

Vaccine FAQs

What is a vaccine?

A vaccine is one method doctors use to protect their patients and the public against an illness. Most often, it works by exposing a person to an inactive or weakened agent that can't make them sick. By doing this, the person's immune system can learn to respond to the virus or other infections and make antibodies to prepare to fight it and give them immunity.

When injected with the vaccine, are you injecting me with COVID-19?

No, you are not being injected with the virus that causes COVID-19. None of the early COVID-19 vaccines tested in the U.S. use a live virus that causes COVID-19. The goal for each vaccine is to teach our immune systems how to recognize and to fight the virus that causes COVID-19. At this time, the vaccines closest to receiving approval are mRNA - messenger ribonucleic acid - vaccines. Like other vaccines, mRNA vaccines work by training the immune system to recognize a virus threat and begin producing antibodies to protect itself.

What kinds of side effects might there be?

It's best to prepare for side effects such as fatigue, headache, muscle pain, chills, fever, and pain at the site of injection. These side effects are an immune response which means the body is doing what it is supposed to. Data from the Pfizer trial shows that many people felt more sick following their second dose. For some people, that might mean taking a day off work or having to rest. You might want to have Tylenol, ibuprofen, a cold compress, and a thermometer at home to use as needed. See the Trial Data document on the intranet for more information released from the trials.

Do I have to get a COVID-19 vaccine?

There is no federal or state mandate to receive the COVID-19 vaccine. The CDC recommends the vaccine to all Americans 16 and over.

Why are there two shots?

By having more than one dose, the vaccine will allow your body to have a more effective response to the virus. The first dose primes your immune system to respond to the virus, and then the second dose makes the effects of the vaccine last longer. For the Pfizer vaccine, the two doses are spaced three weeks apart. For the Moderna and AstraZeneca vaccines, the doses are spaced four weeks apart.

Different COVID-19 vaccines are expected to be available. Which vaccine should I take?

Any COVID-19 vaccine authorized by the U.S. Food and Drug Administration (FDA) is expected to be effective. Data available at this point would suggest that the Pfizer and Moderna vaccines are very similar in their abilities to produce immunity to the virus. The recommendation would be to take whatever vaccine is made available to you and be sure to receive the booster shot of that same vaccine at the appropriate time. If you choose not to get a second dose, you may reduce the effectiveness of the vaccine.

How long will the vaccine protect me?

There is not yet enough data to say exactly how long protection lasts; the earliest participants in the Pfizer study, for example, received the vaccine in July. Some vaccines last a lifetime, like the polio vaccine that is administered to most people as infants. Some vaccines require regular boosters, such as

tetanus which requires a booster every 10 years or the annual flu shot. This reinforces the protective levels in the body.

Do I need a vaccine if I have already had COVID-19?

Yes, people who have already had COVID-19 should plan to take the COVID-19 vaccine, because the science is currently inconclusive as to whether you will be naturally protected from a second COVID-19 infection in the future. The CDC currently suggests that if you were infected with COVID-19 during the previous 90 days, it is likely that you still have immune protection and that you will be asked to wait to receive your vaccine to allow others to be vaccinated first.

If I get the vaccine, can I quit wearing a mask?

No. While the COVID-19 vaccine is highly effective, it not 100% effective. Until the COVID-19 pandemic is controlled, people who receive the vaccine need to continue following Illinois Department of Public Health guidance such as the use of facemasks, social distancing, and regular hand washing. This protects you as well as your family and community.

Is there a cost for the vaccine?

No, the vaccine will be free of charge. There may be an administration fee for vaccine administration, which will be billed to the patient's insurance.

Should I alter the FDA recommended dosing of COVID-19 vaccines in any way (such as taking only a single dose, having half doses administered, extending the length of time between doses, or mixing and matching COVID-19 vaccines)?

No. According to the FDA, at this time, suggesting changes to the authorized dosing or schedules of these vaccines is premature and not rooted solidly in the available evidence. Without appropriate data supporting such changes in vaccine administration, we run a significant risk of placing public health at risk, undermining the historic vaccination efforts to protect the population from COVID-19. Full doses should be administered as directed, the second dose should be from the same manufacturer as the first dose, and should follow the FDA-recommended intervals (21 days between doses for the Pfizer-BioNTech vaccine, and 28 days between doses for the Moderna vaccine).

Development and Safety FAQs

How was the vaccine developed so quickly?

- In developing a vaccine for COVID-19, researchers had to work quickly, but not at the risk of anyone's safety. Researchers did not cut any corners or skip any steps. Safety and effectiveness were the top priorities.
- The accelerated timeline for developing COVID-19 vaccines was possible for several reasons:
 - Researchers were able to use years of previous research in other viruses and vaccines to help inform a vaccine development process for COVID-19.
 - Everyone involved dedicated all their resources and time to developing a COVID-19 vaccine. This includes research institutions, pharmaceutical companies, government agencies, and philanthropic organizations.
 - Many governments around the world, including the U.S. government, and private funders invested in the vaccine, which allowed pharmaceutical companies to focus on

research and clinical trials instead of fundraising, one of the most time-consuming parts of vaccine development.

- Finally, because of the financial support, researchers were able to conduct different parts of the development process on parallel tracks instead of one after another. Usually, each phase in a clinical trial ends before the next phase begins, with several months to a year or more in between each phase. Vaccine developers use this time to plan and raise money. Because of the emergency presented by the pandemic, researchers developed the vaccines on parallel tracks, meaning that they completed the necessary steps at the same time or with some overlap. No steps were skipped in the process of developing the COVID-19 vaccines.

Were minorities or people with high-risk health conditions included in the clinical studies?

Yes. The Phase 3 clinical trials for the Pfizer-BioNTech vaccine (more than 43,000 participants) and Moderna vaccine (more than 30,000 participants) included communities that have historically been under-represented in clinical research and have been disproportionately impacted by COVID-19. Approximately 42% of participants in Pfizer BioNTech’s worldwide clinical trials, and 37% of the Moderna study population were from communities of color, which is similar to the diversity of the U.S. at large. In addition, the clinical studies included participants over age 65 (21% of Pfizer-BioNTech participants; 23% of Moderna participants); and those with high-risk chronic diseases that put them at increased risk of severe COVID-19, such as diabetes, severe obesity, and cardiac disease (46% of Pfizer-BioNTech participants; 42% of Moderna participants).

If we’ve only been testing this vaccine for 1 year, how do we know side effects won’t show up in the long term?

The research is still emerging, but the vaccines developed recently are based on existing technology. We know the timeframe that most side effects historically show up within minutes to weeks, not years. While we cannot rule out the possibility of long-term side effects from the vaccine, it’s also important to consider the possible long-term effects of COVID-19. We are seeing many COVID-19 survivors display lasting heart issues, lung damage, and even effects on the brain. While all of the long-term impacts of COVID-19 and its vaccine are not yet known, this initial data leads us to believe the vaccine is much safer in comparison to the illness.

What do we know about the safety of these vaccines for pregnant or breast-feeding women?

Pregnant and breast-feeding women were not included in the licensing studies of the COVID-19 vaccines, so there are no data on the safety and efficacy of COVID-19 vaccines in these women. As of mid-December 2020, the Centers for Disease Control and Prevention (CDC) stated, “Evidence suggests that pregnant women are potentially at increased risk for severe COVID-19-associated illness and death compared to non-pregnant women, underscoring the importance of disease prevention in this population. Given the predominance of women of child-bearing potential among the healthcare workforce, a substantial number of healthcare providers (HCPs) are estimated to be pregnant or breastfeeding at any given time.” On December 12, 2020 the CDC advised that “if a woman is part of a group (e.g., healthcare personnel) who is recommended to receive a COVID-19 vaccine and is pregnant, she may choose to be vaccinated. A discussion with her healthcare provider can help her make an informed decision.” Routine testing for pregnancy prior to receipt of a COVID-19 vaccine is not recommended.

If a lactating woman is part of a group (e.g., healthcare personnel) who is recommended to receive a COVID-19 vaccine, she may choose to be vaccinated. mRNA vaccines are not considered live virus vaccines and are not thought to be a risk to the breastfeeding infant.

Please see this website for more information: <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/pregnancy-breastfeeding.html>

Pfizer and Moderna use an mRNA-based vaccine. What does that mean?

Most vaccines (like the flu vaccine) use a weakened or inactive version of the infectious agent to give your body immunity. An mRNA vaccine uses a small part of the vaccine's genetic code to instruct your cells to build a protein specific to SARS-COV-2, the virus that causes COVID. This teaches your immune system to recognize it and fight it. It does not contain a live virus and can't cause disease. It also does not affect or even interact with your own DNA.

These two vaccines would be the first licensed mRNA vaccines, but the technology has been studied for over 10 years. mRNA vaccines have been researched before for other illnesses like the flu, Zika and rabies. Like all other vaccines, mRNA vaccines have been rigorously studied and tested before being authorized for use.

More information about mRNA vaccines is below.

Is there anyone who should not get the Pfizer vaccine at this time?

People with a history of severe allergic reactions were excluded from the trials, and severe allergic reaction to vaccination was exceedingly rare during the clinical trials of this vaccine, but there have been reports of allergic reactions to this vaccine in healthcare workers as it has been introduced in the UK and US in December 2020 under emergency use. Currently, the potential cause of these reactions is not known. Anyone with a known allergy to any of this vaccine's ingredients should not get the Pfizer COVID-19 vaccine.

The Pfizer-BioNTech COVID-19 Vaccine is preservative free, and each dose includes the following ingredients:

lipids

0.43 mg (4-hydroxybutyl)azanediylobis(hexane-6,1-diyl)bis(2-hexyldecanoate)

0.05 mg 2[(polyethylene glycol)-2000]-N,N-ditetradecylacetamide)

0.09 mg 1,2-distearoyl-sn-glycero-3-phosphocholine

0.2 mg cholesterol

0.01 mg potassium chloride

0.01 mg monobasic potassium phosphate, 0.36 mg sodium chloride

0.07 mg dibasic sodium phosphate dihydrate

6 mg sucrose

The diluent (0.9% Sodium Chloride Injection, USP) contributes an additional 2.16 mg sodium chloride per dose

Any person with a history of a severe allergic reaction to any vaccine or injectable therapy (intramuscular, intravenous, or subcutaneous) is a precaution to vaccination at this time.

Can people with an egg allergy have the COVID vaccine?

Yes. Neither the Pfizer nor the Moderna vaccines contain egg.

Can the Pfizer-BioNTech COVID-19 Vaccine cause infertility in women?

There is no scientific evidence to suggest that the vaccine could cause infertility in women. In addition, infertility is not known to occur as a result of COVID-19, further demonstrating that the virus, whether induced by infection or a vaccine, are not a cause of infertility.

How is vaccine safety monitored after it's been approved or authorized?

- The FDA and CDC continue to closely monitor vaccine safety after the public begins using the vaccine. Both agencies have both longstanding and new safety systems in place for heightened monitoring of all COVID-19 vaccines. Learn more about the vaccine safety monitoring systems:
 - CDC's [V-SAFE](#) is a new smartphone-based, after-vaccination health checker for people who receive COVID-19 vaccines. Vaccine recipients can opt-in to receive text messages and web surveys from CDC on how to report health problems following COVID-19 vaccination. The system will also provide telephone follow-up to anyone who reports medically significant adverse events. The report will be submitted to the Vaccine Adverse Event Reporting System (VAERS) while keeping patient identity confidential.
 - [Vaccine Adverse Event Reporting System](#) (VAERS) - VAERS is an early-warning system that collects and analyzes reports of any problems that happen after vaccination. Anyone can submit a report, including parents, patients, and health care professionals.
 - [Vaccine Safety Datalink](#) (VSD) - VSD is a collaboration between CDC and several health care organizations to monitor vaccine safety. The system analyzes healthcare information for over 24 million people to conduct studies about rare and serious adverse events after immunization.
 - Post-licensure Rapid Immunization Safety Monitoring (PRISM) - PRISM is the FDA's immunization safety monitoring program. PRISM actively monitors the safety of medical products using electronic health information from over 190 million people.
 - [Clinical Immunization Safety Assessment Project](#) (CISA) - CISA is a collaboration between CDC and seven medical research centers to answer complex safety questions. CISA conducts clinical research studies to further understand vaccine safety and recommend prevention strategies for adverse events following immunization.
- Vaccine recommendations may change if safety monitoring reveals new information about vaccine risks, such as a new serious side effect. The CDC, with the help of state and local health departments, will send safety alerts to health care providers. If necessary, a vaccine may be removed from the market.

mRNA FAQs

What is mRNA?

mRNA stands for messenger RNA, which is the blueprint for making proteins. DNA, which lives in the nucleus of cells, makes mRNA and ships it outside the nucleus to the surrounding cell cytoplasm. Once in the cytoplasm, mRNA is translated into a host of cell proteins and enzymes. Because our cells make proteins all the time, they also make mRNA all the time. Soon after making proteins, mRNA breaks down.

How do mRNA vaccines work?

COVID-19 mRNA vaccines take advantage of the cellular process of making proteins by introducing mRNA that contains the blueprint for one of the coronavirus proteins, specifically the spike protein. This is the protein that attaches coronavirus to our cells. If we can prevent virus-cell attachment by making antibodies against the spike protein, then we can prevent coronavirus from infecting cells. The mRNA that codes for the SARS-CoV-2 spike protein is taken up by specialized cells of the immune system, called dendritic cells, which put small pieces of the spike protein on their surface, travel to a nearby lymph node, and stimulate other cells of the immune system (B cells) to make antibodies. This is why some people who get the mRNA vaccine have swelling in the lymph nodes under the arm that was inoculated. The antibodies made during this process prevent virus-cell attachment in the future.

Can mRNA vaccines change a person's DNA?

No. In order for mRNA to alter someone's DNA, several events would need to occur. First, mRNA would need to enter the cell nucleus, where DNA resides. However, mRNA does not have the nuclear access signals that would allow it to enter. Put quite simply, mRNA vaccines can't get into the nucleus. Second, even if mRNA did enter the nucleus, it would have to be converted to DNA. This would require an enzyme called reverse transcriptase, which the mRNA vaccines don't contain. Third, the mRNA vaccines don't contain an enzyme called integrase, which would also be needed for mRNA to insert itself into the DNA. In short, the mRNA vaccines lack all of the basic requirements necessary to alter DNA. They remain in the cell cytoplasm for just a few days before they are destroyed. One other thing to remember is that there are more than 200,000 cellular mRNAs making a host of proteins and enzymes. The mRNA vaccines introduce only a few copies of mRNA into cells.

What ingredients are in the mRNA vaccines?

The mRNA vaccines contain: *mRNA* – The mRNA is for the spike protein of SARSCoV-2, the virus that causes COVID-19.

Lipids – These are molecules that are not able to dissolve in water. They protect the mRNA so that it does not break down before it gets into our cells. These lipid particles can be thought of as little “bubbles of fat” that surround the mRNA like a protective wall and make it easier for the mRNA to enter cells.

Salts – Salts, similar to table salt, are used to keep the pH of the vaccine close to that found in the body, so the vaccine does not damage cells when it is administered.

Sugar – This ingredient is the same as the sugar you put in your coffee or on your cereal. In the vaccine, it helps keep the “bubbles of fat” from sticking to each other or to the sides of the vaccine vial.

mRNA vaccines do NOT contain:

- Blood products
- Antibiotics
- DNA
- Fetal cells
- Pork products
- Egg proteins
- Preservatives (e.g., thimerosal)

Eligibility FAQs

Will undocumented people be able to get the vaccine?

All populations in Illinois, including individuals who are undocumented, can receive the vaccine. No one will be turned away when it is their time to be vaccinated.

Can children get a COVID-19 vaccine?

Currently, a pediatric vaccine is not available, and it may be some time before one is approved and becomes available. Clinical trials need to be conducted with children before determining if the existing COVID-19 vaccines are safe and effective for them.

Will youth with high risk conditions be included in any of the phases?

The availability of a vaccine for youth, under the age of 16 years, will depend on the availability of a pediatric vaccine. Clinical trials need to be conducted with children before determining if the existing COVID-19 vaccines are safe and effective for them.

Vaccine and New Variants of COVID-19 FAQs

Will the vaccine protect against the new COVID-19 variant now confirmed in the United States?

Viruses frequently change through mutation, and new variants of a virus are expected to occur over time. Multiple variants of the virus that causes COVID-19 have been documented in the United States and globally during this pandemic.

According to the [CDC](#), scientists are working to learn more about how easily this variant and other variants might spread, whether they could cause more severe illness, and whether currently authorized vaccines will protect people against them. Experts anticipate little to no impact on vaccine efficacy. Studies are pending to assess whether the immune response to infection with other variants or current vaccines will work effectively with this strain. Public health officials are also studying if variants are detected by currently available viral tests, and if they respond to medicines being used to treat COVID-19 patients.

What Happens After Getting the Vaccine FAQs

When will we be protected after we get the vaccine?

Studies show that it takes about one to two weeks after your last dose for your body to be able to protect itself against illness.

Current information suggests it is possible for someone who has been vaccinated against COVID-19 to still have a mild or asymptomatic infection and spread the virus to others. So it is important to continue taking precautions. Continue wearing masks and practicing physical distancing.

While no vaccine is 100% effective, Pfizer and Moderna have reported that their vaccines are about 95% effective.

Can I visit older at-risk family members once they've been vaccinated but before I have gotten a vaccine, or reverse?

To be as safe as possible, until the vaccine is widely available and both parties are fully immunized, we all need to continue to follow critical public health guidance. Prevention methods still include: wearing a mask in public, maintaining at least 6 feet physical distance from others not in our household, avoiding large crowds, washing our hands often, and staying home when we are sick.