Doctors, scientists, pharmacists, and patients in Canada made this guide to answer your questions about COVID-19 mRNA vaccines for young children.

FREQUENTLY ASKED QUESTIONS

COVID-19 mRNA Vaccines
For Young Children (aged 6 months to 5 years)

What are the risks of COVID-19 infection in young children?
COVID-19 is a leading cause of hospitalization and death for young children.1 Young children can get multisystem inflammatory syndrome (MIS-C) after COVID-19.1,2 MIS-C is rare but very serious. It causes inflammation of the heart, lungs, kidneys, brain, skin, eyes, and stomach.3

Young children can get Long COVID and have symptoms that last months, even after a mild illness.4,5 Symptoms include tiredness, cough, breathing problems, change in appetite, and stomach aches.4,5 We are still learning about the long-term effects of COVID-19 infections.

What are the benefits of COVID-19 vaccines for young children?
The benefits of COVID-19 vaccines for young children lower the risk of getting sick with COVID-19, including the Omicron variants. Preventing illness can prevent disruptions to school and activities. Data from older children and adults tell us that vaccines lower the risk of hospitalization, death, MIS-C, Long COVID, and spreading COVID-19.1,6

Which vaccine will young children get?
The Moderna (Spikevax™) mRNA vaccine is approved for children 6 months and older.7 Health Canada is reviewing the Pfizer (Comirnaty™) mRNA vaccine for children 6 months to 4 years. At this time, the Pfizer vaccine is only approved for people 5 years and older.6 A child who is 5 can receive either the Pfizer or Moderna vaccine.2

What is in mRNA COVID-19 vaccines?
The Pfizer and Moderna vaccines contain mRNA. mRNA teaches your cells to make the COVID-19 spike protein.7 The COVID-19 virus uses the spike protein to enter cells. COVID-19 vaccines prepare the immune system to fight infection by teaching it to make antibodies against the spike protein. A lipid (fat) envelope protects the mRNA while it is getting into cells.7 Neither vaccine contains any COVID-19 virus.8 The vaccines cannot cause COVID-19 infection.8
Is mRNA technology safe?
Yes. Scientists have been studying mRNA since the 1960s.7 Scientists around the world worked together to develop COVID-19 mRNA vaccines.7 COVID-19 mRNA vaccines were tested in clinical trials.7-10 Trial results were reviewed by regulatory bodies before the vaccines could be used.8 Strong vaccine safety systems monitor for rare vaccine side effects.11 More than 81 million doses of mRNA vaccines have been safely given in Canada alone.12

What are the common side effects of COVID-19 mRNA vaccines in young children?
Common, mild side effects can include: fever, sore arm, irritable mood, tiredness, and low appetite. These side effects go away in a few days.2,10

What are the serious side effects of COVID-19 mRNA vaccines in young children?
Serious vaccine side effects are expected to be rare for young children. There were no safety concerns in the Moderna vaccine trial.10

Anaphylaxis (a severe allergy) happens very rarely after COVID-19 vaccines.2,11,13 Young children with allergies to foods, drugs, insect stings, or other vaccines can get COVID-19 mRNA vaccines.2

Inflammation of the heart (myocarditis) and of the sac around the heart (pericarditis) can happen rarely after COVID-19 vaccines.2,11,13-15 These conditions happened even less commonly in children than in teens and adults.14,15 In Ontario, the rate of myocarditis in children is 2.7 cases per 1 million doses (0.0003%).16 Experts think this will be similar for young children.

What are the long-term side effects of COVID-19 mRNA vaccines in young children?
Long-term side effects are not expected from COVID-19 mRNA vaccines. This is because vaccine side effects tend to happen in the first 6 weeks. The COVID-19 mRNA vaccine ingredients do not stay in the body long-term. The body breaks down the mRNA in 2 to 3 days.8 The spike protein may stay in the body for up to 2 to 3 weeks.8 Vaccines do not affect fertility, genes (DNA), or hormone levels.8,17,18

How many vaccine doses are recommended for young children?
For most young children, 2 doses of the Moderna vaccine are recommended.2 Young children who have a weakened immune system should have 3 doses.2 This includes children who have specific health conditions or who take medications that affect their immune system (e.g., DiGeorge syndrome, chemotherapy). Like teens and adults, young children may need boosters in the future.

What is the spacing between doses for young children?
For the Moderna vaccine, Health Canada approved spacing of 4 weeks between dose 1 and dose 2. This was the spacing used in the clinical trials.10

However, NACI recommends 8 weeks between dose 1 and dose 2. For young children with a weakened immune system, NACI recommends 4 to 8 weeks between Moderna vaccine doses.2,13

Longer spacing between doses may give better long-term protection.2,6,13 The risk of side effects may be lower.2,13 Shorter spacing between doses will give stronger protection sooner. Young children will have the best possible protection when they have had all recommended vaccine doses.2,6,13


More questions (next page) →

Financial contribution from:
When can young children who have had a COVID-19 infection be vaccinated?
Most children who have had COVID-19 infections can be vaccinated once they are feeling better and their isolation period has ended. Children who have had multisystem inflammatory syndrome (MIS-C) should wait to be vaccinated for at least 90 days from diagnosis.

NACI recommends that children wait 8 weeks after a COVID-19 infection to get a COVID-19 vaccine. Eight weeks are counted from the day symptoms started OR the day of the first positive test. Waiting may give children better protection in the long-term. Choosing to get vaccine doses earlier will give stronger protection sooner. Young children will have the best protection when they have had all recommended vaccine doses.

Why should children who have already had COVID-19 get vaccinated?
Children who have had COVID-19 should still get vaccinated to make sure they have the best protection. The immune system’s response to infection is not predictable. Children who get vaccinated after they have had COVID-19 will have stronger, longer-lasting protection.

Are the vaccine doses for young children the same as for older children, teens, and adults?
No. The Pfizer and Moderna vaccines for young children use lower doses. They still work well because children have strong immune responses.

<table>
<thead>
<tr>
<th>Age</th>
<th>Pfizer vaccine dose</th>
<th>Moderna vaccine dose</th>
</tr>
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<tbody>
<tr>
<td>6 months to 4 years</td>
<td>3mcg (not approved in Canada yet)</td>
<td>25mcg</td>
</tr>
<tr>
<td>5 years to 11 years</td>
<td>10mcg</td>
<td>50mcg</td>
</tr>
<tr>
<td>12 years and older</td>
<td>30mcg</td>
<td>100mcg</td>
</tr>
</tbody>
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*The Moderna booster dose for most people aged 12 years and older is 50mcg.

Should young children who weigh more, or who are at the older end of the age range, get bigger doses?
No. Bigger doses are not recommended for young children who weigh more or are at the older end of the age range. Vaccine doses are based on age, not weight.

What if a child has a birthday between doses?
Children who turn 6 between doses of Moderna vaccine should get the 50 mcg dose for their next doses. If they get the 25 mcg dose, the dose doesn’t need to be repeated.

Can young children “mix-and-match” brands of COVID-19 vaccine to get all recommended doses?
At this time, NACI recommends that young children get the same brand of vaccine for all doses if possible. “Mix-and-match” means having one brand of vaccine for one dose and a different brand for other doses. Data from adults tells us that “mixing-and-matching” COVID-19 vaccines is safe and effective. Children will have the best protection when they have had all recommended doses.
**Should we wait for newer vaccines?**

No. COVID-19 cases are high in many parts of Canada. Getting vaccinated with the approved vaccine as soon as possible will give children the best protection. New vaccines that target the Omicron variants are being studied. We don’t know how well they will work. We don’t know when they will be approved and available.

**How can I support a young child who is anxious about vaccines?**

Numbing skin patches or creams from a pharmacy can help children who are worried about pain. The CARD (Comfort, Ask, Relax, and Distract) system may also help: [CARD System](#). For more tools, visit: [Reduce the Pain of Vaccination in Kids and Teens](#) and [It Doesn’t Have to Hurt](#).

**How can I support a child with a disability or specific needs?**

Some children need support to access COVID-19 vaccines. Guardians and children can speak with their healthcare team to make a plan (e.g., a longer appointment, a quiet space) as needed.

If you have questions about COVID-19 vaccines for a child with complex medical history or with complex needs, you can make a phone appointment with the [Sick Kids Vaccine Consult Service](#).

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**Stay up to date by getting all recommended vaccine doses**

= **Best protection from getting severely ill or dying from COVID-19**

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**For more information about COVID-19 vaccination for children 5 years and younger, visit:**

[SickKids COVID-19 vaccination for ages under five](#).