COVID-19 vaccine information for children (ages five to 11)

Reviewed by SickKids Staff

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Learn about the status of the COVID-19 vaccine for children five to 11 years of age and the benefits of getting the vaccine for children.

Looking for general information on COVID-19 vaccines. Visit the page on <u>COVID-19</u> vaccines general information.

Looking for information specific to youth age 12+? Visit the page on <u>COVID-19 vaccine</u> information for youth (ages 12+).

Key points

- Vaccines against COVID-19 have been shown to be safe and effective against the disease.
- As of November 19, 2021, the Pfizer vaccine has been approved for use in children aged five to 11 years of age.
- Children five to 11 years of age will get a smaller dose of the vaccine. They will still need to get two doses.
- Side effects in children five to 11 years of age are similar to those seen in adults and older children.

What is the status of COVID-19 vaccines for children in Canada?

In November 2021, Health Canada approved the use of the Pfizer vaccine for children five to 11 years of age.

NOTE: For ages six months to four years, clinical trial results are expected in late winter 2022. The full results are



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expected to be submitted to Health Canada sometime in 2022, after which the full Health Canada review process will take place.

What evidence is there that the vaccine is safe and effective for children?

Over 3,000 children aged five to 11 received the vaccine through the clinical trial and no serious side effects have been detected in the ongoing study after more than three months of follow-up. The vaccine was shown to be 91 per cent effective against symptomatic COVID-19 with mild side effects like those seen in adults and older children. These side effects include arm tenderness, fatigue, headache, muscle pain, joint pain, chills and fever, which can also be seen with other vaccines recommended for children. Rare side-effects that have been seen in older teens and young adults are expected to be extremely rare in children. Read about the <u>clinical trial results in the New England Journal of Medicine</u>.

Why should children get vaccinated if they do not get sick from COVID-19?

Although severe illness due to acute COVID-19 infection is less frequent in children compared to adults, children can still be hospitalized and even require admission to an intensive care unit (ICU) due to COVID-19. Some children can also develop other complications from COVID-19 beyond the infection itself, including a condition called multisystem inflammatory syndrome (MIS-C). While highly treatable and rare, approximately one in three children hospitalized with MIS-C will require ICU care. Further studies will be needed to assess how well the vaccines protect against such complications from COVID-19.

How can anyone be sure a vaccine developed so quickly is also safe?

Work on coronavirus vaccines has been ongoing for more than 10 years, due in part to the SARS-CoV-1 outbreak in 2003. It was important to develop the COVID-19 vaccine quickly because of how many people were dying and getting sick, and because of the disruptions to everyday life as a result of the pandemic. Even though the vaccines were developed quickly, all the usual steps for the approval of vaccines occurred, including clinical trials with the appropriate number of participants. Because of the large amount of resources that were made available to develop a COVID-19 vaccine and the large number of COVID-19 cases the clinical trials were able to happen quickly. This made it easier to tell quickly whether or not the vaccines

worked to prevent cases of COVID-19. The vaccine was rapidly shown to be effective in protecting against COVID-19.

Do children under 12 need one vaccination or two? Is a different vaccine dose used in younger children?

Children aged five to 11 receive a two-dose schedule of a smaller Pfizer vaccine dose than the one used in people 12 and older (10 μ g instead of 30 μ g). The National Advisory Committee on Immunization recommends that the second dose should be given at least eight weeks after the first dose. Children who turn 12 before their second dose may receive an adult dose.

My child is turning 12 years old in 2022. Now that a vaccine is approved for children under 12 years of age, should I wait to vaccinate my child when they are 12 years old and eligible for the adult dose?

The first COVID-19 vaccine that is available for your child will be the best vaccine to get, as it will provide protection against COVID-19 to your child as soon as possible. Vaccine doses are based on age and the maturity of the immune system. The clinical trials showed the paediatric dose given to children aged five to 11 (a third of the dose given to people aged 12 and up), was effective and also resulted in fewer side-effects.

If my child is turning five in 2022, do they have to wait until their birthday to get vaccinated?

Yes. At this time, children must have turned five years of age to be eligible to receive the paediatric dose of the COVID-19 vaccine that is approved for children aged five to 11. Clinical trials for children under five are currently underway.

What if my child's weight is above average in their age group?

Vaccine doses are based on age and the maturity of the immune system, not weight. The clinical trials showed the paediatric dose given to children aged five to 11 (a third of the dose given to people aged 12 and up), was effective and also resulted in fewer side-effects.

Are COVID-19 cases among children on the rise?

According to the Public Health Agency of Canada's updated COVID-19 epidemiology and modelling, children under 12 are currently accounting for more cases of COVID-19 compared with their proportion of the Canadian population. In addition, COVID-19 outbreaks in schools and childcare settings predominantly involve children under 12 years of age.

Can vaccination improve the physical and mental health of children?

<u>SickKids-led research</u> has shown a serious, sustained negative impact on the mental health of Ontario children, youth and their families due to the COVID-19 pandemic. Before the pandemic, a study showed that about 60 per cent of participants engaged in school sports and/or other extracurricular activities. During the pandemic, only 27 per cent participated in sports and 16 per cent in extracurriculars. These activities are known to boost physical and mental health. Vaccination will help return children to their regular activities and thus help improve the mental health and psychosocial well-being of children.

My child is afraid of needles. What can I do to help?

Some children have a very strong reaction to needles. If your child is worried about getting a needle, you can ask for special ways to support their vaccination, such as a longer appointment time or a private space for the injection. The CARD system (Comfort, Ask, Relax, Distract) may also help. It provides groups of strategies to reduce the pain, stress and worries associated with vaccinations to make the experience a more positive one. More information can be found at AboutKidsHealth.ca/card. For children worried about pain, there are numbing creams and patches available at many pharmacies to help minimize needle discomfort.

What can I do for my child who is sensory-sensitive?

Sensory-sensitive vaccination clinics use some of the CARD strategies listed above to offer a calmer environment for each child, giving them as much time as they need and their own room to get the vaccine. Some clinics also offer sensory-sensitive appointments, offering dimmed lights, less noise and a slower pace, as well as privacy.

Can the COVID-19 vaccine affect puberty or fertility in children?

There is no evidence and no scientific reason to believe that the COVID-19 vaccine can affect puberty and fertility in children. Clinical trials of those who have been vaccinated in the general population have shown that the vaccine is very safe.

What are the vaccine's side-effects in children under 12?

Clinical trial data show that the Pfizer vaccine is well-tolerated in children aged five to 11 years old, with side-effects generally comparable to side-effects your child may have experienced after other childhood vaccinations. These may include feeling tired, chills, muscle aches and pains, and a sore or red arm. The majority of children had very mild side-effects or none at all. Typically these side-effects will go away after a few days and there are no long-term side-effects reported.

What about reports of vaccine side-effects like myocarditis and pericarditis in younger people?

Myocarditis (inflammation of the heart muscle) and pericarditis (inflammation of the heart's outer lining) is overall rare and mostly seen in older adolescents and young adults. Both are extremely rare in relation to the COVID-19 vaccine. There were no reports of myocarditis or pericarditis in the Pfizer clinical trial for children five to 11 years old. More than 10 million children in Canada and the U.S. have received the vaccine with very few reports of these conditions, which are generally mild and benign. Myocarditis and pericarditis actually occur far more often after COVID-19 infection than after being vaccinated against COVID-19. Myocarditis and pericarditis occurring after COVID-19 vaccination is a generally mild and benign condition. There are multiple surveillance mechanisms in place in order to monitor any potential post-vaccination risk of these conditions over time.

Additional information about <u>myocarditis and pericarditis after COVID-19 vaccination</u> is available in this article from the University of Waterloo.

Is vaccination safe for children with food allergies?

Yes. There is no reason a child with a food allergy of any kind should not be vaccinated. Children with a history of allergy to foods, oral drugs, insect venom or environmental allergies can receive COVID-19 vaccines without any special precautions. If you are concerned about the possibility of an allergic reaction to any of the <u>vaccine ingredients</u>, please consult your child's primary health-care provider.

Does the vaccine work against the Omicron variant?

The Omicron variant is known to be much more transmissible than previous strains of COVID-19. Early data out of South Africa and the United Kingdom suggests that vaccination still

protects against serious illness due to Omicron. The more people who are vaccinated against COVID-19, the more we can protect ourselves and prevent new variants from emerging and spreading in the community.

Is the Omicron variant of COVID-19 causing more severe illness than previous strains?

Studies are ongoing with respect to the severity of COVID-19 in children and youth due to the Omicron variant. However, most children and youth who have COVID-19 experience mild illness and do not require hospitalization. Those who are hospitalized typically require support for fever, dehydration and breathing difficulties. The increase in hospitalizations of COVID-positive patients is likely the result of widespread community transmission of COVID-19 due to the Omicron variant. While rare, some children and youth can get seriously ill after contracting COVID-19 and this is something we are monitoring closely.

How effective is one dose of the vaccine against COVID-19?

The COVID-19 vaccine is currently a two-dose series for children aged five to 11. While one dose provides partial protection in young individuals, it takes both doses to be considered fully vaccinated and optimize the protection provided by vaccination.

Does the rapid spread of the Omicron variant mean children should receive their two vaccine doses at an interval shorter than the eight weeks recommended when it was approved in Canada?

The National Advisory Committee on Immunization (NACI) currently recommends an eight-week interval, but parents may choose to vaccinate their children at a shorter interval (minimum three weeks) if they provide informed consent. If you are considering vaccinating your child at a shorter interval because of an underlying health condition or other reason, please discuss the matter with your child's primary health-care provider.

Is there advice you would give to families with children who are immunocompromised or have disabilities and medical complexity?

Vaccination remains the best layer of protection against COVID-19 for everyone. It is important your child receives the vaccinations for which they are eligible. In Ontario, certain immunocompromised populations, including children aged five to 11, are eligible for third doses.

Read more about <u>Ontario's third-dose recommendations</u>. You can also talk to your child's doctor or book an appointment with the SickKids COVID-19 Vaccine Consult Service.

What is the current evidence for vaccination for COVID-19 in children with disabilities and medical complexity?

Current evidence suggests that children with disabilities and medical complexity may be at an increased risk for severe illness or complications from COVID-19 based on their underlying condition making vaccination and prevention of COVID-19 especially important. The Pfizer COVID-19 vaccine is safe and effective for children with a wide variety of different medical conditions and complexities. Unexpected or severe side-effects to the vaccine are very rare. If you have specific questions about your child's medical condition and the COVID-19 vaccine, talk with your child's doctor or book an appointment with the SickKids COVID-19 Vaccine Consult Service.

What special considerations are there when vaccinating children with disabilities and medical complexity? Where can family caregivers find additional resources?

Families should consider different strategies that have worked well with previous immunizations and create a plan to set their child up for success. Some questions to consider when scheduling your child's vaccination appointment include:

- Does my child require a calmer environment? (i.e., privacy, quiet)
- If applicable, is the vaccination clinic wheelchair accessible?
- Which distraction techniques are typically most effective for my child (i.e., deep breathing, counting, watching a favourite video, stress balls)
- What position will be most comfortable for my child during their vaccination (i.e., comfort holding, sitting with a caregiver, lying down)

If family caregivers have questions related to vaccinating children with disabilities and medical complexity, you should first reach out to your child's primary care physician. For additional questions after speaking with your child's physician, you can book an appointment with the SickKids COVID-19 Vaccine Consult Service.

When will children and youth who are not immunocompromised be eligible for a third (booster) dose of the vaccine?

Third doses are currently being prioritized for people aged 18 and up as they were vaccinated earlier and are more at risk due to waning immunity. It is possible that children and youth will be eligible for a third dose in the future, but there are no current recommendations for this group.

I cannot decide if vaccinating my child is the right thing to do. Who can I talk to?

Contact your child's primary care provider or the SickKids COVID-19 Vaccine Consult Service, a by-appointment phone service for Ontario residents that provides a safe, judgment-free space to have an open conversation about the COVID-19 vaccine with a paediatric registered nurse. Book an appointment online at sickkids.ca/vaccineconsult or by calling 1-888-304-6558.

For general information on COVID-19, please visit the COVID-19 learning hub.

Information on how to prepare and support your child with their COVID-19 vaccine

CARD System Learning Hub https://www.aboutkidshealth.ca/card

Needle pokes: Reducing pain in children aged 18 months or over https://www.aboutkidshealth.ca/Article?contentid=990&language=English

Needle pokes: Reducing pain with comfort positions and distraction https://www.aboutkidshealth.ca/Article?contentid=3629&language=English

Needle pokes: Reducing pain with numbing cream https://www.aboutkidshealth.ca/Article?contentid=3627&language=English

Pain relief: Comfort kit

https://www.aboutkidshealth.ca/Article?contentid=1258&language=English

References

Centers for Disease Control and Prevention. (2021, February 26). COVID-19 Vaccination. Retrieved from https://www.cdc.gov/vaccines/covid-19/index.html

Centers for Disease Control and Prevention. (2021, March 8). Science Brief: Background Rationale and Evidence for Public Health Recommendations for Fully Vaccinated People.

Retrieved from https://www.cdc.gov/coronavirus/2019-ncov/more/fully-vaccinated-people.html

Government of Ontario – Ministry of Health. (2020, March 31). COVID-19 vaccines for Ontario. Retrieved from https://covid-19.ontario.ca/covid-19-vaccines-ontario

Health Canada. (2021, October 18). Health Canada receives submission from Pfizer-BioNTech to authorize the use of Comirnaty COVID-19 vaccine in children 5 to 11 years of age. Retrieved from https://www.canada.ca/en/health-canada/news/2021/10/health-canada-receives-submission-from-pfizer-biontech-to-authorize-the-use-of-comirnaty-covid-19-vaccine-in-children-5-to-11-years-of-age.html

ImmunizeBC. (2021, March 12). COVID-19 Vaccine Frequently Asked Questions. Retrieved from https://immunizebc.ca/covid-19-vaccine-frequently-asked-questions

ImmunizeCanada. (2021, February 18). COVID-19 Info. Retrieved from https://immunize.ca/covid-19-info

National Advisory Committee on Immunization. (2021, May 5). Recommendations on the use of COVID-19 vaccines. Retrieved from https://www.canada.ca/content/dam/phac-aspc/documents/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines/recommendations-use-covid-19-vaccines-en.pdf

Pfizer. (2021, September 20). Pfizer and BioNTech Announce Positive Topline Results from Pivotal Trial of COVID-19 Vaccine in Children 5 to 11 Years. Retrieved from https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-announce-positive-topline-results

Pfizer. (2021, September 28). Pfizer and BioNTech Submit Initial Data to U.S. FDA From Pivotal Trial of COVID-19 Vaccine in Children 5 to <12 Years of Age. Retrieved from https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-submit-initial-data-us-fda-pivotal

Public Health Agency of Canada. (2021, September 28). Advisory Committee Statement (ACS) National Advisory Committee on Immunization (NACI): Recommendations on the use of COVID-19 vaccines. Retrieved from https://www.canada.ca/content/dam/phac-aspc/documents/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines/recommendations-use-covid-19-vaccines-en.pdf

Walter, E.B., Talaat, K.R., Sabharwal, C., Gurtman, A., Lockhart, S., Paulsen, G.C.,...Gruber, W.C., for the C4591007 Clinical Trial Group. (2021). Evaluation of the BNT162b2 Covid-19 Vaccine in Children 5 to 11 Years of Age. *New England Journal of Medicine*. https://www.nejm.org/doi/full/10.1056/NEJMoa2116298

World Health Organization. (2021, February 19). COVID-19 vaccines. Retrieved from https://www.who.int/emergencies/diseases/novel-coronavirus-2019/covid-19-vaccines

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