

COVID-19 Vaccine: Building Trust and Confidence

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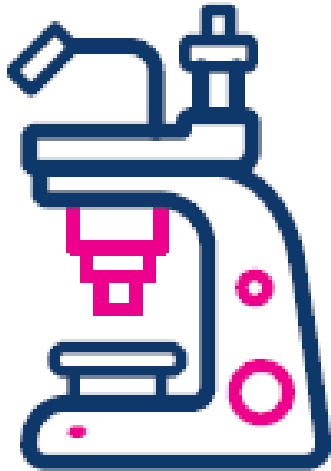
Moderator: Domenico Calla

COVID-19

- A COVID-19 infection can cause damage to the lungs, heart or brain.
- Some people who have had a COVID-19 infection will have symptoms and experience long term effects months after the infection is gone.
- Long term effects may include persistent fatigue, shortness of breath, cough, joint pain, pounding heartbeat, trouble concentrating, skin rash or hair loss.

Vaccines Can Help

**Vaccines used in
Canada are safe
and they work.**



**Vaccines help to
protect us from
serious illness**



1.45 Billion Doses Given Worldwide

As of May 16, 2021:

- 1.45 billion doses of COVID-19 vaccines have been given in 174 countries around the world.
- 18 million doses have been given in Canada.
- **1.7 million** doses have been given in **Toronto**, which is approximately 54% of all eligible adults in the City.

<https://www.toronto.ca/home/covid-19/>

<https://www.bloomberg.com/graphics/covid-vaccine-tracker-global-distribution>

Vaccine development and approval in Canada

Vaccine development



Scientists develop a potential vaccine



Scientists conduct lab and animal studies before testing on humans



10s of volunteers

Phase I

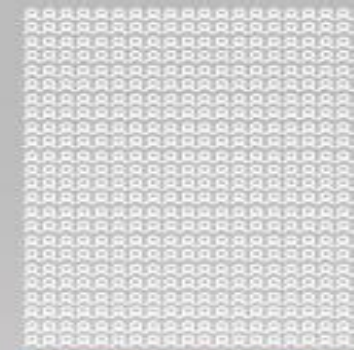
- Is the vaccine safe?
- What is a safe dose?
- Are there any side effects?



100s of volunteers

Phase II

- How well does the vaccine work?
- Is it safe on a larger number of people?
- Safest and most effective dose?



1000s of volunteers

Phase III

- Does the vaccine prevent disease?
- What are the side effects?



Manufacturer submits application to Health Canada for review

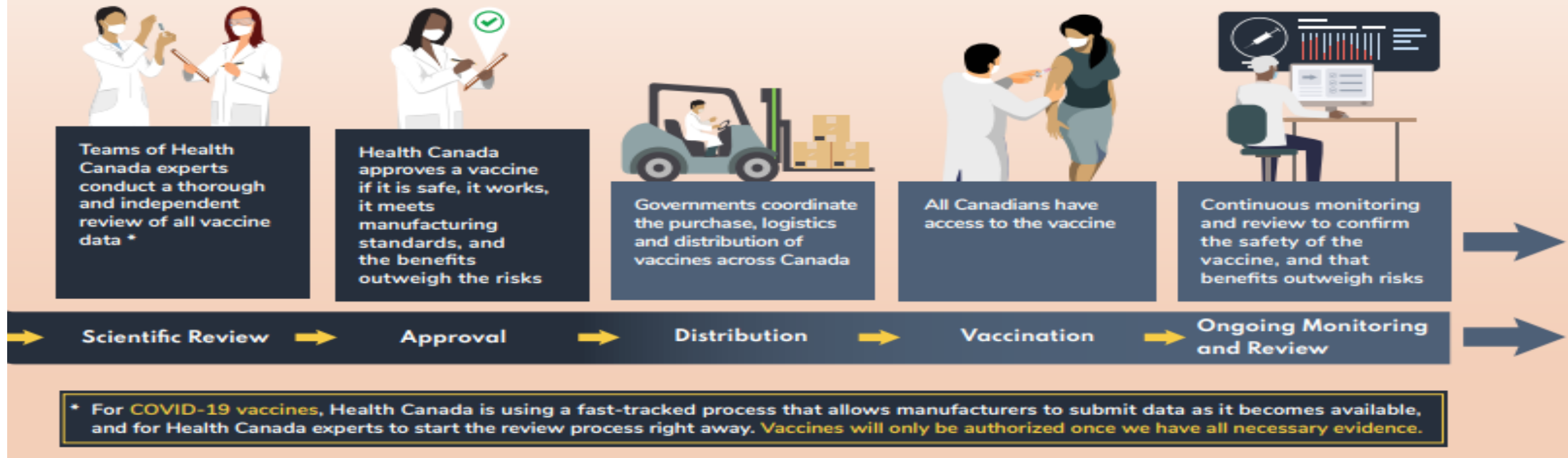
Exploratory →

Preclinical →

----- Clinical Trials -----

----- → Application -----

Review and approval of vaccines



COVID-19 Vaccines Are Safe For ...



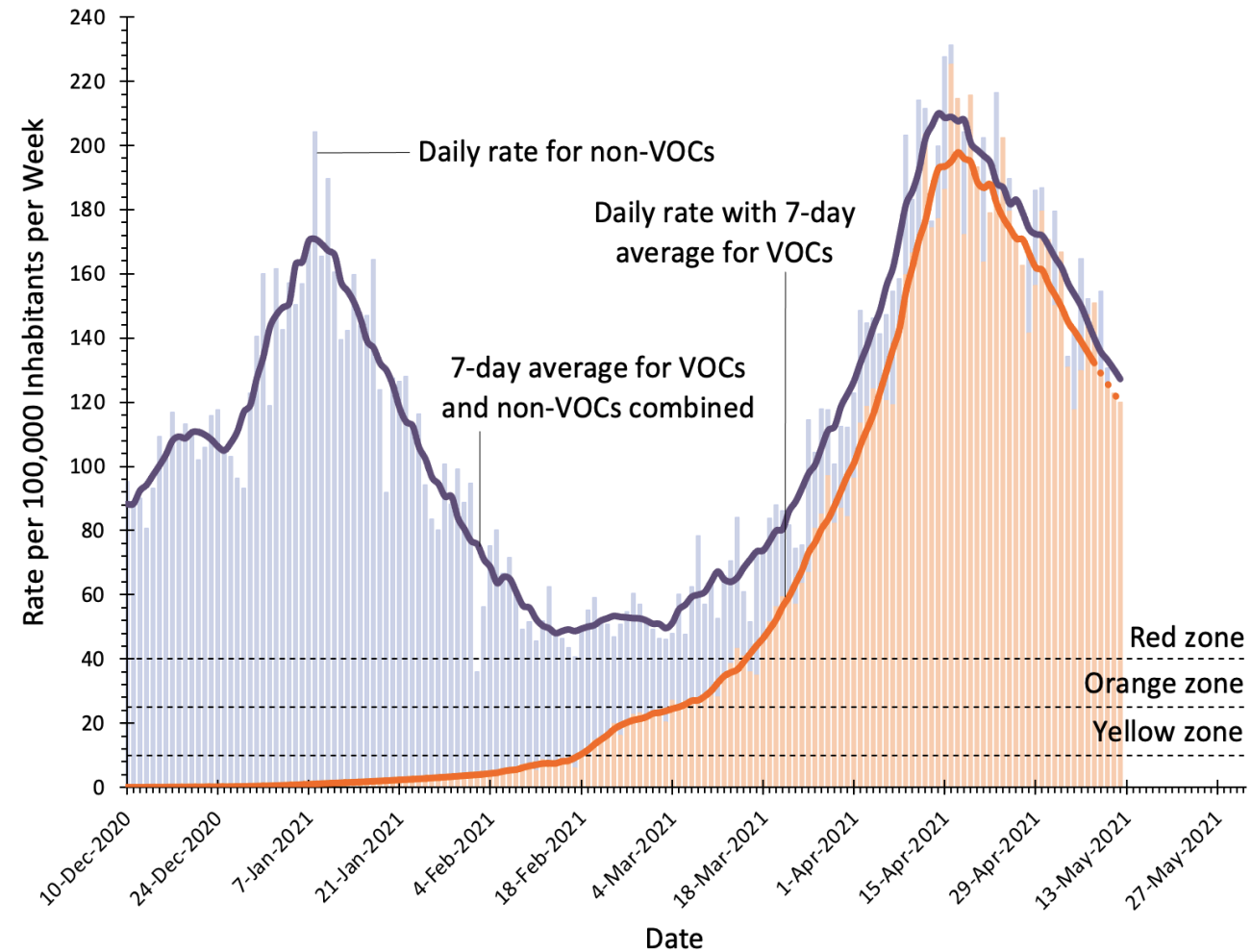
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- People with health conditions such as heart disease, asthma, diabetes, high blood pressure, hepatitis B or C and HIV
- It is also safe for people on blood thinners, with a weakened immune system, auto-immune disorder and anytime during pregnancy or breastfeeding.

Variants of Concern (VOC)

- Different variants are now in Ontario and Toronto.
- They spread infection more easily and cause more serious disease
- Public health measures and vaccines work against variants



Vaccines and the Variants

VACCINES OFFER PROTECTION AGAINST NEW VARIANTS



Vaccines have been used successfully in countries with variants



Vaccines can provide protection even when viruses change



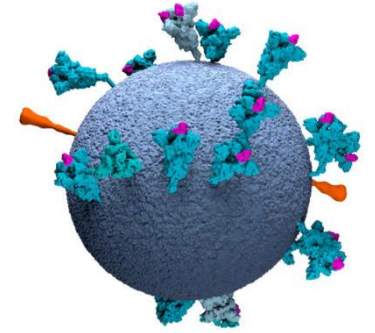
Protection offered by vaccines is important as variants can spread more easily



Booster doses may be used in the future for specific variants

How the COVID-19 vaccines work...

The COVID-19 vaccines works by telling our body to make “*spike proteins*”, a protein specifically found on the surface of the coronavirus. These proteins will stimulate our body to start making antibodies against COVID-19.



- **Pfizer** BioNTech and **Moderna** use mRNA technology.
 - mRNA research and technology has been around for over 10 years.
 - Breaks down and is removed from body in days
- **AstraZeneca/COVISHIELD** and Janssen (**Johnson & Johnson**) use a viral vector.
 - A cold virus that is inactivated (adenovirus), has instructions to make the spike protein in it.

What Is In The Vaccines?

WHAT IS IN THE COVID-19 VACCINES?



The vaccines contain instructions to have your body make antibodies



The vaccines contain lipids, salts, sugars and buffers



They do not contain eggs, gelatin, preservatives, latex or antibiotics



There is no COVID-19 virus in the vaccine that can give you COVID-19

What If I Have Allergies?

Pfizer-BioNTech & Moderna: **Polyethylene glycol**, also found in:

- laxatives or products for colonoscopy, cough syrup, ultrasound gel
- cosmetics, skin creams,
- shampoos, toothpastes, hair products, contact lenses & solutions,
- some fast foods, baked goods

Moderna vaccine: **Tromethamine**, also found in:

- contrast media for CT scans / MRI, some medications, skin creams

AstraZeneca/COVISHIELD & Janssen vaccines: **Polysorbate 80**, also found in:

- processed food, pickles, ice cream, whipped cream, gelatin, shortening, chewing gum,
- cosmetic, soaps, creams, body butter, bath gels, shampoo, mouthwash,
- eye drops, vitamin supplements, heart medication, contraceptives

Will The Vaccine Make Me Sick?

WILL THE VACCINE MAKE ME SICK?



There is no COVID-19 virus in the vaccine that can make us sick



Most side-effects are mild & will go away after a few days



Severe allergic reactions are rare and are treated right away



Talk to your doctor if your symptoms don't go away after 3 days

Vaccine side effects

- Most vaccine side effects are mild and similar to the flu shot, lasting 1 to 3 days:
 - pain, redness & swelling where the injection is given
 - headache, feeling tired, muscle ache, joint pain
 - fever, chills, nausea or vomiting
 - swelling & tenderness under the armpit / enlarged lymph nodes
- Side effects are more common after the 2nd dose (Pfizer/Moderna)
- Stay at the clinic for 15 minutes after vaccination, so you can be monitored, and treated, for any reactions

Blood Clots, Low Blood Platelet Count, VITT

- There have been reports of this rare event after receiving either the AstraZeneca (1/50,000) or Johnson & Johnson vaccine (1/500,000)
- **First dose of Astra Zeneca vaccination has been paused as of May 11, 2021 until further notice.**
- Blood clots can occur in the brain, arms/legs or abdomen
- With proper medical care, can be treated
- Watch for any side effects following vaccination on days 4 to 28. **Call 911** if you have:
 - Trouble breathing, chest pain, severe leg or abdominal pain that does not go away
 - Sudden severe headache, blurred vision, skin bruising or spots

[Vaccine-Induced Immune Thrombotic Thrombocytopenia \(VITT\) Following Adenovirus Vector COVID-19 Vaccination: Lay Summary - Ontario COVID-19 Science Advisory Table \(covid19-sciencetable.ca\)](#)

COVID-19 Variants Can Be Serious In Pregnancy

- Vaccination during pregnancy and breastfeeding can protect the pregnant person and baby.
- Over 110,000 pregnant persons have been involved in COVID-19 vaccine safety registry in the United States. Some have delivered with no safety concerns identified.
- In Ontario, all pregnant persons are eligible for a COVID-19 vaccine.
- Book an appointment at any time in pregnancy or while breastfeeding.

GET THE COVID-19 VACCINE IF YOU ARE PREGNANT



In pregnancy, COVID-19 infection can be more serious



COVID-19 vaccines can protect you from serious illness



Antibodies can transfer to the baby, protecting them as well



COVID-19 vaccines are safe in pregnancy & are being used around the world



Talk to your health care provider if you have questions

Vaccines and Children

- Vaccination of children aged 12-17 begins the week of May 31st
- Vaccination is not mandatory.
- The best way to protect children is:
 - to keep following public health guidelines, and
 - for adults to be vaccinated as soon as they can

Do I need the vaccine, if I already had COVID-19?

A: Yes. Based on the latest scientific evidence, natural immunity from COVID-19 may not last long. It is possible to get re-infected after a previous COVID-19 infection.

Learn more:
toronto.ca/COVID19



Phase 2 of Vaccine Rollout

Eligibility group	Week of April 26	Week of May 3	Week of May 10	Week of May 17	Week of May 24	Week of May 31
Provincial age band	April 30: 55 and older	50 and older	40 and older	30 and older	18 and older	12 to 17
Hotspot age band	April 27: 45 and older	18 and older	-	-	-	-
Health conditions	Highest-risk health conditions continues	High-risk health conditions	At-risk health conditions	-	-	-
Cannot work from home	April 29: licensed childcare workers	Group 1	Group 2	-	-	-

Pfizer/BioNTech Vaccine in Highest Supply for May/June in Ontario

- Ontario is expecting an average of 800,000 Pfizer doses per week for the month of May. Also some Moderna.
- 140,000,000 doses of Pfizer vaccine administered in the USA so far. No safety signals.
- Works well, even with variants.
- Current vaccine being offered at the City of Toronto's mass immunization clinics, and most other clinics.

Second Dose Extended But Still Necessary

WHY IS THE 2ND VACCINE DOSE EXTENDED TO 4 MONTHS?



Data shows the first dose provides strong protection



Extending the 2nd dose allows us to vaccinate more people



Vaccinating more people will reduce the spread of COVID-19



Vaccines can provide protection against COVID-19 variants

toronto.ca/COVID19

 TORONTO Public Health

Protection is 80% after 1 dose of mRNA vaccine and 90% after the 2nd dose.

Ref – CDC: https://www.cdc.gov/mmwr/volumes/70/wr/mm7013e3.htm?s_cid=mm7013e3

WHAT IS HERD IMMUNITY?



Herd immunity protects our community from infection when many people are vaccinated.



It is another way to protect others by reducing COVID-19 spread.



It also protects people who can't get vaccinated like newborn babies.

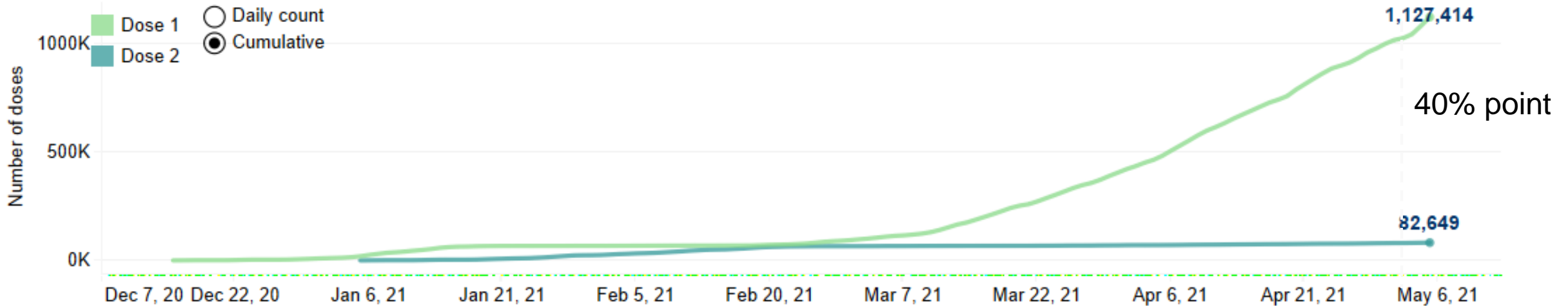


Until we have herd immunity, we need to wear our mask & keep a distance from people we don't live with.

Goal of 40% of Toronto residents 18+ reached ahead of schedule. Next goal is 65% by May 31

Provincial goal to vaccinate 40% of adult residents was achieved on May 1st

Doses administered over time



At the current rates of vaccination, we are on track to exceed the 65% goal by end of May

Ways To Get Vaccinated

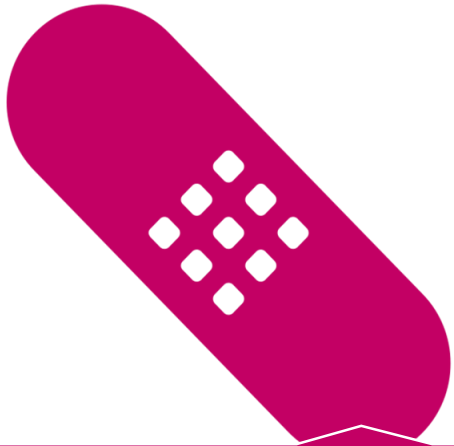
Red & white or no health card?
Register using telephone #

City clinics <https://covid-19.ontario.ca/book-vaccine/>
Or call: 1-888-999-6488
(TTY 1-866-797-0007)

Hospital clinics www.vaccineto.ca
Or call: 1-888-385-1910

Visit <https://covid-19.ontario.ca/book-vaccine/> to find a **pharmacy**
Or call your local pharmacy / website

Mobile & pop-up clinics
Host organizations will promote clinics directly to the target community



Mass Immunization Clinics



Hospitals / Ontario Health Team Immunization Clinics



Pharmacies and Primary Care Providers



Mobile Teams & Pop-up Clinics

Interactive map available online:
toronto.ca/covid19vaccinemap

- **For those with no other means to get to their vaccination appointment**

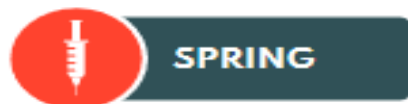
1. **Toronto Ride** - 416-481-5250; www.torontoride.ca
 2. **iRide** - 1-844-474-3301; www.circleofcare.com/vaccinerides;
 3. **Scarborough Ride** - 416 736-9372; www.schcontario.ca/schc-scarborough-ride--transportation--hemodialysis.html
 4. **Uber Canada**
 5. **TTC**
- Vouchers distributed through a network of partner community agencies

More information: <https://www.toronto.ca/home/covid-19/covid-19-protect-yourself-others/covid-19-vaccines/covid-19-how-to-get-vaccinated/?accordion=transportation-to-clinics>

Vaccinated? What Next ...

Vaccinated Against COVID-19? Here's what happens next

More people getting vaccinated means fewer people getting sick. When you get your shot, you make it safer in your community so that certain measures can be lifted and we can gather safely.



Cases are high and vaccine coverage is low.

Continue following local public health advice and maintain individual protective measures whether or not you have been vaccinated to keep yourself, your family, and your community safe.

More people need to be vaccinated before restrictions can be lifted.

Reach out to help friends, family or neighbours who might need help booking or getting to a vaccination appointment.

stay home • stay safe • get vaccinated



Cases are low and vaccine coverage is high for one dose and increasing for second.

IE 75% of those eligible for vaccines have one dose and 20% have a second dose.

THEN restrictions start to lift based on conditions in your area, but you still need to follow local public health advice and keep up with individual measures like physical distancing and wearing a mask.

You can look forward to small, outdoor gatherings with family and friends.

You should still avoid crowds.

camping • hiking • picnics • patios



Cases are low and two dose vaccine coverage is high.

IE 75% of those eligible for vaccines have received a full COVID-19 vaccination series.

THEN local public health will be able to lift more measures and you should be able to do more activities indoors with people outside your household.

However, COVID-19 will not be eliminated so you will still need to follow some public health measures.

colleges • indoor sports • family gatherings

For more information visit: canada.ca/covid-vaccine

RESIDENTS WITHOUT OHIP CARDS



Residents without an OHIP card may use other forms of identification to book a COVID-19 vaccination appointment through agency partners.

Public Health Measures Continue ...

Vaccines are **one** of many tools we have to fight the COVID-19 pandemic. It will take time before we have enough vaccine to get everyone vaccinated.



For now, we still need to wear a mask, keep our distance and wash our hands frequently.

DON'T PLAY

THE TELEPHONE GAME

STOP THE SPREAD OF COVID-19 MISINFORMATION



More Than A Disease



You Are Not Alone

You are not alone. Support is available.

Call 211 if you are having a hard time. Through 211 anyone be connected to free mental health supports, including including kids, seniors, racialized, Indigenous, Black and LGBTQ2S communities.

Language interpretation is available if you don't speak English.



These are stressful times.
Reach out for help to find
mental health support.
**Call 211, 24 hours a day,
7 days a week.**

Be part of something greater.
Your shot protects others too!



Protected together.

Toronto Public Health COVID-19 Hotline

Have questions?

Call Toronto Public Health

416-338-7600

8:30 am to 8:00 pm

Interpreter service is available in many languages.

TTY 416-392-0658

More information about COVID-19 & vaccines:

toronto.ca/covid19

Questions?



FCJ Refugee Centre

416-469-9754 ext. 230 or 232; WhatsApp: 437-217-3786

Access Alliance

Telephone: 416-760-8677

Toronto Public Health Hotline

Telephone: 416-338-7600; TTY: 416-392-0658

Phone interpretation services available

Which COVID-19 Vaccine Is Best For Me?

WHICH COVID-19 VACCINE IS BETTER FOR ME?



All the approved vaccines are safe and effective



All the vaccines will protect you from serious illness



Get vaccinated as soon as you are eligible



Vaccinating more people will reduce the spread of COVID-19

4 Vaccines Approved In Canada



For 12-18 years
& older, including seniors

Real world effectiveness

2 dose schedule, except for
Janssen

Name	Technology	Available in Ontario	Dose schedule
Pfizer BioNTech	mRNA	12 years +	2 doses
Moderna	mRNA	18 years +	2 doses
AstraZeneca/ COVISHIELD	viral vector	<i>1st dose paused until further notice</i>	2 doses
Janssen	viral vector	30 years +	1 dose

City of Toronto Immunization Clinic Locations



- North Toronto Memorial Community Centre (200 Eglinton Avenue West)
- Mitchell Field Community Centre (89 Church Avenue)
- The Hangar (75 Carl Hall Road)
- Metro Toronto Convention Centre (255 Front Street West)
- Scarborough Town Centre (300 Borough Drive)
- Carmine Stefano Community Centre (3100 Weston Road)
- Toronto Congress Centre (650 Dixon Road)
- Malvern Community Recreation Centre (30 Sewells Road)
- Cloverdale Mall (250 The East Mall)

Interactive map available online:
toronto.ca/covid19vaccinemap

TOGETHER, WE CAN GET OUT OF THE 3RD WAVE



**Take care of
your physical
& mental
wellbeing.**



**Stay home
except for
essential reasons
& exercise.**



**Gather only with
members of
your household.**



**Keep your
distance, wear
your mask, wash
your hands.**



**Get the
COVID-19
vaccine when it is
available to you.**

Mental Health Support during COVID-19

It's okay not to feel okay. Many people may feel sad, worried, scared, confused or angry during COVID-19. These are normal and common responses to unexpected or stressful situations.



Stay connected. Play a virtual game, check in on a neighbour, have a video conference.



Be active & take care of yourself. Exercise, eat well, get enough sleep.



Take time to engage virtually or by phone with friends, family or loved ones.



Learn something new. Try a new hobby or take an online course.



Help someone else. Doing good can feel good.



Reach out for help. Talk to someone you trust or seek professional support.

How vaccines were developed so fast?

- Scientists & researchers around the world sharing data
- Building on existing research & technology
- Large scale funding allowed for multiple testing and large clinical trials
- Over 280 vaccine products were tested
- All vaccines approved by Health Canada still had to meet all safety, efficacy and quality standards

Vaccine ingredients

Pfizer-BioNTech	Moderna	AstraZeneca / COVISHIELD	Janssen
<ul style="list-style-type: none"> ▪ active ingredient: mRNA 	<ul style="list-style-type: none"> ▪ active ingredient: mRNA 	<ul style="list-style-type: none"> ▪ active ingredient: ChAdOx1-S recombinant 	<ul style="list-style-type: none"> ▪ active ingredient: Ad26.COV2.S recombinant
<ul style="list-style-type: none"> ▪ lipids, cholesterol ▪ polyethylene glycol [PEG-2000] 	<ul style="list-style-type: none"> ▪ lipids, cholesterol ▪ polyethylene glycol [PEG-2000] 	<ul style="list-style-type: none"> ▪ amino acid: L-Histidine, L-Histidine hydrochloride monohydrate ▪ emulsifier: polysorbate 80 	<ul style="list-style-type: none"> ▪ emulsifier: 2-hydroxypropyl-β-cyclodextrin, polysorbate-80
<ul style="list-style-type: none"> ▪ salts: potassium chloride, monobasic potassium phosphate, sodium chloride, dibasic sodium phosphate dehydrate ▪ sugars: sucrose 	<ul style="list-style-type: none"> ▪ salts: acetic acid, sodium acetate, ▪ sugars: sucrose ▪ buffers: tromethamin, tromethamin hydrochloride 	<ul style="list-style-type: none"> ▪ salts: sodium chloride, disodium edetate dihydrate (EDTA), magnesium chloride hexahydrate ▪ sugars: sucrose ▪ alcohol: ethanol 	<ul style="list-style-type: none"> ▪ buffers: citric acid monohydrate, hydrochloric acid, sodium hydroxide, trisodium citrate dehydrate ▪ salts: sodium chloride ▪ alcohol: ethanol