

Get the Facts About the COVID-19 Vaccine

Get your questions answered by the experts on your immune system, your Allergist/Immunologist!

Q: Are the vaccines safe? I've heard people are dying from the vaccine.

A: More than 350 million vaccinations have been given in the United States as of August 8, 2021. Between December 2020 and August 2, 2021, VAERS (Vaccine Adverse Event Reporting System) received 6490 reports of death following COVID vaccination (0.0019%). This does not mean that the vaccine caused the death. Each case is reviewed and to date, there are 3 deaths that appear to be linked to blood clots that occurred in people following the J&J/Janssen vaccine related to thrombosis with thrombocytopenia, TTS, a rare serious adverse event of blood clots with low platelets.

Q. What about Guillain-Barre Syndrome?

A. Guillain-Barre Syndrome (GBS) is a rare disorder which can cause muscle weakness and transient paralysis. Most people fully recover but some people do have permanent nerve damage. There were 143 preliminary reports in VAERS of GBS following J&J/Janssen vaccination as of July 30. The cases are 2 weeks after vaccination and occur mostly in men 50 years and older.

Q. Do I even need the vaccine? I already had COVID19 -OR- I haven't had COVID19 yet.

A. The Delta variant is currently the predominant strain of the virus in the United States. It causes more infections and spreads faster than early forms of SARS-CoV-2.

Some data suggest the Delta variant might cause more severe illness than previous strains in unvaccinated people. Unvaccinated people are currently the greatest concern because of their ability to transmit the Delta variant whether they have symptoms or not. Fully vaccinated people with Delta variant breakthrough infections can also spread the virus to others. However, vaccinated appear to be infectious for a shorter period.

Vaccines in the U.S. are highly effective, including against the Delta variant. If you've had COVID19, you may still have antibodies, but the vaccine's antibodies are more targeted to the first protein the body sees (spike protein) and can neutralize it faster. A vaccine will also serve as a booster shot to your immune system to allow you to be protected longer than just natural infection.

Q. Why aren't Ivermectin and HCQ used more widely?

A. Vaccination is one of many tools being used to help end the pandemic, so the healthcare community is promoting vaccination in the interest of public health. Regarding Ivermectin and hydroxychloroquine, both of these medications, as well as many others, are being extensively researched, and the media has been extensively involved in presenting the data from scientists studying these potential treatments.

While initial laboratory testing showed promise that these medicines might be effective against the COVID-19 virus, the dose that is safe for humans to take hasn't been shown to be effective at decreasing the length or severity of a COVID illness. There were some initial studies that claimed this, but with further review by the medical and scientific communities, it was found that their studies had serious flaws in the results and the conclusions. The report for the largest of these studies on Ivermectin has been withdrawn due to bias in the reporting.

Q. I've heard the vaccine causes heart damage. Is that true?

A. There were some cases of inflammation of the heart (myocarditis) among adolescents, but it is very rare. It occurs at a rate of about 67 cases per million patients. Most cases were mild and resolved within days. What is more concerning is that the risk of getting myocarditis after a COVID-19 infection is actually much higher, occurring at a rate of about 450 cases per million. So the vaccine actually reduces the risk of getting myocarditis by about 7 fold.

Q. What is an mRNA vaccine? How do we know they are safe when they are so new?

A. mRNA is like the instruction manual that comes with your do-it-yourself furniture kit or a recipe card that tells you what to do to prepare food. Simply stated, mRNA tells a cell what proteins to make. The mRNA vaccine tells your cells to make a protein like the one that decorates the surface of the coronavirus. Your body then makes antibodies against this specific protein. These antibodies circulate in your bloodstream and are immediately ready to attack the actual virus if you are ever exposed.

mRNA has a short life span before it is destroyed naturally. It delivers a message and once the work is done, it disappears within a few days. The mRNA does not enter your cells or affect your DNA. There is no virus involved in this process, so you cannot get COVID-19 from the vaccine. mRNA is also much easier and faster to manufacture than older types of vaccines, which means protecting large populations can happen much, much faster than in the past. mRNA technology is not actually that new: it has been used in cancer therapeutics previously.

As of August 2021, more than 198 million people in the U.S. have received at least one dose of a Covid-19 vaccine, including about 169 million people who have been fully vaccinated by the two-dose series made by Pfizer-BioNTech and Moderna, or with the Johnson & Johnson single-dose vaccine. More than 4.46 billion vaccine doses have been administered worldwide with great results. Approximately 70,000+ people who were part of the mRNA vaccine clinical studies are still being followed to assess continued safety.

Q. What about side effects?

A. The new mRNA COVID-19 vaccines stimulate your immune system and therefore are reactogenic. They are likely to cause some side effects, especially after the second dose. The most common side effects include sore arm, fatigue, headache, or muscle pain. The side effects are not a sign that the vaccine gave you COVID-19, but a good sign that your immune system had a positive response to the vaccine. The side effects are generally short-lived.

Severe allergic reactions to COVID-19 mRNA vaccines are exceedingly rare. Anaphylaxis to the mRNA COVID-19 vaccines is currently estimated to occur in 2.5 to 5 cases per million doses. You are 100 times more likely to die from COVID than to have a serious allergic reaction to the vaccine.

Q. What about long-term side effects?

A. In the history of vaccines, serious adverse effects have only popped up in the first 2 months of receiving the vaccine. Based on knowledge of mRNA and the human body, long term side effects from vaccination are not expected. There are anecdotal reports that menstrual cycles changed after vaccination. This suggests that the body was mounting an immune response and is likely a side effect, like a fever. No long-term changes in fertility have been reported.

Q. I've had food, medication, or vaccine reactions in the past. Can I still get a COVID19 vaccine?

A. In the vast majority of cases, you probably can. There are no animal or plant proteins or preservatives in the vaccine. You should talk to an allergist if you've reacted to polyethylene glycol or polysorbate. The only contraindication is if you've had a severe allergic reaction to a previous dose of the COVID19 vaccine or its ingredients. We have been able to give our patients the vaccine with minimal side effects (even those that have reacted to the first dose). We are able to treat allergic reactions with medications that work well, including epinephrine. We are not able to treat severe COVID19 well.

If you have specific questions that are not covered here, please ask! We care about your health and are happy to discuss how the vaccine can help you stay well. We recommend the vaccine for all our patients, staff, and our own family members, including children who are eligible.