



COVID-19

Pfizer-BioNTech COVID-19 Vaccine Overview and Safety

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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

Number of Shots: 2 shots, 21 days apart

Manufacturer: Pfizer, Inc., and BioNTech

How Given: Shot in the muscle of the upper arm

Type of Vaccine: [mRNA](#)

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 \[PDF – 6 pages\]](#)

[MMWR: Allergic Reactions Including Anaphylaxis After Receipt of the First Dose of Pfizer-BioNTech COVID-19 Vaccine — United States, December 14–23, 2020](#)

[Safety and Reactogenicity Data](#)