

# mRNA COVID-19 Vaccines: Some Facts

There are two **messenger RNA (mRNA)** vaccines that have been approved by Health Canada to fight COVID-19: **Pfizer-BioNTech** and **Moderna**. You need two shots to have 95% immunity. Eventually these will be offered to all Canadians. There will be different types of vaccines in the future.

This handout is to provide **accurate medical information** to help you make an **informed decision**. It has been reviewed by doctors. This is the most up to date information as of March 2021, and it will be updated as needed.

## How do messenger RNA (mRNA) vaccines work?

Like most vaccines, COVID-19 vaccines help us make antibodies to help fight an infection. COVID-19 vaccines use **messenger RNA (mRNA)**. mRNA are molecules that carry messages to the part of our cells that make proteins. In this case, mRNA make proteins found on COVID-19. Once this COVID-19 protein is made, your body learns to kill it by making antibodies to it. In the future, if your body ever sees the proteins from COVID-19, the antibodies will attack these and kill the virus quickly. This is how the vaccine protects you.



It is important to remember: Our bodies get rid of mRNA after it is used and it does not stay in our body for long. Also, **the mRNA cannot change our DNA**.



### *To learn more visit:*

<https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/drugs-vaccines-treatments/vaccines/type-mrna.html>

## What are the vaccines made of?

There are medical and non-medical ingredients in the vaccines. Some of the non-medical ingredients are water and sugars. **The vaccines do not have any mercury, fetal cells, formaldehyde, blood products, pork, animal products, or aluminum.**



### *To learn more visit:*

1. <https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/drugs-vaccines-treatments/vaccines/pfizer-biontech.html>
2. <https://www.canada.ca/en/health-canada/services/drugs-health-products/covid19-industry/drugs-vaccines-treatments/vaccines/moderna.html>

# mRNA COVID-19 Vaccines: Some Facts

## What are the side effects?

The common side effects of these COVID-19 vaccines are similar to those of other vaccinations (like the flu shot). A lot of people get pain at the injection site, tiredness, headache, muscle/joint pain, fever, or chills. Some people may get an allergic reaction. This is why you will have to wait 15-20 minutes in the waiting area after getting your shot. If you get an allergic reaction or other rare side effects, speak to a medical professional.



### To learn more visit:

[http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/vaccine/COVID-19\\_about\\_vaccines.pdf](http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/vaccine/COVID-19_about_vaccines.pdf)

## Who should not get these vaccines?

It is recommended the following groups do not get the vaccines:

- If you have an allergy to any ingredient of the vaccine
- Anyone who is sick
- If you got another vaccine in the past 14 days
- Children under the age of 16 for Pfizer-BioNTech and children under the age of 18 for Moderna vaccine. They were not included in the studies, but we will have more information soon.



### To learn more visit:

[http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/vaccine/COVID-19\\_information\\_sheet\\_pfizer-biontech.pdf](http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/vaccine/COVID-19_information_sheet_pfizer-biontech.pdf)

## You may still be able to get the vaccine and should speak to your healthcare provider if you are:

- Pregnant
- Breast-feeding
- Immunocompromised
- Have a bad allergy to another vaccine, food, or drug
- Think you have an allergy to the COVID-19 vaccine ingredients



### To learn more visit:

[http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/vaccine/COVID-19\\_vaccination\\_recommendations\\_special\\_populations.pdf](http://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/vaccine/COVID-19_vaccination_recommendations_special_populations.pdf)