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CoVid-19 Vaccine Awareness

- September 24, 2021

Purpose Of This Module

This module has been created using research and information available to help support the Lakehead University community in making their decision to get vaccinated against COVID-19.

As we open the university to more in-person on campus activities, Lakehead University is taking increased measures to protect the health and safety of our community amid the ongoing risks of COVID-19, the Delta variant, and other variants of concern. As part of this effort the university expects anyone accessing Lakehead University Premises, including, but not limited to, Lakehead students, faculty, and staff, contractors, and others visiting or conducting business on Lakehead University Premises to be fully vaccinated to attend campus. Vaccination is one of the most effective measures to protect you against COVID-19. This module is intended to provide you with the most accurate and up-to-date information about COVID-19 vaccines so you can build confidence and address hesitancy.

PLEASE NOTE: This module is not intended to be medical advice. If you have questions about your personal health and the COVID-19 vaccines, please consult with your personal health care professional.

CoVid-19 Pandemic Impact

COVID-19 has caused restrictions on our daily activities, including contact with friends and loved ones.

The Numbers

Since Jan. 15, 2020, more than 570,000 COVID-19 cases have been detected in Ontario, resulting in more than 9,500 deaths.

Globally there have been more than 200 million cases, resulting in more than 4.5 million deaths.

The Variants

Studies have shown the Delta variant of concern is now twice as contagious than previous variants and doubles the risk of hospitalization.

Cases Increasing in Younger Unvaccinated People

COVID-19 data are showing more cases and severe illnesses among younger unvaccinated individuals.

Health Canada: How COVID-19 Vaccines were Developed

For video transcript, please go to: https://www.canada.ca/en/public-health/services/video/covid-19-how-vaccines-developed.html

For more information on vaccine clinical trials, please go to: Conducting a COVID-19 drug and vaccine clinical trial - Canada.ca

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Does the Vaccine Work?

Vaccines approved in Canada and by the WHO are highly effective.

In Ontario, the **majority of COVID-19 cases are now found in unvaccinated people.** The vast majority of eligible Ontarians being fully vaccinated* against COVID-19 has lowered their rate of infection from 10.25 to 1.58 per 100,000**.

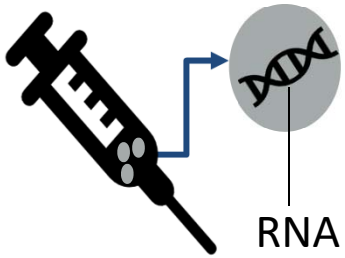
Data show **vaccinations further reduce the chances of being hospitalized** or being admitted into the Intensive Care Unit.

If you would like more information, please click on the link below to view Ontario's COVID-19 Vaccinations Data.

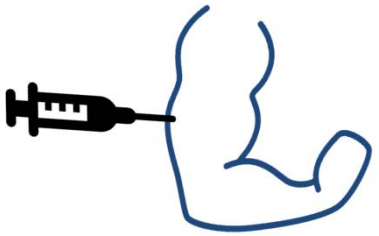
*Fully Vaccinated" means receipt of the full series of a Vaccine or a combination of Vaccines accepted by the Government of Canada and/or World Health Organization **and** the last dose has been received at least 14 days before the date of the self-declaration.

**as of 24 September 2021 https://covid-19.ontario.ca/data

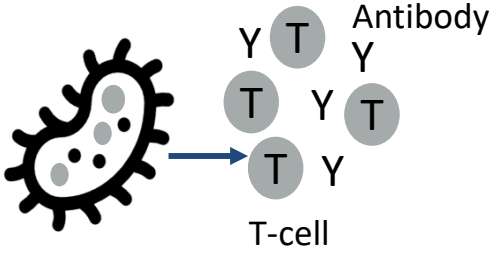
How COVID-19 mRNA Vaccines Work



1. The mRNA vaccine (either Pfizer or Moderna) is based on COVID-19's genetic code – or RNA – a molecule that puts DNA instructions into action

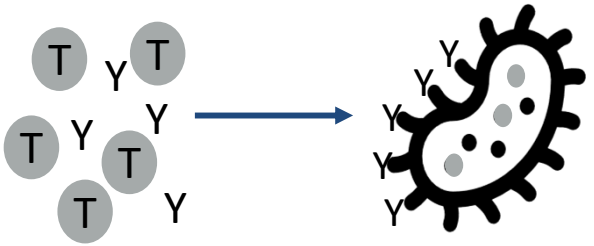


2. When a person is injected with the vaccine, it enters the cells, telling them to produce the coronavirus proteins



3. This causes the immune system to produce antibodies to activate T-cells ready to destroy infected cells. T-cells stimulate the development of antibodies to kill cells that have already been infected by a pathogen

4. If a person gets exposed to COVID-19, antibodies and T-cells are automatically triggered to fight off the virus



It takes roughly two weeks for the body's immune system to respond to the vaccine

For a video on how COVID-19 mRNA vaccines work: https://health.canada.ca/en/public-health/services/video/covid-19-mrna-vaccines.html

COVID-19 Vaccine Efficacy & Safety

All steps to evaluate the safety, efficacy, and quality of vaccines in Canada were met as part of the approval process for the COVID-19 vaccines. There were no serious side effects indicated in the clinical trials.

Vaccination Numbers:

As of Sept. 3, 2021 a total of **53,559,981 vaccine doses** have been administered in Canada. Adverse events (side effects) have been reported in **14,702 people - which is equivalent to three out of each 10,000 people vaccinated.**

Of the 14,702 reported events **10,735 were considered non-serious** (0.020% of all doses administered) and **3,967 were considered serious** (0.007% of all doses administered).

Single dose COVID-19 vaccine efficacy*:

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From clinical trials: • 92% efficacy at preventing symptomatic COVID-19 >14 days after Dose 1 **From real world data:** • 94% effective at preventing COVID-19 related hospitalizations (28-34 days after Dose 1)	**From clinical trials:** • 92% efficacy at preventing symptomatic COVID-19 ≥ 14 days after Dose 1

To develop an effective and longer-lasting protection against COVID-19 and its variants, it is recommended to get 2 doses of either vaccine.

* Data presented from the initial vaccine efficacy studies (alpha variant)

Mixing Vaccines

According to the National Advisory Committee on Immunization (NACI), vaccines can be safely mixed for a first and second dose.

Mixing Health Canada- approved vaccines is **at least as effective as getting two doses of the same vaccine.**

https://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/vaccine/COVID-19_QA_mixed_schedules.pdf

https://www.tbdhu.com/VaccineFacts

COVID-19 Vaccine Side Effects

A COVID-19 vaccine can cause mild side effects such as:

Fatigue

Chills

Pain at injection site

Headache

Muscle pain

- Most side effects occur within the first three days after vaccination and typically last one to two days.
- A reaction is an indication that the body is prepared to fight against what it thinks is a foreign invader.

For more information on side effects and how to manage them please go to: https://www.canada.ca/en/public-health/services/diseases/coronavirus-disease-covid-19/vaccines/what-expect-vaccination.html

COVID-19 Vaccine Side Effects

Serious adverse events are extremely rare. They include:

- **Anaphylaxis.** Anaphylaxis is a severe allergic reaction and is typically identified shortly after receiving the vaccine, which is why there is a wait period after you receive you vaccine.

- **Myocarditis and Pericarditis.** Myocarditis (inflammation of the heart muscle) and pericarditis (inflammation of the lining around the heart) following mRNA vaccination has been studied. Data in Canada indicate a slightly higher number of reports in younger people then would normally be expected.

- **Facial Paralysis/Bell's Palsy.** Facial paralysis/Bell's Palsy following mRNA vaccination has been seen.

A **weekly summary of reported side effects** following COVID-19 vaccination in Canada is available using this link > https://health-infobase.canada.ca/covid-19/vaccine-safety/summary.html

Risks of Not Getting Vaccinated

There are risks associated with not being vaccinated. They include:

- **Risk of Severe Disease.** As stated earlier, unvaccinated people are far more likely to develop a severe illness that requires hospitalization and can be fatal.

- **Risk of Long-Term Illness.** Many COVID-19 patients have at least one persistent symptom six months after infection that greatly disrupts their personal lives. This is called “Long COVID.”

- **Risk of Not Getting Back to Normal Activities** Increases in COVID-19 cases fueled by unvaccinated individuals may cause further restrictions on travel, gatherings, and campus access.

Common Questions and Misconceptions about the Vaccines

Were steps skipped in the development and approval of the COVID-19 vaccines in order to make them available sooner?

No. The vaccine was created quickly because of global efforts from leading scientists. Governments across the globe provided financial, scientific, and technical resources. Clinical trials were expedited, but no steps were skipped in the process of developing, testing, approving, and producing the vaccines.

Will the COVID 19 vaccine alter my DNA?

No. COVID-19 vaccines do not change or interact with your DNA in any way. Both mRNA and viral vector COVID-19 vaccines deliver instructions to trigger an immune response by building antibodies, which help you fight off a COVID-19 infection. However, the material never enters the nucleus of the cell, which is where our DNA is kept.

I have allergies. Can I still get the vaccine?

You can get the vaccine even if you have allergies. If you have a history of serious allergic reactions to medications or previous vaccinations you can still get the COVID-19 vaccine. Talk to your health care professional **before** receiving the vaccine, and inform the health care provider who is providing you with the vaccine of your allergies or allergic conditions. Wait the prescribed time at the site after your vaccination to monitor for any allergic reactions.

Common Questions and Misconceptions about the Vaccines

Are long-term side effects expected with the COVID-19 vaccines?
Long-term side effects with any vaccine is very rare. As with other vaccines, severe reactions typically occur within days or weeks after vaccine administration.

The COVID-19 vaccines have been part of clinical trials since late summer 2020, and no long-term side effects have been observed.

To ensure ongoing safety, scientists and regulatory bodies worldwide continue to monitor for any evidence of extremely rare events.

Can I get vaccinated if I am pregnant, breastfeeding, or trying to conceive?
There is no evidence to suggest the COVID-19 vaccine will impact fertility in either men or women. For women who are pregnant or breastfeeding many experts including Canada's National Advisory Committee on Immunization has recommended that pregnant or breastfeeding women get vaccinated.

Real world studies have shown that the vaccine is not only effective in protecting the women who are pregnant or breastfeeding, but protective antibodies can be passed on to the babies. Conversely, getting infected with COVID-19 while pregnant can be dangerous for parent and baby, with higher rates or admission to the ICU, preterm birth, and babies admitted to the neonatal ICU.

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Benefits of Getting the COVID-19 Vaccine

- Reduces the risk from getting COVID-19 and greatly reduces the risk of becoming seriously ill (or dying) from COVID-19
- Reduces the risk of spreading COVID-19 to others
- Increases community protection— making it harder for the disease to spread, contributing to herd immunity and protect vulnerable populations that cannot get the vaccine
- Helps prevent the COVID-19 virus from spreading, replicating, and mutating

Where Can You Get a Vaccine?

•**Thunder Bay Campus.** Appointments are available for Students, Staff and Faculty at Student Health and Wellness> https://www.lakeheadu.ca/students/wellness-recreation/student-health-and-wellness/about/covid-19-updates/covid-19-vaccine-info

•**Local Health Units.**

- Thunder Bay District Health Unit> https://www.tbdhu.com/covidclinics
- Simcoe Muskoka Health Unit> https://www.simcoemuskokahealth.org/Topics/COVID-19/Vaccine-and-Immunization/Gettingyourvaccination

•**Local Pharmacies.** Many local Pharmacies are providing vaccination appointments.

Resources Used for this Module

Ontario COIVD-19 vaccinations data
Government of Canada COVID-19: Vaccine safety and side effects
Government of Canada: COVID-19 vaccines questions
Government of Canada: COVID-19 mRNA vaccines
Ontario: COVID-19 vaccine safety
COVID-19 Vaccine Sunnybrook e-learning module

Laurier University: COVID-19 Vaccine: Know the Facts and Be Informed
University of Guelph: CoVid-19 Vaccines

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