

COVID-19 Fact Sheet

Safety and effectiveness of COVID-19 vaccines

Ohio is distributing [safe and effective COVID-19 vaccines](#) using a phased approach, focused first on [protecting those at the highest risk](#). Ohio will distribute vaccine to all Ohioans who choose to receive it as vaccine supply increases.

The first step to making an informed decision about whether to be vaccinated is accessing [accurate and trusted information](#). The information below comes from leading experts from the [Centers for Disease Control and Prevention \(CDC\)](#), the [Food and Drug Administration \(FDA\)](#), the [National Academies of Sciences, Engineering and Medicine \(NASEM\)](#), the [World Health Organization \(WHO\)](#), and the U.S. Department of Health & Human Services (HHS).

How effective are COVID-19 vaccines?

All COVID-19 vaccines currently available in the United States have been shown to be **highly effective at preventing COVID-19** after two doses. So far, two vaccines have been approved for emergency use by the FDA. During clinical trials, the [Pfizer-BioNTech vaccine was 95% effective](#), and the [Moderna vaccine was 94% effective](#). There were more than 70,000 participants between the two studies.

Dr. Jerome Adams, when he was serving as U.S. surgeon general, said typical studies only have about 5,000 participants before a vaccine is approved, explaining, “These vaccines, at the point of being administered to the American public, will have more data than any other vaccine developed in history.”

Can I get COVID-19 from the vaccine?

Vaccines work to prepare your body’s natural defenses to fight specific viruses. **Messenger RNA (mRNA) vaccines don’t use a live virus**. An mRNA vaccine does not put a weakened or inactivated germ into the body. Instead, it builds the immune system by teaching cells how to create antibodies that attack the virus if it enters the body.

How safe are the COVID-19 vaccines?

Safety has been a top priority throughout the [vaccine development and approval process](#). It continues to be a top priority, as vaccine administration is under way, through continuous safety monitoring measures.

- **Rigorous testing:** The [COVID-19 vaccine development process](#) involved several steps comparable with those used to develop other vaccines, such as the flu or measles 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.
- **Thorough evaluation:** The 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 CDC also reviews available data before making final recommendations for vaccine use.
- **Ongoing safety monitoring:** The CDC and other federal partners continue to monitor the new vaccines for any serious side effects, using many vaccine safety monitoring systems. This continued monitoring could reveal side effects that may not have been observed in clinical trials.

How was the COVID-19 vaccine developed so quickly?

In the past, vaccines have taken many years to develop. The process for COVID-19 vaccines has been quicker for many reasons. No steps were skipped, but researchers did conduct some stages of the process simultaneously. This included concurrent trial phases and condensed timelines that eliminated long waiting periods.

Researchers have been studying mRNA, used by the Pfizer and Moderna vaccines, for decades. Early-stage clinical trials using mRNA vaccines occurred for influenza, Zika, rabies, and other viruses. Because COVID-19 comes from a family of viruses, including the SARS coronavirus of 2002 and the MERS coronavirus of 2012, scientists had already researched how coronaviruses behaved and began developing a similar vaccine.

Are the COVID-19 vaccines safe for all groups of people?

Clinical trials that studied the vaccine's effectiveness and safety included a diverse cross-section of people, including communities that have historically been under-represented in clinical research. Those communities also have been disproportionately impacted by COVID-19. Approximately [42% of participants in Pfizer BioNTech's worldwide clinical trials](#), and [37% of the Moderna participants](#), were from communities of color, which is similar to the diversity of the U.S. at large.

In addition, the clinical studies included participants older than age 65 (21% of Pfizer-BioNTech participants, 23% of Moderna participants); and people with high-risk chronic diseases that put them at increased risk of severe COVID-19 (46% of Pfizer-BioNTech participants, 42% of Moderna participants).

Children and pregnant or breastfeeding moms were not included in the clinical trials, so no data is available at this time on the safety of the vaccines for those populations. Trials with these groups are in progress or beginning soon.

What are the benefits of getting the COVID-19 vaccine?

COVID-19 vaccines create immunity without risk of illness. People who have had COVID-19 may develop short-term immunity from antibodies, but it is uncertain how long this protection will last. COVID-19 symptoms can vary widely from mild to serious, and may be long-lasting and life-threatening. Vaccination will protect you by creating an immune system response without sickness.

COVID-19 vaccines could help keep you from getting seriously ill if you contract the virus. Based on what we know about vaccines for other diseases and early data from clinical trials, medical experts believe that getting a COVID-19 vaccine may also help keep you from getting seriously ill even if you do get COVID-19.

What are the side effects of the COVID-19 vaccines?

The most common [side effects observed with COVID-19 vaccines](#) are similar to side effects experienced with most vaccines. When you get a COVID-19 vaccine, you can expect mild side effects, usually within 72 hours (three days), that could include: soreness, redness, or swelling at the injection site; fever and/or chills; headache; fatigue; muscle or joint pain; and nausea.

These side effects are normal and a sign that your body is creating an immune response to protect you from COVID-19. Side effects typically last only a few days and may increase with the second dose.

Have there been any safety concerns with the COVID-19 vaccines?

[Severe allergic reactions](#), such as anaphylaxis, in which a person needs to be treated with epinephrine or is hospitalized, are rare. [Chances of a bad reaction may be higher if you have certain health conditions](#), such as a weakened immune system, or if you have had an allergic reaction to a vaccine before. The CDC has learned about a small number of people who have experienced [adverse events](#) after getting a COVID-19 vaccine. The CDC has also learned about reports that some people have experienced non-severe allergic reactions within four hours after getting vaccinated, such as hives, swelling, and wheezing, and continue to investigate.

Is there anyone who should NOT get a COVID-19 vaccine?

Yes, the COVID-19 vaccines are not recommended in a few cases.

- **People with severe vaccine allergies:** People who have a known history of a [severe allergic reaction](#) to any component of the [Pfizer-BioNTech](#) or [Moderna](#) vaccines or anyone who had a severe allergic reaction to the first dose of the COVID-19 vaccine should **NOT** get the vaccine, according to the FDA.
- **People who received a flu shot or another immunization in the previous 14 days:** The [CDC recommends at least a two-week window between getting a COVID-19 vaccine and any other vaccine](#), including a flu shot.
- **People allergic to PEG or polysorbate:** Polysorbate is not an ingredient in either mRNA COVID-19 vaccine but is closely related to PEG, which is in the vaccines. People who are [allergic to PEG or polysorbate](#) should not get an mRNA COVID-19 vaccine.
- **People who have an active case of COVID-19 or are under quarantine:** If you're currently infected with the coronavirus, wait until you've recovered and meet the CDC's [criteria for when you can stop isolating at home](#). If you've been exposed to COVID-19 and are under quarantine, wait until your quarantine period has ended to avoid potentially exposing others.

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