



COVID-19 VACCINE: FAQs

Updated: May 20, 2021

1. How do the mRNA vaccines work?

- mRNA vaccines teach our cells how to make a protein that will help our body fight the COVID-19 virus. Once the cells learn how to make the protein, our body then makes antibodies. Antibodies protect us from being infected if the real virus does enter our body in the future.
- RNA stands for ribonucleic acid. This is a molecule that gives cells instructions for making proteins. Messenger RNA (mRNA) vaccines give our bodies the genetic instructions for making a spike protein. This spike protein is found on the surface of the virus that causes COVID-19.
- When a person is given the vaccine, their cells read the genetic instructions like a recipe and produce the spike protein. After the protein piece is made, the cell breaks down the instructions and gets rid of them. The cell then displays the protein piece on its surface. Our immune system recognizes that protein doesn't belong there and begins to build an immune response by making antibodies.

2. Can the vaccines alter your DNA?

- No, mRNA vaccines cannot change a person's DNA. mRNA never enters the centre of the cell (the nucleus), which is where our DNA (genetic material) is kept. Once the instructions (mRNA) are inside the immune cells, the cells use them to make the spike protein. After the protein is made, the cell breaks down the instructions and gets rid of them.

3. Are the COVID vaccines fully approved? What does that mean?

- To market a vaccine in Canada, manufacturers must file an application with Health Canada
- Health Canada will issue an interim order. This allows Health Canada to begin to review data and information about the vaccine as evidence becomes available instead of waiting until all studies are complete. Health Canada allows a vaccine to be used under the interim order if the evidence demonstrates that the vaccine is:
 - Safe, effective and of good quality AND
 - The intended benefits outweigh the risks.

4. What is herd immunity? How is herd immunity achieved?

- The **Canadian Immunization Guide** defines herd immunity as the immunity of a population against a specific infectious disease.
- It looks at a number of factors to determine how well the population can resist the spread of an infectious disease. This includes the percentage of people who are immune, either because they received a vaccine or because they have already had the illness. In addition, it looks at the probability of a non-immune person coming into contact with an infected person.
- The number of people that need to be immune to a disease and reach herd immunity depends on a number of factors. This includes how easy it is to catch the virus from people with symptoms or people without symptoms (asymptomatic).

5. Can you shed the virus by getting vaccinated?

- A person who receives a live virus vaccine (e.g., nasal flu vaccine (FluMist), rotavirus vaccine, MMR, etc.) can, in rare instances, shed vaccine viruses to unvaccinated persons days or weeks after vaccination. This can cause an infection. However, COVID-19 vaccines authorized by Health Canada are not live virus vaccines. Therefore, there is no potential for vaccination to cause viral shedding.

6. Do I need to get vaccinated if I've had COVID?

- The National Advisory Committee on Immunization (NACI) recommends individuals who have had COVID-19 can get the vaccine. However, there is a lack of evidence on potential differences in how effective the vaccine is and possible side effects after vaccination for people who were previously infected. At this time, while the vaccine supply is limited, NACI recommends waiting three months after recovering from a COVID-19 infection before getting immunized. This is because the current data shows that reinfections have been rare in the first three months following infection.

7. How safe are the vaccines? What's the chance of adverse reactions?

- To date, no safety signals have been detected with the mRNA vaccines (Pfizer-BioNTech and Moderna). Like all vaccines, Health Canada reviews the safety and effectiveness of COVID-19 vaccines that are used throughout the country before it approves a vaccine for use. Vaccines are continually monitored to identify any potential safety concerns following immunization. This includes reviewing through clinical trial data, studies done after someone has received the vaccine and additional research. Health Canada has determined that the benefits of the COVID-19 vaccines authorized for use in Canada continue to outweigh the risks.
- Common reactions are defined as those that occur in one per cent of vaccine recipients; very common side effects occur in 10 per cent or more of recipients. As is the case with any vaccine, there could be side effects. This happens because the vaccine triggers your immune system to start fighting.

What's the chance of adverse reactions? Cont...

- The common/very common local side effects reported in clinical trials for the mRNA vaccines include pain, redness and swelling at the site of injection, with 40 per cent of people experiencing injection site pain. Pain at the injection site was reported more frequently in younger adults, compared to older adults.
- As well, fatigue, headache, muscle pain, chills and joint pain were reported as common or very common. In particular, fever was very common after administration of the second dose. More than 25 per cent of those who received an mRNA vaccine report headache and/or fatigue after any dose. In general, these reactions are more frequent after the second dose and in younger adults.
- Side effects are generally mild and none of these symptoms should last more than a few days, or lead to a high fever. If this happens, people should contact their primary health care provider or Health Links – Info Santé.
- A more serious side effect could be a severe allergic reaction—also known as anaphylaxis. This is more common in people who have existing sensitivities to the ingredients in the vaccine.
- People who are concerned about allergies or side effects should talk to their primary health care provider or call Health Links-Info Santé.
- There have been rare but serious reports of people experiencing blood clots following immunization with the AstraZeneca/COVISHIELD vaccine.
 - Signs and symptoms of blood clots include: shortness of breath, chest pain, leg swelling, persistent abdominal pain, a sudden headache that gets worse, blurred vision, and skin bruising (other than at the site of where the vaccine was given).
 - People who experience any of these signs or symptoms within 28 days of being immunized with the AstraZeneca/COVISHIELD vaccine, should go to the nearest emergency department or health centre for immediate attention, and be sure to tell their doctors that they received the AstraZeneca/COVISHIELD vaccine and when they got the vaccine.

8

Will you need a vaccine to travel out of province or out of Canada or to get on an airplane?

- It is recommended that travelers consult the requirements for the destination they are traveling to, to determine if a COVID-19 vaccine is required for admittance to the destination. Be sure to also review the provincial and federal regulations and requirements for return to Manitoba. For example, there may be mandatory self-isolation orders upon return.

Learn more at: www.gov.mb.ca/covid19/vaccine