



# COVID-19 Vaccines [Developed by Pfizer-BioNTech & Moderna]

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## COVID-19

[COVID-19](#) is a viral infection that mainly 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. The virus can also hurt the lungs, heart, brain and other organs, increasing the risk of long-term health effects. Very rarely, some children can get a serious inflammatory condition. Some people are more likely to get COVID-19 because of where they live or work.

## How the Vaccines Work

The coronavirus that causes COVID-19 disease has a "spike protein" that is only found on the virus surface. The vaccines give instructions to cells to make the spike protein so that the body can learn to recognize the virus. These instructions are called messenger RNA (mRNA). The body makes antibodies against the spike protein to protect us from getting sick if we are exposed to the virus. The vaccines do not contain the virus and so cannot give infect people with COVID-19.

Health Canada has approved the Pfizer-BioNTech and Moderna mRNA vaccines, which were tested in large clinical trials to make sure that they are safe and effective. In these trials, the vaccines were 94-95% effective. Millions of people around the world have been vaccinated against COVID-19.

## Approved COVID-19 Vaccines

- Pfizer-BioNTech's vaccine can be given to people 16 years and older with 2 doses at least 21 days apart.
- Moderna's vaccine can be given to people 18 years and older with 2 doses at least 28 days apart.

The vaccines are safe for seniors and people with stable health conditions such diabetes and high blood pressure. People with stable hepatitis B, C or HIV, may receive COVID-19 vaccines. People with food, insect bite, medication or environmental allergies can get the vaccine as long as they do not have an allergy to any of the vaccine ingredients. If you have allergy concerns, we recommend reviewing the list of non-medical ingredients in the vaccine in advance of getting it, or speaking with your family healthcare provider.

## Important to Know

Both vaccines require two doses to provide the most protection. If you miss your second appointment, schedule another appointment as soon as possible. It may take another two weeks after your second dose for your body to build a good immune response against COVID-19. There is a small chance that you may still get COVID-19 after vaccination. Currently, there is no information on how long the vaccine's protection will last. If vaccine protection decreases, a booster dose may be recommended in the future.

## Side Effects and Risks

Some people may have side effects from the vaccines. Common side effects include:

- redness, pain or swelling at the injection site
- headache, feeling tired, muscle aches, joint pain



- fever, chills, nausea, vomiting
- pain or swelling under the armpit (in the Moderna vaccine only)
- enlarged lymph nodes (this is less common)

Side effects are more common after the second dose. Side effects usually last one to three days. The side effects can be a sign that your body is developing an immune response to the vaccine. In rare cases, serious allergic reactions (anaphylaxis) can occur. Allergic reactions can be treated and are usually temporary. Seek medical attention if you have trouble breathing, hives, or swelling of the face and throat. If you have a reaction to the vaccine, speak with your health care provider to report the symptoms directly to public health. Public health will track reported side effects to ensure vaccine safety.

**Delay vaccination, if you:** have a fever or COVID-19 symptoms. COVID-19 vaccine cannot be given with other vaccines. If you have just received a vaccine, wait 14 days before getting the COVID-19 vaccine.

**Speak with a health care provider first, if you:**

- are pregnant, could be pregnant or are breastfeeding
- have a bleeding disorder or weakened immunity due to illness or treatment
- had an allergic reaction within four hours after receiving your first dose of the COVID-19 vaccine

**Do not get this vaccine, if you:**

- have known severe allergies/reactions to any vaccine ingredients, including polyethylene glycol or tromethamine (in Moderna vaccine only)
- had a severe reaction to your first dose of COVID-19 vaccine

**Continue to protect yourself and others**

Until there are enough vaccines for everyone, and until we know that the vaccine prevents the spread of most COVID-19 infections, it is important to continue 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 vaccination.

**For more information:** talk to your health care provider, or visit our website at [toronto.ca/COVID19](https://toronto.ca/COVID19).

**Resources**

National Advisory Committee on Immunization. Recommendations on the use of COVID-19 Vaccines. January 12, 2021. Available at <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines.html>