

## Myths and Facts about COVID-19 Vaccines

[cdc.gov/coronavirus/2019-ncov/vaccines/facts.html](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/facts.html)

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Accurate vaccine information is critical and can help stop common myths and rumors. It can be difficult to know which sources of information you can trust. Learn more about finding credible vaccine information.

Below are myths and facts about COVID-19 vaccination.

**Have more questions?** Visit Myths and Facts about COVID-19 Vaccines for Children and FAQs about Vaccination.

### Bust Common Myths and Learn the Facts

#### **MYTH: The ingredients in COVID-19 vaccines are dangerous.**

**FACT:** Nearly all the ingredients in COVID-19 vaccines are also ingredients in many foods – fats, sugars, and salts.

Exact vaccine ingredients vary by manufacturer. Pfizer-BioNTech and Moderna COVID-19 vaccines also contain messenger RNA (mRNA) and the Johnson & Johnson/Janssen COVID-19 vaccine contains a harmless version of a virus unrelated to the virus that causes COVID-19. These give instructions to cells in your body to create an immune response. This response helps protect you from getting sick with COVID-19 in the future. After the body produces an immune response, it discards all the vaccine ingredients just as it would discard any information that cells no longer need. This process is a part of normal body functioning.



COVID-19 vaccines do NOT contain ingredients like preservatives, tissues (like aborted fetal cells), antibiotics, food proteins, medicines, latex, or metals.

Learn more about what ingredients are and are not in Pfizer-BioNTech, Moderna, or Johnson & Johnson/Janssen COVID-19 vaccines.

## **MYTH: The natural immunity I get from being sick with COVID-19 is better than the immunity I get from COVID-19 vaccination.**

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**FACT:** Getting a COVID-19 vaccination is a safer and more dependable way to build immunity to COVID-19 than getting sick with COVID-19.



COVID-19 vaccination causes a more predictable immune response than infection with the virus that causes COVID-19. Getting a COVID-19 vaccine gives most people a high level of protection against COVID-19 and can provide added protection for people who already had COVID-19. One study showed that, for people who already had COVID-19, those who do not get vaccinated after their recovery are more than 2 times as likely to get COVID-19 again than those who get fully vaccinated after their recovery.

All COVID-19 vaccines currently available in the United States are effective at preventing COVID-19. Getting sick with COVID-19 can offer some protection from future illness, sometimes called “natural immunity,” but the level of protection people get from having COVID-19 may vary depending on how mild or severe their illness was, the time since their infection, and their age.

Getting a COVID-19 vaccination is also a safer way to build protection than getting sick with COVID-19. COVID-19 vaccination helps protect you by creating an antibody response without you having to experience sickness. Getting vaccinated yourself may also protect people around you, particularly people at increased risk for severe illness from COVID-19. Getting sick with COVID-19 can cause severe illness or death, and we can’t reliably predict who will have mild or severe illness. If you get sick, you can spread COVID-19 to others. You can also continue to have long-term health issues after COVID-19 infection.

Learn about why you should get vaccinated even if you already had COVID-19.

### **MYTH: COVID-19 vaccines cause variants.**

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**FACT:** COVID-19 vaccines do not create or cause variants of the virus that causes COVID-19. Instead, COVID-19 vaccines can help prevent new variants from emerging.



New variants of a virus happen because the virus that causes COVID-19 constantly changes through a natural ongoing process of mutation (change). As the virus spreads, it has more opportunities to change. High vaccination coverage in a population reduces the spread of the virus and helps prevent new variants from emerging. CDC recommends that everyone 5 years of age and older get vaccinated as soon as possible.

Learn more about variants.

### **MYTH: All events reported to the Vaccine Adverse Event Reporting System (VAERS) are caused by vaccination.**

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**FACT:** Anyone can report events to VAERS, even if it is not clear whether a vaccine caused the problem. Because of this, VAERS data alone cannot determine if the reported adverse event was caused by a COVID-19 vaccination.

Some VAERS reports may contain information that is incomplete, inaccurate, coincidental, or unverifiable. Vaccine safety experts study these adverse events and look for unusually high numbers of health problems, or a pattern of problems, after people receive a particular vaccine.

Recently, the number of deaths reported to VAERS following COVID-19 vaccination has been misinterpreted and misreported as if this number means deaths that were proven to be caused by vaccination. Reports of adverse events to VAERS following vaccination, including deaths, do not necessarily mean that a vaccine caused a health problem.

Learn more about VAERS.



## **MYTH: The mRNA vaccine is not considered a vaccine.**

**FACT:** mRNA vaccines, such as Pfizer-BioNTech and Moderna, work differently than other types of vaccines, but they still trigger an immune response inside your body.

This type of vaccine is new, but research and development on it has been underway for decades.

The mRNA vaccines do not contain any live virus. Instead, they work by teaching our cells to make **a harmless piece** of a “spike protein,” which is found on the surface of the virus that causes COVID-19. After making the protein piece, cells display it on their surface. Our immune system then recognizes that it does not belong there and responds to get rid of it. When an immune response begins, antibodies are produced, creating the same response that happens in a natural infection.

In contrast to mRNA vaccines, many other vaccines use a piece of, or weakened version of, the germ that the vaccine protects against. This is how the measles and flu vaccines work. When a weakened or small part of the virus is introduced to your body, you make antibodies to help protect against future infection.

Learn more about how mRNA COVID-19 vaccines work.



**MYTH: COVID-19 vaccines contain microchips.**

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**FACT:** COVID-19 vaccines do not contain microchips. Vaccines are developed to fight against disease and are not administered to track your movement.



Vaccines work by stimulating your immune system to produce antibodies, exactly like it would if you were exposed to the disease. After getting vaccinated, you develop immunity to that disease, without having to get the disease first.

Learn more about the ingredients in the COVID-19 vaccinations authorized for use in the United States.

**MYTH: Receiving a COVID-19 vaccine can make you magnetic.**

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**FACT:** Receiving a COVID-19 vaccine will not make you magnetic, including at the site of vaccination which is usually your arm.



COVID-19 vaccines do not contain ingredients that can produce an electromagnetic field at the site of your injection. All COVID-19 vaccines are free from metals.

Learn more about the ingredients in the COVID-19 vaccinations authorized for use in the United States.

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**MYTH: COVID-19 vaccines authorized for use in the United States shed or release their components.**

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**FACT:** Vaccine shedding is the release or discharge of any of the vaccine components in or outside of the body and can only occur when a vaccine contains a live weakened version of the virus.

None of the vaccines authorized for use in the U.S. contain a live virus. mRNA and viral vector vaccines are the two types of currently authorized COVID-19 vaccines available.

Learn more about mRNA and viral vector COVID-19 vaccines.



## **MYTH: COVID-19 vaccines can alter my DNA.**

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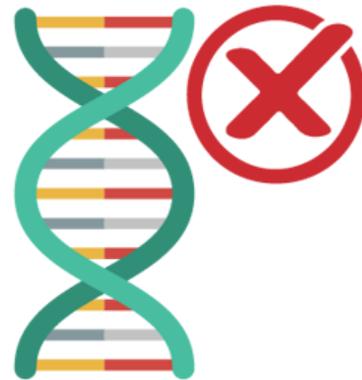
**FACT:** COVID-19 vaccines do not change or interact with your DNA in any way.

Both messenger RNA (mRNA) and viral vector COVID-19 vaccines work by delivering instructions (genetic material) to our cells to start building protection against the virus that causes COVID-19.

After the body produces an immune response, it discards all the vaccine ingredients just as it would discard any information that cells no longer need. This process is a part of normal body functioning.

The genetic material delivered by mRNA vaccines never enters the nucleus of your cells, which is where your DNA is kept. Viral vector COVID-19 vaccines deliver genetic material to the cell nucleus to allow our cells to build protection against COVID-19. However, the vector virus does not have the machinery needed to integrate its genetic material into our DNA, so it cannot alter our DNA.

Learn more about how COVID-19 vaccines work.



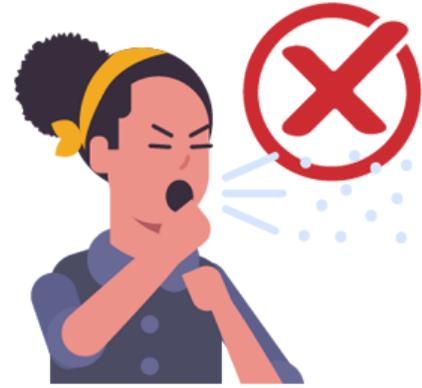
## **MYTH: A COVID-19 vaccine can make me sick with COVID-19.**

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**FACT:** Because none of the authorized COVID-19 vaccines in the United States contain the live virus that causes COVID-19, the vaccine cannot make you sick with COVID-19.

COVID-19 vaccines teach our immune systems how to recognize and fight the virus that causes COVID-19. Sometimes this process can cause symptoms, such as fever. These symptoms are normal and are signs that the body is building protection against the virus that causes COVID-19.

Learn more about how COVID-19 vaccines work.



## Other Myths and Facts

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Last Updated Dec. 15, 2021

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