

ALL ABOUT THE COVID VACCINE

Getting vaccinated against COVID-19 when available is an absolutely critical step to protect yourself and others.

Immunizing people with vaccines has been in use upwards of 100 years. Vaccination is widely recognized as one of the most effective and cost-effective ways to reduce the impact of infectious diseases.

There are different ways that vaccines are made, and different ways they work. But they all do the same thing: they make our bodies produce an immune response that help us fight infection if the real virus enters our body in the future.

COVID-19 vaccines are safe

Before any type of vaccine is approved by Health Canada, it has to be shown safe and effective in fighting the target disease. This is done through at least three phases of clinical trials. In each phase, the vaccine is given to ever larger numbers of people. Clinical trials are governed by strict regulation. While developed rapidly, COVID-19 vaccines have completed all the appropriate steps and no short cuts in approvals were taken.

COVID-19 vaccines – like any vaccines or any medication – may cause some side effects, such as headache, mild fever, muscle aches or a sore arm, but for the most part they are minor and quickly go away.

When thinking about the vaccine and any risks, you are much, much more likely to become seriously ill from a vaccine-preventable disease like COVID-19 than from a vaccine, and the benefits of protecting yourself and those around you far outweigh any potential risks and side effects.

How COVID-19 vaccines work

The vaccines currently approved for use in Canada – the Pfizer and Moderna vaccines – are called mRNA (messenger RNA) vaccines.

“RNA” stands for ribonucleic acid, a molecule that provides cells with instructions for making proteins. mRNA vaccines contain the genetic instructions for making the SARS-CoV-2 spike protein. This protein is found on the surface of the virus that causes COVID-19.



mRNA vaccines teach our cells how to make a protein that will trigger an immune response, without using the live virus that causes COVID-19. Once triggered, our body then makes antibodies. These antibodies help us fight the infection if we become exposed to the COVID-19 virus.

When you get the vaccine, your cells read the genetic instructions like a recipe and produce the protein. After the protein piece is made, the cell breaks down the instructions (the mRNA) and gets rid of them.

The cell then displays the protein piece on its surface. Our immune system recognizes that the protein doesn't belong there and begins building an immune response and making antibodies.

mRNA vaccines use two shots. The first shot starts building protection. A second shot a few weeks later is needed to get the most protection the vaccine has to offer.

Herd immunity: Why we all need to get vaccinated

When the majority of a population is vaccinated, there's little opportunity for an outbreak. This is called “herd immunity”: the entire population is more protected, including infants too young to be vaccinated and those with weakened immune systems like cancer patients. It is important that those who can be vaccinated get vaccinated to help keep everyone healthy.

For more information please visit: [askOntariodoctors.ca](https://askontariodoctors.ca)

The OMA acknowledges Canada.ca for portions of this Community InfoBulletin. ■