

# What you need to know

COVID-19 vaccines are safe and effective



## 10 myths about the COVID-19 vaccine

Myth	Fact
 The side effects of the COVID-19 vaccine are dangerous.	COVID-19 vaccines are safe and effective at preventing COVID-19 disease, especially severe illness and death.
 The vaccine will harm me months or years from now.	Most vaccine side effects occur within six weeks. With more than 434 million doses of the COVID-19 vaccines administered in the U.S. during a 10-month period, it's unlikely that serious new side effects will be identified.
 More people will die from the COVID-19 vaccine than would die from the virus.	Despite careful follow-up over the past nine months of administering more than 434 million doses of the COVID-19 vaccine, few, if any, people have died from receiving the vaccination. Meanwhile, more than 750,000 Americans have lost their lives to COVID-19.
 It will change my DNA.	COVID-19 vaccines do not change your DNA in any way. Moderna, Pfizer and Johnson & Johnson vaccines deliver instructions (genetic material) to our cells to produce a protein that our body and immune system use to build protection against the virus that causes COVID-19.
 It contains microchips and tracking devices.	This is an unfounded social media rumor. None of the COVID-19 vaccines contain implants, microchips or tracking devices that track you or gather information.
 Cells from aborted fetuses were used to make the COVID-19 vaccine.	None of the currently-available COVID-19 vaccines contain cells from aborted fetuses (see the deeper dive section for more details).
 It causes infertility.	There is no scientific evidence that COVID-19 vaccines can cause infertility.
 Vitamin and mineral supplements can cure COVID-19.	There's no evidence that vitamin and mineral supplements can cure COVID-19.
 There weren't enough participants in the clinical trials to say the vaccines are safe.	The currently authorized COVID-19 vaccines enrolled 45,000 to 60,000 participants, many of whom were followed for months after receiving the second vaccine. With more than 193 million fully vaccinated Americans, only three additional rare side effects have been found in addition to the initial studies. Infection with COVID-19 also can cause the same illnesses and at a much higher rate than vaccination.
 The death toll from COVID-19 is exaggerated.	The death toll from COVID-19 actually may be higher than current numbers indicate due to those who have died from COVID-19 without being tested and confirmed to have the virus.

# Myth vs. Fact - A deeper dive into some of the data

## **MYTH: The side effects of the COVID-19 vaccines are dangerous.**

FACT: While vaccines for COVID-19 can have side effects, the great majority begin 12 to 24 hours after vaccination, last for hours to a couple of days and are mild or moderate. Some people experience pain where they were injected, body aches, headaches or fever, lasting for a day or two. These are signs that the vaccine is working to stimulate your immune system, although studies show that if you don't have any side effects, you still develop equally good immunity. If symptoms persist beyond two days or are severe, you should call your doctor.

Pfizer and Moderna vaccines only rarely cause immediate allergic reactions, with about 2 to 5 immediate reactions per million people receiving the vaccine. Almost all these reactions occur within 45 minutes after vaccination, are readily treated and patients are usually released home. The other side effect which has been identified is inflammation of heart muscle (myocarditis) or the membrane surrounding the heart (pericarditis) in adolescent and young adult males. This usually resolves in a few days with outpatient treatment.

The Johnson & Johnson vaccine has been associated with rare but serious blood clotting in the brain in about 3 per one million doses. Treatment guidelines have been published and clinicians educated about the needed treatment. Additionally, the Johnson & Johnson vaccine has been associated with Guillain-Barre syndrome, a rare neurologic disorder with muscle weakness and sometimes paralysis, in about 11 people per one million receiving the vaccine. This usually resolves with treatment.

Upon careful review of this information, the Advisory CIP determined that the benefits of these vaccines greatly outweighed the risk of rare side effects, and they approved continued use of each vaccine.

## **MYTH: The vaccine will harm me months or years from now.**

FACT: When new vaccines are released, the unknown side effects, if any, generally show up early. This history goes back to at least the 1960s with the oral polio vaccine and examples continue through today.

With more than 434 million doses of the COVID-19 vaccine given in the U.S. over a 10-month period, it's highly unlikely that serious new side effects will occur at a rate of more than one per one million. While COVID-19 vaccines may be new, mRNA technology has been studied for decades in treatments for cancer, influenza and rabies.

Also, scientists and public health officials continually monitor vaccine data before, during and after a vaccine becomes available to the public.

## **MYTH: More people will die from the COVID-19 vaccine than would die from the virus.**

FACT: Clinical trials for the COVID-19 vaccine have shown short-term mild or moderate reactions to vaccination, while the mortality rate for COVID-19 is 10 times higher than the seasonal flu. Worldwide, 4.5 million people have died from the coronavirus outbreak, including more than 750,000 in the United States.

More than 434 million doses of COVID-19 vaccines were administered in the United States from December 14, 2020, through September 20, 2021. During this time, the Vaccine Adverse Event Report System (VAERS) received 7,899 reports of death (0.0020%) among people who received a COVID-19 vaccine. FDA requires healthcare providers to report any death after COVID-19 vaccination to 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.

## **MYTH: Cells from aborted fetuses were used to make the COVID-19 vaccine.**

FACT: None of the currently-available COVID-19 vaccines contain cells from aborted fetuses.

Both Pfizer and Moderna COVID-19 vaccines use a synthetic piece of the novel coronavirus that helps your body learn how to fight the virus in the future. Neither Pfizer nor Moderna used an abortion-derived cell line in the development or production of the vaccine. However, such a cell line was used to test the efficacy of both vaccines.

AstraZeneca used cell lines replicated from a fetus aborted in 1973 to develop their vaccine, but the vaccines themselves do not contain any aborted fetal cells.

Both Pfizer and Moderna vaccines were found to be ethically acceptable by the Charlotte Lozier Institute, a pro-life policy organization. Additionally, the Catholic Church and the Southern Baptist Ethics & Religious Liberty Commission have both stated that receiving a COVID-19 vaccine that required fetal cell lines for production or manufacture is morally acceptable.

**MYTH: The COVID-19 vaccine causes infertility.**

FACT: There is currently no evidence that COVID-19 vaccination causes any problems with pregnancy, including the development of the placenta.

This myth has been going around on social media. It claims that antibodies made from the COVID-19 vaccines will bind to proteins in the placenta (the organ that gives an unborn baby food and oxygen) and stop pregnancy. Scientific studies don't support this idea, and no evidence links COVID-19 to infertility.

During the Pfizer vaccine tests, 23 women volunteers involved in the study became pregnant, and the only one who suffered a pregnancy loss had not received the actual vaccine, but a placebo. In addition, there is no evidence that female or male fertility problems are a side effect of any vaccine, including the COVID-19 vaccine.

For pregnant women who wish to be protected from COVID-19, a recent study showed no clear safety concerns. The study included 827 women who were vaccinated and completed a pregnancy, stating "adverse pregnancy and neonatal outcomes in persons vaccinated against COVID-19 who had a completed pregnancy were similar to incidences reported in studies involving pregnant women that were conducted before the COVID-19 pandemic."

Getting COVID-19, on the other hand, can have a potentially serious impact on pregnancy and the mother's health. Women should reach out to their medical providers to discuss questions they have about COVID-19 as it relates to fertility or pregnancy.

**MYTH: There weren't enough participants in the clinical trials to say the vaccines are safe.**

FACT: The currently authorized COVID-19 vaccines enrolled 45,000 to 60,000 participants, many of whom were followed for two months after receiving the second vaccine. To receive an Emergency Use Authorization (EUA), all COVID-19 vaccines must meet rigorous standards for safety and efficacy as outlined by the FDA.

With more than 193 million fully vaccinated Americans, only three additional rare side effects have been found in addition to side effects found in the initial studies.

**MYTH: The death toll from COVID-19 is exaggerated. It includes people who were already sick with other conditions.**

FACT: In a report from the CDC on deaths due to COVID-19, researchers found COVID-19 can directly and indirectly lead to mortality. People with underlying conditions like diabetes or obesity are at higher risk for contracting COVID-19 than those without pre-existing conditions.

It is true that a person's pre-existing condition may have contributed to their death from COVID-19. However, if the person had not contracted the virus, it is unlikely their pre-existing condition would have led to their death. The death toll from COVID-19, in fact, is likely higher than what current numbers indicate. People who die from COVID-19 without being tested, for example, may not be included in current counts.

Sources: Maragakis, Lisa and Kelen, Gabor, Johns Hopkins Office of Critical Event Preparedness and Response; Mandavilli, Apoorva, C.D.C. Internal Report Calls Delta Variant as Contagious as Chickenpox, New York Times, (<https://www.nytimes.com/2021/07/30/health/covid-cdc-delta-masks.html>); Katella, Kathy, 5 Things to Know About the Delta Variant, Yale Medicine (<https://www.yalemedicine.org/news/5-things-to-know-delta-variant-covid>); Harvard Health Publishing, Harvard Health Medical School, COVID-19 vaccines- What you need to know before getting vaccinated (<https://www.health.harvard.edu/covid-19/covid-19-vaccines>); Henry Ford, LiveWell (<https://www.henryford.com/blog/2021/08/vaccine-myths>); North Dakota Health, Covid-19 Vaccine and Fetal Cell Lines, ([https://www.health.nd.gov/sites/www/files/documents/COVID%20Vaccine%20Page/COVID-19\\_Vaccine\\_Fetal\\_Cell\\_Handout.pdf](https://www.health.nd.gov/sites/www/files/documents/COVID%20Vaccine%20Page/COVID-19_Vaccine_Fetal_Cell_Handout.pdf)); Preliminary Findings of mRNA COVID-19 Vaccine Safety in Pregnant Persons, The New England Journal of Medicine; The Risk of Allergic Reaction to SARS-CoV-2 Vaccines and Recommended Evaluation and Management: A Systemic Review, Meta-Analysis, GRADE Assessment, and International Consensus Approach; Center for Disease Control and Prevention; and WebMD.