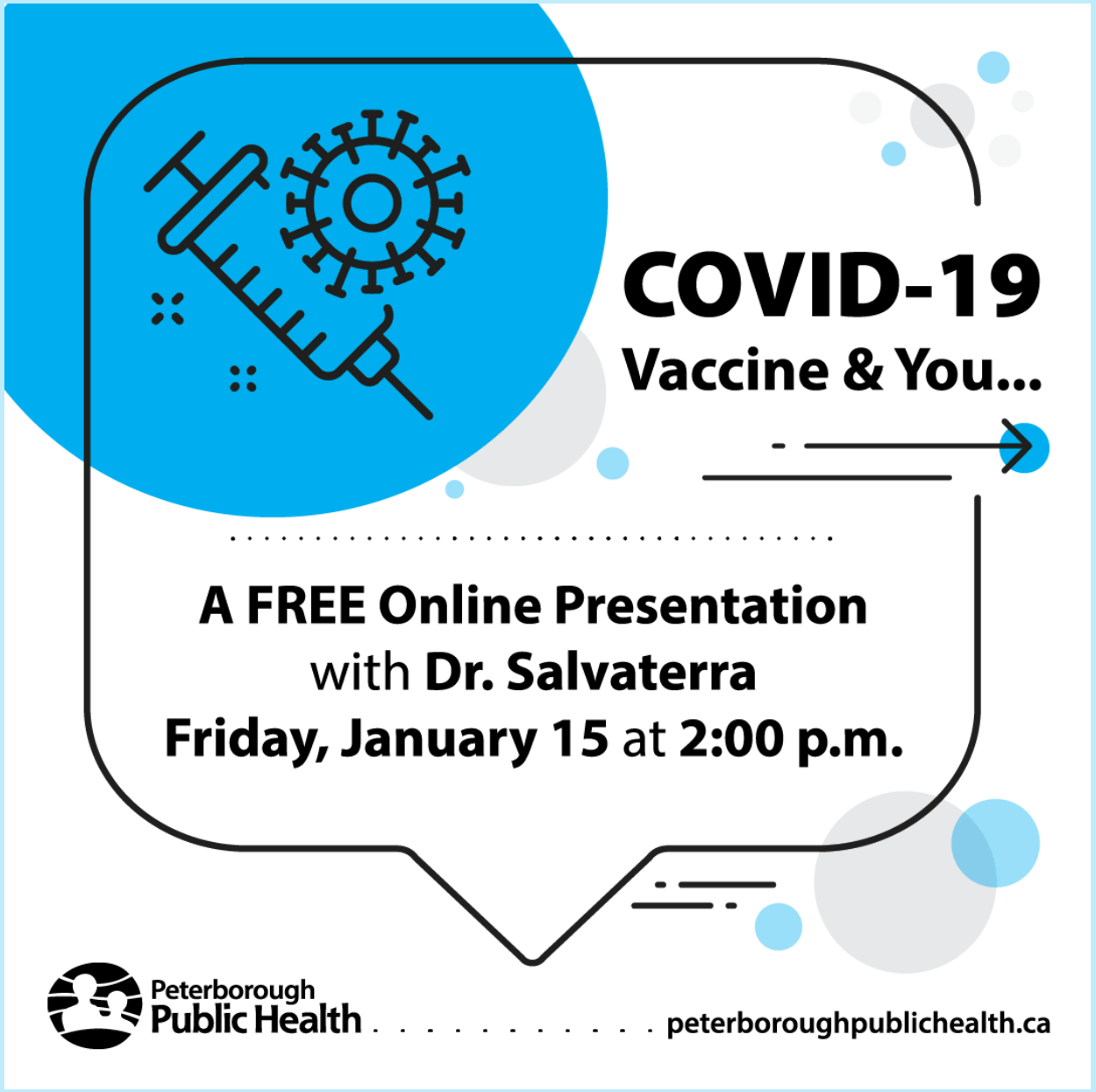
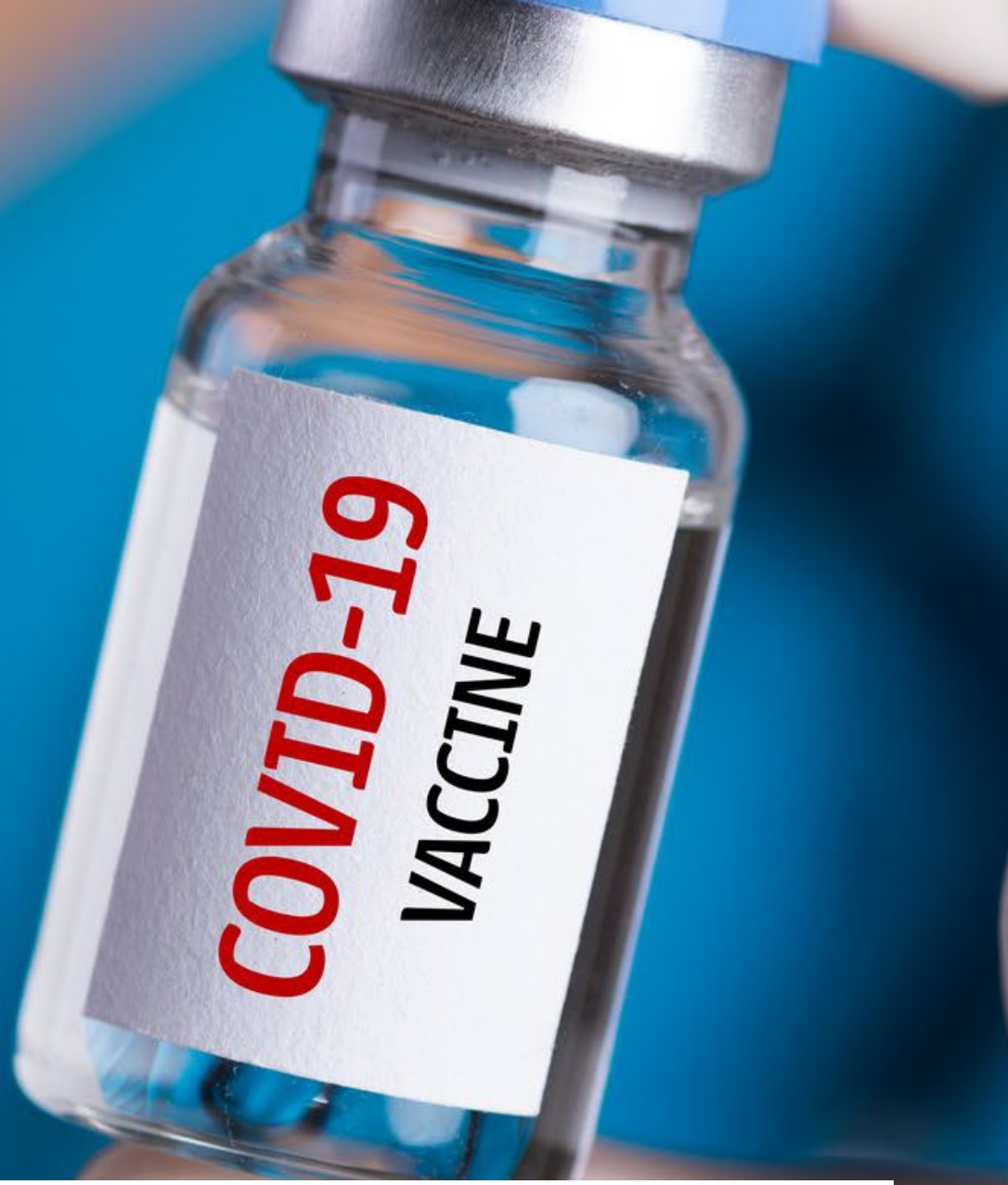

COVID-19
Vaccine & You...
A FREE Online Presentation
with Dr. Salvaterra
Friday, January 15 at 2:00 p.m.
Peterborough
Public Health
peterboroughpublichealth.ca

Vaccine Information Session

January 15, 2021



Peterborough Public Health

Serving the residents of **Curve Lake** and **Hiawatha First Nations**, and the **County** and **City of Peterborough**

Introduction & Ground Rules

- This information will be specific to residents of Peterborough City, County, Hiawatha First Nations, and Curve Lake First Nations.
- We received many questions during registration, will be touching on the most commonly asked questions. These questions will be posted on our webpage FAQ after along with some that we did not have time for during this presentation.
- If you are having technical difficulties please go over to PPH YouTube channel. Search ‘ptbohealth’ in youtube
- Webinar recording will be available on Peterborough Public Health YouTube channel after the event
- Mics will be muted during presentation. If there is time for more questions at the end we will be taking those from the **chat box**. If you have a question please ask it at the end of the presentation.

Agenda

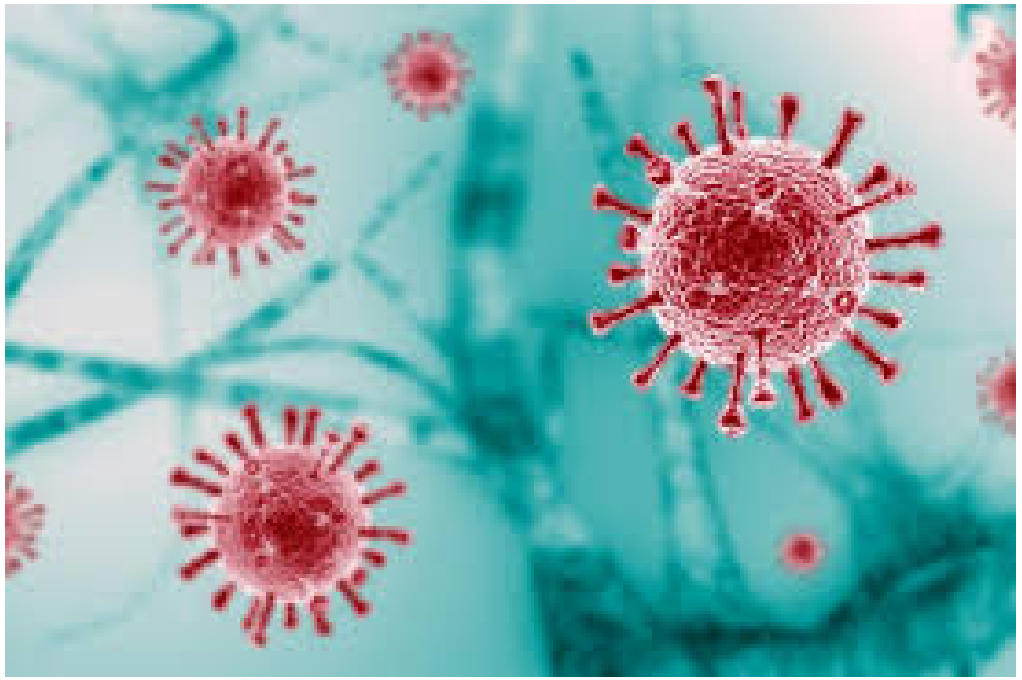
- First, we will start with what we don't know yet about COVID and the vaccines
- Then I will share what we know: how the vaccines work, how helpful they will be to protect you against COVID-19, what the side effects will be
- We will talk about when and how you will be able to be immunized against COVID-19
- There will be lots of opportunities to ask questions about the vaccines in the chat box afterwards

What do we NOT know about mRNA vaccines yet?

Some answers to our questions need more time and research

What do we NOT know about mRNA vaccines yet?

We are still learning which type of immune responses are important for protection from infection, severe disease, or transmission. We don't know that yet.



What do we NOT know about mRNA vaccines yet?

We don’t know how long the vaccines will work and whether their protection may change over time.

The clinical trials will continue for 2 years so we will learn more about whether the vaccines will need a booster shot as more research is done.

What do we NOT know about mRNA vaccines yet?

We still need to understand whether the immune system acts differently, depending on whether it has been triggered by a vaccine or by natural infection.

What do we NOT know about mRNA vaccines yet?

We still don’t understand yet how immune responses differ in different groups of people, such as those whose immune systems may not be working well, or in children.

These studies have yet to be completed.

What do we NOT know about mRNA vaccines yet?

Coronaviruses cause cold-like illnesses in humans and some, like MERS-CoV or SARS, can cause severe disease.

We still don’t know if people who have had other coronavirus diseases in the past will have a different immune response to the vaccine against COVID-19.

What DO we know about the COVID-19 vaccines?

We are learning more every day!

So how does the Moderna or Pfizer Vaccine work?

- The coronavirus that causes COVID-19 uses a “spike” protein that is on its surface to attach to our body’s cells.
- This creates the door for the virus to enter, or infect, our cells.
- The vaccine works by helping our immune system recognize the spike protein so that if the virus is detected, our immune system can respond quickly and effectively to prevent infection. It recognizes the virus before it can even knock on the door.

The vaccine is NOT a magic wand

- If you are already infected when you are immunized, you will still get COVID-19
- If you are infected before your body's immune system is fully armed, you may still get sick with COVID-19.
- Even if the vaccine has worked and your immune system is now armed and activated, it's not 100% effective. It may help prevent severe disease.

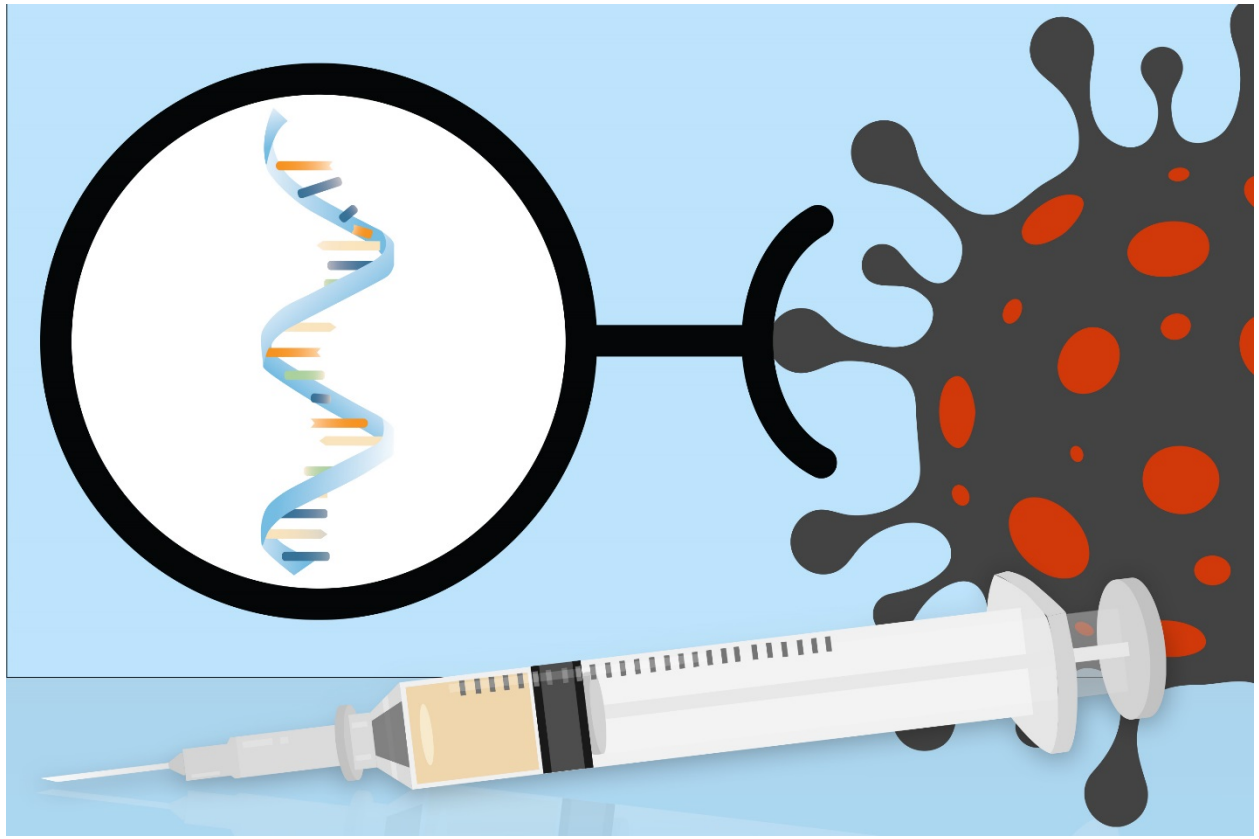
Can I get COVID from an mRNA vaccine?

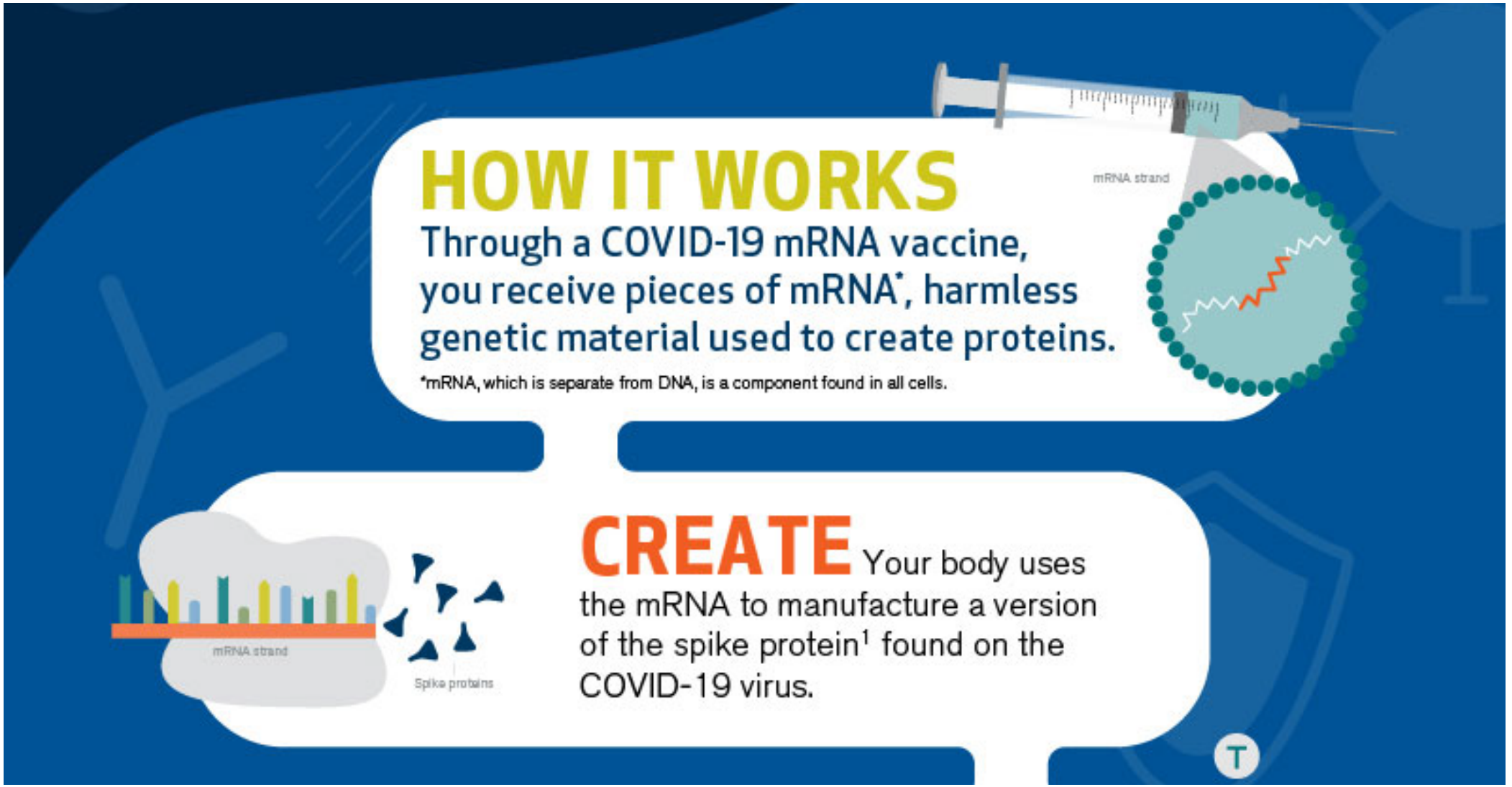
The vaccine does not contain the virus so you can't catch COVID from it.

However, the immune system takes 14 days to respond, and protection is not optimal until 2 weeks after the second dose.

What is “messenger RNA” and how does it work as part of the Pfizer and Moderna vaccines?

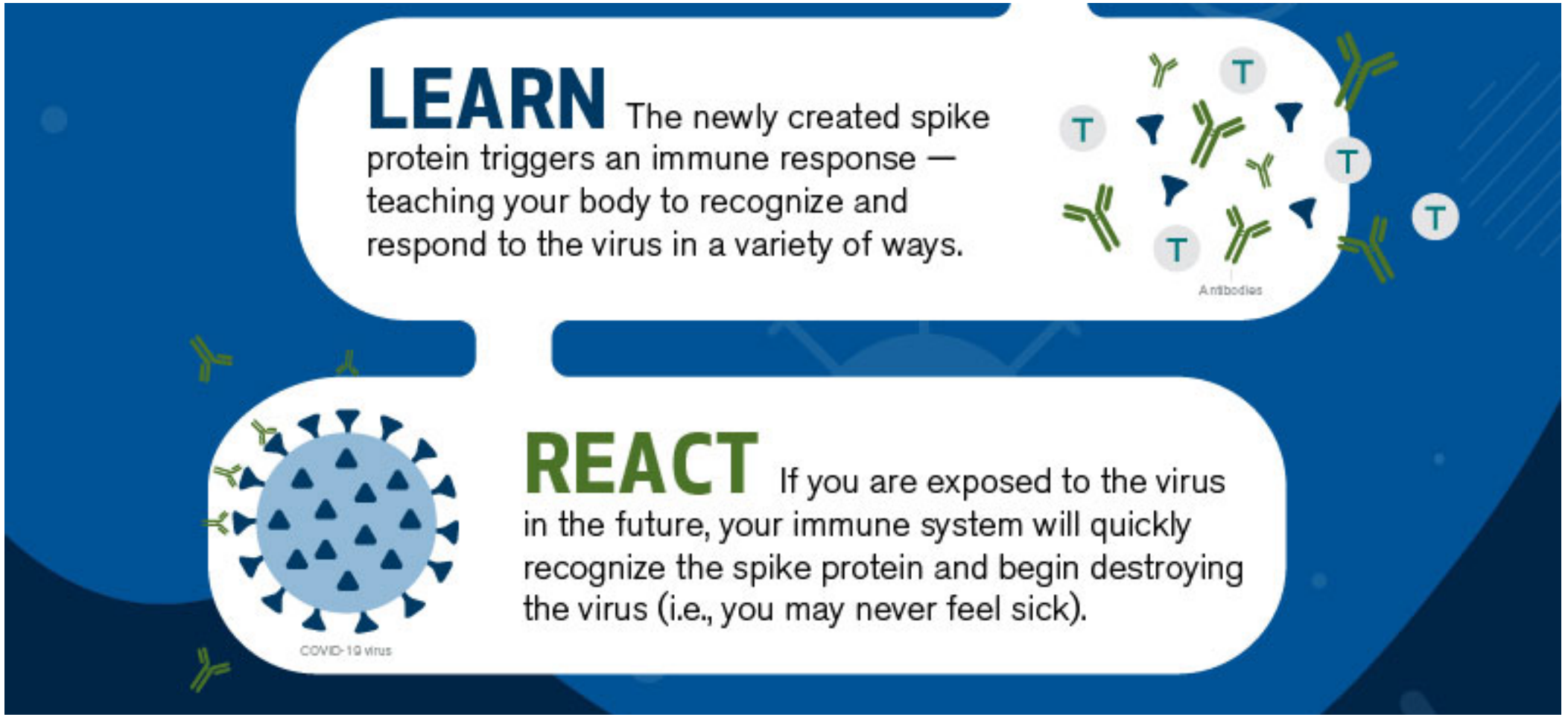
We all have Messenger RNA as part of our cells. Usually it is very busy, travelling back and forth from the nucleus of the cell to the ribosomes, which are the protein factories in the cell.





[1]Spike protein: A component on the outer shell of the COVID-19 virus. By itself, the spike protein is completely harmless.

Source: Houston Methodist Leading Medicine



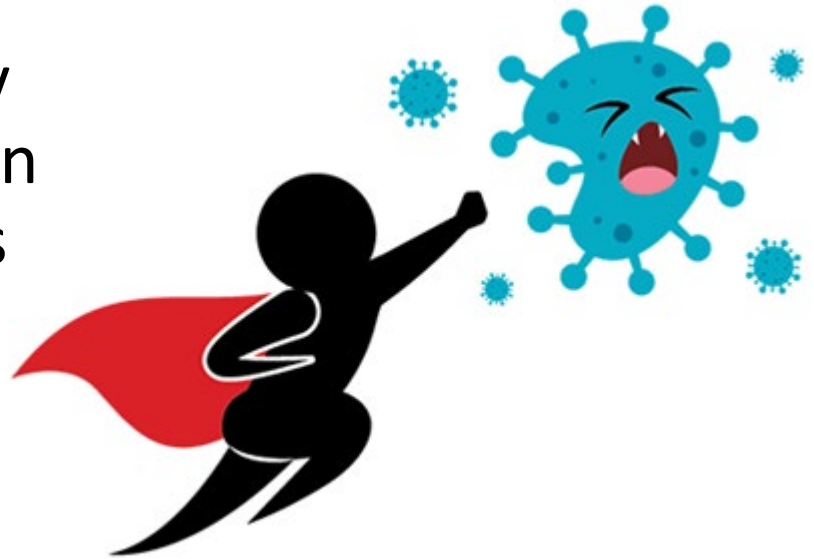
Source: Houston Methodist Leading Medicine

The Benefit of Getting Vaccinated

The COVID-19 virus replicates quickly.

Without the vaccine, your body has to identify the virus, learn how to fight it, and carry out an immune response. In the meantime, the virus can replicate to a level beyond what your immune system can handle at once (i.e., you feel sick).

With the vaccine, your body can more quickly identify the virus and skip straight to mounting it's immune response.



Source: Houston Methodist Leading Medicine

Does the mRNA in the vaccine pose any risk to my DNA?

- Your DNA is your genetic code for all the different proteins that keep your body running – this master recipe book is very precious and can't leave the nucleus of the cell.
- The vaccine does not enter the nucleus of the cell and does not interact with the DNA. It goes straight to the factory, the cell's ribosomes, where it provides the instructions for the spike protein. mRNA vaccines do not change your DNA.
- Human beings do not have the enzymes to convert RNA into DNA. In fact, our cells have enzymes that destroy the mRNA after the protein is made – which is why the vaccine doesn't stay in your body for long.

How long do those spike proteins stay on our muscle cells?

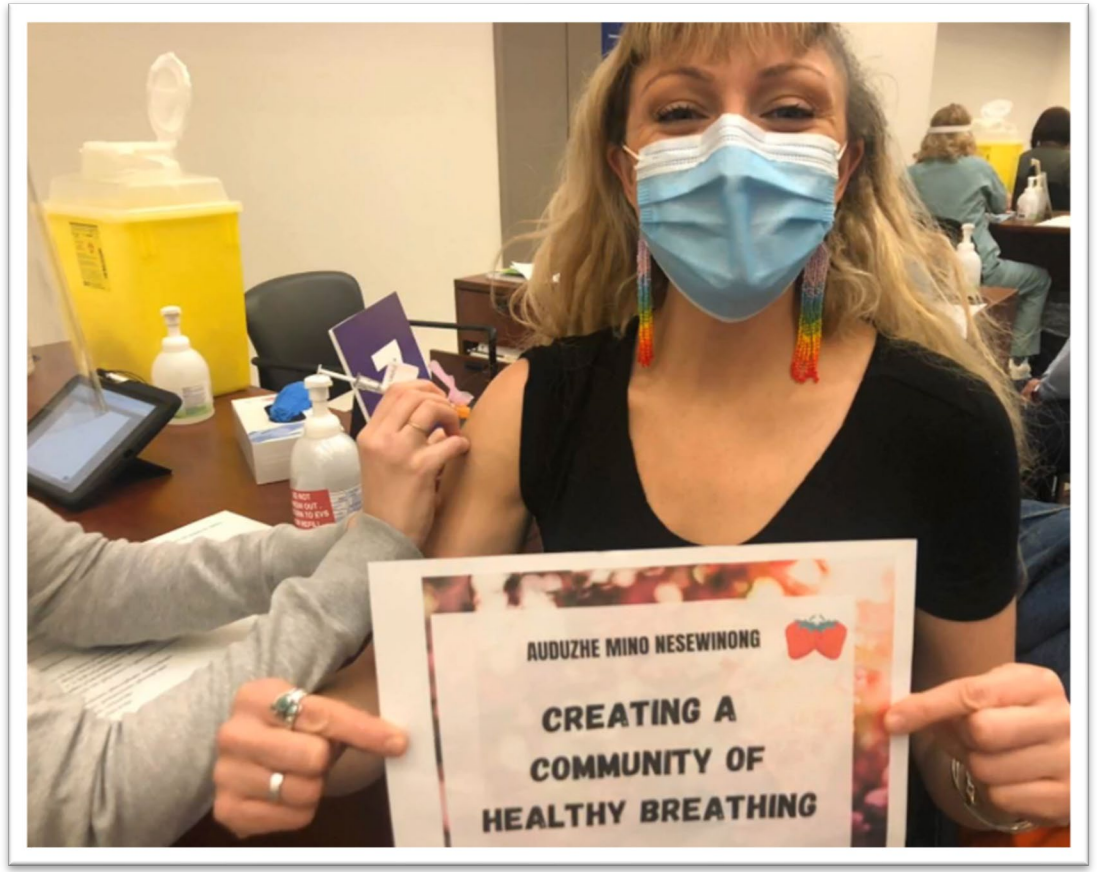
- Both the vaccine mRNA and spike protein are cleared by the immune system.
- This usually takes anywhere from a few hours to a few days.

How safe is the Moderna Vaccine?

The most frequently reported adverse reactions after any dose were:

- pain at the injection site (92.0%)
- fatigue (70.0%)
- headache (64.7%)
- myalgia (61.5%)
- chills (45.4%)

The majority of local and systemic adverse reactions had a median duration of 1 to 3 days. These are all signs that the immune system is being activated!



Source: Women's College Hospital Indigenous Health

Does the Pfizer Vaccine have the same side effects?

- YES
- Common symptoms after immunization are a sore arm (81%), fatigue (63%), Headache (55%), Muscle and joint aches (24-39%)
- Fever is NOT common (only 14%) so if you are ill after your immunization and have a fever or other symptoms of COVID, please get a medical assessment +/- COVID test as you may have been incubating
- Symptoms usually last about 1-3 days, are more common with the second dose and milder with older age

Who shouldn’t get the COVID-19 Vaccine?

- There is no data for groups that were not included in the clinical trials: Children, Pregnant and Breastfeeding Women. More on this…
- Anyone with an anaphylactic reaction to any of the vaccine ingredients (Polyethylene Glycol, or PEG). More on this…
- Anyone who is acutely sick
- Uncertain benefit in people who are immunocompromised
- COVID-19 vaccine should be given with caution in individuals with bleeding disorders, such as haemophilia, or individuals currently on anticoagulant therapy (what’s your INR?)

Safety analysis of Phase III Moderna Trial:

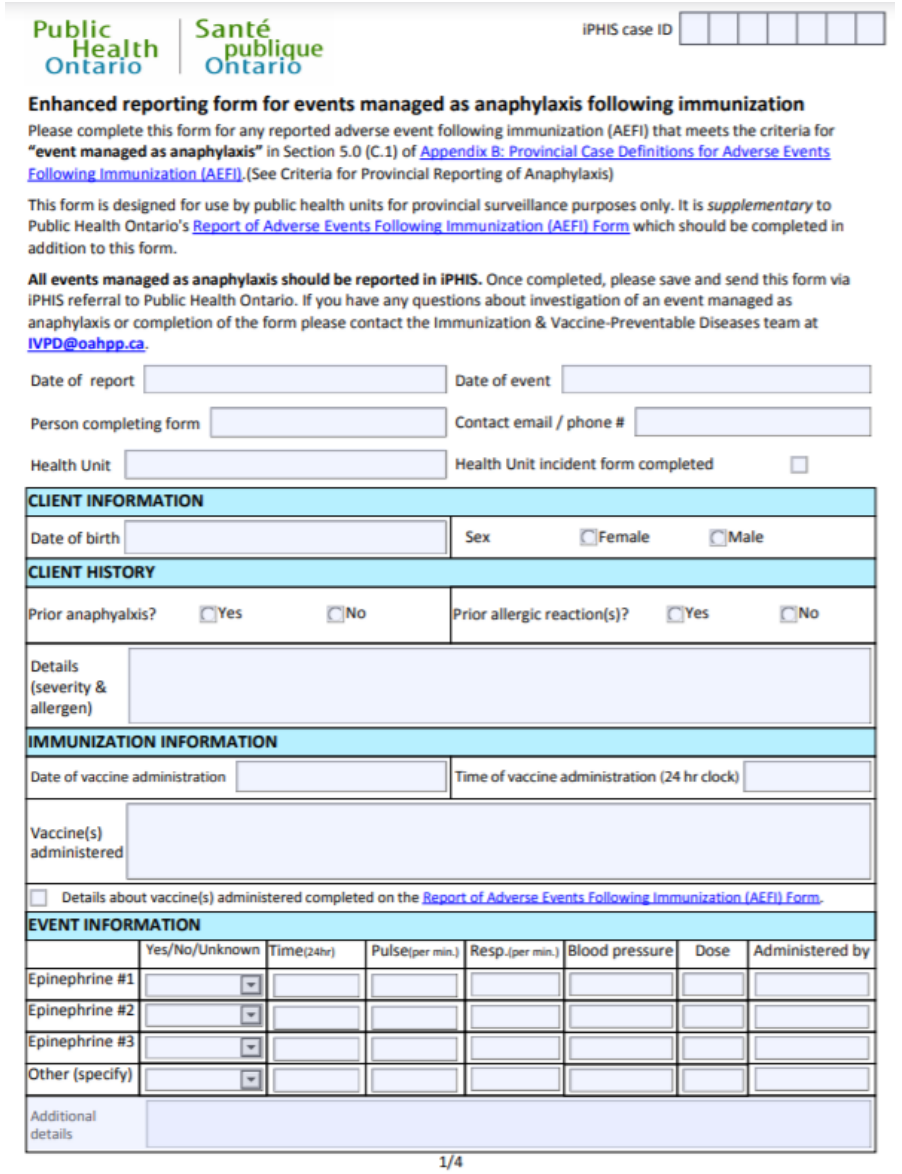
- 30,351 subjects who received at least one dose of Moderna COVID-19 Vaccine (n=15,181) or placebo (n=15,170)
- Subjects were followed for a median of 92 days from first injection and 63 days from second injection
- Were reduced in older recipients
- Were more common after the second dose
- 3 “serious” adverse events: 2 cases of facial swelling occurring within 7 days of receiving dose 2; 1 case of N,V,H and fever requiring in-hospital treatment in a recipient with past medical history of H, N, and V requiring hospitalization.

Safety analysis of Phase III Pfizer Trial:

- 44,000 subjects who received at least one dose of Pfizer COVID-19 Vaccine (n=21,720) or placebo (n=21,728)
- Subjects were followed for a median of 2 months from first injection for 19,067 recipients who were part of the safety analysis
- Similar symptoms as with Moderna vaccine
- Were reduced in older recipients
- Were more common after the second dose
- 0.4% of participants (16-55) reported an unsolicited serious reaction and for recipients 56 years of age and older, this was 0.8%

Post-Marketing Surveillance

- Adverse event following immunization (AEFI) reporting
- Immunizer must report to local MOH
- MOH investigates and reports to PHO
- Special Immunization Clinics
- CANVAS volunteer surveillance:
  - 50,000 participants/vaccine/province/region
  - Online survey 8 days after dose 1 and 8 days, 2 and 6 months after dose 2
  - Telephone follow up for medically attended events up to 72 hours after event reported



Public Health Ontario | Santé publique Ontario

iPHIS case ID

Enhanced reporting form for events managed as anaphylaxis following immunization

Please complete this form for any reported adverse event following immunization (AEFI) that meets the criteria for **"event managed as anaphylaxis"** in Section 5.0 (C.1) of Appendix B: Provincial Case Definitions for Adverse Events Following Immunization (AEFI).(See Criteria for Provincial Reporting of Anaphylaxis)

This form is designed for use by public health units for provincial surveillance purposes only. It is *supplementary* to Public Health Ontario's Report of Adverse Events Following Immunization (AEFI) Form which should be completed in addition to this form.

All events managed as anaphylaxis should be reported in iPHIS. Once completed, please save and send this form via iPHIS referral to Public Health Ontario. If you have any questions about investigation of an event managed as anaphylaxis or completion of the form please contact the Immunization & Vaccine-Preventable Diseases team at IVPD@oahpp.ca.

Date of report | Date of event

Person completing form | Contact email / phone #

Health Unit | Health Unit incident form completed ☐

CLIENT INFORMATION

Date of birth | Sex ☐Female ☐Male

CLIENT HISTORY

Prior anaphyalxis? ☐Yes ☐No | Prior allergic reaction(s)? ☐Yes ☐No

Details (severity & allergen)

IMMUNIZATION INFORMATION

Date of vaccine administration | Time of vaccine administration (24 hr clock)

Vaccine(s) administered

☐ Details about vaccine(s) administered completed on the Report of Adverse Events Following Immunization (AEFI) Form.

EVENT INFORMATION

	Yes/No/Unknown	Time(24hr)	Pulse(per min.)	Resp.(per min.)	Blood pressure	Dose	Administered by
Epinephrine #1							
Epinephrine #2							
Epinephrine #3							
Other (specify)							

Additional details

1/4

Pregnant Health Care Workers:

- COVID-19 mRNA vaccine can be offered if they have been counselled by their treating provider on the risks and benefits of the vaccine, the potential risks of a COVID infection in pregnancy, a review of the risk of acquiring a COVID-19 infection in pregnancy, and provided the client recognizes the insufficiency of evidence for the use of COVID-19 vaccine specifically in the pregnant population.

Breastfeeding Health Care Workers

- COVID-19 mRNA vaccines are not live vaccines, and based on their biologic mechanism of action, mRNA vaccines are not hypothesized to be a risk to the breastfeeding infant. The COVID-19 vaccine should be offered provided the client recognizes the insufficiency of evidence for the use of COVID-19 vaccine specifically in the breastfeeding population.

Can I still get the vaccine if I'm trying to get pregnant?

- There is limited information on the use of this Pfizer vaccine in pregnant people.
- For the general public, if you are pregnant, breastfeeding, or planning to have a baby, talk to your health care provider before getting the vaccine.
- As a precaution, avoid trying to get pregnant for one to two months after finishing this two-dose vaccine.

Persons with Autoimmune Conditions & Immunocompromised Persons (due to disease or treatment)

- the majority of people in these groups can be offered the COVID-19 vaccine provided the client recognizes the insufficiency of evidence for the use of COVID-19 vaccine specifically in these populations and the possible decreased vaccine effectiveness with the use of immunosuppressive therapy.
- Those who are receiving the following immunosuppressive therapies can be offered the vaccine if they have been counselled by their treating provider and it has been determined that the potential benefits of vaccination outweigh the potential risks for them:
- stem cell therapy, CAR-T therapy, chemotherapy, immune checkpoint inhibitors, monoclonal antibodies (e.g. rituximab) and other targeted agents (e.g., CD4/6 inhibitors, PARP inhibitors etc.)

People with a history of severe allergies:

- Anyone who has had a severe allergic reaction (i.e. anaphylaxis) to other vaccines or injectable therapies must be evaluated by an allergist or immunologist before getting the vaccine.
- Anyone with a history of severe allergic reactions (i.e. anaphylaxis) not related to vaccines or injectable therapies – such as food, pet, insects, venom, environmental - should be offered the COVID-19 vaccine. These people should remain in after care for 30 minutes post-vaccination.
- Will need documentation of assessment and confirmation of recommendation for immunization

Pfizer and Risk of Anaphylaxis (CDC, Jan6th)

- 1,893,360 first doses administered (as of December 20, 2020)
- 4,393 (0.2%) adverse events reported, including
- 175 “possible severe allergic reactions” investigated, of which
- 21 cases of anaphylaxis diagnoses (rate of 11 per million doses)
- 90% females and 81% had documented history of allergies to drugs, medication, insect stings or food)
- Median interval was 13 minutes following immunization (2-150 min)
- No deaths

Questions…

1. What is the vaccine roll out plan for Ontario?

- Phase 1 of Ontario distribution plan includes:
  - Residents, staff, essential caregivers of senior congregate living centres
  - Healthcare workers
  - First Nations, Metis, Inuit populations
  - Adult recipients of chronic home care
- Phase 2: (will be completed by July 2021)
  - Older adults starting at 80 yrs and decreasing by 5 year increments
  - Residents or staff of high-risk congregate care settings
  - Front line essential workers (first responders, educators, food processing industry)
  - Other populations that face barriers related to the SDOH

2. What is the vaccine roll out plan for Peterborough? When can the general public expect the vaccine?

- Long-term care home residents, staff, and essential caregivers will be vaccinated with their first dose of Pfizer-BioNTech by February 15.
- The province prioritized these populations based on those at greatest risk for COVID-19 related complications and those that come in close contact with those that may be at risk for severe complications related to COVID-19
- There will be a short supply of vaccine until March-April
- We anticipate mass immunizations of community priority groups to begin in May, 2021
- We anticipate having widespread access of vaccine by the end of the summer.

3. How will vaccine clinic information be communicated?

- Peterborough Public Health is committed to keeping everyone up to date on the vaccine roll-out locally.
- All information can be found on our webpage (peterboroughpublichealth.ca) and will be communicated through our social media channels
- For specific populations that are to be vaccinated (ie, HCW, first responders) you will be contacted directly or through your employer.
- When mass vaccination clinics begin, all information will be on our webpage, on our social media platforms, communicated to the media, and advertised as needed.

4. Can I still get the vaccine if I have existing health conditions (such as diabetes, high blood pressure, hepatitis, HIV)?

Yes. People with stable health conditions, including HIV, may be vaccinated with the COVID-19 vaccine as long they are not on medications that weaken the immune system. This also includes people with stable hepatitis B or C.

5. How effective is the COVID vaccine?

- Both mRNA vaccines compared vaccine recipients to those who received a placebo.
- In both trials, everyone was followed for 2 months after the second dose
- For the Moderna vaccine, there were 11 confirmed COVID-19 cases in the vaccine group and 185 in the placebo groups (94.1% efficacy) For participants 65 years of age and older, efficacy was 86.4%. None of the vaccine recipients had severe cases.
- For the Pfizer vaccine, there were 8 cases in the vaccine group and 162 in the placebo. Efficacy reported at 95%. For participants 65 years of age of older, it was 94.7%.

6. What's in the vaccine?
The Pfizer vaccine contains no latex and…

Non-medicinal ingredients:

- 1,2-distearoyl-sn-glycero-3-phosphocholine (DSPC) (a phospholipid),
- acetic acid (vinegar),
- cholesterol,
- PEG2000 DMG (1,2-dimyristoyl-rac-glycerol,methoxy-polyethylene glycol),
- lipid SM-102 (lipid nanoparticle that carries the mRNA),
- sodium acetate (a salt),
- Sucrose (sugar),
- Tromethamine (a buffer)
- tromethamine hydrochloride,
- water for injection.

7. How long can I go before the second dose?

- January 12, 2021 National Advisory Committee on Immunization (NACI) Statement revised to address interval
- Up to 42 days between first and second doses if required to immunize more people with the first dose (6 weeks)
- Otherwise, both mRNA vaccines can be given 4 weeks apart

8. If I have had COVID-19 and recovered, do I still need the vaccine?

Yes. There is some evidence to suggest that natural immunity from a COVID-19 illness may not last very long. It is best to get the vaccine to stay protected.

9. Do I still need to wear and mask and avoid close contact with others if I have received this two-dose vaccine?

Yes. It is still important for everyone to continue with public health measures like wearing a mask, physical distancing and washing hands often until we can be sure that the vaccine prevents the spread of most COVID-19 infections.

10. Will the vaccine protect me against the Variants?

- The novel corona virus that causes COVID-19 is constantly mutating – it is normal for variants to emerge
- The recent variants (UK and South Africa) have changes to the genetic code of the spike protein
- Pfizer has tested the new variant against blood samples from immunized recipients in their ongoing clinical trial and all of them were able to neutralize the virus. This will be published soon.
- Pfizer and Moderna are able to genetically sequence the virus in any study participants who are diagnosed with COVID-19
- Currently, the expectation is that the vaccine will be effective
- A new mRNA vaccine can be produced in about 6 weeks if needed

11. Why should I get the COVID-19 vaccine?

- Immunization against COVID-19 provides the best level of protection against the virus
- Get the vaccine to keep your friends, family, and community safe
- Get the vaccine to ensure you remain in the workforce and do not get sick
- Get the vaccine to avoid getting COVID-19 and any potential severe complications or life-long complications

Thank you for joining us!

For more information, please visit
www.peterboroughpublichealth.ca

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