

COVID-19 Vaccines Information Sheet: children ages six months to four years

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Key Messages

Children aged six months to four years are eligible to receive the COVID-19 vaccine.

The Moderna COVID-19 vaccine is a two-dose primary series administered at a recommended interval of eight weeks, or at a minimum interval of 28 days between the first and second doses.

The Pfizer-BioNTech vaccine is a three-dose primary series administered at a recommended interval of eight weeks or at a minimum interval of 21 days between the first and second doses, and a minimum of 56 days between second and third doses.

If the child is immunocompromised, they should complete a three dose primary series of the Moderna vaccine or a four dose primary series of the Pfizer-BioNTech vaccine.

Considerations for vaccination for children ages six months to four years:

While most children who get COVID-19 have mild or asymptomatic disease, some children experience severe disease and require hospitalization. Clinical trial data has shown that both vaccines were well-tolerated in children six months to four years of age. Additionally, vaccination in this age group is important to protect them, their families and their communities against severe outcomes from COVID-19 during this respiratory illness season, especially as people spend more time indoors.

Children with underlying medical conditions are strongly encouraged to complete their primary series. Additionally, the following factors may be taken into consideration when discussing vaccination with parents or caregivers:

- Personal circumstances, such as high-risk exposure or upcoming travel
- Some known health conditions/syndromes that may put one at greater risk for severe disease or outcomes from COVID-19 including:
 - being [moderately to severely immunocompromised](#)
 - having a high-risk medical condition: e.g. those with cardiac or pulmonary disorders, diabetes mellitus and other metabolic diseases, cancer, immune compromising conditions (due to underlying disease, therapy, or both, such as solid organ transplant or hematopoietic stem cell transplant recipients), renal disease, anemia or hemoglobinopathy, neurologic or neurodevelopmental conditions, Class 3 obesity (BMI of 40 and over)
- living with someone at higher risk

How to book an appointment:

COVID-19 vaccine appointments can be booked [through all vaccine channels](#), including:

- at [participating pharmacies](#)
- through the [provincial](#) COVID-19 vaccination portal ([Ontario.ca/bookvaccine](https://ontario.ca/bookvaccine))
- by calling the Provincial Vaccine Contact Centre at [1-833-943-3900](tel:1-833-943-3900) (TTY for people who are deaf, hearing-impaired or speech-impaired: [1-866-797-0007](tel:1-866-797-0007))
- directly through [public health units](#)
- through Indigenous-led vaccination clinics
- at select primary care settings
- at hospital clinics (visit your local hospital or public health unit for booking details, if available in your region)
- through mobile or pop-up clinics (visit your local public health unit website for details, if available in your region)

Public health units may also offer additional options for vaccination of children aged six months to four years old, such as walk-in clinics, which will not be listed on the provincial COVID-19 vaccination portal. For information on local options, please visit your local public health unit's website.

General Questions

1. Why should my child get the COVID-19 vaccine? Aren't COVID-19 symptoms milder for children?

Vaccination remains one of the most effective ways children, including those aged six months to four years, can protect themselves, their families, and their communities against severe outcomes from COVID-19.

To date, there have been 1,441 children aged zero to four years of age who have been hospitalized for COVID-19 in Ontario, a ratio of 202.2 hospitalizations per 100,000 children. This is a higher rate than what has been observed in older children, teenagers and young adults aged 20 to 39 years old.

While children who get infected with COVID-19 typically experience mild symptoms, some can get very sick, resulting in hospitalization, ICU admission or even death. Others can experience serious and longer-lasting symptoms (i.e. multi-inflammatory syndrome/MIS-C, long COVID-19, post-acute COVID-19 syndrome). This is especially true for children who are immunocompromised or have underlying health conditions. The COVID-19 vaccine will help your child fight off the virus more easily if they are infected and may help make their symptoms milder. It also provides further

protection to their family members, especially if they have family members who are at risk for more severe illness.

2. Will the COVID-19 vaccine interfere with getting other vaccines?

Children aged six months and older can receive a COVID-19 vaccine at the same time as, or at any time before or after any other vaccines, including the flu shot. It is important to discuss the best timing and approach for COVID-19 vaccination while also ensuring that routine immunizations are up to date.

Additional information for healthcare providers:

Routine vaccination is an essential preventive care service for children that **should not be delayed**. As a result of the COVID-19 pandemic, many children in Canada have missed routine immunizations. It is important to assess the vaccination status of children at each patient visit to avoid missed opportunities for vaccinations and ensure timely vaccine catch-up. All vaccines due or overdue should be administered according to the [Publicly Funded Immunization Schedule for Ontario](#).

Dosages and Intervals

3. How long should I wait between my child's first and second doses of the COVID-19 vaccine?

Children aged six months to four years may receive either:

- a Moderna COVID-19 vaccine in a two-dose primary series at a recommended interval of eight weeks, or at a minimum interval of 28 days between the first and second doses.
- a Pfizer-BioNTech vaccine in a three-dose primary series at a recommended interval of eight weeks, or at a minimum interval of 21 days between the first and second doses and a minimum of 56 days between second and third doses.

To provide the strongest possible protection, the National Advisory Committee on Immunization (NACI) recommends waiting eight weeks (56 days) between the first and second dose. This is based on evidence that suggests longer intervals between doses results in a stronger immune response and higher vaccine effectiveness that is expected to last longer. It is possible to book a second dose at the minimum interval by calling the Provincial Vaccine Contact Centre at 1-833-943-3900.

Children who are moderately to severely immunocompromised are recommended to get either:

- a third dose of the Moderna COVID-19 vaccine eight weeks (56 days), or at a minimum of 28 days, after their second dose as part of an extended primary series.
- a fourth dose of the Pfizer-BioNTech vaccine eight weeks (56 days), after their third dose as part of an extended primary series.

Parents of children who are taking immunosuppressive medications should consult with their child's treating provider around optimal timing of vaccination.

4. My child had COVID-19. Should they still get vaccinated? How long should they wait to get the vaccine?

If a child has already had COVID-19, they should still be vaccinated for protection against severe outcomes.

While a previous COVID-19 infection provides some immunity, it is unclear how long this immunity lasts and individuals may be reinfected. Evidence shows that vaccination combined with infection provides stronger and longer-lasting protection from COVID-19 than infection alone. With the spread of new and transmissible variants, it is important that everyone gets vaccinated to protect themselves and those around them from serious illness, hospitalization and death.

Children aged six months to four years who have had COVID-19 are recommended to wait eight weeks after symptom onset or positive test (if they had no symptoms) before beginning or continuing their vaccine series.

5. Will children aged six months to four years receive the same dose of the vaccine as children aged five to 11 years?

The dose concentration and volume vary depending on age and product.

For the Moderna COVID-19 vaccine:

- Children aged six months to five years: 25 mcg
- Children aged six to 11 years: 50 mcg
- Youth aged 12 years and over: 100 mcg.

For the Pfizer COVID-19 vaccine:

- Infants and children aged six months to four years: 3 mcg
- Children aged five to 11 years: 10 mcg
- Youth aged 12 years and older: 30 mcg.

Our immune systems weaken with age, so younger children are able to develop the same protection from COVID-19 from a smaller dose than older children and adults.

6. My child is four years old and received either Moderna or Pfizer for their first dose. They have turned five and are due for their second dose. Should they receive Pfizer or Moderna?

The same mRNA COVID-19 vaccine product should be offered for the subsequent dose in a primary series started with a specific mRNA COVID-19 vaccine. For example, a child who received a Moderna (25 mcg) dose and turned five years old prior to completing their primary series is recommended to receive Moderna (25 mcg) to complete their primary series. However, if they turn five prior to completing their primary series, they can receive the Pfizer (10 mcg) vaccine with informed consent from parents or caregivers.

Additional information for healthcare providers:

Below are some scenarios specific to this age group for health care providers to consider:

If the child is four years or younger while completing their primary series, use the same vaccine product for all of the primary series doses.

If the child turns five years old between dose 2 and 3 of Pfizer 3 mcg, the 3rd dose should be 10 mcg of Pfizer.

If the child turns five years old between dose 1 and 2 of their primary series with Pfizer, dose 1 would be 3 mcg, and the 2nd and 3rd doses would be 10 mcg.

If the child received Pfizer 10 mcg before the age of five and will turn five years of age before dose 2, both doses should be 10 mcg.

Vaccine Effectiveness and Recommendations

7. Is vaccination for children aged six months to four years being strongly recommended?

Vaccination remains one of the most effective ways children, including those aged six months to four years can protect themselves, their families and their communities against severe outcomes from COVID-19.

Children who are immunocompromised or have other significant underlying medical conditions are strongly recommended to complete the primary series.

If parents and caregivers have more questions about vaccine safety and the benefits of vaccination, they can:

- book a confidential conversation with a registered nurse through the SickKids COVID-19 Vaccine Consult Service at www.sickkids.ca/vaccineconsult or [1-888-304-6558](tel:1-888-304-6558) (appointments are available in multiple languages)
- learn more from [SickKids](#) about COVID-19 vaccines for children and youth
- download our fact sheet on [COVID-19 Vaccines for Children and Youth](#)
- talk to their child's family doctor, paediatrician or nurse practitioner
- book a phone appointment with the VaxFacts Clinic to speak with a trusted physician from the Scarborough Health Network at www.shn.ca/vaxfacts or [416-438-2911](tel:416-438-2911) ext. 5738 (available to all Ontarians in over 200 languages)

8. Can COVID-19 vaccines be co-administered with other vaccines?

Given that children aged six months to four years are also recommended to receive other vaccines to protect against diseases such as diphtheria, tetanus, pertussis, polio, measles, mumps, rubella and varicella, and to avoid multiple immunization visits, these vaccines may be co-administered with the COVID-19 vaccine.

9. How safe and effective is the vaccine for children aged six months to four years?

After a thorough and independent scientific review of the evidence, Health Canada determined that both authorized COVID-19 vaccines for children aged six months to four years are safe and effective at providing a strong immune response against COVID-19 in children.

Additional information for healthcare providers:

Both vaccines were well tolerated during clinical trials, which is consistent with post-market safety data. No safety signals have been identified (including no identified cases of myocarditis) from clinical trials or from post-market data tracked in the United States. Reactogenicity was similar both vaccine products and was consistent with other recommended vaccines in this age group. The humoral (antibody) immune responses after the last dose in the primary series for each vaccine met pre-specified non-inferiority criteria when compared to humoral responses in older age groups.

On risks for unvaccinated children:

Population level estimates of hospitalization and ICU admission in pediatric populations have increased since Omicron became the predominant variant. For children six months to four years of age, the average monthly rate of hospitalization due to COVID-19 increased from 1.4 to 15.9 per 100,000, comparing March 1, 2020 - December 31, 2021, to January 1, 2022 – March 31, 2022 (Public Health Agency of Canada, 2022).

Children who have had COVID-19 are at risk of multisystem inflammatory syndrome in children (MIS-C), a rare but serious post-infection complication that generally requires acute care hospital admission.

While evidence is limited in children five years of age and younger, a COVID-19 infection may lead to post-COVID condition/post-acute COVID syndrome.

On clinical trial data:

Based on Phase 2/3 clinical trial data, the humoral (antibody) immune responses generated by the vaccine met non-inferiority criteria in children aged six months to five years compared to young adults, suggesting it worked at least as well in children as in young adults. The vaccine was well tolerated with no safety signals reported.

Although the clinical trial is still ongoing, early results have shown that efficacy against confirmed symptomatic SARS-CoV-2 infection starting 14 days post second dose was estimated at 50.6% among study participants aged six – 23 months and 36.8% among participants aged two to five years old. Efficacy against asymptomatic SARS-CoV-2 infection at 14 days post second dose, was estimated at 3.8% among those six-23 months and 22.9% among those two to five years old. Real world evidence suggests mRNA vaccines in older age groups have high vaccine effectiveness at preventing severe outcomes of COVID-19 including hospitalization and death.

10. For parents and caregivers that have recently received their booster and have children that are currently breastfeeding, is there any concern about interference with the child's vaccine effectiveness?

Vaccinated individuals who are breastfeeding pass along antibodies in their breast milk. These antibodies do not interfere with the immunity acquired from the vaccine, and will in fact provide additional protection. There is no need to delay or time vaccination differently for either the breastfeeding parent or children six months or older.

Vaccine Safety

11. Will my child experience side effects or reactions?

Like any medication or vaccinations, the COVID-19 vaccine may cause side effects. However, these side effects are typically mild to moderate and on average do not last longer than three days. The most frequently reported short-term side effects for children following the COVID-19 vaccine include soreness, swelling or colour changes (for example red or purple) at the injection site, fatigue, headache, chills, muscle aches and loss of appetite. These side effects are part of their body's efforts to build immunity to COVID-19 following vaccination. Mild side effects and reactions will typically subside anywhere from a few hours to a few days after vaccination.

12. Have the long-term side effects of the COVID-19 vaccine for children been determined?

COVID-19 vaccines, like all medicines, can cause side effects, although not everyone gets them. The most frequently reported short-term side effects for children following the COVID-19 vaccine include soreness, swelling or colour changes (for example red or purple) at the injection site, fatigue, headache, chills, muscle aches and loss of appetite. These side effects are typically mild to moderate and on average do not last longer than three days.

Following any vaccine, the vast majority of severe reactions occur within six weeks of receiving the vaccine.

According to the clinical trials that supported Health Canada's authorization of the Moderna COVID-19 vaccine for children aged six months to four years, children were monitored up to 103 days after receiving their first dose of vaccine and no safety signals were identified. No safety signals were identified in the Pfizer clinical trial for children aged six months to four years, where children were monitored for an average of 36 to 39 days. The safety profile of this vaccine was consistent with the known safety profile of the Pfizer vaccine formulations used in older age groups.

The benefits of getting vaccinated and being protected against COVID-19 far outweigh the risks of any side effects from the vaccine. COVID-19 infection may cause longer-lasting symptoms and health problems for some people, including children, which is why it is important that children get vaccinated as soon as possible.

13. Are vaccines safe for children who are immunocompromised or have medical conditions?

Health Canada has one of the most rigorous scientific review systems in the world and only approves a vaccine if it is safe, works and meets the highest manufacturing and quality standards. After a thorough and independent scientific review of the evidence, Health Canada determined that the authorized COVID-19 vaccine is safe and effective at providing a strong immune response against COVID-19 in children.

Generally, children with medical conditions should be vaccinated as soon as possible, since they are often at higher risk of becoming more ill if they are infected with COVID-19. Children who are moderately to severely immunocompromised require an extended three-dose primary series with Moderna or a four-dose primary series with Pfizer to provide sufficient protection based on a suboptimal or waning immune response to vaccines and increased risk of COVID-19 infection. These individuals are recommended to get a third or fourth dose of a COVID-19 vaccine, with the same product, eight weeks after their second dose to strengthen the protection against COVID-19 and its variants. We continue to monitor new data and follow the advice of the Chief Medical Officer of Health and NACI.

14. Has the COVID-19 vaccine been thoroughly tested for children? How do I know it is safe?

Health Canada has authorized the Moderna COVID-19 vaccine and the Pfizer-BioNTech vaccine for use in children aged six months and older.

Health Canada has one of the most rigorous scientific review systems in the world and only approves a vaccine if it is safe, works and meets the highest manufacturing and quality standards. After a thorough and independent scientific review of the evidence, Health Canada determined that the authorized COVID-19 vaccine is safe and effective at providing a strong immune response against COVID-19 in children.

According to the clinical trials that supported Health Canada's authorization of the Moderna vaccine for children aged six months to four years, children were monitored up to 103 days after receiving their first dose of vaccine and no safety signals were identified. This means that no serious side effects developed as a result of being vaccinated. No safety signals were identified in the Pfizer clinical trial for children in the same age group, where the children were monitored for an average of 36 to 39 days. The safety profile of this vaccine was consistent with the known safety profile of the Pfizer vaccine formulations used in older age groups. The types of events reported in the vaccine group were consistent with events commonly reported for other pediatric vaccines authorized for use in children six months to four years.

15. What is the risk of myocarditis and/or pericarditis in children aged six months to four years?

Myocarditis/pericarditis following COVID-19 mRNA vaccines remains a rare adverse event following immunization (AEFI), which is defined by the Canadian Immunization Guide as occurring at frequency of 0.01 per cent to less than 0.1 per cent. Myocarditis and pericarditis are more likely to occur after a COVID-19 infection than after COVID-19 vaccines.

Although the trial sizes have been limited, in both clinical trials that monitored Moderna and Pfizer-BioNTech in individuals six months to four years, there have been **no cases** of myocarditis and/or pericarditis reported in any of the participants. Post-market vaccine safety in pediatric populations is closely monitored and signals of adverse events (AE) will be reviewed on an ongoing basis.

NACI continues to recommend vaccination with mRNA COVID-19 vaccines for all individuals aged six months and older since the vaccines are highly effective at preventing severe outcomes (i.e., hospitalization, death) from COVID-19. NACI also recommends that children and youth wait eight weeks between the first and second doses of the COVID-19 vaccine. This interval may be associated with a lower risk of myocarditis and/or pericarditis.

For more information on the risk of myocarditis and/or pericarditis parents and caregivers can go to [COVID-19 vaccination for ages under five \(aboutkidshealth.ca\)](https://aboutkidshealth.ca/COVID-19-vaccination-for-ages-under-five).

Additional information for healthcare providers:

As real-world evidence on the use of this vaccine is not available yet, and the clinical trial size was limited, the risk of any rare or very rare adverse event (AE), such as myocarditis and/or pericarditis is unknown at this time.

Canadian and international post-market safety surveillance data for other mRNA COVID-19 vaccines in older populations have reported the rare risk of myocarditis and/or pericarditis with mRNA vaccines, which varies by sex, age, interval between doses, vaccine dose, and vaccine product. Current data suggests the risk of myocarditis and/or pericarditis in younger children is lower than that of adolescents or young adults.

Additional Resources

16. I'm seeing a lot of vaccine hesitancy in my patient population. Where can I go for resources to support these conversations?

The Ministry of Health has a dedicated webpage [Ontario.ca/covidvaccinekids](https://ontario.ca/covidvaccinekids) with resources related to vaccinating children and youth.

The Public Health Agency of Canada also prepared a [Vaccine Confidence Info Bulletin](#), which includes information on the Moderna COVID-19 vaccine and Pfizer-BioNTech vaccine in children six months to four years of age, practical vaccine administration information, key reminders prior to and for vaccination, managing pain for a positive vaccination experience, anxiety-related adverse events and anaphylaxis following vaccination.

The Centre for Effective Practice also developed the [PrOTCT Framework](#) to use when discussing COVID-19 with parents and caregivers.

The [Canadian Pediatric Society](#) has developed various resources, including internal and external resources for parents to learn more about COVID-19 vaccines for children.

SickKids has also developed the [COVID-19 vaccination for ages under five \(aboutkidshealth.ca\)](https://aboutkidshealth.ca/COVID-19-vaccination-for-ages-under-five) document, which helps to answer questions that parents and caregivers may have regarding vaccination.

17. My patient's vaccine hesitancy is persistent. Where can I refer them for additional support?

Visit [Ontario.ca/covidvaccinekids](https://ontario.ca/covidvaccinekids) to learn more about COVID-19 vaccines for children and youth.

You can refer your patients to the Provincial Vaccine Contact Centre to speak to an experienced agent or health specialist at 1-833-943-3900 (TTY for people who are deaf, hearing-impaired or speech-impaired: 1-866-797-0007), available in more than 300 languages.

[Immunize Canada](#)'s website is a resource for healthcare practitioners and for the general public that offers information about the CARD™ system, which stands for C - Comfort, A - Ask, R - Relax, D – Distract, an evidence-based framework that teaches how to prepare for vaccination. It also offers access to other resources that help promote the understanding and use of vaccines recommended by NACI.

Patients or parents and caregivers can book a confidential phone conversation with the SickKids COVID-19 Vaccine Consult Service. No referral is necessary, and the service is available to all residents of Ontario. The consult service provides expert guidance for children, youth and those who are pregnant, breastfeeding, or planning to conceive. Patients can book an appointment with a SickKids Registered Nurse online at sickkids.ca/vaccineconsult, or by calling toll-free 1-888-304-6558. This service is available in multiple languages using over-the-phone language interpretation.

In addition, patients or parents and caregivers can book a phone appointment with the VaxFacts Clinic to speak with a trusted physician from the Scarborough Health Network at www.shn.ca/vaxfacts or 416-438-2911 ext. 5738 (available for all Ontarians in over 200 languages)

COVID-19 vaccination and your practice

Billing

18. How do I bill for a COVID-19 vaccine given in my office?

Physicians administering COVID-19 vaccines in settings that are **not** designated by the ministry as COVID-19 Assessment Centres may be eligible to claim G593A as described in [OHIP INFOBulletin 211201](#).

G593A is eligible for payment to the billing physician if they have personally rendered the COVID-19 immunization service, OR, if they have delegated the service in accordance with the payment rules and conditions described at pages GP62 and GP63 of the [Schedule of Benefits for Physician Services](#).

In scenarios where the patient's sole reason for the visit is to obtain the COVID-19 vaccine, G700 (or Q593 in blended models) is also eligible for payment.

In scenarios where the patient has attended the visit to obtain an insured service in addition to the vaccine, G593 is payable for the vaccination service in addition to the other applicable fee codes (assuming all Schedule of Benefits requirements have been met).

19. Can I bill for counselling patients about the COVID-19 vaccine?

When a medically necessary counselling service is rendered that meets the payment requirements described within Schedule of Benefits, the applicable fee code may be claimed (e.g. K013).

The provision of routine information about the COVID-19 vaccine does not constitute a separately payable counselling service and is included in the vaccination service.

COVaxON

20. How do I access to COVAX_{ON} (the provincial vaccine database)?

Ontario_{MD} has been retained by the Ministry of Health to train, onboard and help set up primary care providers and teams on COVax_{ON}. Any primary care provider that requests COVax_{ON} help can contact the Ontario_{MD} support email at covaxon.support@ontariomd.com including links to upcoming training sessions.

21. I've heard COVax_{ON} is difficult to use – are there resources that I can go to for help?

Any primary care provider that requests COVax_{ON} help can contact the Ontario_{MD} support email at covaxon.support@ontariomd.com. Ontario_{MD} will provide support as required.

Supply and Wastage

22. How do I order vaccine supply?

Each local public health unit has a supply of Royal Blue cap Moderna and Maroon cap Pfizer for their region's eligible population. If you are interested in receiving and administering to this age group, please reach out to your local public health unit.

23. How does the vaccine need to be stored?

Maroon cap Pfizer undiluted product may be stored up to 10 weeks prior to first use in fridge (2-8C). Stability at room temp (8-25C) is up to 12 hours prior to dilution.

Royal Blue cap Moderna may be stored up to 30 days in the fridge (2-8C) and up to 24 hours at room temp (8-25C) prior to first use. Once punctured, use within 24 hours. Punctured vials may be stored at room temperature or refrigerated (2 to 25C). Do not puncture the vial more than 10 times. Thawed, unpunctured vials may be stored in the refrigerator between +2°C to +8°C for up to 30 days prior to first use. Vials may be

stored between +8°C to +25°C for up to 24 hours. During storage, protect vials from light. Do not refreeze thawed vials.

After the first dose has been withdrawn from, a thawed vial should be held between +2°C to 25°C for a maximum of 24 hours. Vaccine may be stored in a syringe or vial for a maximum of 24 hours.

For more information please see the [General COVID-19: Vaccine Storage and Handling Guidance](#) document.

24. What should I do if I must waste doses of the vaccine?

It remains important to limit expiry of closed vials through proper inventory management and storage and handling, including fridge monitoring (e.g., temperature logs), stock rotation based on expiry and “must use by” dating, and recommended packing and transport per product specifications.

Royal Blue cap Moderna and Maroon cap Pfizer should be reserved for children six months to four years old. However, if a punctured vial contains remaining doses that would otherwise be wasted, one or more adult booster doses can be drawn from the vial to avoid or reduce wastage.