

Coronavirus Disease 2019 (COVID-19)

What You Need to Know About mRNA Vaccines

This fact sheet provides information on the safety and effectiveness of mRNA vaccines. For more information, see Public Health Ontario's [COVID-19 Vaccines: mRNA Vaccines](#) or visit the [COVID-19 Vaccines](#) webpage.

About mRNA COVID-19 vaccines

- Messenger ribonucleic acid (mRNA) vaccines are designed to produce an immune response that protects us against the virus that causes COVID-19.
- The two currently authorized COVID-19 mRNA vaccines available in Ontario are the Pfizer-BioNTech Comirnaty® and Moderna Spikevax® vaccines.



How do mRNA vaccines work

- The vaccine works by delivering genetic instructions, mRNA, to our cells to produce a copy of a protein that is found on the surface of the COVID-19 virus.
- These viral proteins, known as antigens, are recognized by the body which starts an immune response.
- The vaccine does not give you the virus or cause an infection. After our cells make copies of the protein, they destroy the mRNA from the vaccine.

mRNA vaccines are safe and effective

- The mRNA vaccines were authorized by Health Canada after they were shown to be safe, effective (94-95%) and of high quality in clinical trials.
- In the real world, both Pfizer-BioNTech Comirnaty® and Moderna Spikevax® COVID-19 vaccines are both equally effective in preventing COVID-19 among people who have received two doses.
- Both mRNA vaccines work the same in preventing hospitalization and death, and work comparably against the circulating variants of concern.
- The vaccines cannot give you COVID-19.
- The vaccines do not interfere with COVID-19 test results used to look for infection and do not give false positive test results.
- More research is being done to determine how long the vaccine protection lasts and if it will prevent others around you from getting sick with COVID-19.



Like every vaccine, there may be possible side effects

- The most common side effects are pain at the injection site, fatigue and a headache.
- Other common side effects can include: fever, chills, muscle pain and joint pain.
- These side effects usually occur within 1-2 days after vaccination and go away within 1-3 days.

Myocarditis/Pericarditis

- mRNA COVID-19 vaccines have been associated with rare reports of myocarditis (inflammation of the heart) and pericarditis (inflammation of the lining of the heart).
- As of Sept 29, 2021, Pfizer-BioNTech Comirnaty® is preferentially recommended for 18-24 year olds, and continues to be the only product used for 12-17 year olds in Ontario, based on provincial vaccine safety surveillance.
- For more information see Public Health Ontario's [At a Glance: Myocarditis and Pericarditis following COVID-19 mRNA Vaccines](#).

Continue to protect yourself and others

- Until vaccines are widely available, it is important to continue to protect yourself and those around you from COVID-19.
- Keep practicing protective measures such as washing your hands, physical distancing, covering your mouth when you cough, wearing a mask and following local public health guidance.

Learn about the virus

To learn more and access up-to-date information on COVID-19, visit the Ontario Ministry of Health's website: ontario.ca/coronavirus.

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