

COVID-19 (Coronavirus Disease)

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Information about the Pfizer-BioNTech COVID-19 Vaccine

Updated Dec. 20, 2020 [Print](#)

General information

Name: BNT162b2

Manufacturer: Pfizer, Inc., and BioNTech

Type of vaccine: mRNA

mRNA vaccines are a new type of vaccine to protect against infectious diseases. These vaccines teach our cells how to make a protein—or even just a piece of a protein—that triggers an immune response inside our bodies. This immune response, which includes making antibodies, protects us from getting infected if the real virus enters our bodies. Learn more about [how COVID-19 vaccines work](#) and get a better [understanding of COVID-19 mRNA vaccines](#).

Number of shots: 2 shots, 21 days apart

How given: Shot in the muscle of the upper arm

Does not contain:

- Eggs
- Preservatives
- Latex

For a full list of ingredients, see [Pfizer's COVID-19 Vaccine Fact Sheet for Recipients and Caregivers](#) 

Who should get vaccinated

- The Pfizer-BioNTech vaccine is recommended for people age 16 years and older. Because demand will exceed supply at first, **healthcare personnel** and **residents of long-term care facilities** should be offered vaccination initially. [Learn more about how CDC is making COVID-19 vaccine recommendations.](#)

Who should not get vaccinated

- If you have had a severe allergic reaction—also known as anaphylaxis—to any ingredient in the Pfizer-BioNTech vaccine, you should not get vaccinated.*

*If you have had a severe allergic reaction to other vaccines or injectable therapies, ask your doctor if you should get the Pfizer-BioNTech vaccine. Your doctor will help you decide if it is safe for you to get the Pfizer-BioNTech vaccine.

Side effects and safety information

Most common side effects

| In the arm where you got the shot: | Throughout the rest of your body: |
|---|---|
| <ul style="list-style-type: none">• Pain• Swelling• Redness | <ul style="list-style-type: none">• Chills• Tiredness• Headache |

These side effects usually start within a day or two of getting the vaccine. They might feel like flu symptoms and might even affect your ability to do daily activities, but they should go away in a few days. [Get tips on what to expect after getting vaccinated.](#)

Summary of safety data

- [In clinical trials](#), reactogenicity symptoms (side effects that happen within 7 days of getting vaccinated) were common but were mostly mild to moderate.
- Side effects (such as fever, chills, tiredness, and headache) throughout the body were more common after the second dose of the vaccine.

- Most side effects were mild to moderate. However, a small number of people had severe side effects—defined as side effects affecting a person’s ability to do daily activities.
- Although few people in the clinical trials went to the hospital or died, data suggest that people who got the Pfizer-BioNTech vaccine were less likely to have these more serious outcomes compared to people who got the saline placebo.
- 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.](#)

[Learn more about safety and reactogenicity data from the clinical trials.](#)

Information on how well the vaccine works

- Based on [evidence from clinical trials](#), the Pfizer-BioNTech vaccine was 95% effective at preventing laboratory-confirmed COVID-19 illness in people without evidence of previous infection.
- CDC will continue to provide updates as we learn more about how well the Pfizer-BioNTech vaccine works in real-world conditions.

Demographic information from clinical trials

Phase 2 and 3 clinical trials for the Pfizer-BioNTech vaccine included people from the following racial and ethnic categories:

- 81.9% White
- 26.2% Hispanic/Latino
- 9.8% African American
- 4.4% Asian
- <3% other races/ethnicities

Age and sex breakdown:

- 50.6% male
- 49.4% female
- 21.4% 65 years and older

The most frequent underlying medical conditions were obesity (35.1%), diabetes (8.4%), and pulmonary disease (7.8%).

[Learn more about demographic information for people who participated in the trials.](#) [↗](#)

More Information

[What to Expect After Getting a COVID-19 Vaccine](#)

[Learn more about how federal partners are ensuring the safety of COVID-19 vaccines](#)

[Learn more about the benefits of getting a COVID-19 vaccine](#)

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Content source: [National Center for Immunization and Respiratory Diseases \(NCIRD\), Division of Viral Diseases](#)