

## Myths vs. Facts COVID-19 Vaccine

*Myth: COVID-19 vaccines aren't safe.*

**FACT: COVID-19 vaccines are safe and effective.**

Safety is a top priority of the [U.S. vaccine safety development and approval process](#). The development process for COVID-19 vaccines involved several steps comparable with those used to develop other vaccines such as the flu or measles vaccine, which have successfully protected millions of Ohioans for decades. The U.S. Food and Drug Administration (FDA), as well as independent medical experts, have ensured that every detail of COVID-19 vaccines is thoroughly and rigorously evaluated. Evidence shows that COVID-19 vaccines are safe and work to prevent COVID-19. Of the first two vaccines to apply to the FDA for emergency use authorization, the [Pfizer BioNTech vaccine was 95% effective](#), and the [Moderna vaccine was 94% effective](#) in phase 3 clinical trials with more than 70,000 participants between the two studies. Although the COVID-19 vaccines themselves have been developed recently, the technology used in mRNA vaccines, like those developed by Pfizer BioNTech and Moderna, has been studied for decades.

*Myth: COVID-19 vaccines were rushed and developed too quickly.*

**FACT: COVID-19 vaccine development and clinical trials were thorough and thanks to a strategic scientific effort to streamline processes, could be developed more efficiently.**

There have been no shortcuts in the vaccine development process. The process has been quicker as a result of [strategic efforts](#) to run concurrent trial phases, as well as a commitment to help condense timelines and reduce or eliminate months-long waiting periods during which documents would be prepared or be waiting for review. In addition, during the process of vaccine development, the CEOs of AstraZeneca, BioNTech, GlaxoSmithKline, Johnson & Johnson, Merck, Moderna, Novavax, Pfizer, and Sanofi made a [historic pledge](#) to the world, outlining a united commitment to uphold the integrity of the scientific process as they work toward potential regulatory filings and approvals of the first COVID-19 vaccines. Messenger RNA (mRNA), used by the first two vaccines to apply for FDA emergency use authorization (Pfizer BioNTech and Moderna), while new, is not unknown. Researchers have been studying mRNA for decades, and early-stage clinical trials using mRNA vaccines have been carried out for influenza, Zika, rabies, and cytomegalovirus (CMV). Recent technological advancements in RNA biology and chemistry, as well as delivery systems, have allowed these COVID-19 vaccines using mRNA to be developed as safe and effective vaccines.

*Myth: COVID-19 vaccines will be mandatory for every Ohioan.*

**FACT: Ohio will not make COVID-19 vaccination mandatory.**

The state of Ohio will not require anyone to get the COVID-19 vaccine. The vaccine will be available to all Ohioans who choose to receive it, as available supply of the vaccine increases.

*Myth: You can get COVID-19 from COVID-19 vaccines.*

**Fact: COVID-19 vaccines will not give you COVID-19.**

None of the COVID-19 vaccines currently in development in the United States use the live virus that causes COVID-19. The Pfizer/BioNTech and Moderna vaccines are messenger ribonucleic acid, or mRNA, vaccines. (See below for further explanation.) The goal for COVID-19 vaccines is to teach our immune systems how to recognize and fight the virus that causes COVID-19. Sometimes this process can cause side effects, such as fatigue, headache, soreness or redness at the injection site, and muscle or joint pain. These symptoms are normal and are a sign that the body is building immunity. It typically takes a few weeks for the body to build immunity after vaccination, and some vaccines require two doses. That means it is possible that a person could be infected with the virus that causes COVID-19 just before, or just after, getting the vaccination and become sick, since it takes the vaccine time to provide protection. Learn more about [how COVID-19 vaccines work](#).

*Myth: Vaccines that use mRNA will alter my DNA or genetic makeup.*

**FACT: Receiving an mRNA vaccine will not alter your DNA.**

Messenger ribonucleic acid, or mRNA, is not able to alter or modify a person's genetic makeup (DNA). The mRNA from a COVID-19 vaccine never enters the nucleus of the cell, which is where your DNA is kept, and therefore does not affect or interact with your DNA in any way. The mRNA from COVID-19 vaccines can most easily be described as a set of instructions for your body on how to make a harmless piece of "spike protein" to allow our immune systems to recognize that this protein doesn't belong there and begin building an immune response and making antibodies. Essentially, COVID-19 vaccines that use mRNA work with the body's natural defenses to safely develop immunity to the virus, giving your cells a blueprint of how to make antibodies. Learn more about [how COVID-19 mRNA vaccines work](#).

*Myth: If I have recovered from COVID-19, I don't need to get the COVID-19 vaccine.*

**FACT: People who have recovered from COVID-19 may still benefit from getting vaccinated.**

At this time, experts do not know how long someone is protected from getting sick again after recovering from COVID-19. Due to the severe health risks associated with COVID-19, and because re-infection with COVID-19 is possible, people may be advised to get a COVID-19 vaccine even if they have been sick with COVID-19 before. The immunity someone gains from having an infection, called natural immunity, varies from person to person. Both natural immunity and vaccine-induced immunity are important aspects of COVID-19 that experts are trying to learn more about, and the federal Centers for Disease Control and Prevention (CDC) will keep the public informed as new evidence becomes available.

*Myth: COVID-19 isn't very serious, so I don't need to get the vaccine.*

**FACT: The severity of COVID-19 symptoms varies widely, and getting vaccinated can help prevent infection with COVID-19.**

While many people with COVID-19 have only a mild illness, others may get a [severe illness](#) or die. There is no way to know how COVID-19 will affect you, even if you are not at [increased risk of severe complications](#). Also, if you get COVID-19, you may spread the disease to friends, family, and others around you while you are sick. COVID-19 vaccination helps protect you by allowing your body to create an antibody response without having to experience sickness. Learn more about [how COVID-19 vaccines work](#).

*Myth: You will get a positive COVID-19 viral test if you receive the COVID-19 vaccine.*

**FACT: COVID-19 vaccines will not cause you to test positive on COVID-19 viral tests.**

Vaccines currently in clinical trials in the United States won't cause you to test positive on [viral tests](#), which are used to see if you have a current infection. If your body develops an immune response, which is the goal of vaccination, there is a possibility you may test positive on some [antibody tests](#). Antibody tests indicate you had a previous infection and that you may have some level of protection against the virus. Experts are currently looking at how COVID-19 vaccination may affect antibody testing results.

*Myth: Other vaccines, like the flu shot, will prevent COVID-19.*

**FACT: Only vaccines designed specifically to prevent COVID-19 will protect you from COVID-19.**

Other vaccines, such as those for flu, measles, or other diseases, will not protect you from COVID-19. Only the vaccines designed specifically to protect you from COVID-19, once approved for use by the FDA, can prevent it. While a flu vaccine will not prevent you from getting COVID-19, it can prevent you from getting influenza (flu) at the same time as COVID-19.

*Myth: There will not be enough vaccines for everyone.*

**FACT: As production of vaccine continues to grow, every Ohioan who chooses to do so will be able to receive a vaccine to prevent COVID-19.**

Initially, when the FDA first authorizes the use of specific COVID-19 vaccines in the United States, there will be a limited number of doses available. Ohio is committed to making the vaccine widely available, for those who want to receive it, as quickly as possible when shipments arrive in Ohio. In time, as vaccine production ramps up and large quantities are available, every Ohioan who chooses to do so will be able to get vaccinated.

*Myth: COVID-19 vaccines will implant tracking microchips in people.*

**FACT: Vaccine injections do not contain tracking microchips.**

No vaccine injections or nasal sprays – including the shots for COVID-19 – contain microchips, nanochips, RFID trackers, or devices that would track or control your body in any way. Much like the way any shipment or delivery is tracked, shipments of vaccine doses will be monitored as they are shipped and administered across the country. However, the notion that these shots will contain tracking devices implanted into Ohioans is false.

*Myth: COVID-19 vaccines cause infertility or other serious medical problems.*

**FACT: No serious safety concerns have been observed for the COVID-19 vaccines that have applied for emergency use authorization.**

In the [Pfizer BioNTech phase 3 clinical trial](#) of more than 43,000 individuals, and the [Moderna Phase 3 clinical trial](#) with 30,000 participants, no serious safety concerns were observed. The most common side effects were fatigue, headache, soreness or redness at the injection site, and muscle or joint pain. Side effects like these, while unpleasant, are a sign that your body is responding properly to create immunity from the virus that causes COVID-19.

*Myth: Vaccines cause autism.*

**FACT: Vaccines do not cause autism.**

Time after time, studies conducted across the globe continue to show that there is [no connection between autism and vaccines](#).

**How do I know which sources of COVID-19 vaccine information are accurate?**

It can be difficult to know which sources of information you can trust. The internet, unfortunately, can be filled with dangerous misinformation about COVID-19 vaccines. The best thing you can do is educate yourself about the vaccines with trustworthy information. Learn more about [finding credible vaccine information](#) in this article from the CDC at <https://www.cdc.gov/vaccines/vac-gen/evalwebs.htm>.

Source: [Centers for Disease Control and Prevention \(CDC\)](#), [University of Maryland Medical System](#).

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For additional information, visit [coronavirus.ohio.gov](https://coronavirus.ohio.gov).

For answers to your COVID-19 questions, call 1-833-4-ASK-ODH (1-833-427-5634).

**Your mental health is just as important as your physical health. If you or a loved one are experiencing anxiety related to the coronavirus pandemic, help is available 24 hours a day, seven days a week. Call the COVID-19 CareLine at 1-800-720-9616.**