



# COVID-19 VACCINE MYTHS

Answers from trusted sources to your biggest concerns:

**MYTH: Vaccines can cause you to develop COVID-19.**

**Reality:** The COVID-19 vaccines available in the U.S. cannot and will not give you COVID-19. They do not contain the SARS-CoV-2 virus. The protein that helps your immune system recognize and fight the virus does not cause infection of any sort.

**MYTH: To accelerate the development of the vaccines, safety protocols were ignored.**

**Reality:** Despite the speed with which the vaccines were developed, no shortcuts were taken in judging their safety or effectiveness. The vaccine developers didn't skip any steps, rather they conducted some of the steps on an overlapping schedule to gather data faster. They also had more collaboration, technology and funding that allowed them to work quickly.

The Pfizer/BioNTech and Moderna vaccines were created with a method that has been in development for years for cancer research; messenger RNA (mRNA) vaccines allow a faster approach than the traditional way vaccines are made. The Johnson & Johnson/Janssen vaccine uses a weakened adenovirus, which has been studied extensively for other vaccines.

**MYTH: The vaccines alter your DNA.**

**Reality:** This rumor has its origins in the fact that the Pfizer-BioNTech and Moderna vaccines both rely on a germ-fighting strategy that utilizes mRNA, which stands for "messenger-RNA". Messenger-RNA is simply a set of instructions for building a protein, which becomes the source of the body's immune response. Messenger-RNA interacts with cells but is incapable of entering them. This makes it impossible for it to alter a cell's DNA, which is only found inside the cell. Human cells break down and get rid of the mRNA soon after they have finished using the instructions.

**MYTH: The COVID-19 vaccine was developed with or contains controversial substances.**

**Reality:** The Pfizer-BioNTech and Moderna COVID-19 vaccines – both fully approved by the Food and Drug Administration (FDA) – contain messenger RNA (mRNA), and other, normal vaccine ingredients, such as fats (which protect the mRNA), salts, as well as a small amount of sugar. Exact ingredients vary by manufacturer.

These COVID-19 vaccines were NOT developed using fetal tissue, and they do not contain any material, such as implants, microchips or tracking devices. They also do NOT contain ingredients like preservatives, tissues (like aborted fetal cells), antibiotics, food proteins, medicines, latex, or metals.

Vaccines give instructions to cells in your body to create an immune response in case you are exposed to the coronavirus. 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.

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

**MYTH: The COVID-19 vaccine was developed to control the general population either through microchip tracking or "nano-transducers" in our brains.**

**Reality:** There is no vaccine microchip, and the vaccine will not track people or gather personal information into a database. This myth started after comments made by Bill Gates from The Gates Foundation about a digital certificate of vaccine records. The technology he was referencing is not a microchip, has not been implemented in any manner and is not tied to the development, testing or distribution of COVID-19 vaccines. The fact is your cell phone and debit or credit cards allow companies to track your movements and habits; the vaccines cannot do this.

**MYTH: Vaccine side effects are common and severe.**

**Reality:** There are short-term mild or moderate vaccine reactions that resolve without complication or injury. This includes irritation at the injection site, and some people also developed headache, chills, fatigue or muscle pain lasting for a day or two. These are signs that the vaccine is working to stimulate your immune system. If symptoms last more than two days, you should call your doctor.

Severe side effects, such as severe allergic reactions, or anaphylaxis, have been extremely rare. If you have allergies, especially ones that require you to carry an EpiPen, discuss the COVID-19 vaccine with your doctor who can assess your risk and provide more information about if and how you can get vaccinated safely.

**MYTH: If I've already had COVID-19, I don't need a vaccine.**

**Reality:** Yes, your body developed natural antibodies in response to you having the coronavirus, but we don't know how long they'll remain effective. The CDC released a study in August 2021 of Kentuckians that showed people who were infected with COVID-19 in 2020, and who remained unvaccinated through June 2021, were 2.34 times more likely to be reinfected compared to those who had gotten fully vaccinated after having the virus.

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

**MYTH: The messenger RNA technology used to make the COVID-19 vaccine is brand new.**

**Reality:** The technology behind the new mRNA coronavirus vaccines has been in development for almost two decades.

**MYTH: The vaccines cause miscarriage in pregnant women.**

**Reality:** The CDC released data in August 2021 showing there was no increased risk of miscarriage among nearly 2,500 pregnant women who received a mRNA COVID-19 vaccine before 20 weeks of pregnancy. Previous data found no safety concerns for pregnant women who were vaccinated late in pregnancy, or for their babies.

Data does show that pregnant women and those who were recently pregnant are more likely to get very sick from COVID-19 compared to people who are not pregnant or have not recently been pregnant. Additionally, if a woman gets COVID-19 during pregnancy, she is at an increased risk of complications that can affect the pregnancy and developing baby. These include delivering a preterm (earlier than 37 weeks) or stillborn infant.

COVID-19 vaccines and boosters are recommended for women who are trying to get pregnant, pregnant now, might become pregnant in the future, and their partners.

**MYTH: The COVID-19 vaccine can cause infertility.**

**Reality:** There is no evidence that any vaccines, including COVID-19 vaccines, cause fertility problems in women or men.

The COVID-19 vaccine encourages the body to create copies of the spike protein found on the coronavirus' surface. This "teaches" the body's immune system to fight the virus that has that specific spike protein on it. This myth began as a rumor, based on the supposed inclusion of a spike protein called syncytin-1 in the Pfizer-BioNTech vaccine. Regardless whether syncytin-1 affects human fertility, it is not present in the Pfizer-BioNTech vaccine.

**MYTH: Kids don't get seriously sick from COVID-19. It is not worse than the flu.**

**Reality:** Kids can get and transmit COVID-19, including severe cases. While children do not die from the virus at the same rate as adults, they can still die from COVID-19 or get seriously ill. In fact, children die from this virus at rates similar to other diseases for which children are vaccinated or kept out of school.

**Sources:** Centers for Disease Control, Johns Hopkins Medicine