



# COVID-19 Vaccine Safety in Children and Teens

Updated July 20, 2022

## What You Need to Know

- CDC recommends COVID-19 vaccines for everyone ages 6 months and older, and COVID-19 boosters for everyone ages 5 years and older, if eligible.
- Through continued [safety monitoring](#), COVID-19 vaccination has been found to be safe for children and teens.
- [Millions of children and teens](#) ages 5 through 17 years have already received at least one dose of a [COVID-19 vaccine](#).
- The known risks and possible severe complications of COVID-19 outweigh the potential risks of having a [rare, adverse reaction](#) to vaccination.
- Use [CDC's COVID-19 booster tool](#) to learn if and when your child or teen can get boosters to [stay up to date](#) with their COVID-19 vaccines.

## Clinical Trials and Ongoing Safety Monitoring Show That COVID-19 Vaccination Is Safe for Children and Teens

Before authorizing or approving [COVID-19 vaccines](#), scientists conducted clinical trials with thousands of children and teens to establish their safety and effectiveness. Learn more about [how COVID-19 vaccines were developed and approved](#).

COVID-19 vaccines are being monitored under the most comprehensive and intense vaccine safety monitoring program in U.S. history. CDC monitors all COVID-19 vaccines after they are authorized or approved for use. CDC and U.S. Food and Drug Administration (FDA) continue to monitor vaccines, keep people informed of findings, and use data to make COVID-19 vaccination recommendations.

Learn more about COVID-19 vaccine safety from [published research](#) and [how CDC and FDA are making sure COVID-19 vaccines used in the United States are safe](#).


## Serious Health Events after COVID-19 Vaccination Are Rare

[Serious reactions](#) after COVID-19 vaccination in children and teens are **rare**. When they are reported, serious reactions most frequently occur within a few days after vaccination.

Rare cases of [myocarditis](#) (inflammation of the heart muscle) and pericarditis (inflammation of the outer lining of the heart) have been reported after children and teens ages 5 years and older got the Pfizer-BioNTech COVID-19 vaccine. New studies have shown the rare risk of myocarditis and pericarditis associated with mRNA COVID-19 vaccination ([Pfizer-BioNTech](#) and [Moderna](#))—mostly among males between the ages of 12 and 39 years—may be further reduced with a longer time between the first and second dose.

- In children ages 5 through 11 years, there were 20 confirmed reports of myocarditis out of approximately 18.1 million doses given of the Pfizer-BioNTech COVID-19 vaccine [between November 2021 and April 2022](#) 

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- In [reports of myocarditis following mRNA-based COVID-19 vaccination from December 2020 to August 2021](#) , the risk of myocarditis was highest following the second dose of the Pfizer-BioNTech vaccine in adolescent and young adult males.
- Reporting rates were around 70 cases per million doses in males ages 12 through 15 years and 105 cases per million doses in males ages 16 through 17 years.

Learn more about [myocarditis and pericarditis after COVID-19 vaccination](#) and the [association between myocarditis and having COVID-19](#).

Febrile seizures were rare in COVID-19 vaccine clinical trials for young children and occurred at similar rates for both Pfizer and Moderna COVID-19 vaccines. Learn more about [febrile seizures and vaccines](#).

A [severe allergic reaction](#), like anaphylaxis, may happen after any vaccination, including COVID-19 vaccination, but this is **rare**. If your child experiences a severe allergic reaction after getting a COVID-19 vaccine, vaccine providers can rapidly provide care and call for emergency medical services, if needed.

If your child gets a COVID-19 vaccine and you think they might be having a severe allergic reaction after leaving the vaccination provider site, seek immediate medical care by calling 911.

## People Cannot Get COVID-19 from Any COVID-19 Vaccine

mRNA vaccines, such as the Pfizer-BioNTech and Moderna vaccines, do not use the live virus that causes COVID-19 and do not interact with DNA in any way. Instead, [mRNA vaccines](#) teach the body how to fight the virus that causes COVID-19. Then, the body gets rid of the mRNA within a few days after vaccination.



## There Is No Evidence That COVID-19 Vaccination Causes Problems Becoming Pregnant

There is no evidence that vaccine ingredients, including mRNA, or antibodies made following COVID-19 vaccination would cause any problems with becoming pregnant now or in the future. Learn more about [COVID-19 vaccines for people who would like to have a baby](#) someday.

Learn more about [how mRNA vaccines, like the Pfizer-BioNTech and Moderna vaccines, work](#).



## Research on COVID-19 Vaccine Safety in Children

### Children ages 5 through 11 years

- [COVID-19 vaccine safety in children aged 5–11 Years — United States, November 3–December 19, 2021](#)
- [Evaluation of the BNT162b2 COVID-19 vaccine in children 5 to 11 years of age](#) 
- [Adverse events among children ages 5–11 years after COVID-19 vaccination: Updates from v-safe and the Vaccine Adverse Event Reporting System \(VAERS\)](#) 
- [The Advisory Committee on Immunization Practices' interim recommendation for use of Pfizer-BioNTech COVID-19 vaccine in children aged 5–11 years — United States, November 2021](#)

### Children ages 12 through 17 years

- [Safety monitoring of COVID-19 vaccine booster doses among persons aged 12–17 years — United States, December 9, 2021–February 20, 2022](#)

- [Safety monitoring in the Vaccine Adverse Event Reporting System \(VAERS\)](#) 
- [Myocarditis cases reported after mRNA-based COVID-19 vaccination in the US from December 2020 to August 2021](#) 
- [COVID-19 vaccine safety in adolescents aged 12–17 years — United States, December 14, 2020–July 16, 2021](#)
- [Use of Pfizer-BioNTech COVID-19 vaccine in persons aged ≥16 years: Recommendations of the Advisory Committee on Immunization Practices — United States, September 2021](#)
- [Use of mRNA COVID-19 vaccine after reports of myocarditis among vaccine recipients: Update from the Advisory Committee on Immunization Practices — United States, June 2021](#)
- [The Advisory Committee on Immunization Practices’ interim recommendation for use of Pfizer-BioNTech COVID-19 vaccine in adolescents aged 12–15 Years — United States, May 2021](#)

For a complete list of research, visit [Vaccine Safety Publications](#).

### Related Pages

- › [Pfizer-BioNTech COVID-19 Vaccine Overview and Safety](#)
- › [Moderna COVID-19 Vaccine Overview and Safety](#)
- › [Safety of COVID-19 Vaccines](#)
- › [COVID-19 Vaccine Safety in Children and Teens](#)

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