

COVID-19 vaccine for younger children (ages 6 months to under 5 years): What you need to know

Two COVID-19 vaccines are now approved for children ages 6 months to under 5 years. It's important to make informed decisions about which vaccines your children receive, based on the scientific evidence that is available. In this handout, you will learn about the Pfizer-BioNTech® and Moderna® vaccines approved for this age group. This handout will also give science-backed answers to common myths and misinformation about COVID-19 vaccines.

Which vaccines are available for my child?

As of June 18, 2022, the Pfizer-BioNTech® (or simply Pfizer®) and Moderna® vaccines received approval for emergency use from the U.S. Food and Drug Administration (FDA) and a recommendation for emergency use from the Centers for Disease Control and Prevention (CDC).

The Moderna® vaccine is approved and recommended for children 6 months to under 6 years. The Pfizer® vaccine has already been approved and recommended for children age 5 years and over and adults.

What is the schedule and the dosing?

Pfizer®

3 doses of 3 micrograms (ug) given. (This is a smaller dose meant for children. It is about 1/10th of the adult dose.)

- First dose: Day 1
- Second dose: 3-8 weeks after the first dose
- Third dose: 60 days or more after the second dose

Moderna®

2 doses of 25 micrograms (ug) given 4-8 weeks apart. (This is a smaller dose meant for children. It is about 1/4th of the adult dose.)

The lower dose in each vaccine is safe and works very well in younger children because their immune systems are stronger.

When is my child considered fully vaccinated?

Your child is considered fully vaccinated 2 weeks after receiving their **primary** (first) series of vaccine.

Children who are moderately or severely immunocompromised who receive the Moderna® vaccine will need a 3rd Moderna® dose at least 4 weeks after the 2nd dose. If your child receives the Pfizer® vaccine, they do not need additional doses of the Pfizer® vaccine.

What are the ingredients in the mRNA vaccines?

The Pfizer® and Moderna® vaccines contain the following ingredients:

- **mRNA** (instructions for cells to make proteins) for parts of the spike protein. The **spike protein** is the part of the COVID-19 virus that helps it get into cells and cause inflammation.
- **Lipids** (fats) to help the mRNA get into the cells
- A salt and sugar mixture to keep the vaccine stable until it is ready to be given

There are no preservatives, latex, eggs or metals in the **vials** (bottles that contain the vaccine liquid). There are no tissues, gelatin or any materials from animals. The ingredients in the Moderna® and Pfizer® vaccines for young children, older children and adults are the same.

How many children ages 6 months to 5 years were in the study?

Vaccine	Age of children	Total number of children in the study	Number of children who received the vaccine	Number of children who did not receive the vaccine
Pfizer®	6-23 months	1776	1178	598
Pfizer®	2-5 years	2750	1835	915
Moderna®	6-23 months	2355	1762	593
Moderna®	2-5 years	4048	3040	1008

How well do the vaccines work?

Both the Pfizer® and the Moderna® vaccines work well to prevent severe disease and death from COVID-19. Scientists found that each vaccine for children works just as well as the vaccine used in adult. Therefore, we recommend vaccinating with whichever product is available for your family. It is important to know that the numbers below show how well each vaccine protected against all infections (even those that do not cause symptoms) in children who were in the studies. Also, the way the studies were done do not allow for direct comparison between the 2 vaccines. Both produced similar antibody responses in children under 5 as responses produced in young adults. Both reduce the risk of your child having a serious complication from the disease.

Pfizer® 3-dose series

Ages 6 months to 4 years: 80% (prevents infection in about 8 out of every 10 children)

Moderna® 2-dose series

Ages 6 months to 5 years: 37.8% (prevents infection in about 4 out of every 10 children)



What are the side effects?

The side effects of both vaccines in this age group were quite similar. The most common side effect was pain at the **injection site** (the spot where a person received the vaccine). Other side effects included:

- **Fatigue** (unusual tiredness)
- Fever
- Headache
- Diarrhea (Pfizer® vaccine only)
- Nausea and/or vomiting (less common)
- Muscle aches (less common)
- Joint pain (less common)
- Chills (less common)
- Irritability (fussiness or crankiness) (in babies)
- **Decreased appetite** (not wanting to eat as much or as often as usual) (in babies)

There were no reports of **myocarditis** (inflammation of the heart muscle), blood clots, **anaphylaxis** (a serious allergic reaction) or death.

How long do side effects usually last?

Most side effects go away within 1-2 days. The side effects are a signal that the **immune system** (system in the body that fights and protects against illness and germs) is learning how to protect your child's body against the virus. If your child doesn't get side effects, the vaccine still works well.

If children do not usually get very sick from COVID-19, why should I consider getting my child vaccinated?

There are many reasons why you can consider getting your child vaccinated even if they've had COVID-19 before:

Less risk of severe illness, hospitalization and death

- While the COVID-19 vaccine does not **eliminate** (completely remove or reduce) your child's risk of getting COVID-19, it greatly lowers the risk of severe illness and death. This is true in every age group that received a COVID-19 vaccine. At MGfC, your child's care team expects this to also be true in children under age 5 years.
- Although COVID-19 is typically milder in children than in adults, it can still have risks. Some previously healthy children with COVID-19 get severe lung infections and **multisystem inflammatory syndrome (MIS-C)**, a complication of COVID-19). This causes them to get very sick and require hospitalization.
- Since the Omicron variant has become known, children ages 6 months - 4 years of age are more likely to be hospitalized for COVID-19, than children ages 5-17 years. One in every 2 children hospitalized did not have an underlying medical condition.
- Children are more likely to be hospitalized because of COVID-19 than from all other illnesses that can be prevented through routine vaccinations. Nearly 1 in every 4 children hospitalized because of COVID-19 need intensive care.

Death from COVID-19 is preventable

- COVID-19 is among the top 5 leading causes of death in children under age 5. In the United States alone, millions of children have had COVID-19. Through March 2022 (2 years into the pandemic), over 2500 children under 5 have required hospitalization and over 400 have died. That is higher than any other disease that can be prevented with a vaccine.



The vaccine protects others from spreading and/or getting COVID-19

- The vaccine helps prevent or reduce the spread of COVID-19 among family members, friends and people in the community, including people who have a higher risk of getting COVID-19. **There are still over 1,000 people a day dying of COVID-19 in the US.**
- The vaccine can help stop other **variants** (strains of COVID-19) from happening. Getting the vaccine lessens the virus's ability to infect new people, **replicate** (copy itself) and change into new variants that may be more dangerous.

My child already had COVID-19. Should they still get the vaccine?

Yes, you should still have your child get the vaccine when they are cleared by their pediatrician or medical team. Research has shown that people with hybrid immunity are the most protected from future infections. **Hybrid immunity** is when a person's immune system can better protect against a certain disease if they've had that disease and received a vaccine for it.

If your child received **antibody-based treatments** for COVID-19, talk with your doctor about when to get the vaccine.

Does the COVID-19 vaccine cause myocarditis in children?

Myocarditis has been reported as a very rare side effect (about 1 in 20,000 people) after the second dose, mostly in males ages 16-29 years old. The risk of getting myocarditis from the vaccine is much lower than getting myocarditis from COVID-19. Myocarditis after vaccination is also milder than after getting COVID-19.

In children under age 11 who received the Pfizer® or Moderna® vaccines, there were no cases of myocarditis. In children age 12 and older who did get myocarditis from the vaccine, cases were mild and got better quickly. This is compared to about 75% (about 3 out of every 4) children who got myocarditis and MIS-C from COVID-19, in which their cases were severe with long-term effects.

Do the COVID-19 vaccines alter your DNA?

No, the COVID-19 vaccines do not alter your DNA.

Where can I get a COVID-19 vaccine for my child?

- Your pediatrician's office
- For patients and families in Massachusetts, visit www.VaxFinder.mass.gov
- For vaccine clinic locations anywhere in the US:
 - Visit the CDC's COVID-19 vaccine website at www.vaccines.gov
 - Text your zip code to the CDC's vaccine clinic locator at 438829
 - Call the CDC's vaccine clinic locator at 800-232-0233

Where can I learn more about the COVID-19 vaccine for my child?

- Your pediatrician or other member of your child's care team
- The CDC at www.cdc.gov/coronavirus
- The American Academy of Pediatrics (AAP). Scan the QR codes from the AAP below with the camera or a QR code scanner on your smart device.

