

## Myths vs. Facts

# COVID-19 Vaccine

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

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

Safety has been a top priority throughout the vaccine development and approval process. All of the vaccines were proven to be effective at preventing serious illness, hospitalization, and death from COVID-19 disease. COVID-19 vaccine development processes involved several steps comparable with those used to develop other vaccines, such as the flu or chickenpox vaccine. Clinical trials study the safety and effectiveness of a vaccine in thousands of study participants. No serious safety concerns emerged during the clinical trials for the three authorized vaccines. There were more than 116,000 participants between the three clinical studies. The U.S. Food and Drug Administration (FDA) uses rigorous standards and insights from independent medical professionals to evaluate trial data to ensure that a vaccine is safe and effective and the benefits outweigh the risks. After an FDA decision, the Centers for Disease Control and Prevention (CDC) also reviews available data before making final recommendations for vaccine use. Safety continues to be a top priority, as vaccine administration is under way, through continuous safety monitoring measures. The CDC and other federal partners continue to monitor the new vaccines for side effects and adverse events, using many vaccine safety monitoring systems. This continued monitoring could reveal effects that may not have been observed in clinical trials.

*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, 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. Years of research laid the groundwork for development of COVID-19 vaccines. The approved vaccines use different methods to achieve the same end result, which is to teach our bodies how to recognize COVID-19's spike protein and create antibodies against it. Messenger RNA (mRNA), used by two of the authorized vaccines (Pfizer-BioNTech and Moderna), has been studied for years and was being developed for other infectious diseases. 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. Adenovirus/viral vector vaccines, the method used by Johnson & Johnson, are common. Read more about how the different COVID-19 vaccines work at [coronavirus.ohio.gov](https://coronavirus.ohio.gov).

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

**FACT: COVID-19 vaccines will not alter your DNA.**

None of the COVID-19 vaccines will alter your DNA. There are differences in how the vaccines work to teach the body to build immunity against COVID-19. The Pfizer-BioNTech and Moderna vaccines are messenger RNA (mRNA) vaccines. These vaccines provide instructions for the body to create the harmless surface or "spike" protein found in the SARS-CoV-2 virus (which causes COVID-19); the body responds by building antibodies to destroy the protein. This protein is what allows the virus to attach to cells. When the body kills the protein, it also kills viruses that are attached to it. The Johnson & Johnson (Janssen) vaccine is a viral vector vaccine using a harmless, inactive adenovirus (cold virus) as the transportation device to do the same job. They all use the harmless "spike" protein to teach the body how to recognize the virus, and to build protection against the virus. None of them change your DNA.

*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 use the virus that causes COVID-19. The Pfizer-BioNTech and Moderna vaccines are messenger RNA (mRNA) vaccines. These vaccines provide instructions for the body to create the harmless surface or “spike” protein found in the SARS-CoV-2 virus (which causes COVID-19); the body responds by building antibodies to destroy the protein. This protein is what allows the virus to attach to cells. When the body kills the protein, it also kills viruses that are attached to it. The Johnson & Johnson (Janssen) vaccine is a viral vector vaccine using a harmless, inactive adenovirus (cold virus) as the transportation device to do the same job. None of the vaccines will give you COVID-19 or the cold virus.

*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 are advised to get vaccinated.**

At this time, experts do not know how long someone is protected from getting sick again after recovering from COVID-19. Because of the severe health risks associated with COVID-19, and because re-infection with COVID-19 is possible, the Centers for Disease Control and Prevention (CDC) recommends individuals get vaccinated regardless of whether they've already had COVID-19. Individuals who were treated for COVID-19 with monoclonal antibodies or convalescent plasma are advised to wait 90 days before getting a COVID-19 vaccine. Experts are still learning more about how long vaccines protect against COVID-19.

*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](#) that results in hospitalization or death. 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.**

The COVID-19 vaccines will not 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, according to the CDC.

*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 vaccines designed specifically to protect you from COVID-19 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.**

The FDA has granted emergency use authorization for three COVID-19 vaccines. Vaccine supply is increasing, but is still limited; therefore, Ohio is offering the vaccine first to the populations at the highest risk for severe complications from COVID-19 disease, or heightened risk of exposure. Ohio is committed to making the vaccine widely available, for those who want to receive it, as quickly as possible as supply increases. 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 received emergency use authorization in the U.S.**

No serious safety concerns have resulted from testing or real-world use of any of the three authorized COVID-19 vaccines. The most common side effects are fatigue, headache, fever, soreness, swelling or redness at the injection site, and muscle or joint pain. Side effects like these are minor and a sign that your body is responding properly to fight the virus that causes COVID-19.

*Myth: My children will be forced to get a vaccine.*

**FACT: Children are not yet eligible to receive COVID-19 vaccines.**

Ohio is not mandating COVID-19 vaccines, and at this time, the COVID-19 vaccines that have received emergency use authorization (EUA) are not recommended for children younger than 16. The Pfizer-BioNTech vaccine is recommended for people ages 16 and older, and the Moderna and Johnson & Johnson (Janssen) vaccines are recommended for people ages 18 and older. While additional clinical trial data is being gathered, children, like adults, should wear a mask that covers the nose and mouth, stay 6 feet apart from others, wash their hands frequently, and avoid congregating in groups in order to protect themselves from COVID-19.

*Myth: Pregnant and breastfeeding women should not get COVID-19 vaccines.*

**FACT: Pregnant and breastfeeding women may choose to be vaccinated.**

The CDC and groups such as the [American College of Obstetricians and Gynecologists](#) say all three vaccines should be made available to those who are pregnant, but they leave the choice about whether to get vaccinated up to each individual. Pregnant women were not included in the initial clinical trials for the three authorized vaccines, so there's no data specific to pregnant women. There are no known risks to pregnant women or developing fetuses, according to the [CDC](#). Women who are pregnant are at higher risk of a severe case of COVID-19 if they do become infected. Women are encouraged to discuss whether or not they should receive the vaccine with their healthcare providers. Pregnant women are currently eligible to receive the vaccine in Ohio under [Phase 1C](#).

*Myth: Once I get a vaccine, I can stop wearing a mask and social distancing.*

**FACT: You should continue to wear a mask and practice social distancing after being vaccinated.**

The vaccines protect against serious illness, hospitalization, and death from COVID-19; however, not enough is known about whether individuals can still carry the virus and spread it to others. Those who get the vaccine should continue to wear masks and practice social distancing.

*Myth: Vaccines cause autism.*

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

Studies conducted across the globe continue to show that there is [no connection between autism and vaccines](#).

*Myth: The side effects from the COVID-19 vaccines are worse than getting COVID-19.*

**FACT: Side effects from the vaccines are minor and a sign that the body is building immunity.**

Many people will experience side effects after receiving a COVID-19 vaccine, but the vast majority are very short term and minor. Some people have reported experiencing soreness or redness at the site of the injection, body aches, headaches or fever, lasting for a day or two. Severe reactions, or anaphylaxis, are rare. If you have allergies — especially severe ones that include allergies to other vaccines or ingredients in the vaccines — discuss the COVID-19 vaccine with your doctor, who can assess your risk and provide more information about if and how you can get vaccinated safely.

*Myth: The COVID-19 vaccines won't protect us against new strains of the virus.*

**FACT: The data so far suggest that most of the COVID-19 vaccines do provide protection against the new [COVID-19 variants](#).**

Researchers continue to study how these variants behave differently than the original strain, as well as the protection the COVID-19 vaccines offer against all variants. According to the U.S. Food and Drug Administration, scientists tested the vaccines against several emerging variants, including those detected in the United Kingdom, Brazil, and South Africa, and the vaccines have proven effective so far against those mutations. But the current vaccines may be less effective for certain strains of the virus, such as the strain first identified in South Africa, than other variants. The degree to which the vaccines could be less effective is not yet fully known. Both Pfizer and Moderna have said they could alter their vaccine formulas slightly, if that is deemed necessary, to create additional protection against new emerging strains and are studying possible booster doses that could target specific variants. The newly authorized Johnson & Johnson (Janssen) vaccine did include testing in areas where variants were rampant, including South Africa, and during a time in which variants were emerging in multiple countries.

### **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](#).

Sources: [Centers for Disease Control and Prevention \(CDC\)](#), U.S. Food and Drug Administration (FDA), U.S. Department of Health and Human Services (HHS)

*Updated March 8, 2020*

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.**