

# COVID-19 Vaccines (Pfizer-BioNTech & Moderna)

## What is COVID-19?

- COVID-19 is a viral infection that primarily affects the lungs. Some people may have a mild illness. Others may get very sick, including seniors or people with a pre-existing health condition. Very rarely, some children can get a serious inflammatory condition.
- The long-term effects of COVID-19 are not fully known. Some people are at greater risk of getting COVID-19 because of their work or living conditions.
- For more information about COVID-19, see our [website](#) & COVID-19 [fact sheet](#).

## How do COVID-19 vaccines work?

- The vaccine tells the cells in your body to make a protein that is found specifically on the virus that causes COVID-19. These “spike proteins,” although harmless to us, will trigger our body to start making antibodies. Our new antibodies will protect us from being sick if we are exposed to the virus.
- The vaccine does **not** contain the virus, so it cannot give you COVID-19.
- Both vaccines have been tested in large clinical trials to ensure they meet safety standards, and both have been licensed and approved by Health Canada.
- Both vaccines require two doses to work:
  - Pfizer doses are given at least 21 days apart for people 16 years of age and older.
  - Moderna doses are given at least 28 days apart for people 18 years of age and older.

## What are the benefits of the vaccine?

- In trials, the vaccines were proven to be about 95% effective against the COVID-19 virus.
- Two doses of the vaccine are required for better protection. After the final dose, it may take another one to two weeks to achieve maximum protection against COVID-19. There is no information on long-term protection with this vaccine yet.

## Who should not get this vaccine?

- Anyone who has allergies to any vaccine ingredients, including polyethylene glycol

### Moderna Vaccine Ingredients

- mRNA (medicinal ingredient)
- 1,2-distearoyl-sn-glycero-3-phosphocholine (DSPC)
- acetic acid, cholesterol, lipid SM-102
- PEG2000DMG1,2-dimyristoyl-rac-glycerol, methoxy-polyethylene glycol
- tromethamine, tromethamine hydrochloride
- sodium acetate, sucrose & water for injection

### Pfizer Vaccine Ingredients

- mRNA (medicinal ingredient)
- ALC-0315 = (4-hydroxybutyl) azanediyl bis(hexane-6,1-diyl) bis(2-hexyldecanoate)
- ALC-0159 = 2-[(polyethylene glycol)-2000]-N, N-ditetradecylacetamide
- 1,2-distearoyl-sn-glycero-3-phosphocholine (DSPC)
- cholesterol, dibasic sodium phosphate dihydrate
- monobasic potassium phosphate
- Anyone who has had a severe reaction to a previous dose of an mRNA COVID-19 vaccine
- Delay vaccination if you have a fever, if you are sick with COVID-19 symptoms, or if you have received a vaccine in the past 14 days.

- Talk to your health care provider first if you
  - are under 16 years of age (between 12 to 15 years, the Pfizer vaccine may be offered)
  - are pregnant or breastfeeding
  - have a weakened immune system due to illness or treatment, or a bleeding disorder

### What are the side effects of the vaccine?

- Some people may experience side effects from the vaccine, but they will likely be moderate and be gone after a few days. They are part of the body's response to developing immunity.
- Common side effects that have been reported in the clinical trials for this vaccine include:

<b>Very common</b> ≥10% (more often than 1 in 10 doses)	<b>Common</b> 1% -10% (1 in 100 to 1 in 10 doses)	<b>Uncommon</b> 1% (1 in 100 doses)	<b>Very rare</b>
<ul style="list-style-type: none"> <li>○ pain at the injection site</li> <li>○ headache</li> <li>○ feeling tired</li> <li>○ muscle or joint pain</li> <li>○ fever or chills</li> <li>○ swelling or tenderness under the armpit (only in Moderna vaccine)</li> </ul>	<ul style="list-style-type: none"> <li>○ redness &amp; swelling at the injection site</li> <li>○ nausea &amp; vomiting (only in Moderna vaccine)</li> </ul>	enlarged lymph nodes	serious allergic reactions such as anaphylaxis

- In rare cases, serious allergic reactions (anaphylaxis) can occur. Allergic reactions can be treated and are usually temporary. Seek medical attention immediately if you have trouble breathing or have hives or swelling of the face and throat.
- The side effects are usually worse after the second dose of the vaccine.
- Vaccine side effects will continue to be monitored as more people receive the vaccine.
- If you get a reaction to the vaccine, even a few weeks later, contact your health care provider, who will report the side effect directly to public health, or to public health, directly.
- They will keep track of reported side effects to make sure the vaccine continues to be safe.

### What else do I need to know?

- Avoid trying to get pregnant for at least a month after having the final dose of the vaccine.
- If you are on blood thinner medication, they will use a smaller needle, and you will need to apply pressure for longer after getting the vaccine to reduce bruising.
- Research is underway on vaccines that are suitable for children.
- There is a small chance that you may still get COVID-19 after being vaccinated. It is important to continue with public health measures such as physical distancing, wearing a mask, and staying home if you are sick. Health care and other staff must still wear personal protective equipment (PPE) even after they have been vaccinated.
- Tylenol® or ibuprofen may be taken afterwards, as directed, to reduce discomfort or fever.
- **Children under 19 years of age must not be given ASA, Aspirin® or salicylates.**

### Resources

[National Advisory Committee on Immunization. Recommendations on COVID-19 Vaccines](#)

**Other questions?** Talk to your health care provider or call public health at 613-966-5500 | Toll Free 1-800-267-2803 | TTY: Dial 711 | Website

Public Health is committed to providing accessible programs and services to all. To request this or any other publication in an alternative format, please contact us by phone at 613-966-5500 or by email at [accessibility@hpeph.ca](mailto:accessibility@hpeph.ca).