



# Facts About COVID-19 and the Vaccines

## COVID-19

### What is COVID-19 and why is vaccination so important?

[COVID-19](#) is an infectious disease caused by the SARS-CoV-2 coronavirus.

There's no way to know how COVID-19 will affect you. Most people have a mild case, but it can cause serious illness and death.

COVID-19 has killed more than 860,000 people in the United States, making it a leading cause of death.

Some people develop [long COVID](#), where they have symptoms that last for weeks or months.

Getting a COVID-19 vaccine reduces the risk that you'll:

- Get seriously ill, require hospitalization, or die from COVID-19.
- Spread the disease to others, putting their health and lives at risk.

The more COVID spreads, the more it can mutate, or change, creating variants. Highly contagious variants have caused nearly all COVID-19 infections in the United States for much of the pandemic.

Vaccinating as many people as possible is the best way to reduce:

- The spread of COVID.
- The chance of future variants developing that may be more dangerous.

## How do I protect myself and others from COVID-19 until I get vaccinated?

If you're not yet vaccinated, you should do the following to [protect](#) yourself and others:

- Wear a mask when inside public places.
- Keep at least 6 feet away from people who don't live with you and who may not be vaccinated.
- Avoid crowds.
- Avoid poorly ventilated spaces.
- Wash your hands often with soap and water for at least 20 seconds or use hand sanitizer with at least 60% alcohol if you don't have soap and water.

## Getting vaccinated

### Who can get a COVID-19 vaccine and where can I get vaccinated?

Everyone age 5 and older in the United States can get a COVID-19 vaccine.

The vaccines are [free for everyone](#)—citizens and noncitizens alike, regardless of your immigration status.

You don't need health insurance. And many vaccine providers don't require any forms of ID.

Vaccines are available from pharmacies, doctors' offices, community health centers, and many more locations. Most people live within 5 miles of a vaccination site.

You have 3 ways to find vaccines near you:

- Go to [vaccines.gov](https://vaccines.gov)
- Text your ZIP code to 438829
- Call 1-800-232-0233

## How are COVID-19 vaccines given?

The [available COVID-19 vaccines](#) are given as a shot in the upper part of your arm.

The process is quick and practically painless, because the needle is very thin and the dose is small.

## Which vaccine can I get and how many doses do I need?

These are the [available COVID-19 vaccines and recommended doses](#):

	<b>Pfizer-BioNTech</b>	<b>Moderna</b>	<b>Johnson &amp; Johnson's Janssen</b>
If you're age...	5 or older	18 or older	18 or older
You need...	2 initial doses, 21 days apart	2 initial doses, 28 days apart	1 initial dose
Followed by a booster (an extra dose that helps keep up protection)...	5 months after your 2nd dose (only available for people age 12 or older)	5 months after your 2nd dose	2 months after your initial dose

If you're 18 or older, you can choose which COVID-19 vaccine to get as your booster. However, CDC [prefers](#) that people get an mRNA vaccine (Pfizer BioNTech and Moderna) for your initial vaccination and your booster.

For more information about boosters, check out our [booster resources](#) or talk to a health care provider.

People with [compromised immune systems](#) are less able to fight infections and may need more than these recommended doses.

## Which COVID-19 vaccines are available?

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- People ages 5-17 can get a Pfizer-BioNTech COVID-19 vaccine.
- People age 18 or older can get any of the COVID-19 vaccines available in the United States.

If you're age 18 or older, you can choose which COVID-19 vaccine to get; CDC has issued a preference for people to get an mRNA vaccine (Pfizer BioNTech and Moderna).

## Vaccine safety

### Are COVID-19 vaccines safe?

Yes. The COVID-19 vaccines available in the United States meet the FDA's and CDC's very high safety standards.

Hundreds of millions of people in the United States have safely received COVID-19 vaccines under the most intense safety monitoring in U.S. history.

[Serious side effects](#) and allergic reactions are extremely rare, occurring in only a small number of people.

There is no evidence that COVID-19 vaccines will cause long-term health problems, such as infertility or cancer.

All COVID-19 variants are greater threats to you than any risk from vaccine side effects.

COVID-19 can leave you with heart and lung damage and other conditions that require long-term treatment.

Vaccines are much safer paths to immunity than the disease itself.

If you're [allergic to any ingredients in the vaccines](#), your health care provider can help you decide if it's safe for you to get one of the vaccines.

### Are COVID-19 vaccines safe for children?

COVID-19 vaccine vaccines were rigorously tested in thousands of children before authorization by the FDA. They were shown to be safe and effective during the clinical trials.

Children had the same kinds of temporary side effects from vaccines as adults. Side effects during the clinical trials were usually mild and went away on their own in a few days.

For more on COVID-19 vaccines for children, see our [Frequently Asked Questions From Parents/Guardians About COVID-19 and the Vaccines](#).

## What safeguards are in place to make sure COVID-19 vaccines are safe?

Before the FDA makes vaccines available to the public:

- Scientists must test the vaccines in medical studies, called clinical trials, with thousands of participants. These studies compare what happens to people who get the vaccine with people who don't get the vaccine.
- More than 100,000 volunteers from diverse populations took part in clinical trials for the three available COVID-19 vaccines.
- FDA scientists review the data from the medical studies and inspect the places where the vaccines are made before they authorize or approve the vaccines for public use.

Even after vaccines are available to the public:

- FDA and CDC scientists closely monitor how the vaccines are made and given, to identify any safety issues.
- FDA and CDC scientists closely review any reports of side effects or reactions and share these facts with the public.

## How can COVID-19 vaccines be safe? They were developed so fast.

COVID-19 may be a new disease, but vaccines aren't new.

Scientists were able to quickly develop safe, effective COVID-19 vaccines by applying many years of vaccine experience and advances in technology.

Also, the National Institutes of Health had been working on a coronavirus vaccine before the pandemic and was able to use that experience in developing a COVID-19 vaccine.

Importantly, no one has cut any corners or skipped any [steps](#) that affect vaccine safety in the development, testing, authorization, and approval of COVID-19 vaccines.

## Are COVID-19 vaccines approved by the FDA?

The FDA authorized three COVID-19 vaccines for emergency use during the pandemic. They were authorized for use only after scientists concluded they meet the FDA's very high standards for safety and effectiveness.

The agency has fully approved Pfizer-BioNTech's COVID-19 vaccine for people age 12 and older after thoroughly evaluating additional data on its safety and effectiveness and inspecting where and how it's made.

Other companies' vaccines will be considered for approval if they apply and provide the required data to the FDA.

## Will the shot make me sick?

You can't get COVID-19 from the vaccines because they don't contain the virus that causes the disease.

Your arm might feel sore after you get your shot. You might also experience flu-like symptoms, such as fever, headaches, body aches, and tiredness.

These are normal signs that your immune system is responding to the vaccine. Although these [side effects](#) may be unpleasant, you're not actually sick. And they last a few days at most.

## What are the more serious side effects of COVID-19 vaccines?

[Serious side effects](#) from any vaccine, including the COVID-19 vaccines, are very rare.

It's also highly unlikely that the vaccines will cause any long-term health problems, such as cancer.

A very small proportion (not even 0.0001%) of vaccinated people have experienced the following in the hours and days after vaccination with one or more of the vaccines:

- Anaphylaxis — an allergic reaction that, if it happens, is likely to occur within minutes of vaccination. Vaccination sites are prepared to handle any rare cases of anaphylaxis that occur.
- Myocarditis and pericarditis — two kinds of heart inflammation that, if they happen, are likely to occur within several days of vaccination.
- Guillain-Barré syndrome — a rare autoimmune disorder that, if it happens, is likely to occur within the first couple of weeks after vaccination.

- Thrombosis with thrombocytopenia syndrome — an extremely rare blood-clotting condition that, if it happens, is likely to occur within the first couple of weeks after vaccination.

If any of these unlikely reactions happen, health care providers know how to treat them.

The fact that we know of these extremely rare cases shows that the FDA and CDC's vaccine safety monitoring systems work and catch even the rarest reactions.

## Are COVID-19 vaccines safe for people who are pregnant, want to become pregnant, or are breastfeeding?

Yes. Getting a COVID-19 vaccine can protect you against severe illness from COVID-19 and help keep your baby safe.

COVID-19 can be a dangerous disease during pregnancy and increases the risk of preterm birth. It might increase risks for other adverse pregnancy outcomes.

Vaccination against COVID-19 does not lead to complications during [pregnancy](#).

There's also no evidence that any vaccines, including COVID-19 vaccines, cause [fertility](#) problems in women or men.

And there's no reason to put off getting vaccinated if you're on your period.

CDC recommends COVID-19 vaccination as soon as possible for all people who are pregnant, trying to become pregnant, wanting to become pregnant someday, or breastfeeding.

## What's in COVID-19 vaccines?

Aside from the active ingredient (a molecule with instructions for your cells), all three available vaccines contain water, sugars, and salts.

Depending on which vaccine you get, it may also contain acids, alcohol, fat, or preservatives.

Those are all the [ingredients](#).

## How do COVID-19 vaccines work?

The COVID-19 vaccines available in the United States [give your cells the instructions to make a protein](#) like the one found on the surface of the coronavirus, called a spike protein.

Your immune system sees the spike protein as an invading germ and reacts by creating cells that will be ready to identify and attack the coronavirus if you are exposed to it. But you're never exposed to the real virus, so you don't get sick.

Once your cells make the spike protein, the instructions are destroyed, and your body gets rid of them.

At no point do the vaccines change or interact with your DNA.

## Vaccine effectiveness

### How effective are COVID-19 vaccines?

All available COVID-19 vaccines are [very effective](#).

They are highly effective against severe illness, hospitalization, and death due to COVID-19.

### Why should I get vaccinated if I can still get infected with COVID-19?

Your chance of getting COVID-19 if you're unvaccinated is much higher than if you've been vaccinated. You're also much more likely to get seriously ill if you're unvaccinated and get COVID-19.

If you're fully vaccinated and the virus enters your body (infects you), your immune system will quickly recognize the virus and keep it from doing real harm.

That's why most people who get infected with COVID-19 despite being vaccinated have no symptoms or only mild-to-moderate illness.

Nearly everyone getting severely ill, needing hospitalization, and dying from COVID-19 is unvaccinated.

### Will COVID-19 vaccines prevent me from infecting others?

COVID-19 vaccines reduce the likelihood that you'll get and be able to spread COVID-19.

But if you're infected with a very contagious variant, you can spread the virus to others, whether you're vaccinated or not.

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That's why everyone in [areas of substantial or high community transmission](#) should wear masks inside public places – even people who are vaccinated.

## Do I need to get a COVID-19 vaccine if I've already had COVID-19?

Yes. [People can get COVID-19 more than once](#), although it's not common. Being vaccinated after having COVID-19 strengthens your immunity to give you better protection.

Also, people who are vaccinated have a lower risk of spreading the virus to others. This is very important because of the risks to unvaccinated people from highly contagious variants.

## What can I do after I'm vaccinated?

If you're [fully vaccinated](#), you can do many of the things that you did before the pandemic.

To help prevent the spread of highly contagious variants, continue to wear a mask inside public places in area of substantial or high community transmission.

Vaccinated and unvaccinated people must also follow federal, state, local, tribal, and territorial laws, rules, and regulations. That includes safety precautions for:

- Public transportation
- Airports and airplanes
- Local businesses
- Workplaces

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