

# COVID-19 VACCINE

## Frequently asked questions

## FAQ

Last updated: December 17, 2021

### How were the COVID-19 vaccines developed? Are they safe?

- When the COVID-19 virus was first found, many scientists around the world started working to make vaccines to fight it. It usually takes a long time to develop a vaccine. This time everyone worked together to make sure there was enough money, people and the right tools to allow many of the steps of making the vaccine to happen at the same time. Safety was checked at every step along the way.
- Every year scientists create a safe, new vaccine for the seasonal flu.
- Feeling worried or unsure is common when something is new. However, Health Canada has a careful approval process that makes sure all of the vaccines and medicines we take are safe.
- Doctors and scientists have worked to make sure that all four vaccines available in Canada are safe. They continue to monitor vaccine safety to identify any rare side effects. This process helps to ensure that we maintain a safe and effective vaccine supply.
- After millions of people received the vaccines, it was discovered that the AstraZeneca and Janssen vaccines can cause a rare but serious blood disorder called vaccine-induced thrombotic thrombocytopenia (VITT). It can cause blood clots, ICU admission and even death. However, safety monitoring is so strict that scientists were able to notice this rare side effect and now doctors are able to recognize and treat it.

### Is there more than one COVID-19 vaccine?

- There are many vaccines being developed around the world. Right now, four vaccines have been approved in Canada: The Pfizer-BioNTech, Moderna, AstraZeneca and Janssen (Johnson & Johnson) vaccines. The vaccines may have been developed and work in slightly different ways, but all of them will protect you from death and hospitalization due to COVID-19.

## What is the difference between the Pfizer-BioNTech, Moderna, AstraZeneca and Janssen (Johnson & Johnson) vaccines?

Vaccine name	Pfizer-BioNTech	Moderna	AstraZeneca	Johnson & Johnson
Type of vaccine	mRNA	mRNA	Adenovirus-based	Adenovirus-based
Age eligibility	10 mcg dose (pediatric vaccine): age 5–11 30 mcg dose: 12 and older	30 and older	18 and older	18 and older
Doses required	2 doses	2 doses	2 doses	1 dose

- In Ontario, a person who has two doses of the Pfizer-BioNTech, Moderna or AstraZeneca vaccines and one dose of the Janssen (Johnson & Johnson) vaccine is considered to be fully vaccinated. However, it is now recommended that everyone aged 18 and older get a third (booster) shot to make sure they still have strong protection against COVID-19, including the new Omicron strain.

### What is an mRNA vaccine?

- The Pfizer-BioNTech and Moderna vaccines are mRNA vaccines.
- Research on mRNA is not new. It has been researched for decades.
- mRNA gives your cells the recipe to make antibodies that fight off the COVID-19 virus.
- Scientists identified the “spike protein” found on the COVID-19 virus. Then they made the mRNA vaccine to tell your body how to build that spike protein.
- When you get the vaccine, it instructs your cells to make the harmless spike protein. Your immune system will then build antibodies to fight it off. If you come into contact with the COVID-19 virus, your body will know how to fight it off. This is why you might have muscle soreness, fever and other mild side effects right after receiving the vaccine.
- Now your immune system will remember the virus. If you come into contact with the COVID-19 virus, your body will recognize it and know how to fight it off without making you sick.
- The vaccine does not give you COVID-19.

### What is an adenovirus-based vaccine?

- AstraZeneca and Janssen (Johnson & Johnson) are adenovirus-based vaccines.
- Adenoviruses are common viruses that can cause cold-like symptoms.

*(continued on page 3)*

*(continued from page 2)*

- Adenoviruses-based vaccines have been studied for decades. They are used to deliver genes (DNA) of other viruses and instruct your body's cells to make antibodies, but they do not cause the disease.
- For the COVID-19 vaccine, researchers swapped in a gene from the COVID-19 virus.
- The adenovirus vaccine makes the harmless COVID-19 virus spike protein, which tells your body's immune system to make antibodies to fight off the virus.
- This is why you might have muscle soreness, fever and other mild side effects soon after receiving the vaccine.
- Now your immune system remembers the COVID-19 virus. If you contract COVID-19, your immune system will know the virus and fight it off without making you sick.
- The vaccine does not give you COVID-19.

### **Are vaccines with a higher efficacy rate better than vaccines with a lower efficacy rate?**

- Vaccine efficacy is a term used in clinical studies. It refers to the drop in COVID-19 cases in people who got vaccinated (treatment group) compared with people who did not get vaccinated (placebo group), under controlled conditions.
- Effectiveness is different from efficacy—effectiveness is how well a vaccine works in the real world, not in a clinical trial.
- All four vaccines are highly effective in preventing hospitalization and death due to COVID-19.
- All four vaccines protect you from severe symptoms, hospitalization and death due to COVID-19.

### **What about blood clots associated with some of the vaccines?**

- VITT is a rare but serious blood disorder that can develop four to 28 days after getting the AstraZeneca or Janssen vaccines. VITT has not been associated with the Pfizer or Moderna vaccines.
- People who have had a similar disorder called heparin induced thrombocytopenia (HIT) or who have had cerebral sinus vein thrombosis may be at higher risk of developing VITT. The disorder can lead to certain types of blood clots, ICU admission and even death.
- COVID-19 can also cause blood clots, ICU admission and death. In some cases, the risk of developing health problems from the AstraZeneca or Janssen vaccine may be much lower than the risk of having a serious complication from COVID-19. Speak with your health care provider to get information about your risks and to help you decide whether to get these vaccines.
- Due to the higher risk of VITT with the AstraZeneca vaccine, the Ontario government has decided to pause on giving first doses of this particular vaccine. If you have already had your first dose, know that you have taken a very effective vaccine. You may still receive AstraZeneca as your second dose, or you may be offered a different vaccine for your second dose.

## **I received my first dose of the AstraZeneca vaccine. What happens to my second dose now that Ontario has put a hold on this particular vaccine?**

- Based on the most recent risk assessment and the increasing availability of the Pfizer and Moderna vaccines, Ontario has decided to pause on giving first doses of the AstraZeneca vaccine.
- The AstraZeneca vaccine is still very effective, but it carries the risk of a very rare blood disorder called VITT that may develop four to 28 days after receiving the first dose.
- If you had a first dose, know that you are well protected against getting really sick from COVID-19. For your second dose, you may be offered AstraZeneca, or you may be offered Pfizer or Moderna instead. We will update this FAQ once further guidance is available.

## **What are symptoms of VITT?**

- It is normal to feel tired, achy or have pain at the injection site after a vaccine. These are not signs of VITT. If you received your first dose of the AstraZeneca vaccine four to 28 days ago, you would be aware by now of symptoms that may indicate VITT. Go to the nearest emergency room if you experience the following symptoms four to 28 days after your AstraZeneca vaccine:
  - severe headache that does not go away
  - seizure
  - difficulty moving part of your body
  - new blurry or double vision that does not go away
  - difficulty speaking
  - shortness of breath
  - severe chest, back or abdominal pain
  - unusual bleeding or bruising
  - new reddish or purplish spots or blood blisters
  - new severe swelling, pain or colour change of your arm or leg.

## **If I got the flu shot, can I still get a COVID-19 vaccine?**

- Yes, you can get a COVID-19 vaccine even if you got the flu shot. Having both will not cause any problems. The flu shot protects you from the flu virus, which is a different type of virus than COVID-19.
- You don't need to space out the COVID vaccine from the flu shot or any other vaccines if you are a teenager or adult. But kids under age 12 should get the COVID vaccine at least 14 days before or after getting the flu shot or another vaccine, if possible.

### **Will the vaccines increase my immunity to COVID-19? Can I still spread it to other people?**

- The vaccines will build up your immunity to the COVID-19 virus.
- Scientists and doctors are still watching and testing to see if people who have had the COVID-19 vaccine can still spread the virus to others.

### **Can I get any of the vaccines if I don't have a health card or other government ID?**

- Yes, everyone can get the vaccine with or without a health card or other ID.

### **Should people who are immuno-compromised get a COVID-19 vaccine?**

- People who are immuno-compromised are at increased risk of contracting COVID-19.
- Due to the high risk of severe COVID-19 in people who are immune-compromised, it is strongly recommended that they get the vaccine.
- There is evidence that immune-compromised people may have made fewer antibodies after getting the COVID-19 vaccine. This may mean that the vaccine gives them less protection compared with people who are not immune-compromised.
- People who have had two doses of Pfizer-BioNTech, Moderna or AstraZeneca (or one dose of Janssen) should get another dose of an mRNA vaccine (Pfizer-BioNTech or Moderna). This booster will help build more antibodies for better protection.
- It is important to talk to your health care team and discuss your case before getting the vaccine. If you are taking medications that weaken the immune system, you may need to adjust the timing of the vaccine or of your treatment.

### **How long will the COVID-19 vaccine protect me from the virus?**

- For the general population, it is too early to know how long the COVID-19 vaccines will protect you from COVID-19 and whether you will need booster shots. More research is needed to answer this question.
- People who are more at risk of getting COVID-19 or of needing to be hospitalized if they get the virus should get a booster shot in case their immunity has decreased over time. See the "What do I need to know about the COVID-19 vaccines?" information sheet to learn more about booster shots.
- Research shows that people who have recovered from COVID-19 are less likely to get reinfected for at least some period of time.

### Will I get the vaccine yearly?

- The COVID-19 vaccine is new, so it is still not known if people will need to get the vaccine every year. More research is needed to decide that.

### Is the vaccine effective against the COVID-19 mutations?

- Scientists are still learning whether the vaccines are effective against the COVID-19 mutations. So far, they have been proven to be effective, which looks promising for the most common COVID-19 variants.
- It is important for more people to get vaccinated to stop the spread of the virus because spreading can lead to an increase in new mutations.

### At what age can you consent to getting the vaccine? What if I am a minor?

- There is no age of consent to health care in Ontario (Health Care Consent Act, 1996). Any capable person can consent to health care, including getting a COVID-19 vaccine. If a health care professional finds you incapable of giving consent to receive a COVID-19 vaccine, a legally authorized substitute decision-maker can provide consent for you. However, if there is disagreement and you, the minor, are capable, your wishes will be respected. Capacity for consent is determined by your health care team on a treatment-specific basis.

### What are common myths about the COVID vaccines?

<b>Claim</b>	One of the COVID-19 vaccines has microchip tracking or “nanotransducers.”
<b>Fact</b>	There is no microchip vaccine and the vaccine will not track people or gather personal information.
<b>Claim</b>	The COVID-19 vaccine has mercury as an ingredient.
<b>Fact</b>	Mercury is not an ingredient in the COVID-19 vaccines that are approved. You can also check the Ontario Government “COVID-19 Vaccine Safety” website for the vaccines’ ingredients: <a href="https://covid-19.ontario.ca/covid-19-vaccine-safety#vaccine-ingredients-and-how-they-work">covid-19.ontario.ca/covid-19-vaccine-safety#vaccine-ingredients-and-how-they-work</a>
<b>Claim</b>	The COVID-19 vaccine will change my DNA.
<b>Fact</b>	The vaccine will only build up immunity and tell your body how to build antibodies. It will not interact with or change your DNA.

*(continued on page 7)*

(continued from page 6)

**Claim** The COVID-19 vaccine can cause mental or neurological (brain) illnesses.

**Fact** There is no evidence that vaccines cause any mental or neurological illnesses.

**Claim** The COVID-19 vaccine causes infertility and miscarriages.

**Fact** There is no link between the COVID-19 vaccine and infertility or miscarriage.

**Claim** You don't need to wear a mask after you get the COVID-19 vaccine.

**Fact** It will take time for everyone to get vaccinated. Until most people are vaccinated, the COVID-19 virus can still be passed around. Even after you get the vaccine, you need to follow public health guidelines (for example, physical distancing, wearing a mask, washing your hands).

**Claim** You can just wait until there is herd immunity.

**Fact** Both COVID-19 and the vaccines are new. We don't know how long protection lasts for people who get infected or people who are vaccinated. But we do know that COVID-19 has caused very serious illness and death for many, many people. If you get COVID-19, you also risk giving it to your loved ones, who may get very sick. Getting a COVID-19 vaccine is the safest choice.

**Claim** The vaccine is a cure for COVID-19.

**Fact** The vaccine is a preventative measure, not a cure for COVID-19. Getting the vaccine will most likely reduce your risk of getting sick from COVID-19.

**Claim** The vaccine will cause Bell's palsy.

**Fact** Bell's palsy is a rare reaction to the vaccine. It can cause temporary facial muscle weakness or paralysis. The condition goes away on its own.

**Claim** Some vaccines are less effective than others.

**Fact** Although some of the vaccines have been shown to be more effective in preventing people from getting the COVID-19 virus in general, all of the approved vaccines are 100% effective in preventing death and hospitalization due to COVID-19. That means the vaccine will protect you from the worst COVID-19 symptoms.

This FAQ will be updated as new questions arise. Please check back frequently.

If you have questions, please talk to your doctor.

This information sheet is not intended to be a resource for people who require screening for COVID-19 or who are experiencing a mental health crisis. If you are experiencing a mental health crisis, please call 911 immediately or go to your nearest emergency department.

For more information, visit [www.camh.ca/covidvaccine](http://www.camh.ca/covidvaccine)

Adapted with permission from CAMH's Azrieli Adult Neurodevelopmental Centre