

# COVID-19 VACCINE

## Questions & answers for the public and healthcare practitioners

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### Vaccine Products

#### **How do mRNA vaccines work?**

The first COVID-19 vaccines available in Alberta are the Pfizer and Moderna vaccines. Both are mRNA vaccines.

An mRNA vaccine is a new type of vaccine that prepares the body to defend and protect itself against infectious diseases – in this case, COVID-19. The mRNA vaccine teaches your body's cells to make a viral protein that triggers the immune response. When a person is given the vaccine, their body's cells will read the instructions from the mRNA and produce the harmless "spike protein" which is the same protein that is normally found on the surface of the COVID-19 virus, but not found in our bodies. The person's immune system will then treat this spike protein as foreign and produce defenses to fight against it. These defenses are then ready to protect the person against the real COVID-19 virus.

#### **Why does the mRNA vaccine need to be frozen?**

The mRNA vaccine is stored in frozen or ultra-frozen temperatures because mRNA is more likely to break down above freezing temperatures. To ensure the vaccine will work the best when it is administered, the vaccine is stored frozen before ready to use. The manufacturers continue to study the stability of the vaccine in various storage conditions and the temperature guidelines for storage may change in the future.

#### **What is the AstraZeneca or COVISHIELD vaccine and how do they work?**

The AstraZeneca and COVISHIELD vaccines are essentially the same vaccine made by two different manufacturers. Health Canada has reviewed the manufacturing information for these two vaccines and found them to be comparable. The vaccine is a non-replicating viral vector vaccine which uses a modified harmless virus (vector) to carry the genetic code for the COVID-19 spike protein. Once in the cells, the vaccine provides instructions for the cell to make the spike protein, which then cause your immune system to produce antibodies that will protect you against COVID-19.

### Vaccine Effectiveness

#### **How effective are the vaccines?**

All of the vaccines licensed in Canada are highly effective in preventing severe disease, hospitalizations and death from COVID-19.

Pfizer and Moderna COVID-19 vaccines have been demonstrated to be over 90% effective in preventing COVID-19 disease in clinical trials. Data from clinical trials show a good (at least 62%) vaccine efficacy against symptomatic COVID-19 disease for the AstraZeneca vaccine.

### **What is the difference between vaccine efficacy and effectiveness?**

'Vaccine efficacy' is the term used to describe the percentage reduction of disease in an immunized group of people compared to an unimmunized group in clinical trials where the study conditions are controlled. It does not describe whether an immunized person can still transmit the virus.

'Vaccine effectiveness' is the term used to describe how the vaccine works in the real world where conditions cannot be controlled, such as previous exposure to the virus, the immune status of the individual, and if people receive both doses that are required. Vaccine effectiveness will continue to be evaluated as the COVID-19 immunization program is rolled out.

### **The vaccines are reported to have different efficacy rates against COVID-19. Is a vaccine with a higher reported vaccine efficacy better than a vaccine with a lower efficacy?**

It may seem that 90% is better than 80% when looking at vaccine efficacy, however, with vaccines it is not that simple. Efficacy does not mean effectiveness. Efficacy refers to the difference in infection rates between a group that got a vaccine, and a group that did not. If there's no difference between the two groups, efficacy is zero. Differences in efficacy numbers may be because the vaccines were tested in different locations, at different phases of the pandemic, against different strains and over different schedules (e.g., one vs. two doses over different timeframes). What is important to know is the COVID-19 vaccines are demonstrating a reduction in hospitalizations, deaths and severe disease. Health Canada would not approve a vaccine if they determined it to be insufficient to protect against disease.

## **AstraZeneca Vaccine Safety**

### **Are there safety signals for AstraZeneca in Canada? Have there been safety signals for other vaccines?**

There have been reports in Europe and Canada of very rare but serious cases of blood clots combined with low levels of blood platelets (thrombocytopenia) following immunization with the AstraZeneca COVID-19 vaccine. As of April 26, there have been four reports of these very rare blood clotting events with low platelets in Canada with over 1.1 million doses of AstraZeneca vaccine have been administered. A safety signal has not been seen with mRNA vaccines (Pfizer and Moderna).

Once a vaccine is in use, Canada has a comprehensive vaccine safety monitoring system to alert public health authorities to changing trends or unusual adverse events not previously reported. These alerts trigger expert medical reviews, which are conducted on all serious adverse events to identify any safety concerns and respond to these quickly and appropriately. Together, this system, referred to as "post-market surveillance", is an essential part of the Government of Canada's ongoing monitoring to ensure the continued quality, safety and effectiveness of all vaccines and other health products that are in use in Canada. NACI's recommendation and the decision by the Council of Chief Medical Officers of Health March 29 to pause the use of the AstraZeneca vaccine in all individuals less than 55 years of age in Canada, following recently reported events out of Europe, is an example of this in action.

As of April 20th, AstraZeneca is available for individuals born in 1981 or earlier in Alberta. Alberta's decision to reduce the age of eligibility for AstraZeneca/COVISHIELD from 55 to 40 years of age is based on public health recommendations weighing the benefit of this vaccine against the rare risk of adverse events from this vaccine, and taking into consideration the current level of exposure to the virus and wait time for the mRNA vaccines in Alberta.

### **If I received my first dose of the AstraZeneca vaccine, and it is no longer recommended for my age group, should I follow through with my second dose, or should the vaccine series be completed with an mRNA vaccine?**

Decisions on the type of second dose that will be offered to those under 40 years of age who have been immunized with AstraZeneca will be determined based on the latest evidence and research.

NACI will continue to review evidence as it emerges, including evidence on mixed COVID-19 vaccine schedules, to provide advice to public health programs on the potential for completing the vaccine series with other vaccine products. For now, you do not need a second dose for up to 16 weeks from your first dose.

### **What is Vaccine-Induced Immune Thrombotic Thrombocytopenia (VITT)? Is there a test for it or treatment? Any risk factors?**

The United Kingdom, European Union, Scandinavian countries and Canada have reported rare cases of serious blood clots, including blood clots in the brain following the AstraZeneca COVID-19 vaccine. The cases of these blood clots reported to date have two important features: the majority have occurred between 4 and 28 days after immunization, and they are associated with low platelets (tiny blood cells that help form blood clots to stop bleeding). This rare adverse event is being referred to as "Vaccine-Induced Immune Thrombotic Thrombocytopenia" (VITT). VITT seems to be rare, occurring approximately one case in 100,000 to 250,000 doses of vaccine.

Based on what we know to date, for those individuals who have already been immunized with AstraZeneca more than 28 days ago, there is little cause for concern. For those who have been immunized with AstraZeneca less than 28 days ago, you should seek immediate medical attention in the unlikely event that you [develop symptoms](#) starting a few days or more after immunization, such as: shortness of breath, chest pain, leg swelling, persistent abdominal pain, sudden onset of severe or persistent worsening headaches or blurred vision, and skin bruising (other than at the site of immunization) and inform your healthcare practitioner that you have received the vaccine. Testing and treatment guidelines have been developed for VITT (also referred to as VIPIT) (<https://covid19-sciencetable.ca/sciencebrief/vaccine-induced-prothrombotic-immune-thrombocytopenia-vipit-following-astrazeneca-covid-19-immunization/>). Healthcare professionals will be alert to these signs and symptoms and consult a hematologist if needed.

At this time, no risk factors have consistently been identified in patients who develop VITT. This adverse event has not been identified following receipt of mRNA COVID-19 vaccines.

### **What if I just got the vaccine, should I be worrying? What are the symptoms?**

The expected rate of VITT following receipt of AstraZeneca vaccine is not yet known, however investigations and monitoring is ongoing. Based on cases identified to date, VITT seems to be very rare, and may occur at anywhere from 1 case in 100,000 to 1 in 250,000 doses of vaccine administered.

People who have been immunized with AstraZeneca less than 28 days ago should seek immediate medical attention in the rare event that they develop symptoms starting a few days or more after immunization, such as:

- shortness of breath;
- chest pain;
- leg swelling;
- persistent abdominal pain;
- sudden onset of severe or persistent worsening headaches or blurred vision, and
- skin bruising (other than at the site of immunization).

### **What data prompted NACI's Rapid Response recommendation and Alberta's decision to use the AstraZeneca vaccine in individuals 40 years of age and older?**

Rare cases of serious blood clots associated with thrombocytopenia and thrombosis, including cerebral venous sinus thrombosis (blood clots in the brain), have been recently reported in Europe and other countries following use of AstraZeneca COVID-19 vaccine.

Based on cases identified to date, the rate of VITT has been estimated at approximately 1 case in 100,000 to 25,000 doses of vaccine.

A number of factors and evidence were considered by NACI and the Council of Chief Medical Officers of Health regarding use of AZ vaccine including: population-based analyses of VITT and risk assessment of COVID-19 disease by age based on what is known at this time, and considering that alternate products are available (i.e., mRNA vaccines). In addition, each province has considered their own incidence rates and in reviewing this Alberta, along with other provinces, decided to offer AstraZeneca vaccine to those 40 years of age and older.

### **Why are NACI and Alberta recommending that older adults over the age of 65 may be offered the AstraZeneca vaccine?**

Adults 65 years of age and older may still be offered the AstraZeneca vaccine, given the increased risk of hospitalization and death due to COVID-19 disease in this population, and since VITT appears to be a rarer event in this age group based on reported cases to date. However, mRNA vaccine is the preferred vaccine for Albertans over the age of 65.

Anyone receiving the AstraZeneca COVID-19 vaccine should be informed of this potential adverse event and advised to seek immediate medical attention if they develop symptoms of thromboembolism, and especially signs of thrombocytopenia and cerebral blood clots, such as easy bruising or bleeding, and persistent or severe headache between days 4 to 28 after receipt of vaccine.

## **General Vaccine Safety**

### **Is the AstraZeneca Vaccine safe?**

Please see the section above on the AstraZeneca Vaccine.

### **How do we know the vaccines are safe when they were developed so quickly?**

The production and approval of COVID-19 vaccines was not rushed. Instead, it was prioritized. Around the world, financial supports, open and transparent sharing of information amongst researchers, and adjustments in regulatory processes led to the relatively fast development of successful COVID-19 vaccines.

Usually Health Canada reviews vaccine submissions after all study results are available; this can take up to a year. An interim order approved by the federal Minister of Health provided the flexibility to expedite the review and authorization of vaccines. This allowed manufacturers to submit study data to Health Canada as it became available, shortening the time needed for the review process.

Review of the data from the clinical trials and of the manufacturing processes allows Health Canada to confirm that there are no significant safety concerns and that the vaccine will protect against disease. The review also assesses whether the benefits of the vaccine outweigh the risks, and whether the vaccine is manufactured to high quality standards. In order to support the independent review process for COVID-19 vaccines, Health Canada, dedicated more resources to the review process than usual and global partnerships have expedited the process.

### **Can I get the COVID-19 vaccine if I have allergies or had a reaction to a vaccine in the past?**

Individuals who have had a serious allergic reaction to another vaccine, drug or food should talk to their health care provider before receiving the vaccine. There are two reasons you cannot get a COVID-19 vaccine (also known as a contraindication):

- Known severe hypersensitivity to any component of the vaccine (like polyethylene glycol - PEG - which is common in laxatives).
- Anaphylaxis to a previous dose of COVID-19 vaccine.

Most people with allergies (e.g., to food, medication or substances not included in the vaccine) or those who have had a previous adverse reaction following immunization will be able to receive the COVID-19 vaccine.

### **What are the expected side effects from the vaccine?**

Common short-term side effects of the COVID-19 vaccine include:

- Pain at the injection site lasting one to two days
- Fatigue, headache, muscle pain, chills, fever, and joint pain lasting approximately one day

These short-term mild or moderate side effects are very common to many vaccines and may affect more than 10 per cent of people. Some side effects, including fever, are more frequent after the second dose.

It is important to note that the common short-term side effects are not necessarily bad. Your immune system is functioning and building the necessary protections for you against this virus.

Over-the-counter pain or fever medication may be considered for the management of short-term side effects if they occur after immunization.

No serious safety concerns have been identified in clinical trials.

### **Can an mRNA vaccine affect my DNA?**

No. mRNA vaccines do not affect, interact with or alter your DNA in any way. The mRNA in the vaccine is broken down quickly by normal cellular processes after the harmless genetic instructions have been used to make the spike protein. In a cell, DNA is in the nucleolus, and the mRNA works outside of the nucleolus in the cytoplasm. It is not possible for the mRNA to enter the nucleolus, as this process would require many enzymes that the cell or vaccine does not have.

### **Can I get COVID-19 from an mRNA vaccine?**

No. The mRNA vaccine does not contain any virus in it. It has only genetic instructions on how the cell can make one single coronavirus protein (the spike protein). It takes several different coronavirus proteins and other genetic materials to make a coronavirus. Therefore, this vaccine cannot make the virus and then lead to disease. The mRNA does not become a permanent part of your body, as it is naturally broken down after use.

### **Can I get sick from the viral vector vaccine?**

No. The viral vector vaccine uses a harmless virus to carry the genetic code for the COVID-19 virus spike protein into the cell. The vector virus has been modified to prevent replication and will not make you sick.

### **Is it recommended to receive the vaccine while pregnant?**

The safety and efficacy of COVID-19 vaccines in pregnant women has not yet been established. Pregnant individuals were not included in large enough numbers in the initial trials of the COVID-19 vaccines to provide solid information.

COVID-19 vaccines may be offered to individuals in the eligible group who are pregnant if a risk assessment with their doctors determines that the benefits outweigh the potential risks for the woman and fetus. The individual may also be immunized without consulting their doctor following their acknowledgment of the absence of evidence on the use of COVID-19 vaccine in this population.

### **Is it recommended to receive the vaccine while breastfeeding?**

It is unknown whether COVID-19 vaccines can be present in human milk. A risk to the newborns/infants cannot be determined because there is an absence of evidence on the use of COVID-19 vaccines in breast feeding individuals. These groups were not included in large enough numbers in the initial trials to provide solid information.

COVID-19 vaccines may be offered to individuals in the eligible group who are breastfeeding if a risk assessment with their doctors determines that the benefits outweigh the potential risks for the mother and infant. The individual may also be immunized without consulting their doctor following their acknowledgment of the absence of evidence on the use of COVID-19 vaccine in this population.

### **Is it recommended to receive the vaccine if I am immunocompromised or have an autoimmune disorder?**

At this time, there is an absence of evidence on the use of COVID-19 vaccine in immunocompromised individuals and those with auto-immune disorders. These groups were not included in large enough numbers in the initial trials to provide solid information.

COVID-19 vaccines may be offered to individuals in the eligible group who are immunosuppressed due to disease or treatment and those with an auto-immune disorder if a risk assessment with their doctor determines that the benefits outweigh the potential risks.

Potential risks include:

- Immunocompromised persons may have a diminished immune response to the vaccine
- There is a theoretical concern that mRNA vaccine may elicit an inflammatory response and possibly exacerbate existing autoimmune diseases. However, current applications of mRNA technology for COVID-19 vaccines have been optimized to reduce this risk.

Albertans who have had a Solid Organ Transplant (SOT) or Haematopoietic Stem Cell Transplant (HSCT) should consult their physician prior to immunization. Other immunocompromised individuals may be immunized without consulting their doctors following their acknowledgment of the risks mentioned above and the absence of evidence on the use of COVID-19 vaccine in these populations.

Additional resources:

- [COVID-19 Scientific Advisory Group Rapid Evidence Report.](#)
- [Advisory Committee on Immunization Practices \(ACIP\) interim recommendations for the use of Pfizer-BioNTech and Moderna COVID-19 vaccines.](#)

### **If an individual is less than 40 years of age and, cannot receive Pfizer or Moderna due to a contraindication to the vaccine, can they receive AstraZeneca vaccine?**

Yes. If an individual 40 years of age and younger has a contraindication to the mRNA vaccine such as severe hypersensitivity to a component of the mRNA vaccine or anaphylaxis to a previous dose, the AstraZeneca COVID-19 vaccine can be requested. Please contact Health Link at 8-1-1 to be assisted with where you can access this vaccine closest to your location.

### **Does Alberta Health track adverse events following immunization?**

Alberta has a central reporting system for reporting adverse reactions following immunization (AEFIs) that allows Alberta Health Services and Alberta Health to rapidly assess any potential risks and take immediate action when necessary.

Active surveillance is another component of tracking AEFIs that involves proactively collecting information about adverse events from vaccine recipients. Albertans who receive COVID-19 vaccine may be asked to take part in a surveillance study that is looking to determine how often adverse events occur after receiving a COVID-19 vaccine. For more information visit <https://canvas-covid.ca/>.

Alberta Health will not hesitate to take action if any safety concerns are identified. Emerging information will be communicated promptly to Canadians and Albertans if needed, such as new information on risks, or changes to who can be immunized. The total number of AEFIs reported to-date can be found here: <https://www.alberta.ca/covid19-vaccine.aspx>.

### **What ingredients are in the vaccines?**

The vaccines available for use contain ingredients that help the vaccine work in the body and protect the stability of the vaccine before it is administered. The vaccines do not contain antibiotics or preservatives.

One non-medicinal ingredient in both the Moderna and Pfizer-BioNTech vaccines may cause a hypersensitivity reaction. This ingredient is polyethylene glycol (PEG). This ingredient is also found in cosmetics, cough syrup, skin products and some food and drinks. When you are being immunized or offering immunization, potential allergic reactions will be discussed.

Additional ingredient information:

<b>Pfizer/BioNTech</b>
<p>Lipid nanoparticles (these help the mRNA enter the cell):</p> <ul style="list-style-type: none"> <li>• ALC-0315 = (4-hydroxybutyl) azanediyl)bis(hexane-6,1-diyl)bis(2-hexyldecanoate)</li> <li>• ALC-0159 = 2-[(polyethylene glycol)-2000]-N,N-ditetradecylacetamide</li> </ul> <p>Other Lipids (provide structural integrity of the nanoparticles):</p> <ul style="list-style-type: none"> <li>• 1,2-distearoyl-sn-glycero-3-phosphocholine</li> <li>• cholesterol</li> </ul> <p>Salts (these help maintain the PH of the vaccine):</p> <ul style="list-style-type: none"> <li>• bibasic sodium phosphate dihydrate</li> <li>• monobasic potassium phosphate</li> <li>• potassium chloride</li> <li>• sodium chloride</li> </ul> <p>Other:</p> <ul style="list-style-type: none"> <li>• sucrose (this protects the nanoparticles when frozen)</li> <li>• water for injection</li> </ul>

<b>Moderna</b>
<p>Lipid nanoparticles (these help the mRNA enter the cell):</p> <ul style="list-style-type: none"> <li>• PEG2000-DMG LSM-102, 1,2-dimyristoyl-rac-glycero-3-methoxypolyethyleneglycol</li> <li>• 1,2-distearoyl-sn-glycero-3-phosphocholine [DSPC]</li> <li>• Cholesterol</li> <li>• Lipid SM-102</li> </ul> <p>pH stabilizers (help maintain the PH of the vaccine):</p> <ul style="list-style-type: none"> <li>• acetic acid</li> <li>• sodium acetate</li> <li>• tromethamine</li> <li>• tromethamine hydrochloride</li> </ul> <p>Other:</p> <ul style="list-style-type: none"> <li>• sucrose (protects the nanoparticles when frozen)</li> </ul>

<b>AstraZeneca</b>
<p>Essential Amino Acids:</p> <ul style="list-style-type: none"> <li>• L-Histidine</li> <li>• L-Histidine hydrochloride monohydrate</li> </ul> <p>Stabilizer:</p> <ul style="list-style-type: none"> <li>• Magnesium chloride hexahydrate</li> <li>• Polysorbate 80</li> </ul>



- Ethanol
  - Disodium edetate dihydrate (EDTA)
- Others:
- Sucrose
  - Sodium chloride
    - Water for injection

## Other COVID-19 Vaccine Questions

### **Will the vaccines work against the COVID-19 variant strains?**

Mutations in the COVID-19 virus are expected, resulting in variant strains of COVID-19 to emerge. At this time, there are several variant strains circulating around the world, and vaccine manufacturers are conducting studies to determine whether current vaccines work against these variants. We are watching this information closely.

Studies by Pfizer have indicated their COVID-19 vaccine appears to work against the variants of the coronavirus first discovered in the UK and South Africa. Moderna has announced that its COVID-19 vaccine elicits virus-neutralizing antibodies in trial participants that work against the new coronavirus variants found in the UK and South Africa in the laboratory setting. Studies for AstraZeneca vaccine have shown the vaccine works against the strain first discovered in the UK and but may work less well for the variant first discovered in South Africa. Data about the efficacy of the licensed COVID-19 vaccines against the variants of concern is evolving. All manufacturers and countries that are using these vaccines continue to conduct further studies to learn more about this topic.

### **I have recovered from COVID-19, should I still be immunized?**

Yes. The COVID-19 vaccine is recommended for those who have had and recovered from COVID-19 infection as it is unknown how long immunity may last after recovering from COVID-19.

### **Will the vaccine prevent me from getting COVID-19?**

Yes. Vaccines that have been licensed in Canada are demonstrating a high efficacy in preventing COVID-19 disease. For example, the Pfizer and Moderna vaccines have been demonstrated to be over 90% effective and the AstraZeneca vaccine against symptomatic COVID-19 was at least 62% effective in clinical trials. The vaccines are used both for preventing the occurrence of COVID-19 disease and diminishing the severity of the disease.

At this time, based on the evidence submitted to Health Canada, it remains unknown how long the protection will last. The manufacturers are following the participants of clinical trials to assess their protection over time. International jurisdictions, Health Canada and Alberta Health will evaluate the data and promptly update the product information about how long the protection lasts and whether there may be a need for additional doses of the vaccine.

### **Can immunized people spread the virus to others?**

There is limited evidence on whether someone who received the vaccine is able or not able to spread the virus. This will be monitored as more people in the community receive the vaccine. Everyone must continue to follow public health measures, regardless of their COVID-19 immunization status, to protect themselves, their loved ones, as well as people and communities at risk of more severe disease or outcomes from COVID-19.

## **Can an immunized person get COVID-19?**

The currently authorized COVID-19 vaccines have demonstrated safety and high efficacy against symptomatic laboratory-confirmed COVID-19 disease within one to two weeks after receiving the full two-dose series.

As the vaccines are not 100% effective, they may not work for a small percentage of recipients. A 90% vaccine efficacy suggests 10 in 100 immunized people is not protected, even after the two-dose immunization. In addition, people who are exposed to COVID-19 virus before their body mounts an adequate level of protection can also get infected. Vaccine effectiveness will continue to be evaluated as the COVID-19 immunization program is rolled out.

## **Can I test positive for COVID-19 due to the vaccine?**

No. The mRNA vaccine or viral vector-based vaccines do not contain the virus that causes COVID-19. It has only genetic instructions on how the cell can make one single coronavirus protein - spike protein. Therefore, this vaccine cannot make the virus and then lead to disease. Immunization will not result in a positive PCR test or a rapid molecular or antigen test.

## **Could the antibodies from the COVID-19 vaccine result in a false positive test result?**

There are two kinds of tests currently available for COVID-19:

- A test for active infection (diagnostic) that tells you if you have a current COVID-19 infection. This is done using a swab from your nose or throat, or a saliva sample. These tests are expected to continue to perform accurately in immunized individuals.
- An antibody (serology) test tells you if, at some point, you were exposed to the virus and had a COVID-19 infection. These tests can also identify if a person was immunized. They are done on a blood sample and not used to diagnose a current COVID-19 infection.

## **When will I receive the second dose of COVID-19 vaccine?**

The second dose of mRNA vaccines that are currently approved for use in Alberta can be administered between 21-28 days after the first dose. The second dose for the AstraZeneca vaccine can be administered 84 days after the first dose. The time between doses can be extended up to 16 weeks for all adult populations because data from recent scientific studies show a good or high vaccine efficacy or effectiveness after the first dose of the COVID-19 vaccines and that protection is not expected to decrease rapidly in adults over a relatively short period of time.

Clinical trials also have shown that delaying the second dose to greater than 12 weeks resulted in a better efficacy against symptomatic disease compared to shorter intervals between the doses. As part of ongoing efforts to reduce community transmission of COVID-19, Alberta will be offering second doses of the COVID-19 vaccine within 16 weeks after the first dose. This aligns with the approach recommended by the National Advisory Committee on Immunization (NACI). This will allow more Albertans to receive at least one dose of COVID-19 vaccine earlier.

## **If I do not receive my second dose within the 16-week duration, should I still receive that second dose?**

Yes. If the second dose of a COVID-19 vaccine is delayed beyond the 16-week duration, the second dose should still be administered as soon as possible. A COVID-19 vaccine series does not need to be restarted.

## **How long after getting a vaccine will I be protected against COVID-19? How long does the protection last?**

The vaccines available show protection starting two to three weeks after the first dose. One dose of vaccine can offer a good level of protection against symptomatic disease. Peak efficacy against symptomatic COVID-19 disease is achieved about 2 weeks after the second dose.

At this time, based on the evidence submitted to Health Canada, it remains unknown how long the protection will last. Health Canada and Alberta Health will evaluate the data and promptly update the product information about how long the protection lasts and whether there may be a need for additional doses of the vaccine.

## **With everything we do not know about the COVID-19 vaccines, why should I be immunized?**

To stop the spread of COVID-19, we all need to be immunized as soon as we are eligible to receive COVID-19 vaccine. The vaccines currently available in Canada protect against hospitalizations and deaths. Delaying or refusing immunization carries serious risks, including hospitalization, ICU admission, and death and may extend the need for public health measures to continue.

Health Canada has completed thorough reviews of the data from the clinical trials and of the manufacturing processes. This review process allowed Health Canada to confirm that there are no significant safety concerns and that the vaccines protect against disease. The review also determined that the benefits of the vaccines outweigh the risks, and that the vaccines are manufactured to high quality standards.

## **Eligible Populations**

### **I am 75 years old, can I receive COVID-19 vaccine?**

Yes, as of February 24, 2021, Albertans 75 years of age and older (born in 1946 or earlier) are eligible for COVID-19 vaccine. Appointments with Alberta Health Services can be made online [here](#) or by calling 8-1-1.

Appointments can be made with participating pharmacies in Edmonton, Red Deer and Calgary starting the first week of March. A list of participating pharmacies can be found at [Alberta Blue Cross](#).

### **I am 68 years old, when can I receive COVID-19 vaccine?**

As of March 15, Albertans aged 65-74 years of age, no matter where they live can book appointments for the COVID-19 vaccine through select pharmacies or Alberta Health Services ([online or 811](#)). A list of participating pharmacies can be found at [Alberta Blue Cross](#).

### **I am Métis and 51 years of age, when can I receive COVID-19 vaccine?**

As of March 15, First Nations, Métis and Inuit people aged 50 and older, no matter where they live can book appointments for the COVID-19 vaccine through select pharmacies or Alberta Health Services ([online or 811](#)). A list of participating pharmacies can be found at [Alberta Blue Cross](#).

### **Will there be priority groups that receive the vaccine first?**

Yes. Alberta receives all vaccines, including the COVID-19 vaccine, through the Government of Canada. The federal government determines on a per-capita basis how many vaccines Alberta receives, and advises us when we expect to receive the vaccines. Every province in the country is in the same situation and experiencing similar challenges regarding limited supply of the vaccines from the federal government at this time.

As these vaccines are in very limited supply, our government is implementing a phased approach to target key populations in the earlier phases of the COVID-19 Immunization Program. The precise timeframes depend on the availability of the vaccine. To determine which groups are included in each phase of the plan, we consider the recommendations from the National Advisory Committee on Immunization and Alberta's Advisory Committee on Immunization, and focus on Albertans who are at increased risk of severe COVID-19 disease outcomes or who are at increased risk of transmitting infection to those who are most vulnerable.

We recognize and understand that many people want to be immunized immediately. We are moving quickly to make the doses we receive available to those who are eligible, and we will continue to do so going forward. However, it will take time to receive enough COVID-19 vaccine from the federal government to offer immunization to everyone who wants it. We are asking Albertans to please be patient while we all wait for enough vaccine for each of our turns, and to be supportive of those who are in the initial groups that are eligible to be immunized.

More information on the COVID-19 Immunization program can be found at [alberta.ca/covid19-vaccine.aspx](https://alberta.ca/covid19-vaccine.aspx). This site will continue to be updated as additional information becomes available.

### **I have a chronic condition and I'm in the eligible age group for the AstraZeneca vaccine, should I wait for mRNA vaccine or get AstraZeneca?**

While we are prioritizing individuals with chronic conditions that lead to higher risk of severe outcomes to get the mRNA vaccine, if an individual chooses to get AstraZeneca vaccine earlier due to age-eligibility, they can. There will only be a requirement to validate age, not proof of "health". Waiting for mRNA vaccine or receiving AstraZeneca is an individual decision based on an assessment of individual risk and whether the benefit of receiving a vaccine now outweighs the benefit of receiving a slightly more efficacious vaccine in about 3 weeks.

### **Why are Albertans aged 70 or older who live in Lloydminster being offered immunizations before other Albertans?**

There is an existing agreement (Memorandum of Understanding) between Alberta Health and Saskatchewan Health for health services for the City of Lloydminster. Saskatchewan Health is responsible for providing public health services to residents in the City of Lloydminster, including all Alberta residents. This includes immunizations services. Differences in the provinces and territories COVID-19 vaccine rollout are common as each uses their own data and information to determine vaccine prioritization. More information on immunization actions for Albertans who reside in Lloydminster can be found [here](#).

## **Vaccine Access**

### **How will I know when I am eligible for vaccine and where to access it?**

The Government of Alberta is taking a phased approach to who receives the COVID-19 vaccine first to protect those at high risk of severe illness and death from COVID-19, and health care workers essential to maintaining the pandemic response.

Over time, all Albertans for whom the vaccine is licensed, will be eligible for COVID-19 vaccine.

The COVID-19 immunization plan will expand once vaccine supplies increase and are more reliable.

Eligible groups and where to access the vaccine will be communicated using public announcements, the Government of Alberta website or dedicated phone services (i.e. 2-1-1), [Alberta Health Services immunization](#) webpage, COVID-19 updates by Dr. Hinshaw, news media and social media.

### **Can a block of immunization appointments be booked for a group of eligible Albertans?**

No, at this time the Alberta Health Services on-line booking system does not allow for the booking of multiple Albertans at one-time. Appointments need to be booked separately to allow for public health measures to be maintained, such as social distancing and masking, are not compromised at an Alberta Health Services clinic. The ability to block a number of appointments for Albertans accessing immunization services at one time is being considered.

### **Can I request Alberta Health Services visit my apartment building or condominium complex for immunization services?**

No, Alberta Health Services is only providing outreach immunization services to locations where transport of Albertans is not possible due to underlying health conditions. Albertans who reside in senior apartments or condominiums are encouraged to book appointment either through Alberta Health Link (8-1-1) or using the online tool or a community pharmacy. Please visit [Alberta Blue Cross](#) to see if there is a pharmacy available near you. Family members and friends can assist their loved ones in making these appointments. If transportation supports are needed, Albertans are encouraged to contact 2-1-1 and assistance may be able to be provided. When it is your turn to be immunized, please bring your Alberta Health Care card or another form of identification that provides your birth date. Picture ID is also requested but not required.

### **If I receive a first dose of COVID vaccine outside of Alberta, would I be able to receive the second dose?**

Anyone who has received a first dose of COVID-19 vaccine outside the province would be able to receive their second dose in the province if they are in one of the groups currently eligible. If someone has received a first dose of vaccine elsewhere but they are not in a currently eligible group in Alberta, they will be able to receive their second dose when they in an eligible group for vaccine. While the interval between the first and second may be beyond the 16 week interval that is currently recommended in Alberta, there is no evidence that the series would need to be restarted.

### **When can my child receive the vaccine?**

The safety and efficacy of the COVID-19 vaccine in children under 16 years of age has not yet been established. Manufacturers are conducting clinical trials in children, which will help inform recommendations about use in children once more data become available.

Currently, the Pfizer vaccine is licensed for individuals 16 years and older and the Moderna and AstraZeneca vaccines are licensed for individuals 18 years of age and older. It is too soon to know what ages future vaccine will be licensed for.

When vaccine supply is sufficient, NACI recommends that the Pfizer vaccine may be considered for youth 12 to 15 years of age who are at very high risk of severe outcomes of COVID-19 and are at increased risk of exposure.

The immunization provider must seek informed consent with the individual and the parent or guardian, including information about the lack of evidence on the use of COVID-19 vaccines for children.

### **Are international students eligible to receive the vaccine?**

Not at this time. Students are not likely to be eligible until Phase 3, when immunizations are rolled out to the general Alberta population. Subject to vaccine availability, it is anticipated that Phase 3 will begin by the fall of 2021. Once a universal COVID-19 immunization program is in place, individuals who are living, working, or going to school in Alberta will be eligible for the COVID-19 vaccine free of charge.

### **Is anyone ineligible for COVID-19 immunization? Who should not get the COVID-19 vaccine?**

The Pfizer vaccine is licensed for anyone 16 years of age and older and Moderna vaccine is licensed for anyone 18 years of age and older. It will be offered to anyone in these age groups.

Anybody with a current infection of COVID-19 should wait to be immunized until the isolating period is over, meaning 10 days from the start of symptoms or until symptoms have improved and they have been non-feverish for at least 24 hours without the use of fever-reducing medications, whichever is longer.

Canadians who receive any other vaccine, including their influenza immunization, should wait at least 14 days before getting immunized against COVID-19.

The following groups should not receive the COVID-19 vaccine:

- people who have had an allergic reaction (anaphylaxis) to a previous dose of the vaccine.
- people who have severe hypersensitivity to any component of the vaccine.

There is no data about the use of COVID-19 vaccines in individuals who are immunocompromised, pregnant or breastfeeding, however, with the exception of Solid Organ Transplant (SOT) and Haematopoietic Stem Cell Transplant (HSCT) clients, a COVID-19 immunization can be offered without a risk assessment from their doctor, following an acknowledgment from the individual requesting immunization that there no evidence on the use of COVID-19 vaccine in these populations.

NACI recommends additional research and surveillance of COVID-19 immunization, particularly for populations not currently included in clinical trials (e.g., people who are pregnant, breastfeeding, or immunocompromised, and seniors living in congregate care settings).

### **Will COVID-19 vaccine be mandatory in Alberta?**

Immunization will not be mandatory in Alberta, including the COVID-19 vaccine, but it is highly encouraged and recommended. The Government of Alberta recognizes immunization as one of the most important ways to protect and promote the health of Albertans. When immunization schedules are followed, vaccines are highly effective at preventing disease in those who receive them. We choose an approach that is collaborative rather than mandatory because we want to encourage conversations on the benefits of immunization, while still respecting Albertans' right to make informed decisions about their own health.

### **Can my employer require me to be immunized?**

Yes, private employers can require employees to be immunized as part of their company policy or as a required precondition of employment.

Some employers have occupational health and safety policies that require some immunizations as a condition of employment to protect themselves and others around them. Employers may ask that employees present their immunization records, to have them on file to determine who is at risk of infection in the event of an outbreak or if an individual is exposed to someone with a communicable disease. It is recommended that employees speak with their employer about their specific occupational health and safety immunization policy.

### **Where can I find information on the community pharmacies offering COVID-19 vaccine?**

A list of participating pharmacies can be found at [Alberta Blue Cross](#) or visit [www.alberta.ca/vaccine](http://www.alberta.ca/vaccine) for more information.

### **What will clinics do to protect clients and healthcare workers from COVID-19 during immunization?**

All healthcare providers follow [guidelines](#) to protect you and themselves from COVID-19. This includes:

- Screening clients and staff for illness and exposure to COVID-19;
- Setting up the clinic and using an appointment-based system to make sure that everyone can keep physical distance;
- Enhanced environmental cleaning;
- Using personal protective equipment (PPE) such as masks; and
- Requiring hand washing or the use of hand sanitizer when clients arrive.

### **Will I have to pay for the vaccine? If I don't want to wait to be included in the populations being offered the vaccine, can I buy the vaccine privately?**

No. The vaccine will be available to eligible Albertans at no additional charge. There is no vaccine available for private purchase at this time.

### **Will I get to choose which vaccine I receive?**

No. To stop the spread of COVID-19, we all need to be immunized as soon as we are eligible to receive COVID-19 vaccine which means accepting the first vaccine offered. Health Canada has completed thorough reviews of the data from the clinical trials and of the manufacturing processes.

This review process allowed Health Canada to confirm that there are no significant safety concerns and that the vaccines protect against disease. Health Canada would not approve a vaccine if they determined the efficacy to be insufficient to protect against disease. If different vaccines are offered to different groups in the future, the decision to offer one product over another is deliberate, and is made based on the scientific evidence and supply available at the time.

## **Post-Immunization**

### **Will I have to continue to follow public health measures if I get immunized?**

Yes. Based on recommendations from the National Advisory Committee on Immunization (NACI), Alberta Health advises that all individuals, including those immunized with COVID-19 vaccine, should continue to follow public

health measures for prevention and control of COVID-19 infection and transmission. This includes masking when in public, maintaining physical distancing, practicing diligent hand hygiene, and staying home when sick.

The COVID-19 vaccines currently available in Alberta require two doses, up to 16 weeks apart. It takes time for your body to build up an immune response after receiving the vaccine. The vaccines available show protection starting two to three weeks after the first dose. One dose of vaccine can offer a good level of protection against symptomatic disease. Peak efficacy against symptomatic COVID-19 disease is achieved about 2 weeks after the second dose; however, no vaccine is 100% effective.

Currently, there is little evidence on:

- How effective these vaccines are in the real world;
- How long these vaccines will offer protection from the virus; or
- How effective the COVID-19 vaccines are in preventing asymptomatic infections and reducing transmission to others.

Health Canada and Alberta Health continue to monitor the emerging evidence on vaccine effectiveness and will provide updates when possible.

### **Why should I get immunized if I am still expected to follow public health measures after I receive the vaccine?**

Vaccines are only one part of the effort against COVID-19. We do not yet know if immunized people can still carry and pass the virus to others that are not immunized, how effective the vaccines are in the real world and against variants, or how long immunity lasts.

Research into these questions is ongoing, and we will provide updates to these questions. In the meantime, we all should continue to follow COVID-19 public health guidelines.

### **Will I have to quarantine if I received the vaccine and then am a close contact of someone who was positive for COVID-19?**

Yes, continue to follow all public health measures, including quarantining if you are informed that you are a close contact of a COVID-19 case for the reasons stated above.

### **Will I have to quarantine if I received the vaccine and am returning to Canada from an international destination?**

Yes, continue to follow all public health measures, including all federal and provincial quarantine requirements.

### **If I am immunized outside of Canada, do I still need a negative test to return to Canada? Quarantine in a Government of Canada-approved hotel? Take a COVID-19 molecular test on arrival?**

Yes, regardless of immunization status, travelers must present proof of a negative COVID-19 test result (either paper or electronic) to an airline prior to boarding a flight to Canada. Travelers must also reserve a room in a Government of Canada-approved isolation hotel, and must take a COVID-19 molecular test on arrival.

For more information see the [Government of Canada website](#).



## **What do I do if I experience the expected reactions that are similar to the symptoms of COVID- 19 that require isolation?**

Individuals who receive the COVID-19 vaccine may experience some side effects. These reactions are most often mild, develop within 24 hours, and could last 24 to 48 hours. Many of the reactions that occur are similar to the symptoms of COVID-19 infection such as:

- fever and/or chills,
- feeling tired,
- headache or body aches,
- nausea

Individuals should monitor themselves for these symptoms. Individuals who develop the above symptoms should stay home. If the symptoms develop within 24 hours of receiving the COVID-19 vaccine and resolve within 48 hours after starting, the individual can return to normal activities, unless they have been instructed to quarantine or isolate for other reasons by Alberta Health Services.

If symptoms persist longer than 48 hours and are not related to a pre-existing illness or health condition, individuals must continue to stay home and contact Health Link at 811 or complete the online COVID-19 online self- assessment tool for testing.

If testing is not done, adults with fever, cough, runny nose, sore throat or shortness of breath are to remain in isolation at home and stay away from others for 10 days, or until symptoms improve and they have been without a fever for at least 24 hours without the use of fever-reducing medications, whichever is longer. Individuals with any other symptoms on the COVID-19 symptom list should remain home until symptoms resolve.

## **For Healthcare Practitioners**

### **How do I have a positive conversation with my patient/client who may have concerns about receiving the COVID-19 vaccine?**

Be open-minded, respectful and empathetic. Establish an environment where the patient/client can freely discuss their concerns and ask questions about immunization without feeling judged. Identify and understand the patient/client's concerns by actively listening, repackaging their statements back to them and asking open-ended questions. You can then provide tailored information related to the concerns or misconceptions they might have. Trying to convince them by simply providing the facts about immunization may backfire and make the patient/client even more hesitant.

For more information see [\*Motivational interviewing: A powerful tool to address vaccine hesitancy.\*](#)

### **I am a student completing a clinical placement, am I eligible for vaccine?**

Not at this time. While students are key to our future success they will not be included in with the HCWs currently working in the Phase 1 care areas. This should not be interpreted as a value judgement on the role of students but rather that students are not considered part of the critical workforce in the pandemic context.

Once students become eligible for vaccine, more information will be provided to the educational institutions.

## **Will healthcare workers who are not immunized be excluded from work if they do not get immunized or if there is a COVID-19 Outbreak in the workplace?**

Immunization is voluntary for all Albertans. There are many reasons a person may not be immunized for COVID-19. For example, individuals may be waiting for their scheduled appointment time to receive the vaccine, may have declined the vaccine, or the vaccine may be contraindicated or there are precautions to consider (e.g., pregnancy, allergy to components of the vaccine).

Although current outbreak management guidelines from Alberta Health Services indicate that health care workers who are not immunized against influenza need to either take influenza antivirals or be excluded from work when there is an outbreak in the facility. Currently, there are no antivirals recommended for COVID-19.

At this time, exclusion of workers who are not immunized against COVID-19 is not required due to the measures already in place to prevent transmission. These measures include active and passive health assessment screening, staying home when sick, continuous masking, hand hygiene, contact and droplet precautions with appropriate Personal Protective Equipment. These measures must be maintained as there is currently limited evidence on the duration of protection of COVID-19 vaccines and the effectiveness of these vaccines in preventing asymptomatic infection and reducing transmission of other strains of the virus.

## **Resources to help health practitioners with conversations about COVID-19 vaccine**

Websites:

[19 to Zero](#)

[COVID-19: How vaccines are developed.](#) Government of Canada.

[Vaccine development and approval in Canada.](#) Government of Canada.

[Immunize Canada](#)

[Canvas](#)

Social media:

<http://linkedin.com/company/19tozero>

<https://twitter.com/19toZero>

<https://www.facebook.com/19tozero>

<https://www.instagram.com/covidisabear/>

@covidvaccinefacts (Instagram)