates political and ethical thinking in the west – is biologically ludicrous and sociologically unsustainable. Our individual boundaries are porous. We bleed into one another and infect one another with both ills and joys. Infectious disease is a salutary reminder of our interconnectedness. It might help us to recover a sense of society.

3. It may encourage a proper sort of localism

Internationalism may be boosted. I hope so. But if we're all locked up with one another in local quarantine, we might get to know the neighbours and the family members we've always ignored. We might distribute ourselves less widely, and so be more present to the people around us. We might even find out that our local woods are more beautiful than foreign beaches, and that local farmers grow better and cheaper food than that which is shipped (with the associated harm to the climate) across the globe.

4. It may encourage altruism

Exigencies tend to bring out the best and the worst in us. An epidemic may engender and foster altruistic heroes.

5. It may remind us of some neglected constituencies

Mortality and serious illness are far higher among the old, the very young, and those suffering from other diseases. We tend to think about – and legislate for – the healthy and robust. The epidemic should remind us that they are not the only stakeholders.

6. It may make future epidemics less likely

The lessons learned from the coronavirus epidemic will pay dividends in the future. We will be more realistic about the dangers of viruses crossing the barriers between species. The whole notion of public health (a Cinderella speciality in medicine in most jurisdictions) has been rehabilitated. It is plain that private healthcare can't be the whole answer. Much has been learned about the containment and mitigation of infectious disease. There are strenuous competitive and cooperative efforts afoot to develop a vaccine, and vaccines against future viral challenges are likely to be developed faster as a result.

7. It might make us more realistic about medicine

Medicine is not omnipotent. Recognising this might make us more aware of our vulnerabilities. The consequences of that are difficult to predict, but living in the world as it really is, rather than in an illusory world, is probably a good thing. And recognising our own vulnerability might make us more humble and less presumptuous.

8. Wildlife may benefit
China has announced a permanent ban on trade in and consumption of wildlife. That in itself is hugely significant from a conservation, an animal welfare, and a human health perspective. Hopefully other nations will follow suit.

9. Air Pollution Plummets in Cities with High Rates of Quarantine
https://www.goodnewsnetwork.org/10-positive-updates-on-the-covid-19-outbreaks-from-around-the-world/#.XnJVw6ZwmIY.facebook

Satellite readings of air pollution levels over China and Italy show that the regions hit hardest by the COVID-19 have also caused air pollution levels to decline dramatically.

Some reports estimate that China's quarantine has saved more than 100 million metric tons of carbon dioxide emissions from entering the atmosphere—which is about the equivalent of what Chile produces in a year.

Not only have similar effects been reported across Italy, the canals and waterways of Venice are reportedly cleaner than ever with the waters shining crystal clear in the absence of diesel-powered boats and gondoliers.

March 24, 2020: The World Could Face a 2nd Wave of COVID-19, Experts Say

https://www.cbc.ca/news/health/canada-covid-19-second-wave-1.5507522?cmp=newsletter_CBC%20News%20Morning%20Brief_831_11461

Countries including Canada must prepare for a second wave of the COVID-19 outbreak to emerge once social distancing measures are eased, and they should only lift those measures gradually, infectious disease experts say.

A second wave of an outbreak is an increase in infections that occurs after a sustained period of time when there are no — or very few — new cases of that illness.

The good news is that Canada has the opportunity to learn from countries where the epidemic started months earlier by observing how public health measures in those places work to keep the case load from bubbling up again once people start to emerge from their homes and go about business as usual.

Some Asian countries are facing a second wave of the virus now. For instance, on March 20th, Hong Kong recorded its biggest daily jump in cases since the pandemic started, though mostly connected to infected travellers who are returning from abroad after they were prevented from going home before.

It is believed that like Hong Kong, Singapore and Taiwan, Canada will also experience its own second wave after seeing initial success containing the virus through the social distancing measures currently in place.

When we start to lift those measures in the months down the line, we will probably see, to some extent, a greater number of cases as people mingle again as life slowly returns to normal.

Dr. Theresa Tam, Canada's chief public health officer, warned last week that "this virus is going to be with us for some time. It will not be eradicated from the world in months."

COVID-19 scams are spreading like the virus

From RCMP:
http://bc.rcmp-rc.gc.ca/ViewPage.action?siteNodeId=2087&languageId=1&contentId=63720

British Columbians are being targeted by fraudsters who want to profit from consumers' fears and desire to protect themselves from the COVID-19 (Coronavirus). The Canadian Anti-Fraud Centre (CAFC) is reporting that scammers are setting up websites to sell bogus products, and using fake emails, texts, and social media posts as a ruse to take your money and get your personal information.

Some examples of COVID-19 frauds and facts include:
Fraud - Private companies offering fast COVID-19 tests for sale
Fact - Only hospitals can perform the test, no other tests are genuine or guaranteed to provide accurate results
Fraud - Door-to-door solicitors offering fake decontamination services
Fact – Follow direction of the Provincial Health Authority to decontaminate your home and reduce your personal risk.
Fraud - Fraudsters posing as police have been imposing on-the-spot fines to consumers wearing masks claiming that wearing a mask in public goes against a full-face veil law
Fact - It isn't illegal to wear a mask for health reasons
Fraud – Fraudsters urge you to invest in hot new stocks related to the virus
Fact – You should only ever purchase stocks through reputable sources and banking institutions.
Fraud - Fraudsters sending emails, texts or online campaigns that capitalize on the public's fears about Covid-19
Fact – Do not respond to unsolicited email, texts or phone calls. Don't click on any links or give any information about yourself. If you have any doubts about where the email came from, make sure to check the identity of the sender., if you receive a suspicious phone call, hang-up.
Fraud - Fraudsters are creating fraudulent and deceptive online ads offering: cleaning products, hand sanitizers, other items in high demand
Fact – Buy from companies or individuals you know by reputation or from past experience. Before checking out, make sure you're still on a reputable website and have not been redirected to a third-party page. Beware of sellers from far away or that have limited or no reviews. Use a credit card when shopping online; many offer protection and may give you a refund. Regularly check your credit card statements for frequent or unknown charges.

HOW TO PROTECT YOURSELF

- Beware of high priced or low quality products
- Beware of unsolicited medical advisory emails or text with links or attachments
- Fraudsters may use spoofing, which means they make it look as if the origin of the email or text is legitimate by using identifying information similar to government and health care organizations
- Beware of unauthorized or fraudulent charities requesting money for victims or research:

Don't be pressured into making a donation and verify that a charity is registered:
https://apps.cra-arc.gc.ca/ebci/hacc/srch/pub/dsplyBscSrch?

Can't travel, but you can…

Visit some museums from around the world:
https://artsandculture.google.com/partner?hl=en&tab=pop

Visit 5 National Parks in the United States:
https://artsandculture.withgoogle.com/en-us/national-parks-service/parks

Take a Virtual Garden Tour: England, France, Chicago and Hawaii
https://www.housebeautiful.com/lifestyle/gardening/g31746949/gardens-you-can-virtually-tour/

Watch FREE films from National Film Board of Canada
Choose from 4,000 titles – wide range of short and feature length – from animation, documentary, or fiction. Something for everyone!
https://www.nfb.ca/

Get Cineplex films at home – just download the app:
https://store.cineplex.com/WaysToWatch.aspx?

Take the online Climate Change Quiz: Some answers might be a surprise!
https://www.cnn.com/interactive/2019/04/specials/climate-change-solutions-quiz/

And the people stayed home.
And read books, and listened, and rested and exercised, and made art, and played games, and learned new ways of being and were still.
And listened more deeply.
Some meditated, some prayed, some danced.
Some met their shadows.

And the people began to think differently.
And the people hear.
And, in the absence of people living in ignorant, dangerous, mindless, and heartless ways, the earth began to heal.

And when the danger passed, and the people joined together again,
they grieved their losses, and made new choices,
and dreamed new images,
and created new ways to live and heal the earth fully,
as they had been healed.

Kitty O'Meara

Wednesday, April 1st – April Fool's Day

Traditionally, *April Fool's Day* is an opportunity for playing jokes or tricks on one another - the stranger and the more absurd the better. Any tricks or jokes must be harmless and in good taste for the unsuspecting "victim". he challenge is to carry out a trick that is believable, if only for a little while. Tricks are most successful if played earlier in the day before a person is wise to what is going on. Younger children are also more gullible.

Some historians speculate that April Fools' Day dates back to 1582, when France switched from the Julian calendar to the Gregorian calendar, wherer the new year began with the spring equinox around April 1.

People who were slow to get the news or failed to recognize that the start of the new year had moved to January 1 and continued to celebrate it during the last week of March through April 1 became the butt of jokes and hoaxes and were called "April fools." These pranks included having paper fish placed on their backs and being referred to as "poisson d'avril" (April fish), said to symbolize a young, easily caught fish and a gullible person.

Tuesday, April 7th – GREEN SHIRT DAY

In honour of the Logan Boulet Effect, in support of organ donor awareness and registration across Canada: https://greenshirtday.ca/

On April 6, 2018: Canadians were heartbroken to hear the news of the Humboldt Broncos bus crash. Of the 29 passengers, sixteen lost their lives and thirteen will all bear physical and emotional scars for life.

On April 7, 2018: Humboldt Broncos defenceman Logan Boulet succumbed to his injuries. His parents offered to donate his organs so that six lives could live on. Logan was inspired to be an organ donor by his coach and mentor Ric Suggitt who passed on June 27, 2017, was also an organ donor and saved six lives.

BC Transplant Society: http://www.transplant.bc.ca/our-services/organ-donor-registry

Planning to be an organ donor: https://www.healthlinkbc.ca/health-topics/abl0474

Register your decision to be an organ donor:
http://www.transplant.bc.ca/Pages/Register-your-Decision.aspx

Verify your Registration with your Personal Health Care Number:
http://www.transplant.bc.ca/our-services/organ-donor-registry/verify-your-registration

Sunday, April 12th – EASTER

Easter is a "movable feast" and does not have a fixed date; however, it is always held on a Sunday between March 22 and April 25 – on the first Sunday following the full moon that occurs on or just after the spring equinox.

Wednesday, April 22nd

https://www.earthday.org/earth-day-2020/

Earth Day is an annual event celebrated around the world on April 22 to demonstrate support for environmental protection. First celebrated in 1970, it now includes events coordinated globally by the Earth Day Network in more than 193 countries.

Fifty years ago (on April 22nd) 20 million Americans — 10% of the U.S. population at the time — took to the streets, college campuses and hundreds of cities to protest environmental ignorance and demand a new way forward for our planet.

The first Earth Day was a unified response to an environment in crisis — oil spills, smog, and rivers so polluted they literally caught fire is credited with launching the modern environmental movement which launched a wave of action: including the passage of landmark environmental laws, the Clean Air, Clean Water and Endangered Species Acts, as well as the creation of the Environmental Protection Agency (EPA) with many countries soon adopting similar laws.

In 2016, the United Nations chose Earth Day as the day when the historic Paris Agreement on climate change was signed into force.

The **theme for Earth Day 2020** is climate action which is a pressing topic with enormous challenge, but also vast opportunities.

Be Good to the Earth Every Day!

- Reduce, reuse, and recycle.
- Cut down on what you throw away
- Volunteer for cleanups in your community
- Educate – awareness campaigns
- Conserve water
- Choose sustainable
- Shop wisely (local and less packaging)
- Use long-lasting light bulbs
- Plant a tree
- Eat Less Meat
- Take the Pesticide Pledge.
- Promote organic farming by buying and creating a demand for chemical free food
- Support Organizations that Protect Species and Habitats
- Use cruise control
- Get out and enjoy nature
- Use a clothesline (Dryers can use up a lot of energy!)
- Use travel mugs and re-useable water bottles
- Turn off the lights
- Reduce paper mail
- Use re-useable shopping bags
- Use food containers (not plastic wrap or aluminum foil)
- Refuse single-use items
- Avoid products with micro-beads
- Build a bird house or start a bee farm
- Compost your food waste
- Plant a garden

Round-Up Class Action Suit

Are you a Canadian citizen who developed cancer after using the weedkiller Roundup?

Glyphosate is a widely used herbicide found in the popular weedkiller Roundup. This chemical is reportedly classified as a probable human carcinogen by an international cancer research group.

Using glyphosate over a long period of time can reportedly lead to the development of non-Hodgkin's lymphoma, a type of cancer affecting the lymphatic system.

Canadian residents who developed non-Hodgkin's lymphoma or another type of Roundup cancer may be eligible to take legal action against the manufacturer Monsanto, and its parent company, Bayer. Legal action could help those injured recover compensation for medical expenses, funeral costs, pain and suffering, and more.

If you are a Canadian citizen who developed cancer after using Roundup products, you may be eligible to join a FREE Canada Roundup cancer class action lawsuit investigation.

What is Glyphosate?

Glyphosate is a non-selective herbicide used in common weed killers. Roundup and other industrial versions of the herbicide manufactured by Bayer subsidiary Monsanto are widely used around the Canada. Glyphosate works to kill plants by targeting an enzyme pathway necessary for plant survival.

Does Roundup Cause Cancer?

Although glyphosate herbicides like Roundup are widely used, studies have revealed that they may cause cancer.

In March 2015, the World Health Organization's International Agency for Research on Cancer (IARC) officially classified glyphosate as "probably carcinogenic to humans." The classification was reportedly based on "sufficient" evidence that the substance causes cancer in animals in addition to "limited" evidence of the same mechanism in humans. Based on the Roundup cancer research available, the agency concluded that there was "strong" evidence that both "pure" glyphosate and glyphosate formulations lead to genotoxicity.

Regulators such as Health Canada have rejected this classification, placing them at odds a growing body of science and the international authority under the United Nations. In 2017, Health Canada decided to approve the use of glyphosate for 15 years—a decision they reaffirmed in January 2019. Advocacy groups have called this decision "deeply flawed," claiming that the regulator failed to consider all of the evidence when making the decision.

What Type of Cancer is Linked to Roundup?

Glyphosate is reportedly associated with an increased risk of developing non-Hodgkin's lymphoma which occurs in the lymphatic system, a widespread series of glands in the body that helps fight diseases. This type of cancer reportedly develops from a type of white blood cells known as lymphocytes.

Have Roundup Lawsuits Been Filed in Canada?
Consumers in Canada have begun to file lawsuit alleging that the glyphosate weedkiller Roundup cases cancer.

In July 2019, a woman from Ontario and man residing in Nova Scotia filed a national class action lawsuit against Monsanto and Bayer.

The claim describes that the man was routinely exposed to Roundup during his work on various farms from 1988 until 2011. In 2014, he was diagnosed with Waldenstrom's Macroglobulinemia, a type of non-Hodgkin's lymphoma.

The woman used Roundup seasonally on her farm from 2007 until 2013. She was diagnosed with Mantle cell lymphoma, a type of non-Hodgkin's lymphoma, in 2014 and continues to receive treatment through ongoing clinical drug trials.

Both plaintiffs were exposed to glyphosate in various ways: their skin and on their clothing, and via inhalation during spraying. Neither knew that using and/or being exposed to Roundup as intended could cause them harm.

The Roundup cancer lawsuit claims that Monsanto and Bayer were negligent in their design, development and testing on Roundup and its marketing and sale. It is alleged that they chose not to warn consumers that glyphosate is associated with an increased risk of cancer, instead misrepresenting the Roundup products as safe. The lawsuit also claims that Monsanto and Bayer created a dangerous and unreasonable risk of harm to individuals who use and/or are exposed to Roundup.

The action seeks damages, including for personal injuries, mental anguish and severe emotional distress associated with the personal injury, pain and suffering, diminished enjoyment of life, loss of employment income and benefits, possible death, and for expenses, including but not limited to cost of care arising from the need for lifelong medical treatment. Lawsuits with similar allegations have been filed in various provinces across Canada, including Quebec, Manitoba, Ontario and British Columbia.

Should I File a Roundup Cancer Lawsuit?
Consumers in Canada who used Roundup and later developed non-Hodgkin's lymphoma may be eligible to take legal action against the herbicide manufacturers.

Filing a Roundup cancer lawsuit could help sick consumers recover significant compensation for their cancers. Any resulting Roundup cancer lawsuit settlements could also help the family of injured or deceased consumers pay for treatment or funeral expenses, along with emotional damages from losing a loved one.

What Roundup Cancer Lawsuit Settlements Have Been Reached?
No Roundup cancer lawsuit settlements have been reached in Canada at this time, but plaintiffs in the United States have been successful in recovering millions of dollars in compensation.

In August 2018, the first Roundup glyphosate cancer award was granted by a California jury in the amount of $289 million. The Roundup lawsuit payout was awarded to a groundskeeper who allegedly developed terminal non-Hodgkin's lymphoma due to exposure to glyphosate.

In May 2019, a jury awarded a couple $2.06 billion to compensate them for each of their non-Hodgkin's lymphoma diagnoses. Although this award was later reduced, the couple still walked away with an award of $86.7 million.

While the legal systems in Canada and the United States are distinct – especially regarding the amount of damages that can be awarded – these cases show that legal success is possible and has been achieved against herbicide giants Monsanto and Bayer.

Join a Canada Roundup Cancer Class Action Lawsuit Investigation
If you or a loved one lives in Canada and developed cancer after using Roundup glyphosate products, you may be eligible to join a Canada Roundup cancer class action lawsuit investigation for FREE.

For a free case evaluation by a Canadian Roundup lawyer, click on the link below, to fill out the form and see if you qualify:
ttps://topclassactions.com/canada/roundup/glyphosate-cancer-class-action

Orca Place Supportive Housing

When you're spring cleaning please keep in mind; Orca Place is looking for craft and art supplies.

- Jewelry making supplies
- Acrylic paints
- Craft supplies

If you have any craft supplies to donate, please let me know and I will arrange for collection. Thanks! Cathy Van 250.248.0412 cathyvanh@gmail.com I have volunteered for their Handmade for Hope program….in the future sometime!

WELCOME to NEW PQRTA MEMBERS!

- **Martin Marquardt**
- **Sandra Hamilton**

ORES - OCEANSIDE RETIRED EDUCATORS' SCHOLARSHIP

TWO Local District Scholarships worth $1500 **- On HOLD for now!**

If you are interested in learning more, please contact Elaine Young:
Email: reyis3@shaw.ca
Phone: 250.927.0375

Hearing Life: Lana Cuddeford

- 10% of Canadians have a hearing loss
- 1 in 10 people have some degree of hearing loss
- 1 in 3 Canadians over the age of 65
- Hearing loss is reported as the third most common health problem in Canada today

Outer Ear – picks up sounds
Middle Ear – sends sound vibrations down the ear canal
Inner Ear – sends sound to the brain

Two types of hearing loss:
1. Conductive Hearing Loss - blocked outer or middle ear
2. Sensorineural Hearing Loss
– inner ear hair cells or hearing nerve is damaged and cannot send complete signals to the brain
– caused by aging, noise exposure, hereditary factors
cannot be corrected with medicine of surgery, but hearing aids can be very helpful

Let's Talk About Wax
– wax is a natural substance found in the other ear canal
– protects and lubricates the skin inside our ear canal preventing dry, itchy ears
– sticky substance to trap harmful foreign objects such dust, dirt and insects and prevents them from travelling further down the canal
– some wax is great, but too much is not!
– chewing causes wax to naturally and slowly move out of the canal where it either falls out or is washed away
– for some people, the wax gets trapped along the way
– some people make large amounts of wax and the canal doesn't push it out quickly enough
– some people have very narrow ear canals or very bendy canals which leads to build up
– using cotton swabs can cause wax build up by pushing wax further in and around the next bend of the ear – not good!

Too Much Wax
– affects your hearing,
– can interfere with performance of hearing aids
– can lead to ear infections
– certified hearing professionals or doctors can remove the wax by manual means with a curette, flushing with a syringe, or suction

Hearing Loss can be mild, moderate, severe, or profound.
Even a mild hearing loss can profoundly affect your life.

Presbycusis – hearing loss due to aging!
Signs of Hearing Loss:
– people around you seem to mumble
– you often ask others to repeat themselves

– you can hear but cannot understand
– children's and women's voices are difficult to hear
– difficulty following conversations when background noise or when in groups
– need to turn up TV or radio louder
– cannot hear high pitched sounds

Common Reactions to Hearing Loss
– denial
– anxiety
– search for a cure
– feeling powerless
– emotional detachment
– isolation
– withdrawal from communication situations

The longer that you go without hearing properly, the harder it is to re-introduce noise back into your environment.

Did you know that sound comes in your ear and crosses over your brain?

What can be done to improve hearing?
– every Canadian over 60 years of age should have a hearing test to get a baseline
– get a hearing test every 2 years to ascertain any minor changes
– early detection of hearing loss is the key to successful treatment
– use correctly fitted hearing aids for you and your price range!
– many different styles (in ear, behind ear, battery operated or rechargeable, etc.)
– use good communication strategies

Hearing Aids do something!!!
In our time of earbuds, hearing aids have fewer stigmas and have become more acceptable! Hearing Aids need to be worn from the time of rising in the morning, until going to bed.

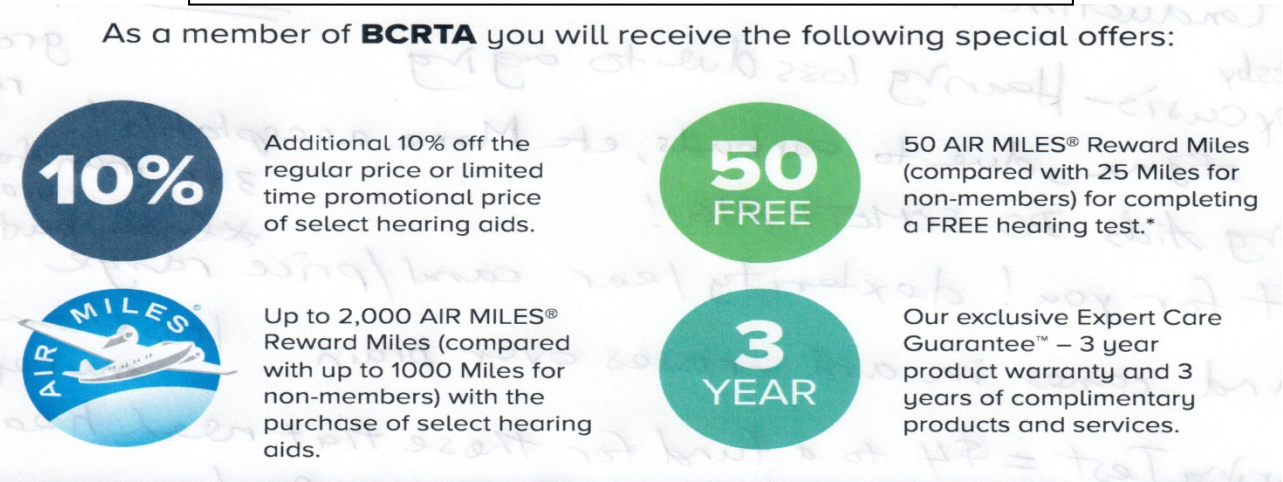
Hearing Aids have **Blue Tooth Technology** that can receive sounds directly from your TV, your telephone, and /or your cell phone with any cords!

Receive your FREE hearing test – only takes 1 hour – and get results for FREE
No obligation to purchase - Trial period of 90 days!
3 Year Manufacture Warranty and get free batteries for 3 years!

Campaign for Better Hearing
– Sponsors give back **$4 per every hearing test** to a fund for hearing aids to low income
– since 2015, over one million dollars raised in the "give back" program with over 300 hearing aids given to those Canadians who otherwise could not afford them
– the Nanaimo Hearing Life store has given hearing aids to two needy people in Nanaimo and two in Parksville through the "Give Back" program

Green Shield Hearing Care:
Reimbursement up to **$1400 every 4 calendar years** for hearing aids, repairs or replacement parts, if recommended by qualified medical practitioner amount for batteries.

Hearing Life is a BCRTA Advantage Partner



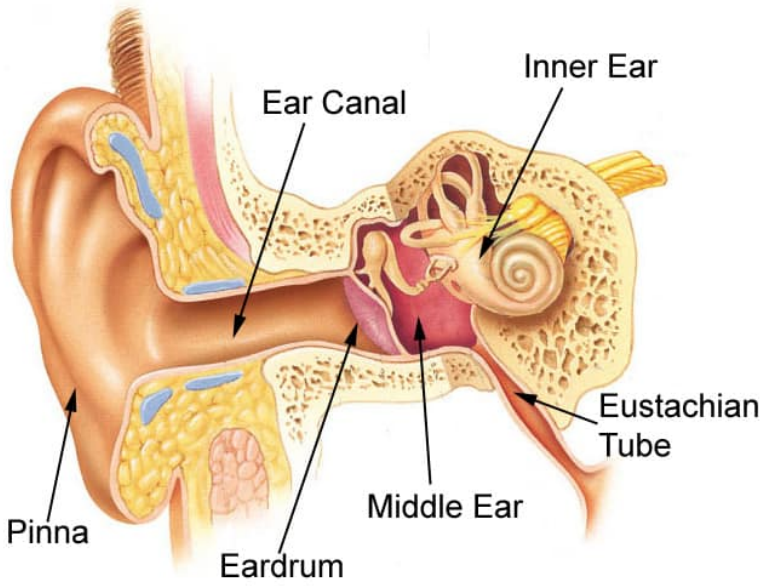
Why It's Important to Incorporate Hearing Health in Your Wellness Routine
https://www.everythingzoomer.com/featured/sponsored-content/2020/03/05/why-its-important-to-incorporate-hearing-health-in-your-wellness-routine/

- Improved Social Connection
- Decreased Risk for Depression and Mental Health Issues
- Improved Physical Safety

Cognitive Decline: Could Hearing Aids Reduce?
https://www.medicalnewstoday.com/articles/cognitive-decline-could-hearing-aids-reduce-the-risk?type=medical-news

Can Hearing Aids Help Prevent Dementia?
https://www.nytimes.com/2020/02/20/magazine/hearing-loss-dementia-alzheimers.html?fbclid=IwAR2p7jJoTYKppSv4XDmAD9eAz-Ja82bT0AVy0oacKHspsBt-u9CpkMGk4rE

How Hearing Health Impacts Your Brain (animated video):
Almost half the people over 60, have hearing loss! Check your ears, at 60 years!
https://www.youtube.com/watch?v=Khd5mu1G-_I



"Do you sell those invisible hearing aids?"

BCTF News:

From Terri Mooring – President of BCTF:

Dear Colleagues,

We are pleased to be able to make an announcement today that your BCTF Bargaining Team achieved a tentative agreement with the employer, and the BCTF Executive Committee is recommending this agreement to the membership.

At 2:00 a.m. this morning, March 26, after marathon negotiation sessions with the employer, the Bargaining Team reached an agreement-in-principle with the BC Public School Employers' Association that will, if ratified by a province-wide membership vote, conclude this round of bargaining.

VANCOUVER SUN - Teri Mooring: Schools may be closed, but teachers' hearts are open
Source: https://vancouversun.com/opinion/teri-mooring-schools-may-be-closed-but-teachers-hearts-are-open/wcm/148d14fd-229a-4a18-824d-cf8b5e394feb/

Not since October 1918, when Spanish influenza hit our province, have schools across B.C. been closed due to a public health emergency. On Monday, March 30th, the historic threat of COVID-19 will shutter our public education system, impacting more than 550,000 students from kindergarten to Grade 12.

The provincial government has declared a state of emergency and closed all in-school instruction for the indefinite future. This is absolutely the right decision. The unprecedented spread of the global pandemic means all of us must do everything we can to help "plank the curve." As teachers, there's a lot we can and will do to support the fight against COVID-19 while helping our students and their families confront this stressful new reality.

British Columbians can be reassured that there is an unprecedented level of co-operation among the partner groups in public education. Representatives of teachers, support workers, principals and vice-principals, superintendents, trustees, and the Ministry of Education are in constant communication. We're working together as never before to figure out how we can contribute to continuity of learning opportunities, while keeping everyone healthy and safe.

And let's be clear — health and safety is our No. 1 priority. That means, for now, fundamentally rethinking what public education looks like. It means taking time to develop processes and protocols so everyone can be safe. There is no need to rush. We mustn't accidentally undermine the critical public health measures that necessitated suspension of in-class instruction in the first place.

As we strategize to define how schools operate in the face of a global pandemic, we need to remember some fundamental values of public education: equity and inclusion. Every child has the right to equal access to education, and the doors of our public schools are open to all. Because the physical doors must be temporarily closed, some virtual doors will open. For some courses and for some students, especially Grade 12 students, online learning could be a good option. But for thousands of vulnerable students, it's not.

One in five B.C. kids is growing up in poverty and that statistic will grow as businesses shut down and parents are laid off. Without a computer at home and with libraries closed, access to learning opportunities will be a big challenge for those kids, but one we'll meet together.

For students who rely on school breakfast and lunch programs, we'll find a way to safely continue providing not only food for the body, but for hearts and minds too. Likewise, we'll continue to support our students with diverse needs, some of whom have compromised immune systems or pre-existing conditions and may be dealing with health emergencies.

Long before the COVID-19 crisis began, teachers' organizations across Canada identified a significant increase in mental health issues among children and youth. It's likely the pandemic will escalate their anxiety or depression. Again, we'll be there with the necessary health facts and emotional support as well.

There are many questions and, so far, not a lot of clear answers. But we will get there, and we'll be communicating with parents and the public along the way. Please be patient as we work through the complex issues confronting our public-school system. And know that B.C. teachers care deeply about our students, your kids. We are going to do everything we can to help our school communities continue to thrive as we develop different ways to work, learn, and play together.

At this pivotal moment in human history, teachers across Canada and around the world are called to be the calm voices, to be the helpers, to bring people together in different but still meaningful ways.

In the weeks to come, even though our public schools will not be open for instruction, those schools will remain at the heart of our communities. And teachers will be working hard — some from home, others from safe distances in schools — to develop ways to help all our kids feel safe, strong, and resilient in the face of this unprecedented public health crisis.

We are all in it together and we'll get through this together.