

# Nervous about getting the COVID-19 vaccine? Don't believe these myths

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Are you anxious about "dangerous" COVID-19 vaccine side effects? Wondering if it will affect your fertility? Did you hear it will change your DNA? There's plenty of misinformation circulating about the COVID-19 vaccines, much of which can make it feel scary to sign up for an appointment. We're setting the record straight on common COVID-19 myths to help you feel better about getting vaccinated.

**Myth:** Vaccine development was too fast, so it can't be trusted.

Yes, the vaccines were produced at record speeds. But that was a benefit that can be attributed to massive government investments, including the Trump administration's Operation Warp Speed, and technological advances that have been in the works for years.

"This was one of the fastest [vaccine](#) rollouts that's ever been done but that's not because there's been any shortcuts taken on safety," says Eric Sachinwalla, medical director of Infection Prevention and Control at Einstein Medical Center

Philadelphia. "Drug companies had support from the federal government so they were able to start producing the vaccine while the clinical trials were going on, meaning we didn't have to wait for the trial results and then wait months or years for the vaccine to be manufactured."

The actual technology behind the vaccines has been around for more than a decade. The pandemic pushed scientists to put it into action. While federal funding helped accelerate the process, that doesn't mean any steps were skipped. Like with any other vaccine, the COVID-19 vaccines were tested in clinical trials that enrolled tens of thousands of people to make sure they meet safety standards and effectively protect people.

**Myth:** The COVID-19 vaccine and the side effects are dangerous.

It's natural to feel a little skeptical about putting something new into your body, but there's an abundance of evidence that the vaccine is safe. "Around 570,000 [Americans] have died from this virus. None have died from the Pfizer or Moderna vaccines. Those odds are pretty striking," says Paul Offit, director of the vaccine education center and professor of infectious disease professor at Children's Hospital of Philadelphia.

The vaccines can cause side effects, like tiredness, achiness, and fever, but the vast majority last only a day or two and aren't serious or dangerous. Side effects are actually normal signs that the vaccine is working and your body is building protection. (Not everyone will experience side effects, and that's OK too.)

But what about the Johnson & Johnson vaccine that's been temporarily paused as a result of blood clots? At the time of the pause, out of roughly seven million people that received the Johnson & Johnson vaccine, six people experienced blood

clots. It's important to remember that this is an extremely rare side effect—"twice as rare as getting hit by lightning," says Doctors for America. It's also a complication that can happen if you're infected by COVID-19. It's expected that the federal government will announce a decision about the J&J vaccine soon.

**Myth:** You have to pay for the vaccine.

The vaccine is free for all Americans. You will not be asked to pay anything out of pocket. However, you may be asked for your insurance card. This is because insurance companies have agreed to help cover some costs of administering the vaccine. That being said, many providers won't ask you for your card. And if they do, and you don't have insurance, that's 100-percent OK.

"Not only is it safe, but it's free, and it can save a life," says Meenakshi Bewtra, a Penn Medicine physician and an assistant professor of epidemiology and of medicine at the University of Pennsylvania.

**Myth:** Getting the vaccine gives you COVID-19.

The Pfizer and Moderna vaccines are mRNA vaccines. This type of vaccine essentially delivers a tiny piece of code to our cells that teaches them how to make a protein, or a piece of a protein, that triggers our immune system to recognize the actual virus if it comes along.

"It's biologically impossible to get COVID from the vaccines," says Sachinwalla. "They don't actually contain the virus itself."

This is true for the Johnson and Johnson vaccine, too, considered a viral vector vaccine. It uses similar genetic instructions as the Pfizer and Moderna vaccines to teach your cells how to make "spike" proteins. But it delivers the instructions to do so using disabled adenovirus instead of mRNA technology. The adenovirus has been modified so it cannot make copies of itself and cause disease, and it is in no way related to the coronavirus.

**Myth:** The vaccine can affect your fertility.

There is zero evidence to support that the COVID-19 vaccine can cause infertility. There's no need to get a pregnancy test before getting vaccinated, nor do you need to avoid pregnancy after vaccination, says the CDC.

"The mRNA vaccine is new and different, so it may sound scary, but there really hasn't been any evidence of it affecting fertility, and in fact, COVID for pregnant [people] is dangerous," says Sarah Bass, associate professor and director of the Risk Communication Laboratory at Temple University.

If you're pregnant, you're at an increased risk for severe illness from COVID-19 and may be at increased risk for adverse outcomes, like preterm birth, says the CDC. There is currently limited data on the safety of COVID-19 vaccines in pregnant people, but experts believe they're unlikely to pose a specific risk for people who are pregnant. Pregnant people were not included in any of the three vaccine trials. But a few dozen people who participated in the Pfizer and Moderna trials became pregnant, and continued in the trials with no safety problems. If pregnant, you're eligible for all authorized vaccines. You should talk with your doctor if you have any questions, but it's not required before vaccination.

**Myth:** The vaccine changes your DNA.

You may have seen this myth circulating on social media, but it's impossible for the vaccines to change your DNA. All three COVID-19 vaccines work by delivering instructions (genetic material) to our cells so that they can start building protection against the [coronavirus](#). "However, the material never enters the nucleus of the cell, which is where our DNA is kept," notes the CDC. This means that the vaccines can't affect or interact with our DNA in any way.

**Myth:** The vaccines don't always work, so I don't need to get one.

The COVID-19 vaccines are highly effective, far more so than many scientists anticipated. But no vaccine provides 100-percent protection. For this reason, it actually makes it even more important for you to get those shots. To bring the pandemic

under control, we need a substantial percentage of the population to be immune.

"This is all about adding layers of protection," says Sachinwalla. "We know and expect there will be people who get vaccinated and still get infected, but if one potentially infectious person is in a room full of vaccinated people, they're going to spread the virus to a lot less people than if they were in a room of unvaccinated people."

The more people who are vaccinated, the harder it is for the virus to keep spreading (and mutating). But getting vaccinated is not just about looking out for others. Vaccines radically reduce your own chances of getting COVID-19, and even if you do get infected, your likelihood of being protected from serious illness that forces you into the hospital, or worse, kills you, is "pretty darn close to 100%," says Sachinwalla.

Myth: I've already had COVID-19, so I don't need the vaccine.

You're advised to get vaccinated even if you've had COVID-19. Why? Experts need more time to research how long natural immunity lasts. It's also possible that the vaccine could provide better protection.

"It seems like the antibody response after vaccination may be better than natural immunity, but it's still being researched," says Sachinwalla. "There's also a concern about whether or not natural immunity protects against various variants, whereas we've seen with the vaccines that there's pretty good cross-protection, depending on the variants."

If you were treated for COVID-19 with monoclonal antibodies or convalescent plasma, you should wait 90 days before getting vaccinated. Ask your doctor if you have questions or are unsure what treatments you received.

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