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FAQs for COVID-19 Vaccine Health Care Providers

GENERAL

How do mRNA vaccines work?

COVID-19 vaccines use messenger RNA (mRNA) which provides instructions to cells in our bodies to make a viral protein from the coronavirus called a “spike protein”. The mRNA provides the instructions that allows the cell to make the spike protein, and then the immune system is activated to recognize the spike protein as being different from the body’s own proteins and initiates an immune response. The mRNA is then degraded by normal cellular mechanisms and the spike proteins are destroyed by the immune system.

Can the mRNA vaccine alter a person’s DNA?

No. mRNA is not able to alter or modify a person’s genetic makeup (DNA). The mRNA from a COVID-19 vaccine never enters the nucleus of the cell, which is where our DNA are kept. This means the mRNA does not affect or interact with our DNA in any way. Instead, COVID-19 vaccines that use mRNA work with the body’s natural defenses to safely develop protection (immunity) to disease.

Can the COVID-19 vaccine cause a COVID-19 infection (e.g., in people with weakened immune systems)?

No. None of the COVID-19 vaccines currently in development use the live virus that causes COVID-19. There are several different types of vaccines in development. However, the goal for each of them is to teach the immune system to recognize and fight the virus that causes COVID-19. Sometimes this process can cause symptoms, such as fever. These symptoms are normal and are a sign of the immune response to vaccine.

It typically takes a few weeks for the body to build immunity after vaccination. That means it’s possible a person could be infected with the virus that causes COVID-19 just before or just after vaccination and get sick. This is because the vaccine has not had enough time to provide protection.

Can COVID-19 cause a positive COVID-19 viral test (e.g., PCR test or rapid antigen tests used in Ontario)?

No. COVID-19 vaccines will not cause a positive test on COVID-19 viral tests, which are used to see if a person has a current infection. If a person’s body develops an immune response, which is the goal of vaccination, there is a possibility they will test positive on some antibody tests. Antibody tests indicate that a person had a previous infection and may have some level of protection against the virus. Antibody tests are not being used for diagnosis of COVID-19 in Ontario except in special clinical circumstances. They are not the tests used in assessment and testing centres and/or long-term care homes.

Can people who have been diagnosed with COVID-19 be vaccinated?

Yes. Those who have previously had PCR-confirmed infection should still be vaccinated and individuals do not need COVID-19 testing prior to vaccination.

Due to the severe health risks associated with COVID-19 and the fact that re-infection with COVID-19 is possible, people can still get a COVID-19 vaccine even if they have been sick with COVID-19 before. At this time, experts do not know how long someone is protected from getting sick again after recovering from COVID-19. The immunity someone gains from having an infection, called natural immunity, varies from person to person. Some early evidence suggests natural immunity may not last very long. We won't know how long immunity produced by vaccination lasts until we have more data on how well it works. In situations, where there is limited vaccine supply, doses of the vaccine are being prioritized for those who have not been previously infected as they are assumed to have no immunity to COVID-19.

Once a person is vaccinated with the series of two doses, can they stop following public health measures like wearing a mask, physical distancing and self-isolating when they become sick?

No. While experts learn more about the protection that COVID-19 vaccines provide under real-life conditions, it will be important for everyone to continue using all the tools available to us to help stop this pandemic, like covering your mouth and nose with a mask, washing hands often and never touching your eyes, nose or mouth with unwashed hands, staying at least 2 metres (6 feet) away from others and self-isolating when sick. Health care and other staff must still wear personal protective equipment (PPE) even after they have been vaccinated.

Together, COVID-19 vaccination and public health measures will offer the best protection from getting and spreading COVID-19. Experts need to understand more about the protection that COVID-19 vaccines provide before deciding to change recommendations on steps everyone should take to slow the spread of the virus that causes COVID-19. Other factors, including how many people get vaccinated and how the virus is spreading in communities, will also affect this decision.

What percentage of the population needs to get vaccinated to have “herd immunity”?

Experts do not know what percentage of people would need to get vaccinated to achieve herd immunity to COVID-19. Some estimates for COVID-19 suggest it may be near 60 to 70%, though the full range of estimates is much broader. Herd immunity is a term used to describe when enough people have protection—either from previous infection or vaccination—that it is unlikely a virus or bacteria can spread and cause disease. As a result, everyone within the community is protected even if some people don't have any protection themselves. The percentage of people who need to have protection in order to achieve herd immunity varies by disease.

SAFETY

What are the side effects (adverse effects) of the vaccine?

The most frequent adverse reactions were injection site pain (84.1%), fatigue (62.9%), headache (55.1%), muscle pain (38.3%), chills (31.9%), joint pain (23.6%) and fever (14.2%), and were usually mild or moderate in intensity and resolved within a few days after vaccination.

If a person develops an adverse reaction, what should be done?

If someone experiences a side effect following immunization, they should report it to a healthcare professional (e.g., family doctor).

Healthcare professionals should complete the [Adverse Events Following Immunization \(AEFI\) Form](#) and send it to the local public health unit. For more information about AEFI reporting in Ontario visit the [Public Health Ontario website](#).

Can people with severe allergies to a component of the COVID-19 vaccine receive the vaccine?

People with known allergies to any of the [ingredients](#) in the Pfizer-BioNTech COVID-19 vaccine should not receive it.

Can people with severe allergies to other vaccines, medicines or foods receive the COVID-19 vaccine?

People who have experienced a serious allergic reaction to another vaccine, drug, or food should talk to their health care provider before receiving the vaccine. The individual should discuss the risks and benefits of receiving the vaccine with their health care provider to determine whether they should or should not proceed with vaccination.

Who should NOT be vaccinated at the current time because of lack of information from clinical trials (i.e., these individuals were not included in the trials)?

COVID-19 vaccine should not be offered to the following populations excluded from clinical trials until further evidence is available:

- Under 16 years of age
- Pregnant or breastfeeding
- Immunosuppressed due to disease or treatment or suffering from autoimmune disorder

However, if a risk assessment deems that the benefits of vaccine outweigh the potential risks for the individual (e.g., where the risk of severe outcomes of COVID-19 and risk of exposure to SARS-CoV-2 is high) or for the fetus/infant (in the case of pregnancy/breastfeeding) and if informed consent includes discussion about the insufficient evidence in this population, then a complete series of authorized COVID-19 vaccine may be offered to individuals in the following populations:

- Immunosuppressed due to disease or treatment or suffering from autoimmune disorder
- Pregnant or breastfeeding
- Adolescents 12 to 15 years of age

Are there any other precautions with receiving the vaccine?

- Vaccination should be deferred in symptomatic individuals with confirmed or suspected COVID-19 or other acute illness to avoid attributing any complications resulting from their illness with vaccine-related adverse events and to minimize the risk of COVID-19 transmission at an immunization site.
- In individuals with bleeding disorders, the condition should be optimally managed prior to immunization to minimize the risk of bleeding. Individuals receiving long-term anticoagulation are not considered to be at higher risk of bleeding complications following immunization and may be safely immunized without discontinuation of their anticoagulation therapy.

Has the vaccine been shown to cause Bell's palsy?

No. A direct connection with the vaccine and Bell's palsy, a condition that causes temporary facial

paralysis, has not been established. The Pfizer study examined 38,000 patients and found four cases of Bell's palsy among those who received the vaccine, but this is in keeping with the normal observed incidence of Bell's palsy in the population. The COVID-19 vaccine, like all vaccines, continues to be monitored for adverse events.

How was Health Canada able to approve the COVID-19 vaccine so quickly – did they lower their safety standard for vaccines?

The reason the COVID-19 vaccine was approved quickly is not because safety standards have changed, it's because Health Canada shortened the administrative and organizational process of vaccine authorization. The safety requirements in clinical trials for the COVID-19 vaccine were just as strict as the regular process for any other vaccine.

Resources

Government of Canada. Pfizer-BioNTech COVID-19 vaccine: What you should know. Ottawa, ON: December 9, 2020. [Available link](#).

Pfizer-BioNtech COVID-19 Vaccine product Monograph. December 2020. [Available link](#).

Public Health Agency of Canada. An Advisory Committee Statement (ACS) National Advisory Committee on Immunization (NACI) Recommendations on the use of COVID-19 Vaccine(s) Advanced copy.

Accessed: 14 December 2020. Not yet publicly available.

United States Centre for Disease Control. Frequently Asked Questions about COVID-19 Vaccination.

Accessed: 14 December 2020. [Available link](#).