

HOW THE COVID-19 VACCINES WORK

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COVID-19 vaccines protect you from getting sick

Local, regional, and national health experts recommend taking a vaccine against COVID-19. Right now, there are 3 vaccines approved in the U.S. — Pfizer/BioNTech, Moderna and Johnson & Johnson.

It's normal to have more than one vaccine to fight the same virus. Each of these vaccines has been proven to be safe and effective at preventing serious illness or death from COVID-19.

Medical experts are still learning how long the vaccines protect you and if they stop you from spreading COVID-19. It will take some time before enough people have the vaccine that we can stop using everyday prevention. **Continue to wash your hands, wear a mask, watch your distance, and keep gatherings small and brief, even if you receive a vaccine.**

What they do

- **They teach your body how to recognize and fight the coronavirus that causes COVID-19.**
- The Pfizer and Moderna vaccines contain messenger RNA (mRNA). mRNA is like an instruction manual. It teaches your body how to make a harmless protein that looks like a protein on this coronavirus. Your body responds to the protein and creates disease-fighting cells and antibodies that can recognize and fight this coronavirus.
- The Johnson & Johnson vaccine is a viral vector vaccine. It contains a harmless adenovirus, from a family of viruses that causes the common cold. The adenovirus in the vaccine carries a gene from the spike protein of the coronavirus. This teaches your body how to recognize and fight the coronavirus that causes COVID-19.
- **No matter what type of vaccine you get, your body will be ready to protect you if it sees this coronavirus in the future.**

What they don't do

- They **do not** contain coronavirus and **can't give you** COVID-19.
- They **do not** change your DNA or genetic material.
- They **do not** cause infertility.

What's in the COVID-19 vaccines?

The [Pfizer](#) and [Moderna](#) vaccines have mRNA and ingredients to help mRNA work in your body: fats, potassium, organic compounds to protect mRNA from too much acid, salt, and sugar.

The Johnson & Johnson vaccines have a modified adenovirus with information from the coronavirus on it. They also contain ingredients that help keep the vaccines stable: salts, sugars and other organic compounds.

The vaccines **do not** contain eggs, preservatives, latex, pork or other animal products, or fetal cells.



Who can get these vaccines?

- Adolescents and adults 12 years and older (Pfizer)
- Adults 18 years and older (Moderna and Johnson and Johnson)
- Talk with your doctor or clinic if you:
 - Are pregnant or breastfeeding, or
 - Have any serious allergies

Scientists are working on a vaccine for kids younger than 12



Side effects

Many people experience mild side effects after getting the vaccine. This is a sign that your body is doing what it is supposed to do: building protection against the disease.

- Common side effects include soreness or redness where you got the vaccine, a headache, tiredness, and/or low fever (less than 100.4). These symptoms are more common after the second dose.
- These symptoms usually go away on their own within a few days. If they don't, call your doctor or clinic.

Rare, but serious, problems

It is rare, but some people have had a severe allergic reaction to the vaccine. All of these people received medical help right away.

- Everyone who gets these vaccines must wait for at least 15 minutes afterwards, so medical staff can help them if they have a reaction.
- If you've had a severe allergic reaction in the past, talk with your doctor or clinic.

The Johnson & Johnson vaccine could be linked with a very rare, but serious, blood clotting disorder. After more study, national and state health officials have agreed that the Johnson & Johnson vaccine is safe to use.

If you get the Johnson & Johnson vaccine, monitor yourself for these symptoms for three weeks after your shot:

- a severe headache or a headache that won't go away
- blurred vision
- chest pain or severe belly pain
- leg swelling or pain
- trouble breathing
- easy bruising or tiny blood spots under your skin outside of where you got your shot

If you have any of these symptoms, call 911 or seek medical attention. It is important to tell the medical provider that you got the Johnson & Johnson vaccine so they can take care of you in the right way.

Search COVID-19 on your county website to get local information.

