COVID-19 Vaccines and People with HIV

Frequently Asked Questions

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The HIV Medicine Association and Infectious Diseases Society of America developed this document to respond to questions from HIV clinicians, and as a resource for HIV clinicians to respond to patient questions regarding the Pfizer-BioNTech COVID-19 vaccine approved for use in the U.S. by the Food and Drug Administration and the Moderna and Johnson and Johnson/Janssen COVID-19 vaccines authorized for use in the U.S. The two mRNA vaccines are referred to by the manufacturer’s names – Moderna and Pfizer-BioNTech, and the Johnson and Johnson/Janssen adenoviral-vector vaccine is referred to as J&J/Janssen. Unless otherwise specified, the information provided is applicable to all three vaccines. This resource does not cover COVID-19 vaccines that have not been authorized for use in the U.S. The World Health Organization is a resource for information on other COVID-19 vaccines.

Except when otherwise referenced, the information provided is based on the IDSA COVID-19 Real-Time Learning Network’s Vaccine Information and FAQs and the following Centers for Disease Control and Prevention resources: Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Authorized in the United States, Facts About COVID-19 Vaccines, Frequently Asked Questions About COVID-19 Vaccination, COVID-19 ACIP Vaccine Recommendations, Interim Public Health Recommendations for Fully Vaccinated People, and Vaccine Considerations for People with Underlying Medical Conditions. Please email us with questions not covered.

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SAFETY

Are the COVID-19 vaccines safe for people with HIV?
- In clinical trials, COVID-19 vaccines were found to be safe and effective. Given these data and extensive experience following vaccine authorization, people with HIV should receive the COVID-19 vaccine. There are no data to suggest that the vaccines are not safe and effective for people with HIV.
- There have been no links between HIV or other types of immunosuppression with any of the rare serious adverse events for the COVID-19 vaccines. Data compiled by the WHO from 37 countries indicate that people with HIV are likely at increased risk for severe illness due to COVID-19. For that reason, it is important that people with HIV receive the COVID-19 vaccine.
- The CDC advises that people with HIV and other underlying conditions receive a COVID-19 vaccine as long as they do not have other conditions that would exclude them, such as a known severe allergic reaction or immediate allergic reaction of any severity after a previous dose or to a component of the COVID-19 vaccine. The vaccines authorized for use in the United States do not contain infectious virus, so they are safe in people with low CD4 cell counts.
- People with stable HIV have been included in the COVID-19 vaccine clinical trials, so information specific to people with HIV should become available in the future.

Is the Pfizer-BioNTech vaccine safe for children and adolescents with HIV?
- The CDC and the American Academy of Pediatrics recommend COVID-19 vaccination for children and adolescents 5 years and older in the U.S. There are no data or scientific rationale to suggest that the Pfizer-BioNTech vaccine is unsafe or would have a different safety profile for children and adolescents with HIV who are 5 years and older.
- The CDC recommends that persons who are immunocompromised age 5 and older receive their primary COVID-19 vaccine series as soon as possible.
- The Pfizer-BioNTech vaccine received full approval for individuals 16 and older and is authorized for vaccination for children and adolescents 5 years and older. It is the only vaccine currently authorized for children and adolescents in the U.S.

Are the Pfizer-BioNTech and Moderna (mRNA) vaccines safe?
- The safety monitoring data for the Pfizer-BioNTech and Moderna vaccines confirm that they are safe.
- Rare, serious allergic reactions have occurred with the Moderna and the Pfizer-BioNTech vaccines and this issue is being monitored by the CDC. The CDC also recommends that everyone who receives a COVID-19 vaccine is monitored onsite for at least 15 minutes, and for at least 30 minutes if they have had a reaction to a vaccine or other prior history of significant allergic reactions.

Is the J&J/Janssen (adenoviral-vector) COVID-19 vaccine safe?
- During clinical trials, the most common reactions in people who received the J&J/Janssen vaccine were pain at the injection site, headache, fatigue, muscle pain, nausea and fever. The side effects were more common in patients younger than 60 years of age. Overall, these rates were lower than those reported for both mRNA vaccines.
- The safety data available so far for the J&J/Janssen vaccine is similar to what was reported during clinical trials, and 97% of the events reported have not been serious events. Rare cases of serious blood clotting disorders and Guillain-Barré syndrome have been reported through CDC’s Vaccine Adverse Event Reporting System in individuals receiving the J&J/Janssen vaccine.
- The blood clotting disorders have occurred in less than two in 1 million individuals who have received the J&J/Janssen vaccine. CDC and FDA reviewed the data on the blood clotting cases and, after a temporary
pause, recommended that the use of the J&J/Janssen vaccine resume. FDA has added a warning to the authorization label for clotting events with low platelets, primarily occurring among women aged 18 to 49 years.

- There have been no reported cases of blood clotting events in people with HIV, and there’s no reason to believe people with HIV are at greater risk for blood clots based on their HIV status.
- CDC advises people who receive the J&J/Janssen vaccine to seek medical care right away if, within three weeks of getting vaccinated, they have a severe or persistent headache or blurred vision, shortness of breath, chest pain leg swelling, persistent abdominal pain or easy bruising.
- In July 2021, FDA added a warning for Guillain-Barré syndrome to the EUA for symptoms occurring within 42 days of vaccination with the Janssen/J&J vaccine. Common symptoms are weakness or tingling sensations in legs or arms; difficulty walking; difficulty with speaking, chewing or swallowing; double vision or inability to move eyes; and difficulty with bladder control or bowel function.

REPORTING SIDE EFFECTS OR ADVERSE EVENTS

How do I report side effects or adverse events?

- Side effects should be reported through the CDC’s vaccine adverse event reporting system (VAERS) either online or by calling 1-800-822-7967 for more information. CDC also has an app called v-safe that can be used to report side effects.
- If you are experiencing a medical emergency, contact your health care provider or call 911.

EFFICACY

Are the mRNA (Pfizer-BioNTech and Moderna) vaccines more efficacious than the adenoviral-vector (J&J/Janssen) vaccine? How does the single dose of the J&J/Janssen vaccine compare to two doses of Pfizer-BioNTech or Moderna in terms of efficacy?

- The estimates of vaccine efficacy for the Pfizer-BioNTech and Moderna and the J&J/Janssen vaccine cannot be compared directly. The clinical trials for these vaccines were conducted at different times during the pandemic and in different populations. In addition, the outcomes used to determine the efficacy was not the same in the studies. The J&J/Janssen study looked at moderate to severe illness due to COVID-19 at 14 and 28 days after vaccination. The Moderna study evaluated incidence of symptomatic COVID-19 at least 14 days after the second dose of the vaccine while the Pfizer/BioNTech study assessed incidence of symptomatic COVID-19 at least 7 days after the second dose. All of the vaccines available in the U.S. met and exceeded the criteria set for efficacy by the FDA for emergency use authorization.
- Data from a small study comparing the antibody responses to the Pfizer-BioNTech vaccine for people with HIV to people without HIV found a similar response in both groups suggesting that the mRNA vaccines are protective for people with HIV.

Do the vaccines protect against the Delta variant?

- The COVID-19 vaccines approved or authorized for use in the U.S. are highly effective at preventing serious illness from COVID-19, and all individuals with HIV should be encouraged to get vaccinated to protect their health and their family and friends. According to CDC, the Delta variant is more than twice as transmissible as other variants and is now the dominant variant in the U.S. COVID-19 infections in fully vaccinated individuals are uncommon. A small percentage of fully vaccinated individuals may become infected with the Delta variant and may be able to transmit the virus to others. The Moderna and Pfizer-BioNTech vaccines are strongly protective against serious illness and hospitalization from the Delta variant. Data on the effectiveness of the J&J/Janssen vaccine against the Delta variant are still being evaluated, but this vaccine protects against severe disease caused by other variants.
SUPPLEMENTAL AND BOOSTER DOSE OF VACCINE

Is a supplemental shot recommended for people with HIV?

- The recommendations for a supplemental shot for people with HIV vary according to their age, health status and the COVID-19 vaccine that they received. Please see the COVID-19 Real-Time Learning Network’s Vaccine Dosing and Scheduling section for more general information directed toward clinicians.
- Below is a summary of the latest recommendations based on the CDC recommendations and the FDA authorizations for the Pfizer-BioNTech, Moderna and J&J/Janssen COVID-19 vaccines for supplemental doses for individuals who are immunocompromised and/or booster doses for other populations at higher risk for serious illness due to COVID-19 or for exposure and transmission due to occupation or institutional setting.

Supplemental Doses for Individuals Who Are Immunocompromised

- A person (12 years and older) with advanced HIV (CD4 cell count <200, CD4% <14) or untreated HIV who received two doses of Pfizer vaccine previously should receive a third dose of Pfizer vaccine at least 28 days after their second dose.
- A person (18 years and older) with advanced HIV (CD4 cell count <200, CD4% <14) or untreated HIV who received two doses of Moderna vaccine previously should receive a third dose of Moderna vaccine at least 28 days after their second dose.
- Persons who are 18 and older who received the J&J/Janssen vaccine previously should receive a second vaccine dose at least two months after their first dose. Their second dose can be either J&J/Janssen or an mRNA vaccine; there is data to suggest that an mRNA dose following a J&J/Janssen dose provides superior immune responses.
- Persons should be evaluated based on their immune status at the time of vaccination in consideration of a supplemental dose. For example, persons who were not on antiretroviral therapy or had CD4 <200 during their primary series but no longer meet those definitions should still be considered at risk for suboptimal vaccine response and offered a supplemental dose.

Booster Doses

Pfizer-BioNTech or Moderna COVID-19 Vaccines

- People with HIV who are 18 or older and who received two doses of the Pfizer-BioNTech or the Moderna vaccine should receive a booster dose at least 6 months after their second dose.
- People with HIV 18 years and older who are moderately to severely immunocompromised and who received the Pfizer-BioNTech or Moderna primary vaccine series, including a third vaccine dose 28 days after their initial primary series, may receive a booster dose 6 months after their third dose.
- Booster doses do not need to be the same as the initial vaccination series. The CDC recommendations now allow for mixing or matching of the COVID-19 vaccine for booster shots.
- For the Moderna booster dose, the FDA authorized a lower dose (50 mcg) than the primary two-dose (100 mcg) Moderna series.

J&J/Janssen COVID-19 Vaccines

- A person with HIV who is 18 or older and who received the J&J/Janssen vaccine should receive a second vaccine dose at least two months after their first dose.
- Their second dose not need to be the J&J/Janssen vaccine. Booster doses do not need to be the same as the initial vaccination series. The CDC recommendations now allow for mixing or matching of the COVID-19 vaccine for booster shots.
How will the supplemental or booster doses be administered?
- Booster doses are now recommended for everyone 18 years and older.
- A clinician referral or prescription is NOT required to receive a booster or a supplemental vaccine.
- Individuals receiving a supplemental third shot should self-attest to the vaccine provider that they meet the eligibility criteria. A clinician’s note or prescription is not needed.
- See *Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Authorized in the United States* for additional guidance, including assessing immunosuppression risk.
- Individuals receiving a booster dose or an additional supplemental dose should still be advised to wear masks and maintain a safe distance in public places until the CDC and local health authorities indicate that the rate of transmission has decreased sufficiently.

When are individuals who are immunocompromised considered fully vaccinated?
- People with conditions that compromise their immune systems are still considered fully vaccinated after receiving two doses of one of the mRNA vaccines or one dose of the J&J/Janssen vaccine.

What is the difference between the supplemental doses being recommended now more broadly, and the additional dose recommended for immunocompromised individuals?
- The supplemental vaccine doses for immunocompromised individuals are being recommended for individuals who did not mount a sufficient response to the initial mRNA series because they have moderately to severely weakened immune systems. The booster doses are being recommended due to data suggesting that the level of immunity initially seen for fully vaccinated individuals drops over time, although the vaccines remain highly effective at preventing severe illness, including hospitalizations.
- The top priority continues to be ensuring that everyone who can be vaccinated receives their primary vaccine series against COVID-19.

GETTING VACCINATED

What are the eligibility requirements for vaccination?
- States are no longer limiting vaccinations to certain groups. In every state and the District of Columbia, anyone over 5 years of age is eligible to be vaccinated, including people with HIV.
- The Department of Health and Human Services developed the following resources to facilitate finding vaccination sites:
  - Visit [vaccines.gov](http://vaccines.gov) (English) or [vacunas.gov](http://vacunas.gov) (Spanish) to search by zip code;
  - Text GETVAX to 438829 (English) or VACUNA to 822862 (Spanish) to receive three vaccine sites on your phone; or
  - Call the National COVID-19 Vaccination Assistance Hotline at 1-800-232-0233.
- Also check your local or state health department for the latest information specific to your community.

When am I considered fully vaccinated?
- According to the CDC, people (whether they have HIV, or do not) are considered fully vaccinated:
  - For the Moderna and Pfizer-BioNTech vaccine, two weeks after the 2nd dose of the two-dose series; and
  - For the J&J/Janssen vaccine, two weeks after receiving the one-dose vaccine.

What can I do when I am fully vaccinated?
- The COVID-19 vaccines authorized for use in the U.S. are highly effective at preventing serious illness from COVID-19, and individuals with HIV should be encouraged to get vaccinated to protect their health and their family and friends.
In response to data on the transmissibility of the Delta variant including among fully vaccinated individuals, current CDC guidance recommends that both unvaccinated and fully vaccinated individuals wear masks in indoor public spaces in areas with substantial and high transmission to stop community spread of the virus. To prevent widespread community transmission, IDSA urges that additionally, in communities with moderate transmission rates, all individuals, even those who are vaccinated, wear masks in public indoor spaces.

Data considered by CDC’s Advisory Committee on Immunization Practices indicate that people who are immunocompromised are at higher risk for serious illness due to COVID-19 and more likely to have breakthrough infections when fully vaccinated. Individuals with HIV who are untreated or who have low immune status should be encouraged to take extra precautions, including wearing a mask in public indoor spaces and maintaining a safe physical distance from others.

What if I am not fully vaccinated?

• If you are not fully vaccinated, it is important to get vaccinated as soon as possible to protect yourself and your family and friends, and to wear masks in public places and maintain a safe physical distance from others to protect yourself from getting COVID-19.

SIDE EFFECTS

Will I have more side effects because I have HIV?

• The effects of the vaccines on people with HIV are still being studied. So far, no data suggest that people with HIV have more side effects than the general population.

• Side effects common among all study participants included pain and swelling at the injection site, fatigue and headache. A smaller number reported having a fever. These side effects did not last longer than a few days at most.

Have there been any serious side effects with the J&J/Janssen vaccine?

• A rare, clotting disorder has occurred in less than two in a million individuals receiving the J&J/Janssen vaccine. The FDA has added a warning to the authorization for clotting events with low platelets, primarily occurring among women under 50 years of age. None of the women affected were living with HIV and there are no data to suggest that people with HIV are at higher risk of that occurring due to their HIV status.

• Rare cases of the neurological disorder Guillain-Barré syndrome (GBS) have been reported through the Vaccine Adverse Event Reporting System (VAERS) in individuals receiving the J&J/Janssen vaccine. In July 2021, the FDA added a warning for GBS to the EUA for symptoms occurring within 42 days of vaccination with the J&J vaccine. Common symptoms are weakness or tingling sensations in legs or arms; difficulty walking, difficulty with speaking, chewing or swallowing; double vision or inability to move eyes, and difficulty with bladder control or bowel function.

Have there been any serious side effects with the Moderna and the Pfizer/BioNTech vaccines?

• Rare, serious allergic reactions have occurred with the Moderna and the Pfizer-BioNTech vaccines and this issue is being monitored by the CDC. The CDC recommends that everyone who receives a COVID-19 vaccine is monitored onsite for at least 15 minutes, and for at least 30 minutes if they have had a reaction to a vaccine or other prior history of significant allergic reactions.

• A very rare risk of myocarditis, which is generally self-limited, has been seen with both Moderna and Pfizer-BioNTech vaccines. This risk is about six times lower than the risk of myocarditis after COVID-19 infection.

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Should I wait for another COVID-19 vaccine since I have HIV? Have any of the other vaccines been found to be safer or more effective for people with HIV?

- Based on the current data available, the vaccines authorized for the U.S. are safe and effective.
- Rare cases of a serious blood clotting disorder and of the neurological disorder GBS have been reported through the Vaccine Adverse Event Reporting System (VAERS) in individuals receiving the J&J/Janssen vaccine.
- Several trials have included people with treated HIV, including mRNA, adenoviral vectored, and protein vaccines against SARS-CoV-2. None of these studies have suggested any safety concerns for PWH.
- Small studies of PWH within mRNA or adenovirus-vectored vaccine trials have demonstrated similar immune responses to these vaccines compared to the general population. However, because these first studies only included people with well-controlled HIV, additional data about immune responses in advanced HIV should become available in the future.
- The majority of HIV providers strongly recommend that people with HIV receive one of the currently available vaccines rather than wait for further data.

What are the long-term side effects or complications of getting the vaccine?

- Currently no data suggest that the vaccines cause long-term side effects. Data will continue to be collected and monitored for signs of long-term side effects or complications. As of November 2021, more than 1.5 years has passed since the first volunteers received some of these vaccines. For all known vaccines, the vast majority of side effects occur within the first 2-6 weeks after vaccination.

Should I take the vaccine if I already had COVID-19? If so, what are the side effects? How long should I wait between my COVID-19 illness and the vaccine?

- Because people’s immune responses to having COVID-19 can vary (some people may develop a weak immune response, others a stronger one), and because data demonstrates stronger protection in people who have been vaccinated after infection than after infection only, the CDC recommends that individuals who have already had COVID-19 receive the vaccine. For individuals who are still experiencing symptoms of COVID-19, vaccination should be delayed until they have recovered, and can be delayed for up to 90 days after illness. Data is still being collected on people who have had COVID-19 receiving vaccinations so we will learn more.

Does the vaccine cause post-acute sequelae of COVID-19 (PASC) or “long-COVID” syndrome?

- None of the vaccines available in the US contain the virus that causes COVID-19. They cannot make you sick from COVID-19, nor can they cause “long-COVID.”
- Preventing COVID-19 infection through vaccination is the best way to prevent “long-COVID.”

Why do some people develop COVID-19 after being vaccinated?

- According to the CDC, it takes a few weeks for the body to develop enough immunity to protect you from the virus, so you could still get sick from COVID-19 while your body is in the process of developing immunity.
- With newer, more contagious variants, mRNA vaccines (Pfizer-BioNTech, Moderna) have slightly reduced effectiveness against preventing infection but remain highly effective at preventing severe illness (hospitalization or death) in the general population. Even with highly effective vaccines, we expect that a small percentage of vaccinated people exposed to COVID-19 will get infected and have symptoms, which are generally milder than might be expected without vaccination. This does not mean that the vaccine is not working; it just means that we need to continue wearing masks and social distancing to add layers of protection to vaccination. Vaccination remains the most important step we can take to protect ourselves and our family friends.

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What is the frequency of Bell’s palsy?

- Bell’s palsy is one of the conditions that is monitored in all vaccine trials. While there were cases of Bell’s palsy in clinical trials for the COVID-19 vaccines, the number of cases reflected the number in the general population. No relationship between receiving the vaccines and Bell’s palsy has been established. Monitoring for Bell’s palsy is ongoing, as more people receive the vaccines.

What should I do if I had bad reactions to other vaccines? What if I had Guillain-Barré syndrome from Shingrix (or any other vaccine)? Can I take the COVID-19 vaccine safely?

- It is important to let your health care provider know if you have had a bad reaction to other vaccines.
- No cases of Guillain-Barré syndrome (GBS) have been reported in people receiving the Moderna or the Pfizer-BioNTech COVID-19 vaccines.
- Rare cases of the neurological disorder Guillain-Barré syndrome (GBS) have been reported through the Vaccine Adverse Event Reporting System (VAERS) in individuals receiving the J&J/Janssen vaccine. In July 2021, the FDA added a warning for GBS to the EUA for symptoms occurring within 42 days of vaccination with the J&J vaccine. Common symptoms are weakness or tingling sensations in legs or arms; difficulty walking, difficulty with speaking, chewing or swallowing; double vision or inability to move eyes, and difficulty with bladder control or bowel function.
- Based on the data currently available, you may receive an mRNA COVID-19 vaccine safely. Even if you have had a bad reaction to another vaccine, if that vaccine doesn’t have any of the same ingredients that are in the COVID-19 vaccines, you should not have the same reaction.

HIV MEDICATIONS

I’ve heard my HIV medicines protect me from getting COVID-19, so do I even need the vaccine?

- There is no evidence that HIV medications can prevent or treat COVID-19. Some HIV medications, such as a combination of tenofovir/emtricitabine, are currently being studied to see if they can treat COVID-19 but the results of these studies are pending. Studies on lopinavir/ritonavir, a protease inhibitor combination, have not found it to be effective. Read more in the CDC’s What to Know About HIV and COVID-19.
- Because there is no evidence that HIV medications can treat or prevent COVID-19, guidelines recommend against changing your HIV treatment regimen to prevent or treat COVID-19. More information on HIV treatment recommendations and COVID-19 is available in the HHS Interim Guidance on COVID-19 and Persons with HIV.

Will the vaccine be contraindicated by my HIV medications? Should I stop taking them while I am getting the vaccine doses?

- The three authorized vaccines have no interactions with HIV medications. It is not recommended that people with HIV stop their HIV medicines when they receive a COVID-19 vaccine. Stopping your HIV medications could put you at greater risk for HIV-related illnesses and at greater risk for serious infection due to COVID-19.

Will the vaccine be effective or recommended if I have CD4 < 200 / A low immune system?

- The CDC advises that people who are immunocompromised, including people with HIV, be eligible to receive the vaccine because of their potential increased risk for serious illness due to COVID-19. Effectiveness in people with serious immune impairment is presumed to be less than for the general population, which is why the CDC and HIVMA are recommending a 3rd dose of vaccine to better protect people who may not make as strong of an immune response.
COVID-19 VACCINES & HIV RISK

Does the COVID-19 vaccine increase the risk of contracting HIV?
- There is no reason to think any of the COVID-19 vaccines authorized in the U.S. will increase a person’s risk of acquiring HIV, nor are there any data to suggest that this is the case.
- These concerns have been raised because a previous adenoviral-vector vaccine being studied to prevent HIV about a decade ago may have increased risk for HIV infection, but that vaccine was constructed differently and was not related to the structure of the COVID-19 vaccines authorized in the U.S.

VACCINE ACCESS & ADMINISTRATION

Can I get vaccinated at my HIV clinic?
- Vaccines are being provided in a variety of settings and while some HIV clinics may be providing vaccines, others may not have access to the COVID-19 vaccines. Check with your HIV provider to see if they are providing vaccines. An online web tool allows you to search online for vaccination sites near you at www.vaccines.gov (English) or vacunas.gov (Spanish). Or you can text GETVAX to 438829 for English or VACUNA to 822862 for Spanish to receive vaccine sites nearby.

Will I have to pay when I get vaccinated? Is it covered by my insurance or the Ryan White Program?
- The federal government is covering the cost of the COVID-19 vaccines for everyone. There may be a fee for administering the vaccine, but that fee should be charged to your health insurance provider, including Medicaid or Medicare. If you are uninsured, your provider should bill the Provider Relief Fund that is administered by HRSA, or your Ryan White Program may be covering it.

Is it necessary to get the second dose of the Moderna or Pfizer-BioNTech vaccines? What if I move after I got the first dose – How do I get the second?
- For the Moderna and Pfizer-BioNTech vaccines, receiving at least two doses of the vaccine is important to achieve the highest level of protection based on the clinical trials data that we have now. Not only do people have a lower response after one dose compared to two, but we also don’t know how long immunity lasts after a single dose of the vaccine. Let your vaccine provider know if you are unable to come back to the same location for your second or 3rd dose so they can help you make arrangements to ensure you receive your next dose on time.
- Reminders for receiving the second dose of the COVID-19 vaccines are available by signing up for VaxText – a free text messaging platform.

For the Moderna and Pfizer-BioNTech vaccines, can I get one dose of one vaccine and the second dose of the other vaccine?
- For your initial vaccine series, CDC still recommends that the second dose of your vaccine be the same as the first one. CDC guidance recommends mixing and matching of the COVID-19 vaccines only for booster doses at this time. Vaccine providers should be following guidance from the CDC and their state Department of Health regarding appropriate administration of the second dose.

PREGNANCY & BREASTFEEDING

Can I take the vaccine if I am pregnant? Breastfeeding?
- The CDC, American College of Obstetricians and Gynecologists (ACOG) and the Society for Maternal-Fetal Medicine (SMFM) recommend that pregnant and lactating individuals be vaccinated against COVID-19. They strengthened their recommendations for pregnant and lactating individuals given the increase in

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COVID-19 cases due to the Delta variant and the increased risk for serious illness from COVID-19 for pregnant individuals.

Can I take any vaccine if I am pregnant? Breastfeeding?

- ACOG advises that women under 50 years may receive any of the FDA authorized COVID-19 vaccines. They should be advised that a rare blood clotting disorder has been associated with the J&J/Janssen vaccine and that other COVID-19 vaccines are available.

Can the mRNA vaccines cause infertility?

- There is no evidence to suggest that the COVID-19 vaccines cause infertility. This idea has arisen because of false online statements that COVID-19 proteins and the proteins in the human placenta are similar, and that, as a result, a vaccine that makes people immune to COVID-19 can also make the body attack the placenta. This is not true. Coronavirus proteins and placental proteins are very different, and there is no evidence that the vaccines affect the placenta. Furthermore, infertility is a different issue. Infertility is the inability to get pregnant. There is also no evidence that infertility arises from COVID-19 vaccines.

DNA

Can the mRNA vaccines alter my DNA because it is an mRNA vaccine?

- The mRNA delivered by the mRNA-based COVID-19 vaccines do not enter the cell nucleus where DNA is located, so it cannot alter your DNA.

STEM CELLS

Were fetal stem cells used to make the COVID-19 vaccines?

- Fetal stem cells were not used in production of the Moderna or the Pfizer-BioNTech vaccines.
- The J&J/Janssen vaccine does not include any fetal tissue, but cells derived in a lab from fetal stem cells are used in its production. The Vatican issued guidance in December 2020 indicating that it was acceptable to receive COVID-19 vaccines that have used fetal stems cells in their research and production processes when options and supplies are scarce. It is important to weigh the risks of severe illness and death due to COVID-19 with the benefits of receiving a vaccine that is highly effective at preventing serious illness due to COVID-19.

IMMUNITY OR LEVEL OF PROTECTION

How long will the immunity last after the vaccine?

- The length of time the vaccine will prevent you from getting sick from COVID-19 is still being studied. Because the virus is so widespread in the U.S., even short-term immunity or protection from the virus is important because it can help to prevent you from getting sick due to COVID-19 and help slow the spread of the virus.

Does the vaccine prevent illness? Can I still have the coronavirus (SARS-CoV-2), have no symptoms and spread the virus to others?

- The trials for the vaccines available in the U.S. found that they were highly effective at preventing serious illness due to COVID-19.
- The Pfizer-BioNTech and Moderna vaccines are highly effective at preventing people from acquiring COVID-19 and at preventing serious illness including from the Delta variant. However, according to CDC, while the risk of acquiring and transmitting the Delta variant is significantly lower for fully vaccinated individuals, the risk is not eliminated. To help stop community spread, unvaccinated and fully vaccinated
individuals should be advised to wear masks in public indoor spaces, particularly in communities with substantial or high community spread.

- Insufficient data are currently available for the effectiveness of J&J/Janssen vaccine against the Delta variant, but it has been found to be protective against other variants.

HIV VACCINE

A COVID-19 vaccine was developed in less than a year, but we still don’t have an HIV vaccine after 40 years – why can’t they develop an HIV vaccine as quickly? When is an HIV vaccine going to be approved?

- The virus that causes COVID-19 is very different than HIV. The body rids itself of the virus that causes COVID-19 within weeks while HIV stays in the body and is not removed or eradicated and has a complex way of undermining and evading the immune system. These differences, and many others, make creating an HIV vaccine much more complicated.

- Work on developing an HIV vaccine continues and some of the early work in developing an HIV vaccine contributed to the creation and the success of the COVID-19 vaccines. We also have learned a lot from the development of the COVID-19 vaccines that should contribute to the future development of other effective vaccines, including for HIV.