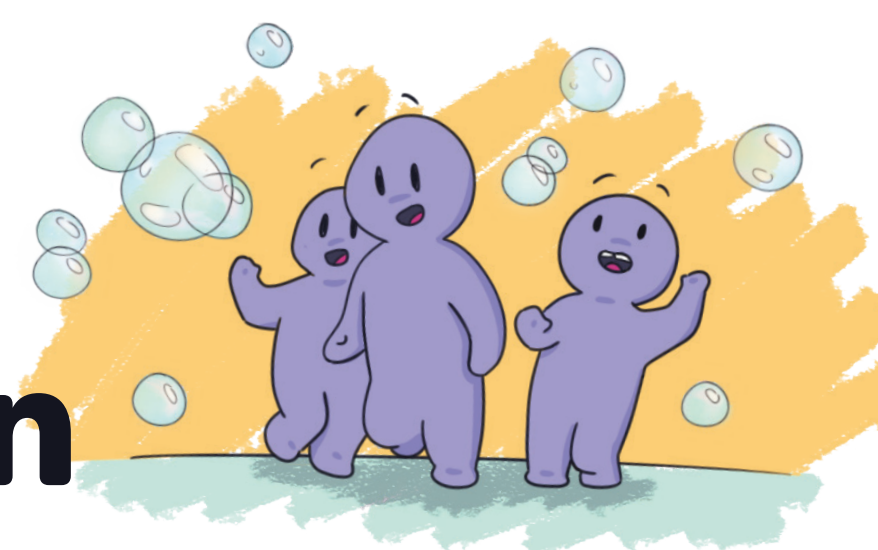


November 8, 2021

**FREQUENTLY ASKED QUESTIONS**

# Covid-19 mRNA Vaccines for Children



✦ **What vaccine will children aged 5 to 11 years get?**

Health Canada is first reviewing the Pfizer-BioNTech (also known as Comirnaty®) Covid-19 mRNA vaccine for approval for children aged 5 to 11.<sup>1</sup>

✦ **Will children aged 5 to 11 get the same dose as teens and adults?**

No. The Pfizer vaccine for children uses a lower dose.<sup>1</sup> The vaccine used for teens and adults has 30 micrograms of mRNA.<sup>2</sup> The vaccine for children has 10 micrograms.<sup>1</sup> Smaller vaccine doses are often used for children.<sup>3</sup> They work well because children have stronger immune responses than adults.<sup>3</sup>

✦ **Should children who weigh more, or who are nearly 12, get bigger doses?**

No. Children who weigh more or who are nearly 12 do not need bigger doses. Vaccine doses are not based on weight.<sup>3</sup>

✦ **How many vaccine doses will children receive?**

In the Pfizer trials, 2 vaccine doses were given 21 days apart.<sup>1</sup> In adults, doses spaced 8 weeks apart seem to give stronger, longer lasting protection.<sup>4</sup> The National Advisory Committee on Immunization (NACI) makes recommendations on the use of vaccines in Canada. We do not know the recommendations for spacing or number of doses yet.

**You can find the most recent  
NACI 🇨🇦 guidelines here:**

[www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines.html](https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines.html)

✦ **What is in the Pfizer Covid-19 vaccine?**

The Pfizer vaccine contains mRNA. mRNA instructs your cells to make the Covid-19 spike protein.<sup>5</sup> A lipid (fat) envelope protects the mRNA while it is getting into cells.<sup>5</sup> The sugars and salts are slightly different in the children's vaccine, so it can be stored in the fridge longer.<sup>1</sup> The vaccine does not contain any Covid-19 virus.<sup>6</sup> It cannot cause a Covid-19 infection.<sup>6</sup>

✦ **Is mRNA technology safe?**

Yes. Scientists have been studying mRNA since the 1960s.<sup>5</sup> Scientists around the world worked together to develop mRNA Covid-19 vaccines.<sup>5,6</sup> mRNA Covid-19 vaccines were tested in clinical trials.<sup>5,6</sup> Trial results were reviewed by regulatory bodies before the vaccines could be used.<sup>6</sup> Strong vaccine safety systems monitor for rare vaccine side effects.<sup>5,6</sup> As of October 2021, more than 1.4 billion doses of Pfizer Covid-19 vaccines have been safely delivered around the world.<sup>1</sup>

✦ **Do mRNA Covid-19 vaccines work for children aged 5 to 11?**

Yes. In vaccine trials, children had a strong immune system response to the Pfizer vaccine.<sup>1</sup> Children who got 2 doses of the Pfizer Covid-19 vaccine had a 91% lower chance of getting sick with Covid-19.\*<sup>1</sup> The Pfizer vaccine protects children from getting sick with the Delta variant.<sup>1</sup>

\* Vaccine efficacy is the reduction in risk of disease in people who are vaccinated compared with people who are not vaccinated. The Pfizer vaccine trial included ~2500 children. The rate of symptomatic Covid-19 infection in children who got vaccinated was ~2 per 1,000. The rate of Covid-19 infection in children who got a placebo (salt water) was ~25 per 1,000. Vaccine efficacy is 91%.

<sup>1</sup> <https://www.fda.gov/media/153409/download?fbclid=IwAR3H3WCpEtBeTYjb0fhLG2ywfOXrFBcojtJhAWkLpvf9trTY2XER6irhHhA>

<sup>2</sup> <https://www.canada.ca/en/public-health/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines.html>

<sup>3</sup> <https://immunizebc.ca/ask-us/questions/does-adult-get-same-amount-vaccine-baby>

<sup>4</sup> <https://www.canada.ca/content/dam/phac-aspc/documents/services/immunization/national-advisory-committee-on-immunization-naci/recommendations-use-covid-19-vaccines/statement-guidance-booster-doses/statement-guidance-booster-doses.pdf>

<sup>5</sup> <https://www.nature.com/articles/d41586-021-02483-w>

<sup>6</sup> <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/mrna.html>

• **What are the common side effects of mRNA Covid-19 vaccines in children?**

Common side effects are a sore or red arm, tiredness, chills, and muscle/joint pain.<sup>1,2</sup> Many children in the trials had mild side effects after getting the Pfizer vaccine.<sup>1</sup> Side effects go away after a few days.<sup>1,2</sup>

• **What are the serious side effects of mRNA Covid-19 vaccines in children?**

No new serious side effects were seen in the Pfizer vaccine trials for children. Serious side effects, like anaphylaxis (a severe allergy), after mRNA Covid-19 vaccines are rare.<sup>6,7</sup> For every 1 million Pfizer doses given to people aged 12 and older, there are 2-8 cases of anaphylaxis (0.0002 - 0.0008%).<sup>2</sup> Children with allergies to foods, drugs, insect stings, or other vaccines can safely get mRNA Covid-19 vaccines.<sup>2</sup>

Inflammation of the heart (myocarditis) and of the sac around the heart (pericarditis) can happen rarely after Covid-19 vaccines.<sup>2,8</sup> These conditions are more likely for young males after dose 2.<sup>8</sup> They are usually mild and are treated with rest and anti-inflammatory medicines.<sup>8</sup> These conditions happen **far more often after a Covid-19 infection.**<sup>9</sup> For more, visit: [https://uwaterloo.ca/pharmacy/sites/ca.pharmacy/files/uploads/files/myocarditis\\_and\\_pericarditis\\_after\\_covid-19\\_vaccines.pdf](https://uwaterloo.ca/pharmacy/sites/ca.pharmacy/files/uploads/files/myocarditis_and_pericarditis_after_covid-19_vaccines.pdf)

• **What are the long-term side effects of mRNA Covid-19 vaccines in children?**

Long-term side effects are not expected from mRNA Covid-19 vaccines.<sup>10</sup> Vaccine side effects tend to happen in the first 6 weeks. mRNA vaccines have been studied in humans since 2013 with no known long-term effects.<sup>5,10</sup> The mRNA in the Covid-19 vaccine is broken down by the body in 2 to 3 days.<sup>6</sup> The spike protein may stay in the body for up to 2 to 3 weeks.<sup>6</sup> There have been reports of short-term menstrual cycle changes,<sup>11</sup> but vaccines **do not** impact fertility, genes (DNA), or hormone levels.<sup>6,12</sup>

• **How can I support a 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: <https://www.aboutkidshealth.ca/card>. Guardians can talk with their healthcare team to make a vaccine plan for children with more complex needs. For more tools, visit: [https://caringforkids.cps.ca/uploads/handout\\_images/painreduction\\_kids\\_andteens\\_e.pdf](https://caringforkids.cps.ca/uploads/handout_images/painreduction_kids_andteens_e.pdf) and <https://www.yummymummyclub.ca/health/it-doesnt-have-to-hurt-bc>.

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

Some children need support to access Covid-19 vaccines.<sup>13</sup> Guardians and children can speak with their healthcare team to make a plan (e.g., a longer appointment or a quiet space<sup>13</sup>), as needed.



**What are the risks of Covid-19 infection in children?**

Covid-19 infection can cause serious illness and death in **any** child.<sup>1,13</sup> Covid-19 can cause myocarditis/pericarditis.<sup>1,9</sup> Multisystem Inflammatory Syndrome (MIS-C) is most common in children aged 5 to 11.<sup>13</sup>

We are still learning about Long Covid.<sup>1,14</sup> In early studies, 1 to 4 out of every 100 children with a Covid-19 infection had lasting symptoms (1% to 4%).<sup>15</sup> Symptoms include tiredness, headache, sore throat, and loss of smell.<sup>15</sup> Children can get Long Covid even after a mild illness.<sup>1,14,15</sup>



**What are the benefits of Covid-19 vaccination for children?**

Most people will be exposed to Covid-19 in the next year. Unvaccinated people are much more likely to get Covid-19. Covid-19 vaccines will protect children from getting sick with Covid-19. In teens and adults, vaccines lower the risk of hospitalization, death, Long Covid, and spreading Covid-19 to others.<sup>1,2,16,17</sup>

<sup>7</sup> <https://health-infobase.canada.ca/covid-19/vaccine-safety/summary.html>

<sup>8</sup> [https://www.sickkids.ca/contentassets/50c1bd3c95e74dcf9fa7c9f6fd707bd7/interim-guidance\\_myocarditis-pericarditis-after-mrna-covid-19-vaccination-in-children.pdf](https://www.sickkids.ca/contentassets/50c1bd3c95e74dcf9fa7c9f6fd707bd7/interim-guidance_myocarditis-pericarditis-after-mrna-covid-19-vaccination-in-children.pdf)

<sup>9</sup> <https://www.cdc.gov/mmwr/volumes/70/wr/mm7035e5.htm>

<sup>10</sup> <https://immunizebc.ca/ask-us/questions/are-there-long-term-side-effects-caused-mrna-covid-19-vaccines-how-do-we-know>

<sup>11</sup> <https://www.bmj.com/content/374/bmj.n2211>

<sup>12</sup> [https://cfas.ca/\\_Library/SOGC\\_Statement\\_/CFAS\\_COVID-19\\_Vaccine\\_Build\\_Final\\_April2021\\_Final\\_EN.pdf](https://cfas.ca/_Library/SOGC_Statement_/CFAS_COVID-19_Vaccine_Build_Final_April2021_Final_EN.pdf)

<sup>13</sup> <https://pediatrics.aappublications.org/content/148/4/e2021053190>

<sup>14</sup> <https://www.fda.gov/media/153508/download>

<sup>15</sup> <https://covid19-sciencetable.ca/sciencebrief/understanding-the-post-covid-19-condition-long-covid-and-the-expected-burden-for-ontario/>

<sup>16</sup> [https://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(21\)00460-6/fulltext](https://www.thelancet.com/journals/laninf/article/PIIS1473-3099(21)00460-6/fulltext)

<sup>17</sup> <https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/fully-vaccinated-people.html>

