

Frequently Asked Questions about the COVID-19 vaccines

Abbreviations

CDC – Centers for Disease Control

FDA – Food and Drug Administration

Resources:

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html>

<https://www.nejm.org/covid-vaccine/faq>

Why should I get vaccinated?

Getting vaccinated is one of many steps you can take to protect yourself and others from COVID-19. Protection from COVID-19 is extremely important because for some people, it can cause severe illness or death.

Stopping a pandemic requires using all the tools available. Vaccines work with your immune system so your body will be ready to fight the virus if you are exposed. Other steps, like masks and social distancing, help reduce your chance of being exposed to the virus or spreading it to others. Together, COVID-19 vaccination and following CDC's recommendations to protect yourself and others will offer the best protection from COVID-19.

<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>

Vaccine Safety

Are the COVID-19 vaccines safe?

The COVID-19 vaccines have been proven safe and effective by the CDC and FDA after reviewing results from clinical trials. The Pfizer-BioNTech, Moderna and Janssen (Johnson & Johnson) vaccines have all been authorized for use in the United States. These vaccines underwent large clinical trials with 30,000-50,000 people of diverse ages, genders, medical conditions, and racial and ethnic backgrounds. The risks from contracting the virus are greater than the possible risks from receiving the vaccine. Once a vaccine is authorized for use, there are vaccine safety monitoring systems in place to watch for symptoms to ensure that the benefits continue to outweigh the risks for people who receive vaccines. If you have a history of severe allergic reactions, please inform your vaccination provider before receiving the vaccine.

Are there side effects?

Common side effects include fever, fatigue, chills, body aches, headache, and nausea. These side effects may occur in the first few days after vaccination and typically resolve within 48 hours. These are signs that the vaccine is working, and that your immune system is building up protection against the SARS-CoV-2 virus that causes COVID-19. Some people may experience local side effects, such as soreness, redness, or swelling in the arm where they were vaccinated, or develop sore lymph nodes under the arm. These symptoms are usually mild and go away on their own.

Can the COVID-19 vaccines cause COVID-19?

No, the Pfizer-BioNTech, Moderna, and Janssen vaccines do not contain live SARS-CoV-2 virus that could make someone sick with COVID-19. It is important to understand how the different COVID-19 vaccines work. The goal is to prepare the immune system to recognize parts of the virus once it enters the body. The SARS-CoV-2 virus is made up of 29 proteins and the virus uses what is called the "spike" protein to enter the body. The spike protein is the prickly projection on the surface of the SARS-CoV-2 virus and the part of the virus that our immune system recognizes

as “foreign”. Currently, there are two different types of vaccines approved that help the immune system recognize the virus spike protein. The Pfizer-BioNTech and Moderna vaccines use what’s called messenger RNA (mRNA), which provides a code for your own body to create a protein similar to the spike protein which prompts an immune response in the body. Unlike the mRNA vaccines, the Janssen vaccine is a viral vector vaccine that uses an adenovirus, which is a type of virus that causes the common cold but has been changed so it is unable to cause disease. The adenovirus (viral vector) is used to help educate the immune system to recognize the spike protein by carrying a gene from the virus into human cells, which then creates the spike protein. Since only the spike protein is being used to help the immune system recognize the virus once it enters the body, it is impossible for these vaccines to cause COVID-19 disease.

If I receive a COVID-19 vaccine should I avoid contact with someone who is pregnant or immunocompromised?

The Pfizer-BioNTech, Moderna, and Janssen vaccines do not contain live SARS-CoV-2 virus that could make someone sick with COVID-19. There are no restrictions on contact with vulnerable populations after vaccination, including pregnant women or immunocompromised individuals.

What are the potential long-term adverse effects of the vaccine?

Since the vaccine has only been studied for about 1 year, we can only comment on the effects of the vaccine months after vaccination. So far, no long-term adverse effects have been identified. Most importantly, the vaccines appear to induce a strong protective immune effect – even stronger than in people who had natural COVID-19 disease. The mRNA component of the Pfizer-BioNTech and Moderna vaccines and the DNA component in the Janssen vaccine degrade within weeks of vaccination after they have started or boosted the immune response. No part of the vaccine is left behind in the body.

Allergies and Vaccine

Can the COVID-19 vaccines cause allergic reactions?

Severe allergic reactions, e.g. anaphylaxis, occur rarely after vaccination. The CDC has reported that since December 2020, 5.0 cases of anaphylaxis per million doses of the Pfizer-BioNTech COVID-19 vaccine and 2.5 cases of anaphylaxis per million doses of the Moderna COVID-19 vaccine have occurred. All of those who reported an allergic reaction were treated and recovered. Most allergic reactions occurred within 15 minutes of vaccination. The CDC guidelines say that all people receiving vaccines should be monitored for at least 15 minutes after vaccination and that all vaccine sites should be prepared to treat allergic reactions.

Who should not get a COVID-19 vaccine?

You should not receive a vaccine if you are allergic to an ingredient or related ingredient in the vaccine. See below for ingredients. For the COVID-19 vaccines this includes an allergy to polyethylene glycol (i.e. PEG, which is found in some medications such as laxatives and preparations for colonoscopy procedures) or polysorbate. See below for ingredients. The vaccines do not contain: egg, latex, or preservatives.

It is recommended that people with possible allergies to vaccine ingredients consult an allergist first. If you had a reaction to a previous dose of a COVID-19 vaccine, you should not receive a second dose, and it is recommended that you consult an allergist. If you have a history of an allergic reaction to another vaccine or injectable medication, please inform your vaccination provider before receiving the vaccine. They will likely recommend that you be monitored for 30 minutes instead of the standard 15 minutes after receiving the vaccine.

Ingredients included in mRNA COVID-19 vaccines

	Pfizer-BioNTech	Moderna	Janssen
Vaccine platform	mRNA	mRNA	Adenoviral vector (nonreplicating)
Main vaccine component	Nucleoside-modified mRNA encoding the viral spike glycoprotein of SARS-CoV-2 (30 µg)	Nucleoside-modified mRNA encoding the viral spike glycoprotein of SARS-CoV-2 (100 µg)	DNA-modified adenovirus vector encoding the viral spike glycoprotein of SARS-CoV-2 (5×10 ¹⁰ virus particles)
Inactive Ingredients			
Lipids	2 [(polyethylene glycol)-2000]-N,N-ditetradecylacetamide	polyethylene glycol [PEG] 2000 dimyristoyl glycerol [DMG]	polysorbate-80
	1,2-distearoyl-sn-glycero-3-phosphocholine	1,2-distearoyl-sn-glycero-3-phosphocholine	
	cholesterol	cholesterol	
	(4-hydroxybutyl)azanediyl) bis(hexane-6,1-diyl)bis(2-hexyldecanoate)	SM-102: heptadecan-9-yl 8-((2-hydroxyethyl)(6-oxo-6-(undecyloxy)hexyl)amino) octanoate	
Salts, sugars, buffers	potassium chloride	tromethamine	citric acid monohydrate
	monobasic potassium phosphate	tromethamine hydrochloride	trisodium citrate dihydrate
	sodium chloride	acetic acid	sodium chloride
	dibasic sodium phosphate dihydrate	sodium acetate	2-hydroxypropyl-β-cyclodextrin (HBCD)
	sucrose	sucrose	ethanol

What steps can be taken to ensure vaccine safety?

Sites that administer the COVID-19 vaccines should follow CDC guidelines, including screening for contraindications and precautions, observing those that receive vaccines for the recommended time, and having the necessary supplies available to treat allergic reactions immediately. The San Diego COVID-19 county vaccination sites are following these guidelines. In addition, pharmacists have been routinely trained to administer vaccinations to patients since the mid-1990s and they also follow CDC guidelines.

I have a food allergy. Should I receive a COVID-19 vaccine?

Food allergy is not a contraindication to receiving the COVID-19 vaccines. The Pfizer-BioNTech, Moderna, or Janssen COVID-19 vaccines do not contain food allergens, such as egg or gelatin. It is recommended by the CDC that people who have a history of anaphylaxis to any cause unrelated to the COVID-19 vaccine or its ingredients be monitored for 30 minutes after receiving a COVID-19 vaccine.

I have a penicillin allergy. Should I receive a COVID-19 vaccine?

Penicillin allergy is not a contraindication to receiving the COVID-19 vaccines. The Pfizer-BioNTech, Moderna, and Janssen COVID-19 vaccines do not contain penicillin or medications related to penicillin. It is recommended by the CDC that people who have a history of anaphylaxis to any cause unrelated to the COVID-19 vaccine or its ingredients be monitored for 30 minutes after receiving a COVID-19 vaccine.

I have a latex allergy. Should I receive a COVID-19 vaccine?

Latex allergy is not a contraindication to receiving the currently available COVID-19 vaccines. The Pfizer-BioNTech, Moderna, and Janssen COVID-19 vaccines do not contain and are not stored in packaging that contains latex. It is recommended by the CDC that people who have a history of anaphylaxis to any cause unrelated to the COVID-19 vaccine or its ingredients be monitored for 30 minutes after receiving a COVID-19 vaccine.

I have had dermal fillers. Should I receive a COVID-19 vaccine?

Per the CDC: Infrequently, people who have received dermal fillers might experience swelling at or near the site of filler injection (usually face or lips) following administration of a dose of an mRNA COVID-19 vaccine (no similar occurrences were observed in the Janssen COVID-19 vaccine clinical trials). The swelling appears to be temporary and resolves with medical treatment, including corticosteroid therapy. The reason for this uncommon reaction is not clear. COVID-19 vaccines can be administered to people who have received injectable dermal fillers who have no contraindications or precautions for vaccination. However, these people should be advised to contact their healthcare provider for evaluation if they experience swelling at or near a dermal filler site following vaccination.

About the COVID-19 Vaccines

How effective are the vaccines?

In clinical trials, the Pfizer-BioNTech and Moderna mRNA vaccines lowered the chance of getting sick with COVID-19 by about 95% after the second dose as compared to a placebo injection. This is pretty impressive! The threshold the FDA set before COVID-19 vaccine development started was 50% effectiveness. Clinical trials for these vaccines were done before existence of the SARS-CoV2 variants. A recent study has shown that the Pfizer-BioNTech mRNA vaccine is protective against the UK variant.

Overall, in the clinical trials in the US, the Janssen vaccine was 72% effective in preventing moderate to severe COVID-19 disease, 85% effective in preventing severe disease, and 100% effective in preventing hospitalization and death 28 days after vaccination as compared to a placebo injection. Results varied by country in which the clinical trials were conducted – the US, Brazil, and South Africa - possibly due to variants of the SARS-CoV-2 virus in some regions. The good news is that the Janssen vaccine was 89% protective against severe disease caused by the South African variant.

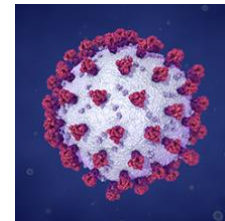
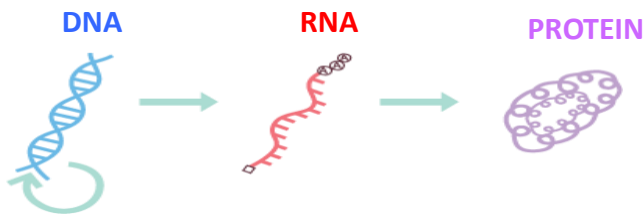
How did they get the vaccine made so quickly?

There are many reasons why the COVID-19 vaccines were made so quickly, and they center around previous research and financial support.

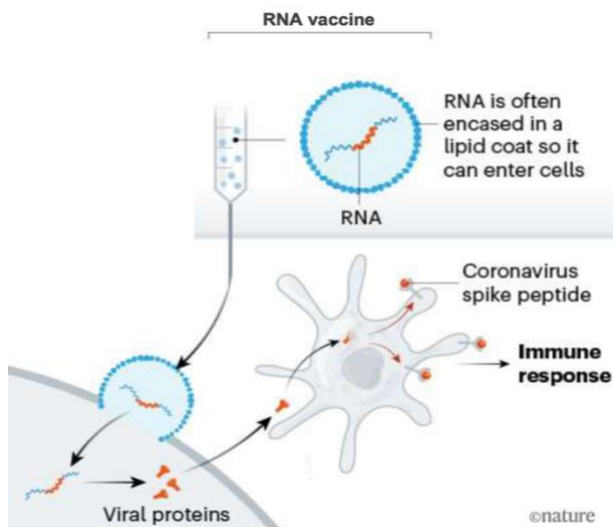
1. After Ebola, SARS, and MERS, scientists were ready with vaccine technology for the next virus outbreak.
2. The genetic information about the SARS-CoV2 virus was quickly shared worldwide so many scientists could work on vaccines at the same time.
3. There were plenty of resources and investments from governments. The US government, for example, invested \$9 billion upfront for vaccine development.
4. Scientists conducted overlapping steps to gather data faster.
5. Because COVID-19 is so contagious and widespread, it did not take long to see if the vaccines worked.
6. Companies made supplies of the vaccines early so they were ready to be shipped as soon as they were approved.

How do the Pfizer-BioNTech and Moderna vaccines work?

The Pfizer-BioNTech and Moderna vaccines are mRNA vaccines. Vaccines work to prepare the immune system to recognize parts of the virus once it enters the body. The SARS-CoV-2 virus that causes COVID-19 is made up of 29 proteins and the virus uses what is called the “spike” protein to enter the body. The spike protein is the prickly projection on the surface of the SARS-CoV-2 virus and the part of the virus that our immune system recognizes as “foreign”. The Pfizer-BioNTech and Moderna vaccines use what’s called messenger RNA (mRNA), which provides a code for your own body to create a protein similar to the spike protein which prompts an immune response in the body.



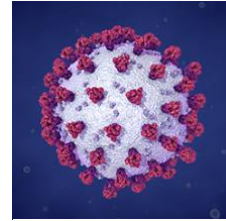
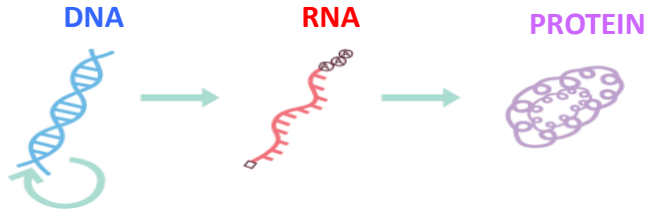
SARS-CoV-2 virus
Source: NEJM



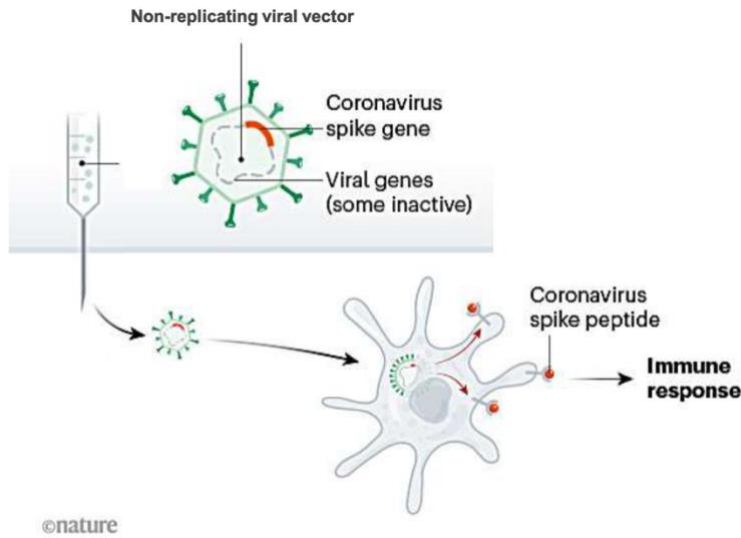
Once the vaccine is injected, the mRNA is taken up by immune cells near the injection site and it instructs those cells to make the spike protein. The spike protein then appears on the surface of the immune cells and triggers our immune system to respond by making T cells and antibodies that protect us in the same way our bodies fight off infections and protect us from natural infection. Enzymes in the body then breakdown and get rid of the mRNA. No live SARS-CoV-2 virus is involved, and no genetic material enters the nucleus of the cell, which is where our DNA is kept.

How does the Janssen (Johnson & Johnson) vaccine work?

The Janssen vaccine is a viral vector vaccine. Vaccines work to prepare the immune system to recognize parts of the virus once it enters the body. The SARS-CoV-2 virus is made up of 29 proteins and the virus uses what is called the “spike” protein to enter the body. The spike protein is the prickly projection on the surface of the SARS-CoV-2 virus and the part of the virus that our immune system recognizes as “foreign”. Unlike the mRNA vaccines, the Janssen vaccine uses an adenovirus, which is a type of virus that causes the common cold but has been changed so that it is unable to cause disease. The adenovirus (viral vector) is used to help educate the immune system to recognize the spike protein by carrying a gene from the virus into human cells, which then creates the spike protein.



SARS-CoV-2 virus
Source: NEJM



Once the vaccine is injected and the viral vector is inside cells near the injection site, it uses the cell's machinery to make spike proteins. Spike proteins then appear on the surface of the cells and triggers our immune system to respond by making T cells and antibodies that protect us in the same way our bodies fight off infections and protect us from natural infection. Enzymes in the body then breakdown and get rid of the cells that contain the viral vector. No live SARS-CoV-2 virus is involved, and the viral vector cannot replicate itself so it cannot cause infection.

What are the differences between the COVID-19 vaccines?

The vaccines differ in how they work, their reported efficacy from clinical trials, what age you have to be to receive one, how many doses are recommended, and how long after the first dose you should receive the second dose. The Pfizer-BioNTech and Moderna are very similar. Some people have equated the differences to getting the same soda in a can versus a bottle, where the packing might be different but not the contents.

COVID-19 vaccine	Age	Dose schedule	Efficacy	Technology
Pfizer-BioNTech	≥ 16 years	2 doses, 21 days apart	95% after 2 nd dose	mRNA
Moderna	≥ 18 years	2 doses, 28 days apart	94.1% after 2 nd dose	mRNA
Janssen	≥ 18 years	1 dose	72% moderate-severe disease; 85% severe disease; 100% hospitalization and death after 28 days	Adenoviral vector

Other Health Conditions and Vaccine

I am immunocompromised. Should I get a COVID-19 vaccine?

Vaccination with the currently available, inactivated COVID-19 vaccines is recommended for immunocompromised individuals. There is limited data from the clinical trials on those with weakened immune systems who received the vaccine, however people with immunodeficiencies, including HIV, or who take immunosuppressive medications or therapies, including chemotherapy and bone marrow transplant, may be at increased risk for severe COVID-19. It is important to know that the Pfizer-BioNTech, Moderna, and Janssen vaccines do not contain live SARS-CoV-2 virus that could make someone sick with COVID-19. People who are immunocompromised should be aware that they may have a reduced immune response to the vaccines and should continue to follow current guidelines to protect themselves against COVID-19. It is not clear if the efficacy of the COVID-19 vaccines would be the same as in someone who is not immunocompromised, however partial immunity is better than none. You can weigh the risks and benefits with your doctor.

Per the CDC: For people receiving antibody therapies not specific to COVID-19 treatment (e.g., intravenous immunoglobulin), administration of COVID-19 vaccines either simultaneously with or at any interval before or after receipt of an antibody-containing product is unlikely to substantially impair development of a protective antibody response. Thus, there is no recommended minimum interval between antibody therapies not specific to COVID-19 treatment and COVID-19 vaccination.

<https://primaryimmune.org/video/covid-19-video-update-vaccines>

<https://primaryimmune.org/news/covid-19-update-vaccines-treatment-options>

I have an autoimmune or inflammatory condition. Should I get the COVID-19 vaccine?

Individuals with an autoimmune or inflammatory condition may receive the COVID-19 vaccines. There is limited data from the clinical trials on those with such conditions who received the vaccine. The American College of Rheumatology (ACR) noted that it appears patients with autoimmune and inflammatory conditions are at higher risk for developing hospitalized COVID-19 and have worse outcomes associated with infection compared to the general population. The ACR concluded, "Based on this concern, the benefit of COVID-19 vaccination outweighs any small, possible risks for new autoimmune reactions or disease flare after vaccination." People on immunomodulatory medications for their condition should be aware that they may have a reduced immune response to the vaccine and should continue to follow current guidelines to protect themselves against COVID-19. If you are on immunomodulatory medications for your condition, it is recommended that you discuss timing of your medication and vaccination. Even if your medication schedule cannot be altered, proceeding with vaccination is still an option as partial immunity is better than none.

Per the CDC: For people receiving antibody therapies not specific to COVID-19 treatment (e.g., intravenous immunoglobulin), administration of COVID-19 vaccines either simultaneously with or at any interval before or after receipt of an antibody-containing product is unlikely to substantially impair development of a protective antibody response. Thus, there is no recommended minimum interval between antibody therapies not specific to COVID-19 treatment and COVID-19 vaccination.

<https://www.rheumatology.org/About-Us/Newsroom/Press-Releases/ID/1138>

Should I get a COVID-19 vaccine if I'm pregnant?

The CDC, the American College of Obstetricians and Gynecologists, and the Society for Maternal-Fetal Medicine agree that pregnant women should be offered the vaccine and may choose to get vaccinated. There is limited data from the clinical trials on pregnant women who received the vaccine, however, new trials are focusing on COVID-19 vaccination and pregnant women. So far safety data from >30,000 pregnant women who have received an mRNA COVID-19 vaccine have not shown any patterns of safety concerns for pregnant women, the pregnancy itself, or the fetus. You can weigh the risks and benefits with your doctor.

It has been shown that pregnant women are at higher risk for severe COVID-19 disease, including a 3-fold increased risk for intensive care unit admission, a 2.4 -fold increased risk for needing advanced life support, and a 1.7-fold increased risk of death from COVID-19. COVID-19 might also be associated with premature birth. It is important to know that the Pfizer-BioNTech, Moderna, and Janssen vaccines do not contain SARS-CoV-2 virus. The mRNA vaccines rapidly degrade over days and do not enter the cell nucleus where DNA resides. The adenoviral vector platform (Janssen) has been used in other clinical vaccines, including Ebola, HIV, and RSV vaccine studies, with no adverse pregnancy outcomes. The DNA for the SARS-CoV-2 spike protein that is carried by the adenoviral vector does not integrate with the body's DNA and the vector cannot replicate itself. Enzymes in the body breakdown and get rid of the cells "infected" with the viral vector and spike protein DNA inside.

Antibodies that the pregnant woman develops from COVID-19 vaccination can cross the placenta to the fetus and may help protect the baby from COVID-19 after birth. The theoretical risk of fetal harm from the vaccines is very low.

A pregnancy test prior to vaccination is not recommended and should not be required. Unfounded claims linking COVID-19 vaccines to infertility have been scientifically disproven. Vaccination is recommended for all eligible people who may consider future pregnancy. Available data do not indicate the need to delay attempting pregnancy following vaccination. If a person decides to receive the vaccine, there are no trimester-specific vaccine considerations at this time.

Per the CDC: For people receiving antibody therapies not specific to COVID-19 treatment (e.g., intravenous immunoglobulin, RhoGAM), administration of COVID-19 vaccines either simultaneously with or at any interval before or after receipt of an antibody-containing product is unlikely to substantially impair development of a protective antibody response. Thus, there is no recommended minimum interval between antibody therapies not specific to COVID-19 treatment and COVID-19 vaccination.

<https://www.acog.org/clinical/clinical-guidance/practice-advisory/articles/2020/12/vaccinating-pregnant-and-lactating-patients-against-covid-19>

[https://s3.amazonaws.com/cdn.smfm.org/media/2838/Provider_Considerations_for_Engaging_in_COVID_Vaccination_Considerations_3-3-21_\(final\).pdf](https://s3.amazonaws.com/cdn.smfm.org/media/2838/Provider_Considerations_for_Engaging_in_COVID_Vaccination_Considerations_3-3-21_(final).pdf)

Should I get a COVID-19 vaccine if I'm breastfeeding?

Vaccination is recommended for lactating women. There is limited data from the clinical trials on lactating women who received the vaccine. However, the theoretical risks regarding the safety of vaccinating lactating women do not outweigh the potential benefits of the vaccine. Because the vaccines do not contain live SARS-CoV-2 virus that could make someone sick with COVID-19, they are not thought to be a risk to the lactating mother or the breastfeeding infant.

I have a history of Guillain-Barre syndrome (GBS). Should I get a COVID-19 vaccine?

People who have previously had GBS may receive a COVID-19 vaccine. In the clinical trials, no cases of GBS were reported following Pfizer-BioNTech or Moderna vaccination. In the Janssen clinical trial, one (1) case of GBS was reported following vaccination compared to one (1) case of GBS in a participant who received a placebo injection. With few exceptions, a history of GBS is not considered a precaution to vaccinations with other vaccines. You can weigh the risks and benefits with your doctor.

<https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html>

I have a history of Bell's palsy. Should I get a COVID-19 vaccine?

People who have previously had Bell's palsy may receive a COVID-19 vaccine. Cases of Bell's palsy were reported following vaccination in the COVID-19 vaccine clinical trials; however, they did not occur at an increased rate compared to the general population. Therefore, the FDA concluded that the cases were not caused by vaccination.

I have a history of idiopathic thrombocytopenia purpura (ITP). Should I get a COVID-19 vaccine?

The American Society of Hematology notes that even though vaccination in general can occasionally result in a drop in platelets in otherwise stable ITP patients, the benefits of receiving a COVID-19 vaccine outweigh this concern. "A case of new onset severe acute ITP, complicated by a fatal intracranial hemorrhage, was diagnosed three days following vaccination with the Pfizer[-BioNTech] COVID[-19] vaccine was recently made public. Best available knowledge from all phases of the vaccine clinical trials and individuals vaccinated to date suggests that post-COVID vaccine ITP is either extremely rare or unrelated coincidental event. ITP onset or worsening has been reported with some frequency following viral infections and anecdotally following other vaccines. Based on current knowledge, the risks associated with COVID-19 disease appear to outweigh risks associated with SARS-CoV-2 vaccination in ITP patients. It may be appropriate to obtain baseline and post vaccination platelet counts in certain ITP patients, particularly in those with ongoing thrombocytopenia or a history of unstable platelet counts."

Per the CDC: For people receiving antibody therapies not specific to COVID-19 treatment (e.g., intravenous immunoglobulin), administration of COVID-19 vaccines either simultaneously with or at any interval before or after receipt of an antibody-containing product is unlikely to substantially impair development of a protective antibody response. Thus, there is no recommended minimum interval between antibody therapies not specific to COVID-19 treatment and COVID-19 vaccination.

<https://www.hematology.org/covid-19/covid-19-and-itp>

COVID-19 Illness and Vaccine

I had COVID-19. Should I get a COVID-19 vaccine?

Yes, you should be vaccinated. We don't know yet how long natural immunity from being sick with COVID-19 may last and it may depend on how robust your immune system was to begin with. Some studies have reported that the duration of natural immunity may depend on how severe the COVID-19 illness was. This suggests that if you had mild COVID-19 symptoms your immunity may not last as long. We also don't know yet how well natural immunity protects you from becoming re-infected or infected with SARS-CoV-2 virus variants. Therefore, getting vaccinated may help protect you from subsequent COVID-19 illness and those around you.

Data from the clinical trials showed that the COVID-19 vaccines can be given safely to people who have evidence of prior COVID-19 illness (indicated by positive antibodies). The CDC

recommends that people should be offered vaccination regardless of history of prior symptomatic or asymptomatic COVID-19 infection. Testing to assess for COVID-19 infection or presence of antibodies is not recommended for deciding whether or not to get a vaccine.

I currently have or had COVID-19. When should I get a COVID-19 vaccine?

If you are known to be currently sick with COVID-19 then vaccination should be postponed until you no longer have symptoms and meet the criteria to stop isolating. This applies if you become sick prior to the first or second COVID-19 vaccine dose. There is currently no recommended minimum time you need to wait after COVID-19 infection to receive a COVID-19 vaccine. Current evidence shows that the risk of getting COVID-19 is low within the first months after initial infection. This may change with the spread of SARS-CoV-2 virus variants.

I was treated with monoclonal antibodies or convalescent plasma for COVID-19. When should I get a COVID-19 vaccine?

It is recommended that patients were treated with monoclonal antibodies or convalescent plasma for COVID-19 illness should wait 90 days prior to getting vaccinated. These treatments might inactivate the vaccines, making them less effective. This applies if you are received such treatments prior to the first or second COVID-19 vaccine dose. You do not need to repeat a vaccine dose if you receive monoclonal antibodies or convalescent plasma for COVID-19 illness within 90 days after vaccination.

Per the CDC: For people receiving antibody therapies not specific to COVID-19 treatment (e.g., intravenous immunoglobulin, RhoGAM), administration of COVID-19 vaccines either simultaneously with or at any interval before or after receipt of an antibody-containing product is unlikely to substantially impair development of a protective antibody response. Thus, there is no recommended minimum interval between antibody therapies not specific to COVID-19 treatment and COVID-19 vaccination.

I had COVID-19. Do I need both doses of the mRNA COVID-19 vaccines?

Recent studies have reported that people with prior COVID-19 who received a mRNA vaccine had more pronounced antibody responses to their first dose compared to those who didn't have evidence of prior infection. Some people with prior COVID-19 who received an mRNA vaccine have reported more side effects with the first dose comparable to second dose side effects reported by those who have not had COVID-19. This suggests that people with prior COVID-19 have some immunity that is then boosted by the first dose of the vaccine. Although this may imply a second dose is not needed for people with prior COVID-19, there are still many unknowns, such as how long this boost will last without a second vaccine dose and how do we know if someone has enough antibody to be considered protected. For now, a second mRNA vaccine dose to complete the series is still recommended even if you've had prior COVID-19.

Other COVID-19 Vaccine Questions

How long does it take for the vaccines to work?

It typically takes 12-14 days to develop some immunity from the vaccine. Your body produces T cell and B cells and starts to make antibodies against the SARS-CoV-2 spike protein. Efficacy for preventing COVID-19 illness of the Pfizer-BioNTech vaccine was 95% one week after the second dose. Estimated efficacy between the 1st and 2nd dose was 53%. Efficacy for preventing COVID-19 illness of the Moderna vaccine was 94% two weeks after the second dose. Estimated efficacy between the 1st and 2nd dose was 70%. Efficacy of the Janssen vaccine was 72% for preventing moderate to severe COVID-19 disease, 85% for preventing severe disease, and 100% effective for preventing hospitalization and death 28 days after vaccination.

How long can I wait between the first and second doses of the mRNA COVID-19 vaccines?

Per CDC: The second dose of mRNA vaccines should be administered as close to the recommended interval as possible, but not earlier than recommended (i.e., 3 weeks for Pfizer-BioNTech or 4 weeks for Moderna). Second doses administered within a grace period of 4 days earlier than the recommended date for the second dose are still considered valid. If it is not feasible to get the second dose within the recommended interval and a delay in vaccination is unavoidable, the second dose of mRNA vaccines may be administered up to 6 weeks (42 days) after the first dose. Currently, only limited data are available on efficacy of mRNA COVID-19 vaccines administered beyond this window.

Can I just get one dose of an mRNA vaccine?

If you receive a Pfizer-BioNTech or Moderna mRNA vaccine then you should complete the series and receive the second dose when it is due. The efficacy for preventing COVID-19 illness of the mRNA vaccines in the clinical trials was ~95% after the second dose. More specifically, efficacy of the Pfizer-BioNTech vaccine was 95% one week after the second dose, with an estimated efficacy of 53% between the 1st and 2nd doses. Efficacy of the Moderna vaccine was 94% two weeks after the second dose, with an estimated efficacy of 70% between the 1st and 2nd doses.

If I received one brand of mRNA vaccine for my first dose, can I receive another brand of mRNA vaccine for my second dose?

The mRNA COVID-19 vaccines are not interchangeable. The safety and efficacy of mixed-brand vaccination have not been evaluated. Both doses of the series should be completed with the same brand.

Can I choose which COVID-19 vaccine I get when I'm eligible for vaccination?

Unless you are known to be allergic to a specific ingredient in one of the vaccines, public health experts emphasize that you should take the first vaccine offered to you. The most important thing that all of the vaccines do is to prevent you from getting so sick that you would need to be hospitalized or die from a COVID-19 infection.

Does receiving a COVID-19 vaccine affect testing for possible COVID-19 infection?

The COVID-19 vaccines do not affect results or cause a “false positive” of the PCR or antigen testing for the disease done by nasal swab. In response to vaccination, the body makes antibodies to the SARS-CoV-2 spike protein. Some available testing can detect this antibody in the blood but it would not be able to distinguish if it was present due to vaccination or infection. If you have been vaccinated and needed to be evaluated for active or recent COVID-19 infection using antibody testing, testing for antibodies to the nucleocapsid protein of the SARS-CoV-2 virus could be done. The COVID-19 vaccines do not cause antibodies to be made to the nucleocapsid protein.

Can the COVID-19 vaccines cause me to have an abnormal mammogram?

Axillary lymphadenopathy (enlarged lymph nodes in the armpit) has been noted in some patients after receiving COVID-19 vaccination which can appear as an abnormality on a mammogram. For non-urgent mammograms, it is recommended that you have the mammogram either before you are vaccinated or to wait until 4-6 weeks after the second dose of vaccination.

Do I still need to wear a mask after getting vaccinated against COVID-19?

Per the CDC: Yes. To protect yourself and others, follow these recommendations:

- Wear a mask over your nose and mouth
- Stay at least 6 feet away from others
- Avoid crowds

- Avoid poorly ventilated spaces
- Wash your hands often

It's important for everyone to continue using all the tools available to help stop this pandemic as we learn more about how COVID-19 vaccines work in real-world conditions. Experts are also looking at how many people get vaccinated and how the virus is spreading in communities. We also don't yet know whether getting a COVID-19 vaccine will prevent you from spreading the virus that causes COVID-19 to other people, even if you don't get sick yourself

What can I do and what things should I continue to do now that I am fully vaccinated against COVID-19?

Please see the CDC's Interim Public Health Recommendations for Fully Vaccinated People:
<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html>