

# COVID-19 Vaccine FAQs for the Construction Industry

Version 4: April 29, 2021

## **JOHNSON & JOHNSON PAUSE LIFTED**

As vaccines become more widely available, you may have questions about how they work and whether you should get vaccinated. The following list of frequently asked questions (FAQs) was developed by The University of Texas Health Science Center at Tyler in coordination with the National Institute for Occupational Safety & Health (NIOSH) and CPWR – The Center for Construction Research & Training for use by those in the construction industry, many of whom are considered essential workers (Phase 1C of the CDC recommended vaccination plan).

*This is considered a living document, and will be updated as new data, information, or vaccines become available. Check CPWR's COVID-19 Vaccine Resources page for the most up-to-date version: [www.cpwr.com/covid-19-resources/covid-19-vaccine-resources](http://www.cpwr.com/covid-19-resources/covid-19-vaccine-resources).*

## FAQs

---



### 1. What is herd immunity?

You may have heard health officials or reporters mention herd immunity as a possible way to stop the spread of COVID-19. Herd immunity occurs when a critical number of the population becomes immune to an infectious disease either from a previous infection or vaccination. Once enough people are immune, it becomes unlikely a virus or bacteria can spread and cause disease. Not every individual may be immune, but the community overall is protected because the virus dies out with nowhere to go. The percentage of people who need to have protection to achieve herd immunity varies by disease. Experts do not know what percentage of people would need to get vaccinated to achieve herd immunity to COVID-19;<sup>1</sup> but the more people get vaccinated, the greater the chances that we will achieve herd immunity.

## 2. How do the vaccines work?

Vaccines are one of the most effective tools to protect your health and prevent disease. Studies show that COVID-19 vaccines are very effective in preventing you from getting COVID-19. Experts also think that getting a COVID-19 vaccine may help keep you from getting seriously ill even if you do get COVID-19.



Vaccines work with your body's natural defenses so your body will be ready to fight the virus if you are exposed (also called "immunity"). These vaccines cannot give you the disease.<sup>2</sup> There are currently two types of vaccines authorized for use in the United States, messenger RNA vaccines and viral vector vaccines.

**Messenger RNA vaccines**—also called mRNA vaccines—are some of the first COVID-19 vaccines authorized for use in the United States (e.g., produced by Pfizer–BioNTech and Moderna). mRNA vaccines are a new type of vaccine developed to protect against infectious diseases. Unlike many vaccines that put a weakened or inactivated germ into our bodies to trigger an immune response, mRNA vaccines teach our cells how to make a protein—or even just a piece of a protein—that triggers an immune response inside our bodies. This immune response, which produces antibodies, is what protects us from getting infected if the real virus enters our bodies.

COVID-19 mRNA vaccines give 'instructions' for our cells to make a harmless piece of what is called the "spike protein." The spike protein is found on the surface of the virus that causes COVID-19. COVID-19 mRNA vaccines are given in the upper arm muscle. Once the instructions (mRNA) are inside the immune cells, the cells use them to make the protein piece. After the protein piece is made, the cell breaks down the instructions and gets rid of them. Next, the cell displays the protein piece on its surface. Our immune system recognizes that the protein does not belong there and begins building an immune response and making antibodies, like what happens in natural infection against COVID-19.

At the end of the process, our bodies have learned how to protect against future COVID-19 infection. The benefit of mRNA vaccines, like all vaccines, is that those who get vaccinated acquire this protection without ever having to risk the serious consequences of getting sick with COVID-19.<sup>3</sup>

**Viral vector vaccines** (e.g., produced by Johnson & Johnson/Janssen or J&J/Janssen) use a modified version of a different virus (the vector) to deliver important instructions to our cells. For COVID-19 viral vector vaccines, the vector (**not** the virus that causes COVID-19, but a different, harmless virus) will enter a cell in our body and then use the cell's machinery to produce **a harmless** piece of the virus that causes COVID-19. This piece is known as a spike protein and it is only found on the surface of the virus that causes COVID-19.

The cell displays the spike protein on its surface, and our immune system recognizes it does not belong there. This triggers our immune system to begin producing antibodies and activating other immune cells to fight off what it thinks is an infection.

At the end of the process, our bodies have learned how to protect us against future infection with the virus that causes COVID-19. The benefit is that we get this protection from a vaccine, without ever having to risk the serious consequences of getting sick with COVID-19. Any temporary discomfort experienced after getting the vaccine is a natural part of the process and an indication that the vaccine is working. Of note, these vaccines cannot give someone COVID-19 or other infections, and they do not affect or interact with our DNA in any way.<sup>4</sup>

### 3. Is the vaccine effective?



Data have shown high vaccine efficacy in preventing COVID-19 following receipt of two doses of mRNA COVID-19 vaccine (Pfizer-BioNTech: 95.0%; Moderna: 94.1%). Limited data are currently available regarding the efficacy of a single dose.<sup>5</sup> It is important to receive both doses of these mRNA vaccines to optimize protection.

The J&J/Janssen COVID-19 vaccine efficacy against symptomatic, laboratory-confirmed COVID-19 was 66.3% at  $\geq 14$  days after vaccination and 65.5% at  $\geq 28$  days after vaccination. The vaccine has high efficacy against COVID-19–associated hospitalization and death (93.1% at  $\geq 14$  days after vaccination and 75.0% respectively).<sup>6</sup>

Due to differences in the clinical trials performed during the development of each of these vaccines, direct comparisons cannot be made regarding their percentages of effectiveness. Benefits of receiving the vaccine significantly outweigh risks. Persons may receive any authorized and ACIP (Advisory Committee on Immunization Practices)-recommended COVID-19 vaccine and are encouraged to receive the earliest vaccine available to them.

### 4. What are the risks/side effects from receiving the vaccine?

Most people do not have serious problems after being vaccinated. Your arm may be sore, red, or warm to the touch. These symptoms usually go away on their own within a week. Some people report getting a headache or fever when getting a vaccine. These side effects are a sign that your immune system is doing exactly what it is supposed to do. It is working and building up protection to disease.<sup>7</sup>

While rare, anaphylactic reactions (“anaphylaxis” is a severe, potentially life-threatening allergic reaction that can occur very quickly) have been reported following vaccination with mRNA COVID-19 vaccines. Although investigations are ongoing, persons with a history of an immediate allergic reaction (of any severity) to an mRNA COVID-19 vaccine or any of its components might be at greater risk for anaphylaxis upon re-exposure to either of the currently authorized mRNA COVID-19 vaccines.<sup>5</sup>

The frequency of serious adverse events with the J&J/Janssen vaccine during clinical trials was low.<sup>6</sup> Following a recent pause in use of the J&J vaccine as the CDC and FDA investigated reported cases of a rare condition involving severe blood clots and low platelet count in individuals after receiving the vaccine, the two agencies have now determined the following<sup>8</sup>:

- Use of the Janssen COVID-19 Vaccine should be resumed in the United States.
- The FDA and CDC have confidence that this vaccine is safe and effective in preventing COVID-19.
- The FDA has determined that the available data show that the vaccine's known and potential benefits outweigh its known and potential risks in individuals 18 years of age and older.
- At this time, the available data suggest that the chance of occurrence of this condition is very low, but the FDA and CDC will remain vigilant in continuing to investigate this risk.

## 5. Are there reasons I should not take the vaccine?

The U.S. Food and Drug Administration (FDA) has authorized the emergency use of the two mRNA COVID-19 vaccines, which are administered in a two-dose series, and the J&J/Janssen vaccine, which is administered as a single dose. You should contact your healthcare provider if you are: 1. Highly allergic with a history of severe allergic reactions to any ingredient of the vaccine; 2. Have a fever; 3. Are immunocompromised or are on a medication that affects your immune system; 4. Are pregnant or plan to become pregnant; 5. Are breastfeeding; or 6. In the case of the two-dose vaccines, have received another COVID-19 vaccine.<sup>5</sup>



The FDA used the existing Emergency Use Authorization (EUA) system<sup>9</sup> in the approval of these vaccines. The EUA system allows the FDA to help strengthen the nation's public health protections during public health emergencies. As of the end of February 2021, three COVID-19 vaccines have been shown to be safe and effective as determined by data from the manufacturers and findings from large clinical trials. These data demonstrate that the known and potential benefits of these vaccines outweigh the known and potential harms of becoming infected with COVID 19.

Following a recent pause in use of the J&J vaccine as the CDC and FDA investigated reported cases of a rare condition involving severe blood clots and low platelet count in individuals after receiving the vaccine, the two agencies have now determined the following<sup>8</sup>:

- Use of the Janssen COVID-19 Vaccine should be resumed in the United States.
- The FDA and CDC have confidence that this vaccine is safe and effective in preventing COVID-19.

- The FDA has determined that the available data show that the vaccine’s known and potential benefits outweigh its known and potential risks in individuals 18 years of age and older.
- At this time, the available data suggest that the chance of occurrence of this condition is very low, but the FDA and CDC will remain vigilant in continuing to investigate this risk.

## 6. After receiving the vaccine, how quickly am I protected?

The Pfizer–BioNTech COVID-19 vaccine, which is given in a two-dose regimen, has been reported to be fully effective against disease seven days after administration of the second dose,<sup>10</sup> but the CDC considers people fully vaccinated two weeks after the second dose for both two-dose vaccines (Pfizer-BioNTech and Moderna).<sup>11</sup>

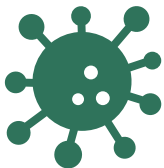


All people for whom vaccination with the J&J/Janssen vaccine is indicated should receive one dose and are considered to be fully immunized within two weeks of receiving the dose. The J&J/Janssen COVID-19 vaccine is not interchangeable with other COVID-19 vaccine products.<sup>6</sup>

## 7. How long does natural immunity last? How long will the vaccine protect me?

The protection someone gains from having an infection (called natural immunity) varies depending on the disease, and it varies from person to person. Since this virus is new, we do not know how long natural immunity might last. Current evidence suggests that reinfection with the virus that causes COVID-19 is uncommon in the 90 days after initial infection.

Regarding vaccination, we will not know how long immunity lasts until we have more data on how well COVID-19 vaccines work in real-world conditions. Experts are working to learn more about both natural and vaccine-induced immunity. The Centers for Disease Control and Prevention (CDC) will keep the public informed as new evidence becomes available.<sup>1</sup>



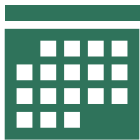
## 8. If I have had a positive COVID test, do I need to receive the vaccine?

Anyone currently infected with COVID-19 should wait to get vaccinated until after they fully recover, and they are out of isolation/quarantine. In addition, if you were treated for COVID-19 symptoms with monoclonal antibodies or convalescent plasma, you should wait 90 days before getting a COVID-19 vaccine. Talk to your doctor if you are unsure what treatments you received. Current evidence suggests that reinfection is uncommon in the 90 days after initial infection. Therefore, people with a recent infection may delay vaccination until the end of that 90-day period if so desired.<sup>1</sup>

## 9. Do I really need a second dose of the two-dose vaccines?

Two of the vaccines that have thus far been approved for emergency use authorization (EUA) by the FDA (those by Pfizer-BioNTech and Moderna) are given in two doses. For those ‘two-shot vaccines’, the first shot primes the immune system, helping it recognize the virus, and the second shot strengthens the immune response. In order to safely have the level of protection observed in the large randomized clinical trials supporting their effectiveness, you should receive both doses. Doses are taken 3-4 weeks apart. Mild side effects after the first dose should not prevent you from receiving the second dose.

There is currently not enough scientific evidence regarding the amount or level of protection after only one dose of the vaccine. Thus, following the FDA-authorized dosing schedule for each COVID-19 vaccine is highly recommended.<sup>12</sup>



## 10. When might I get my vaccine?

CDC guidance provides phases for vaccine distribution due to limited supply. Check with your state/region to find out when they are starting each phase;<sup>13</sup> there may be some overlap between phases (several phases may be able to get the vaccine at the same time).

Persons may receive any ACIP-recommended COVID-19 vaccine and are encouraged to receive the earliest vaccine available to them. Visit <https://www.cpwr.com/covid-19-resources/cdc-niosh-construction-sector-covid-19-vaccine-eligibility-status-documents/> for more information on current state eligibility.

## 11. I have had my vaccine; can I stop wearing my mask (and other public health measures)?

We all need to keep practicing precautions such as wearing a mask, social distancing, hand washing, and other hygiene measures (using current recommendations from the CDC regarding these measures) while public health experts continue to learn more about the protection that COVID-19 vaccines provide in real-world conditions. Regarding masks specifically, CDC continues to recommend masking in settings where there is a decreased ability to maintain physical distance.<sup>14</sup> Using multiple layers of protection has been found to be the best way to keep workplaces safe and prevent spread of the virus that causes COVID-19 to other people. These precautions help reduce your chance of being exposed to the virus or spreading it to others.<sup>1</sup>





### **12. Is there a charge for the vaccine?**

Vaccine doses purchased with U.S. taxpayer dollars will be given to the American people at no cost. However, vaccination providers will be able to charge an administration fee for giving the shot to someone.<sup>1</sup> Vaccine providers can get this fee reimbursed by the patient's public or private insurance company or, for uninsured patients, by the Health Resources and Services Administration's Provider Relief Fund.

### **13. I do not live in the city or in an urban setting; do I really need the vaccine?**



Eligible residents of non-metropolitan/rural areas should receive the vaccination as soon as it becomes available to them. Initially, COVID-19 cases surged in population-dense urban areas like New York City, but by July 2020, cases were surging in rural America as well. By November, the total number of cases per 100,000 residents in rural areas was greater than that of urban areas.<sup>15-18</sup>

## References

1. CDC. Frequently Asked Questions about COVID-19 Vaccination. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html>.
2. CDC. Key Messages about COVID-19 Vaccines. <https://www.cdc.gov/coronavirus/2019-ncov/downloads/vaccines/toolkits/Key-Messages-CBOs-and-Essential-Workers.pdf>.
3. CDC. Understanding mRNA COVID-19 Vaccines. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/mrna.html>.
4. CDC. Understanding Viral Vector COVID-19 Vaccines. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/viralvector.html>.
5. CDC. Interim Clinical Considerations for Use of mRNA COVID-19 Vaccines Currently Authorized in the United States. <https://www.cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html>.
6. Oliver SE, Gargano JW, Scobie H, et al. The Advisory Committee on Immunization Practices' Interim Recommendation for Use of Janssen COVID-19 Vaccine — United States, February 2021. MMWR Morb Mortal Wkly Rep. ePub: 2 March 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7009e4>.
7. CDC. Vaccines & Immunizations: Answering Patients' Questions. <https://www.cdc.gov/vaccines/covid-19/hcp/answering-questions.html>.
8. FDA and CDC Lift Recommended Pause on Johnson & Johnson (Janssen) COVID-19 Vaccine Use Following Thorough Safety Review. <https://www.cdc.gov/media/releases/2021/fda-cdc-lift-vaccine-use.html>
9. FDA. Emergency Use Authorization. <https://www.fda.gov/emergency-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/emergency-use-authorization>.
10. Polack, F. P., et. al. (2020). New England Journal of Medicine. 383:2603-2615  
DOI: 10.1056/NEJMoa2034577. <https://www.nejm.org/doi/full/10.1056/NEJMoa2034577>.
11. CDC. When You've Been Fully Vaccinated. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated.html>.
12. FDA Statement on Following the Authorized Dosing Schedules for COVID-19 Vaccines. <https://www.fda.gov/news-events/press-announcements/fda-statement-following-authorized-dosing-schedules-covid-19-vaccines>.
13. CDC's COVID-19 Vaccine Rollout Recommendations. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations.html>.
14. CDC. Interim Public Health Recommendations for Fully Vaccinated People. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html>.
15. USDA Economic Research Service. The COVID-19 Pandemic and Rural America. <https://www.ers.usda.gov/covid-19/rural-america/>.
16. USDA Economic Research Service. Rural America at a Glance: 2020 Edition. <https://www.ers.usda.gov/publications/pub-details/?pubid=100088>.
17. The Daily Yonder. COVID-19 Dashboard for Rural America. <https://dailyyonder.com/covid-19-dashboard-for-rural-america/#cases-deaths>.
18. CDC. COVID-19: Rural Communities. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/other-at-risk-populations/rural-communities.html>.