CDC Monitoring Reports of Myocarditis and Pericarditis

CDC has received increased reports of myocarditis and pericarditis in adolescents and young adults after COVID-19 vaccination. The known and potential benefits of COVID-19 vaccination outweigh the known and potential risks, including the possible risk of myocarditis or pericarditis. **We continue to recommend COVID-19 vaccination for anyone 12 years of age and older.**

Learn When to Seek Medical Care

General Information

**Name:** BNT162b2  
**Manufacturer:** Pfizer, Inc., and BioNTech  
**Type of Vaccine:** mRNA  
**Number of Shots:** 2 shots, 21 days apart  
**How Given:** Shot in the muscle of the upper arm  
**Does NOT Contain:** Eggs, preservatives, latex, metals  
Full List of Ingredients

Who Should Get Vaccinated

- The Pfizer-BioNTech vaccine is recommended for people 12 years and older.  
- Learn more about how the Centers for Disease Control and Prevention (CDC) is making COVID-19 vaccine recommendations.

Who Should NOT Get Vaccinated

- **If you have had a severe allergic reaction (anaphylaxis) or an immediate allergic reaction**, even if it was not severe, to any ingredient in an mRNA COVID-19 vaccine (such as polyethylene glycol), you should not get either of the mRNA COVID-19 vaccines.  
- If you had a severe or immediate allergic reaction **after getting the first dose of an mRNA COVID-19 vaccine**, you should not get a second dose of either of the mRNA COVID-19 vaccines.  
- A severe allergic reaction is one that needs to be treated with epinephrine or EpiPen or with medical care. Learn about common side effects of COVID-19 vaccines and when to call a doctor.  
- An immediate allergic reaction means a reaction within 4 hours of exposure, including symptoms such as hives, swelling, or wheezing (respiratory distress).  

If you aren't able to get an mRNA COVID-19 vaccine, you may still be able to get a different type of COVID-19 vaccine. Get more information for people with allergies.
Possible Side Effects

In the arm where you got the shot:

- Pain
- Redness
- Swelling

Throughout the rest of your body:

- Tiredness
- Headache
- Muscle pain
- Chills
- Fever
- Nausea

These side effects happen within a day or two of getting the vaccine. They are normal signs that your body is building protection and should go away within a few days.

Learn more about possible side effects after getting a COVID-19 vaccine.

Other Authorized and Recommended COVID-19 Vaccines in the United States

- Moderna
- Johnson & Johnson's Janssen

You should get a COVID-19 vaccination as soon as possible. Do not wait for a specific brand. All currently authorized and recommended COVID-19 vaccines are safe and effective, and CDC does not recommend one vaccine over another.

COVID-19 vaccines are not interchangeable. If you received a Pfizer-BioNTech or Moderna COVID-19 vaccine, you should get the same product for your second shot.

Safety Data Summary

- In clinical trials, reactogenicity symptoms (side effects that happen within 7 days of getting vaccinated) were common but were mostly mild. Some people had side effects that affected their ability to do daily activities.
- Side effects (such as fever, chills, tiredness, and headache) throughout the body were more common after the second dose of the vaccine.
- CDC will continue to provide updates as we learn more about the safety of the Pfizer-BioNTech vaccine in real-world conditions.

Learn more about vaccine safety monitoring after a vaccine is authorized or approved for use.

How Well the Vaccine Works

- Based on evidence from clinical trials in people 16 years and older, the Pfizer-BioNTech vaccine was 95% effective at preventing laboratory-confirmed infection with the virus that causes COVID-19 in people who received two doses and had no evidence of being previously infected.
- In clinical trials, the Pfizer-BioNTech vaccine was also highly effective at preventing laboratory-confirmed COVID-19 infection in adolescents 12–15 years old, and the immune response in people 12–15 years old was at least as strong as the immune response in people 16–25 years old.
- The vaccine was also highly effective in clinical trials at preventing COVID-19 among people of diverse age, sex, race, and ethnicity categories and among people with underlying medical conditions.
Evidence shows mRNA COVID-19 vaccines offer similar protection in real-world conditions as they have in clinical trial settings—reducing the risk of COVID-19, including severe illness by 90% or more, among people who are fully vaccinated. CDC will continue to provide updates as we learn more.

Clinical Trial Demographic Information: 16 Years and Older

Clinical trials for the Pfizer-BioNTech vaccine in people 16 years and older included people from the following racial and ethnic, age, and sex categories:

Race

- 82% White
- 10% African American
- 4% Asian
- 3% other races, multiracial, or race not reported
- <1% Native Hawaiian or Other Pacific Islander
- <1% American Indian or Alaska Native

Ethnicity

- 73% not Hispanic or Latino
- 26% Hispanic or Latino
- <1% not reported

Sex

- 51% male
- 49% female

Age

- 58% 16 to 55 years
- 42% 55 years and older
- 21% 65 years and older
- 4% 75 years and older

The most frequent underlying medical conditions among clinical trial participants were obesity (35%), diabetes (8%), and pulmonary disease (8%).

Learn more about demographic information for people 16 years and older who participated in the trials.

Clinical Trial Demographic Information: 12–15 Year Olds

Clinical trials for the Pfizer-BioNTech vaccine in people 12–15 years old included people from the following racial and ethnic, age, and sex categories:

Race

- 86% White
- 5% African American
- 6% Asian
- <3% other race, multiracial, or race not reported
- <1% Native Hawaiian or Other Pacific Islander
- <1% American Indian or Alaska Native

**Ethnicity**

- 88% not Hispanic or Latino
- 12% Hispanic or Latino
- <1% not reported

**Sex**

- 51% male
- 49% female

Learn more about demographic information for people 12-15 years old who participated in the trials

**Related Pages**

- Possible Side Effects
- Safety of COVID-19 Vaccines
- Benefits of Getting Vaccinated
- How Vaccines Work
- mRNA Vaccines

**For Healthcare Workers**

Pfizer-BioNTech COVID-19 Vaccine: General information, schedule and administration overview.

**More Information**

Pfizer-BioNTech COVID-19 Vaccine Fact Sheet for Recipients and Caregivers [PDF – 6 pages]


Safety and Reactogenicity Data

Last Updated June 24, 2021