



COVID-19

Safety of COVID-19 Vaccines

Updated Feb. 7, 2022

What You Need to Know

- COVID-19 vaccines are **safe and effective**.
- Millions of people in the United States have received COVID-19 vaccines under the most intense safety monitoring in US history.
- CDC recommends you [get a COVID-19 vaccine](#) as soon as possible.
- If you are fully vaccinated, you can resume many activities that you did prior to the pandemic. Learn more about what you can do [when you have been fully vaccinated](#).

Hundreds of Millions of People Have Safely Received a COVID-19 Vaccine

More than 543 million doses of COVID-19 vaccine had been given in the United States from December 14, 2020, through February 7, 2022. To view the current total number of COVID-19 vaccinations that have been administered in the United States, please visit the [CDC COVID Data Tracker](#).

COVID-19 vaccines are **safe and effective**. COVID-19 vaccines were evaluated in tens of thousands of participants in clinical trials. The vaccines met the Food and Drug Administration's (FDA's) rigorous scientific standards for safety, effectiveness, and manufacturing quality needed to support emergency use authorization (EUA). [Learn more about EUAs in this video.](#) 

The Pfizer-BioNTech, Moderna, and Johnson & Johnson/Janssen COVID-19 vaccines will continue to undergo the most intensive safety monitoring in US history. This monitoring includes using both [established and new safety monitoring systems](#) to make sure that COVID-19 vaccines are safe.

Common Side Effects

After COVID-19 vaccination, some people may feel ill, with symptoms like fever or tiredness for a day or two after receiving the vaccine. These symptoms are normal and are signs that the body is building immunity. Some people have no side effects. Others have reported [common side effects after COVID-19 vaccination](#), such as:

- Swelling, redness, and pain at the injection site
- Fever
- Headache
- Tiredness
- Muscle pain
- Chills
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Serious Safety Problems Are Rare

In rare cases, people have experienced serious health events after COVID-19 vaccination. Any health problem that happens after vaccination is considered an adverse event. An adverse event can be caused by the vaccine or can be caused by a coincidental event not related to the vaccine.

To date, the systems in place to monitor the safety of these vaccines have found four [serious types of adverse events following COVID-19 vaccination](#), with evidence that suggests a link to certain types of COVID-19 vaccinations that were administered. They are:

Anaphylaxis

Anaphylaxis is a severe type of allergic reaction with symptoms such as hives, difficulty breathing, low blood pressure, or significant swelling of the tongue or lips. **Anaphylaxis after COVID-19 vaccination is rare.** [Learn more about COVID-19 vaccines and allergic reactions, including anaphylaxis.](#)

Thrombosis with Thrombocytopenia Syndrome (TTS)

Thrombosis with thrombocytopenia syndrome (TTS) is a rare but serious adverse event that causes blood clots or issues with clotting. **TTS after COVID-19 vaccination is rare.** [Learn more about COVID-19 vaccines and adverse events, including TTS.](#)

Myocarditis and Pericarditis

Myocarditis is inflammation of the heart muscle, and pericarditis is inflammation of the outer lining of the heart. **Myocarditis and pericarditis after COVID-19 vaccination are rare.** [Learn more about COVID-19 vaccines and adverse events, including myocarditis and pericarditis.](#)

Guillain–Barré Syndrome (GBS)

[Guillain-Barré Syndrome](#) (GBS) is a rare disorder where the body's immune system damages nerve cells, causing muscle weakness and sometimes paralysis. **GBS after COVID-19 vaccination is rare.** [Learn more about COVID-19 vaccines and adverse events, including GBS.](#)

Reports of Death Are Rare

Reports of death after COVID-19 vaccination are rare. FDA requires healthcare providers to report any death after COVID-19 vaccination to the [Vaccine Adverse Event Reporting System \(VAERS\)](#) [↗](#), even if it's unclear whether the vaccine was the cause. **Reports of adverse events to VAERS following vaccination, including deaths, do not necessarily mean that a vaccine caused a health problem.**

More than 543 million doses of COVID-19 vaccines were administered in the United States from December 14, 2020, through February 7, 2022. During this time, VAERS received 12,122 preliminary reports of death (0.0022%) among people who received a COVID-19 vaccine. CDC clinicians review reports of death to VAERS including death certificates, autopsy, and medical records.

A review of reports indicates a causal relationship between Johnson & Johnson's Janssen COVID-19 vaccine [and TTS](#). On December 16, 2021, CDC scientists released a [comprehensive review](#) [📄](#) of reported U.S. cases through December 2, 2021. Continued monitoring has identified additional deaths for a total of nine deaths causally associated with Johnson & Johnson Janssen COVID-19 vaccination. CDC and FDA continue to review reports of death following COVID-19 vaccination and update information as it becomes available.

Benefits of Vaccination Outweigh the Risks

Serious side effects that could cause a long-term health problem are extremely unusual following any vaccination, including COVID-19 vaccination. The benefits of COVID-19 vaccination outweigh the known and potential risks.

CDC continues to closely monitor the safety of COVID-19 vaccines. Everyone who receives a COVID-19 vaccine can also participate in safety monitoring by [enrolling themselves, their children ages five years and older](#), or other dependents in a smartphone app called [v-safe](#) and completing health check-ins after COVID-19 vaccination.

Have you experienced a side effect following COVID-19 vaccination?

Please [report it to VAERS](#) . In addition, enrolling yourself or your dependent in [v-safe](#) allows you to easily report to CDC how you are feeling after getting a COVID-19 vaccine.

More Information

[ACIP COVID-19 Vaccines Safety Technical Sub-Group \(VaST\)](#)

[VaST Subgroup Technical Report](#)

[v-safe After Vaccination Health Checker](#)

[Vaccine Adverse Event Reporting System \(VAERS\)](#)

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