

Intro to Seasonal Influenza (Flu) for the 2021/2022 Season

The Northern Hemisphere, including the U.S. & Canada, transitions into the 2021/2022 Flu Season with the hope that this flu season will be non-existent to light like the 2020/21 and 2019/20 Seasons, respectively. The Public Health and medical community had dreaded a mix of COVID-19 and seasonal flu in the two previous seasons, but it was not a problem. Most likely, due to the increased flu vaccinations in the population and the infection control mitigations put into place for SARS-CoV-2 (COVID-19).

However, it is unlikely that Flu will be quite as light as the two previous seasons even with COVID-19 infections still causing about 850-1000 deaths per week in the US and about 100-200 deaths per week in Canada and both still in the midst of a Delta wave. It is unknown how Omicron (the new Variant of Concern) will affect either country but there are known cases in both. The major difference, between last year and the current year, is that many of the other mitigations we had in place for COVID are no longer being followed by many.

So far, it is still a light Flu season, but it is early and follows the patterns of most previous years. A review of the US's and Canada's Weekly Flu Surveillance will be coming out later in the week, but **it is important to get your Flu shot ASAP**, if you have not already done so. Another contributor is having two non-Flu seasons which means natural immunity to Flu is waning. See one of these links for info on getting Flu shots:

CDC - <https://www.cdc.gov/flu/vaccines-work/index.html> and Canada - <https://www.canada.ca/en/public-health/services/diseases/flu-influenza/get-your-flu-shot.html>

The predominant Flu strain circulating in the US currently is H3N2, which is usually a pretty tough Flu to get. Canada currently has Influenza B as its dominant strain, with H3N2 coming in a close second. Severe seasons are not unexpected when the dominant strain, at least for part of the season is an H3N2 strain, which is notorious for drifting mid-season. The H3N2 strain is known for having a low match rate with the season's flu vaccine, mostly due to its propensity to drift after the flu vaccine make-up has been decided as well as during the season. Furthermore, it is often a more virulent type than other Influenza A viruses. Still, most severe illnesses and many of the deaths from Flu are in those that were not vaccinated (vaccination, even if not a perfect match, often provides at least some level of protection).

Some individuals have had both COVID-19 & Flu infection at the same time, which raises the risk of complications, particularly in those that are older or very young, already immunocompromised or otherwise at risk for severer illness should they get either one.

See the following links for similarities and differences between Flu and COVID-19: **CDC - <https://www.cdc.gov/flu/symptoms/flu-vs-covid19.htm> & Canada - <https://www.canada.ca/en/public-health/services/diseases/flu-influenza.html>**

But, even alone, Flu has a greater risk of complications, including life threatening ones, in certain individuals. See the appropriate links below for a list of those at greater risk: **CDC** - <https://www.cdc.gov/flu/highrisk/index.htm> & **Health Canada** - <https://www.canada.ca/en/public-health/services/diseases/flu-influenza/health-professionals.html#a5>

So, in preparation for the upcoming season, this document contains seasonal flu information that can help prevent, identify, control and treat (or be treated) for the flu. The links provide a path to more detail on the topics and to more links for a deeper dive into the subject. There is also a link to the CDC Home page for health care professionals for more flu science, clinical and public health applications.

Flu Basics provide an introduction to seasonal influenza, as well as a review for those that may be dealing with it in patients they are responding to, their own households and families, or their workplaces. **US** - <https://www.cdc.gov/flu/season/index.html> <https://www.cdc.gov/flu/about/keyfacts.htm> & **Canada** - <https://www.canada.ca/en/public-health/services/diseases/flu-influenza.html>

ILI – Influenza-like-illness: anyone who presents with a fever at or greater than 100° F (37.8° C) and either/both cough or sore throat and, with no known cause other than influenza, as the likely cause. In cases when Flu is known to be in an area, the identification of ILI, in the absence of influenza testing, will usually result in a presumption of “Flu”, however, due to COVID-19, it is usually not clear without a test for both, since it can be or the other, or both. Antivirals may also be given, when appropriately prescribed by a health care provider (MD, DO, ARNP, PA), without a positive flu test and their use is encouraged in those with high risk of complications from flu.

Seasonal Flu – Influenza: a viral respiratory illness made up of Influenza A or B viruses (for humans) which may be diagnosed by a flu test. A list of signs and symptoms is included in this document

Influenza A viruses have subtypes of hemagglutinin (H1 – H18) and neuraminidase (N1-N11). Influenza A viruses can be further identified by Strain. The current strains that have been seen in the last flu seasons are H1N1 and H3N2. Influenza B viruses don't have subtypes but do have strains and lineages. The current lineages circulating of Influenza B are B/Yamagata and B/Victoria.

Changes in influenza viruses can appear and, if previously not seen, will be called variants. Very different influenza A viruses, typically from reassortment, or remix, of multiple strains within an animal (often a pig since they can get human, avian, and swine flus), from those that have previously circulated will be called Novel viruses and may lead to a pandemic, to which no one or very few will have any immunity. The 2009 (H1N1) was just such a novel virus and replaced the previously known H1N1. Novel viruses are risky for the entire world since spread may be rapid.

Flu Vital Statistics:

Transmission (Sharing): flu can be spread up to 6 feet in the air in the event of a sneeze, cough or by talking when tiny droplets fall/fly into mouths, noses, and perhaps eyes, although some references suggest that most transmission via the air are within a meter/3 ft. Droplets can also fall on or be introduced by contaminated hands onto surfaces or objects (fomites) such as tables, toys, light switches, phones, pens and pencils and then be picked up by someone that becomes exposed to the flu when they touch the contamination and then touch their face/eyes, nose, mouth.

People are most able to spread the virus in the first 3-4 days after developing symptoms. Healthy adults may be contagious starting the day before their symptoms begin and able to pass it on for up to a week after getting sick. Kids and those that have compromised immune systems may continue to spread their germs for 7 to 10 days typically, but can be even longer.

Incubation: the time from exposure to the virus until signs and symptoms develop is variable but generally is between 1 to 4 days after the virus enters the body, with an average of 2 days before signs and symptoms appear. This means that you may get the virus before someone even knows they are sick or pass along the virus before you know you're sick. Some people will be exposed and be infectious (have the ability to spread the germs to someone else) but have no symptoms at all for the entire time.

Signs and Symptoms: often have a sudden onset (some people can name the hour they began to feel awful). Most will have a few of these symptoms; some will have more, some less. Children and elderly patients may have less signs and symptoms, perhaps because their immune systems don't mount as vigorous a defense.

Prevention:

Flu shots are recommended for anyone greater than 6 months unless medically contraindicated. Those listed in the complication list above may want to check with their physician about flu vaccination but most will be encouraged to be vaccinated; some may need a different type of vaccination. **US -**

<https://www.cdc.gov/flu/prevent/keyfacts.htm> & **Canada -**
<https://www.canada.ca/en/public-health/services/diseases/flu-influenza/health-professionals.html#a6>

Also, stay away from those that seem sick or who are coughing or sniffing, wash your hands often, use your own pen for signing, use hand sanitizer, avoid touching your face (including eyes, nose & mouth) and sanitize commonly shared objects such as light switches, styli, keyboards, doorknobs, handles, etc.). Practice COVID-19 precautions including wearing a mask, at least 6 ft of social distancing, and avoid crowds, particularly in indoor spaces.

Consider isolating those that may be at greater risk for catching or fighting the flu, such as the very young or very old, those that can't take the flu vaccine, or those **who are immunocompromised because of** chemotherapy, cancer, post-transplant therapy, high and/or long dose corticosteroid use. <https://www.cdc.gov/flu/prevent/actions-prevent-flu.htm>

These two YouTube videos provide a humorous but scientific look at how coughs and sneezes can spread certain germs like flu, and how to decrease the risk of spread of the germs. <https://www.youtube.com/watch?v=CtnEwvUWDo0>
<https://www.youtube.com/watch?v=MKAHNoni0KI>

Diagnosing: it is sometimes difficult to differentiate between the flu and other respiratory or cold viral illnesses. Health care providers may do a Flu test or just assume you have the flu if it is in your area. For those that are high risk with Flu, doing a flu test is more likely. <https://www.cdc.gov/flu/symptoms/symptoms.htm>

Treating: most care is supportive such as rest, plenty of fluids, Tylenol or ibuprofen for fever or aches, avoid others, soft diet, flu or cold medicines to improve symptoms (check if you are taking more than one medication to make sure that both don't contain Tylenol, aspirin, or ibuprofen). **US -** <https://www.cdc.gov/flu/treatment/index.html> **& Canada -** <https://www.canada.ca/en/public-health/services/diseases/flu-influenza/health-professionals.html#a7>

If you are at risk for flu complications, have a severe case of flu, or cannot avoid others to prevent spread, your health care provider may choose to prescribe an antiviral. **These are particularly helpful if started within 48 hours of the onset of symptoms.** The recommendations state that waiting for the confirmation of flu or flu type is not necessary before prescribing an antiviral. Those in the position of prescribing or providing antiviral medications should consult the sensitivity of antivirals against the circulating flu strain(s), found in the Weekly Influenza Summary. For more about Flu antivirals: <https://www.cdc.gov/flu/treatment/whatyoushould.htm>

Other Links that May Be Helpful:

Public Health Canada:

Seasonal Influenza for Health Care Professionals Index Page:

<https://www.canada.ca/en/public-health/services/diseases/flu-influenza/health-professionals.html>

Seasonal Influenza Surveillance Index Page:

<https://www.canada.ca/en/public-health/services/diseases/flu-influenza/influenza-surveillance/about-fluwatch.html>

Public Health Canada – Index Page with Links to Provinces/Territories Surveillance Reports: <https://www.canada.ca/en/public-health/services/diseases/flu-influenza/influenza-surveillance/influenza-surveillance-resources.html>

Page to Subscribe to Weekly Influenza Surveillance Reports:
<https://www.canada.ca/en/public-health/services/diseases/flu-influenza/influenza-surveillance/subscribe.html>

Public Health Canada – Page with Links to Seasonal Flu Infographics:
<https://www.canada.ca/en/public-health/services/diseases/flu-influenza/flu-influenza-awareness-resources.html>

CDC:

Seasonal Flu Information for Health Care Professionals Index Page:
<https://www.cdc.gov/flu/professionals/index.htm>

Seasonal Flu Surveillance Index:
<https://www.cdc.gov/flu/weekly/overview.htm>

Seasonal Flu Activity Index Page:
<https://www.cdc.gov/flu/weekly/fluactivitysurv.htm>

Link to Weekly Seasonal Flu Summary Report:
<https://www.cdc.gov/flu/weekly/index.htm>

Seasonal Flu Resources & Infographics:
<https://www.cdc.gov/flu/resource-center/index.htm>