

COVID-19 VACCINE

FREQUENTLY ASKED QUESTIONS

The new COVID-19 vaccines have given hope that there is a light at the end of the long pandemic tunnel. However, many people, including healthcare workers, have questions about these vaccines and are seeking more information before making a decision about getting vaccinated. This FAQ serves to answer some of those questions. It will be updated regularly as more information becomes available.

Q What kind of technology is used to make COVID-19 vaccines?

A: Both the Pfizer and Moderna vaccines use messenger RNA (mRNA) technology. An mRNA vaccine is made with a piece of genetic code that contains instructions for our cells to make a protein — the same protein that is the spike on top of the actual coronavirus. This is what triggers the immune response in these types of vaccines.

mRNA does not interact with a person's DNA. For this reason it has no genetic effect on the vaccinated person. mRNA is unstable, quickly broken down by the body after it triggers an immune response. Therefore, to keep mRNA effective, the vaccines must be stored at extremely low temperatures. mRNA is a new technology for vaccines, but it has been in use for cancer treatment and has been studied for many years.

The Johnson & Johnson vaccine, which has just received Emergency Use Authorization from the FDA, uses viral vector

technology. It adds genetic code (DNA) for the coronavirus spike protein into a harmless virus (adenovirus that has been modified so that it cannot replicate in the body). The modified adenovirus acts as a transport vehicle to introduce the genetic code into the body. Viral vector technology has been used to produce Ebola, Zika and HIV vaccines. The Johnson & Johnson vaccine is more stable than the Pfizer and Moderna vaccines, so it does not have to be frozen. It also only requires 1 dose instead of 2.

Both the mRNA and viral vector vaccines work in a similar way — they prime the immune system to recognize a part of the SARS-CoV-2 virus, the spike protein, so that if SARS-CoV-2 enters the body, the immune system is ready to attack.

Q Can I get COVID-19 from the vaccine?

A: No. None of the vaccines currently in use or being considered for future use in the U.S. contain live SARS-CoV-2 virus.

Q What side effects may I experience after being vaccinated?

A: Some people experience no symptoms after being vaccinated. However, many feel pain at the vaccination site and many also experience headaches, achiness, fatigue, chills, low-grade fever and overall malaise, particularly the day after the shot. Many, but not all, of those receiving the Pfizer or Moderna vaccine feel worse after the second shot than the first. These symptoms typically last a day, but can last for several days. These are considered unpleasant, but normal, reactions to the vaccine.

There have been a small number of people who have had an anaphylactic reaction to the mRNA vaccines (see next Q&A). One person had an anaphylactic reaction to the Johnson & Johnson vaccine during the Phase III trial.

Q Why are some people who get vaccinated with the Pfizer or Moderna vaccine having anaphylactic reactions?

A: There is always the risk of anaphylaxis when receiving a vaccine; however, that risk is very, very low. The rate of anaphylaxis caused by the Pfizer and Moderna vaccines is higher than with other vaccines but is still low (0.001%). It is currently considered likely that the cause of this reaction is the presence of PEG (polyethylene glycol) in mRNA vaccines. PEG is a common ingredient, found in many products such as toothpastes, shampoos, medications, etc. But this is the first time PEG has been an ingredient in a vaccine. PEG is needed in mRNA vaccines because it makes them more stable.

Q Can I get vaccinated if I have allergies?

A: Yes, however you should first speak with your personal physician if you have severe allergies or have ever suffered anaphylaxis from a vaccine in the past. The CDC recommends that you not receive a vaccine if you are allergic to any of the ingredients of that vaccine. Vaccine ingredients can be found at the pharmaceutical manufacturers' websites.

If you have allergies you should be monitored for 30 minutes

after vaccination in case you have a strong allergic reaction (15 minutes for everyone else). So far, all those who have suffered anaphylaxis from receiving the vaccine have been quickly identified, treated and recovered.

Q Can I get vaccinated if I am immunocompromised or have an autoimmune condition?

A: People who are immunocompromised or have autoimmune disorders are not disallowed to be vaccinated. The vaccines that are currently approved for use in the U.S., and those that are likely to be approved in the future, do not contain live virus. Live virus vaccines can pose a health risk for people with compromised immune systems. Those who are immunocompromised are at increased risk of severe symptoms and death if infected with COVID-19. It is possible that those who have weakened immune systems may not create as robust an immune response to the vaccine as others, but vaccination is not dangerous for them.

If you have an autoimmune disorder, speak with your doctor about whether the vaccine is recommended for you. So far there have been no reports of negative consequences for those with autoimmune conditions.

Q Can I get vaccinated if I'm pregnant or breast feeding?

A: These categories of people were not included in vaccine test trials (trials rarely include people who are pregnant or breastfeeding). However, some trial volunteers did become pregnant during the trials, and there were no adverse effects on the fetuses of these volunteers. The American Society for Reproductive Medicine, the Advisory Committee for Immunization Practices, the CDC, the American College of OB-GYNs, and the Society for Maternal-Fetal Medicine all have stated that the vaccine should not be withheld from patients who are pregnant or lactating who wish to be vaccinated. Speak with your personal physician if you are in this category as this is a personal decision dependent upon your specific medical situation.

Q Can I get vaccinated if I plan to become pregnant in the near future?

A: The abovementioned professional organizations also support vaccination for those who are planning to become pregnant. There are typically no long-term adverse reactions to vaccines. Those who are pregnant have been found to be at higher risk for severe COVID disease and death, which could be a factor to consider

when deciding whether to get vaccinated before you are pregnant. Speak to your personal physician if you plan to become pregnant and have questions about being vaccinated.

Q Can the COVID vaccine cause infertility?

A: The spike of the SARS-CoV-2 virus contains a protein similar to a protein found in the placenta – syncytin-1. Some people were concerned that the vaccine could produce antibodies that may attack syncytin-1 thus causing the body to reject the protein in the placenta, making people infertile. The coronavirus' spike protein and syncytin-1 share small stretches of the same genetic code, but not enough to make them a match. If the spike protein's similarity to syncytin-1 caused infertility, a pattern would have appeared amongst the millions of people who have been infected with, and recovered from, COVID-19. No such pattern has been found.

Q If I've already been infected with COVID-19, do I still need the vaccine?

A: Typically the immune response from vaccines is stronger than the immune response from a natural infection. It is recommended that, even if you have had a past COVID-19 infection, you still get the COVID-19 vaccine. You should NOT get the vaccine if you are currently sick with COVID-19. It is usually recommended not

to get vaccinated while you are currently sick, no matter what the vaccine.

Q If I've received 1 dose of a vaccine that requires 2 doses, do I have any immunity?

A: For the mRNA vaccines, 1 dose of a 2 dose vaccination is believed to provide approximately 50% immunity 12 days after the dose is given. Around 7 days (Pfizer) to 14 days (Moderna) after the 2nd dose is given, immunity reaches approximately 95%.

The Johnson & Johnson vaccine only requires 1 dose. It is 85% effective at preventing severe illness in clinical trials and 66% effective at preventing COVID-19 cases with any symptoms. That level of immunity is reached approximately 28 days after immunization.

Q Are the current vaccines effective against the new virus variants?

A: Viruses mutate constantly. Most do not change how the virus operates, so these changes go unnoticed. However, when a series of gene mutation make the virus change how it acts, by making illness more acute or by making the virus more infectious, those mutations are called a virus variant or strain. So far main virus variants identified that make the SARS-CoV-2 virus more infectious have been found

in the U.K., South Africa, Brazil, California and New York. The vaccines have varying degrees of efficacy against these variants. However, they are expected to prevent severe illness and death for all currently identified variants.

Q If I get vaccinated now, will I have to get a booster shot at some point in the future or will vaccines be needed annually as with the flu vaccine?

A: At this point in time we do not know the answer to these questions.

Q Who decides who is in which vaccine priority group?

A: The CDC makes recommendations, but it is up to each state to decide how to prioritize groups for vaccination and when to add additional groups.

Q What is an FDA EUA?

A: The U.S. Food and Drug Administration (FDA) can approve medical products, including medications and vaccines, for emergency use under certain circumstances using the Emergency Use Authorization (EUA) process. EUA allows products to be provided to the public without going through the regular slow, bureaucratic approval process. The COVID-19 vaccines

currently in use in the U.S. have been approved through the EUA process. Future COVID-19 vaccines are also likely to be reviewed under the EUA process. The EUA process still requires Phase 1-3 safety trials and still reviews all data gathered from those trials related to efficacy and safety.

Q Has the faster than normal EUA approval process had an effect on safety?

A: The unfortunate use of the term “Operation Warp Speed” has left many concerned that safety measures have taken a back seat to speedy vaccine delivery. However, there are several reasons why the new COVID-19 vaccines have been able to be tested and produced more quickly than past vaccines without compromising safety:

- The SARS-CoV-2 virus genome was mapped very quickly (January, 2020) and that information was shared with the worldwide scientific community immediately. That allowed vaccine developers using genetic information to design vaccines to quickly create vaccines that “mimic” parts of the SARS-COV-2 virus, thus eliciting a strong immune response.
- COVID vaccines are made using newer technology that is quicker to produce than older, egg-based vaccines. Instead of taking months to grow vaccine, these doses

can be produced in weeks.

- Large numbers of vaccine trial volunteers (Phase III trials in the U.S. have included, at a minimum, 30,000 volunteers) has meant that trials have been able to gather data quickly. Many trials take years to complete. In the case of COVID-19, extremely large vaccine trials have been able to be completed in months.
- COVID-19 is so prevalent that enough people in the Phase III trials have been exposed to the virus to quickly determine the efficacy of the vaccine being tested (comparing the number of volunteers who got infected who were in the control group that received a placebo vs. the number of volunteers who received the vaccine).

Q Are those who have been vaccinated being followed to determine if there are any long-term adverse effects, to know how long the immune response lasts, and to determine if current vaccines are effective against future virus mutations?

A: Yes. There is actually a trial Phase IV which follows those who have been vaccinated to gather additional information. Phase IV is expected to last 2 or more years.

Q Do I still need to wear a mask and follow other safety protocols once I’ve been vaccinated?

A: Yes. Depending on the efficacy of the vaccine you receive, you may still get COVID-19 (although you are less likely to become severely ill). Also, trials did not study if becoming vaccinated means you cannot transmit the disease to others. It is possible you may be immune but still carry the virus in your nasal cavity. This is currently being studied.

Q Can my employer cut down on safety protocols once staff have been vaccinated?

A: NO! Vaccination is one tool in your toolbox to protect you from illness. It is important that employers continue to have in place, whenever you may come in contact with a patient who is COVID-positive, a PUI for COVID or whose COVID status is unknown:

- Appropriate PPE:
 - fit-tested N95, elastomeric respirator or PAPR
 - fluid resistant or impermeable gown or coveralls
 - gloves
 - goggles or face shield
 - booties and head covering during aerosol-generating procedures
- Adequate ventilation
- Negative air pressure for COVID-positive patients & PUIs to prevent the airborne

- spread of the virus
- Patient cohorting
- Visitor limitation
- Masking of all patients & visitors
- Patient testing
- Timely contact tracing & notification of exposure
- Safe areas for eating and drinking

Q Can I be mandated to get the COVID vaccine?

A: There are a few employers that are currently mandating that their employees get the COVID vaccine. It is not settled whether employers currently have the right to mandate this vaccine. However, there is legal precedent for employers requiring certain vaccines as a requirement of employment. Although employers may have the right to mandate vaccination, it is considered a term and condition of employment, the effects of which must be bargained with the union. If you learn that your employer is

planning to mandate the COVID vaccine, please contact your union rep immediately.

Q I am a COVID vaccinator. What do I need to know about vaccine administration and my own safety?

A: All vaccinators should be trained on proper handling and administration of the vaccine they are administering.

Specific information on administration of the Pfizer vaccine can be found at: bit.ly/COVID-19PfizerVaccine

Specific information on administration of the Moderna vaccine can be found at: bit.ly/ModernaCOVID-19Vaccineinfo

Specific information on administration of the Johnson & Johnson vaccine can be found at: <https://www.fda.gov/media/146304/download>

All bloodborne pathogen protections must be in place (<http://bit.ly/Bloodbornepathogensinfo>) including:

- An Exposure Control Plan
- Engineered sharps
- No sharps recapping
- Closely located sharps containers for immediate disposal of used syringes; containers should be secured to the table to prevent spillage
- PPE including masks or respirators, gloves, gowns, goggles or face shield (disposable PPE should be disposed of and replaced after breaks or when it becomes contaminated or wet)
- Post-exposure care and medical follow up for anyone who experiences a needlestick injury

More information on COVID vaccines can be found at:

National Institute of Environmental
Health Sciences (NIEHS)

<http://bit.ly/NIEHS-covid>

Johns Hopkins Medicine

<http://bit.ly/JohnHopkinsMedicineCovid>

Mayo Clinic

<http://bit.ly/COVIDVaccinesFacts>

American Association of Critical Care Nurses (AACN)

<http://bit.ly/AACNCovid>

Emergency Nurses Association (ENA)

<http://bit.ly/ENACovidVaccine>

American College of Nurse Midwives, Association of
Women's Health, Obstetrics and Neonatal Nurses,
Nurse Practitioners in Women's Health, Society for
Maternal-Fetal Medicine

<http://bit.ly/CovidVaccineAdvice>

American Medical Association (AMA)

<http://bit.ly/AMACovidVaccine>

<http://bit.ly/CovidVaccineQuestions>

U.S. Centers for Disease Control (CDC)

<http://bit.ly/CDCVaccineCovid>

New York State Department of Health

<http://bit.ly/NYSDOECovidVaccine>

New York City Department of Health & Mental Hygiene

<http://bit.ly/CovidVaccineInfo>

Pfizer

<http://bit.ly/FactsAboutVaccinesPfizer>

<http://bit.ly/CovidVaccineResearch>

Moderna

<http://bit.ly/ModernaVaccineInfo>

<http://bit.ly/ModernaCOVID-19Vaccine>

Johnson & Johnson

<https://www.jnj.com>

NYSNA members can send an email with questions about COVID-19 protections in the workplace, COVID vaccines, and any other occupational health and safety issues to healthandsafety@nysna.net.

