

# COVID-19 Vaccine FAQs for the Construction Industry

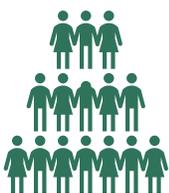
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COVID-19 vaccines are widely accessible in the United States. Everyone aged 12 years and older should get fully vaccinated against COVID-19 as soon as possible. The following list of frequently asked questions (FAQs) about COVID-19 vaccination was 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 to help address questions that may come up among workers, employers, and other stakeholders in the construction industry.

*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

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### 1. What is population immunity?

You may have heard health officials or reporters mention population immunity (also known as herd immunity) as a possible way to stop the spread of COVID-19. Population immunity occurs when enough 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 population immunity varies by disease. Experts do not know what percentage of people would need to get vaccinated to achieve population immunity to COVID-19;<sup>1</sup> but the more people get vaccinated, the greater the chances that we will achieve population immunity.

## 2. How do the vaccines work?

COVID-19 vaccines are effective at protecting you from COVID-19, especially severe illness and death. COVID-19 vaccines reduce the risk of people spreading the virus that causes COVID-19.



Vaccines work with your body's natural defenses so your body will be ready to fight the virus if you are exposed. These vaccines cannot give you the disease.<sup>2</sup> There are currently two types of vaccines against COVID-19 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). To trigger an immune response, many vaccines put a weakened or inactivated germ into our bodies. Not mRNA vaccines.

Instead, COVID-19 mRNA vaccines ‘instruct’ our cells to make a harmless piece of the virus called the “spike protein.” Our immune system recognizes that the spike protein does not belong there and begins building an immune response and making antibodies, like what happens in natural infection against COVID-19. This immune response teaches our bodies how to protect against future COVID-19 infection. People who get COVID-19 from another person will gain protective immunity in the same way, but vaccines are much safer and offer better protection against future infection. For this reason, vaccination will still benefit people who have already been sick with COVID-19.<sup>3</sup> The benefit of mRNA vaccines, like all vaccines, is that they protect us from getting sick without having to actually get sick with COVID-19, which can be deadly.<sup>4</sup>

**Viral vector vaccines** (e.g., produced by Johnson & Johnson/Janssen or J&J/Janssen) use a viral vector to deliver important instructions to our cells. The vector used in COVID-19 vaccines is **not** the virus that causes COVID-19. It is a modified version of a different, **harmless** virus. The vector enters a cell in our body and uses the cell's machinery to produce a harmless piece of the virus that causes COVID-19.

Our immune system recognizes that this harmless piece of the virus, called a spike protein, does not belong there. This triggers our immune system to produce antibodies and activate other immune cells. At the end of the process, our bodies have learned how to protect us from getting sick with COVID-19. The benefit is that the vaccine protects us without the serious risk of getting sick with COVID-19. These vaccines cannot give us COVID-19 or other infections, and they do not affect or interact with our DNA.<sup>5</sup>

### 3. What is the Delta variant?

Viruses are always changing, and that can cause a new variant, or strain, of a virus to form. Delta is currently the predominant strain of the virus in the United States. The Delta variant causes more infections and spreads faster than early forms of the virus that causes COVID-19.<sup>6</sup>

The COVID-19 vaccines authorized in the United States are highly effective at preventing severe disease and death, including against the Delta variant (see below). However, they are not 100% effective at preventing infection altogether, and some fully vaccinated people will become infected (called a breakthrough infection – see below) and experience illness. For such people, the vaccine still provides them strong protection against serious illness and death.

### 4. Is the vaccine effective?



COVID-19 vaccines authorized for use in the United States (Pfizer-BioNTech, Moderna, and Johnson & Johnson/Janssen) are highly effective in preventing symptomatic COVID-19.<sup>7</sup> Research to learn more about this is occurring throughout the world. In recent research among older adults aged 65–74 years (done in part because the risk of severe illness from COVID-19 increases with age), effectiveness of full vaccination for preventing hospitalization was 96% for Pfizer-BioNTech, 96% for Moderna, and 84% for Janssen COVID-19 vaccines; similar effectiveness was shown among adults aged ≥75 years.<sup>8</sup> Other recent research suggests currently available vaccines have high effectiveness for preventing infection and hospitalization from the virus that causes COVID-19, including during periods of time with circulation of the Delta variant.<sup>9</sup> Research to learn more about vaccine effectiveness against the Delta variant is ongoing.

In summary, benefits of receiving the vaccine significantly outweigh risks. People are encouraged to receive the earliest authorized vaccine available to them. For those receiving the mRNA vaccines (Pfizer-BioNTech or Moderna) it is important to get both doses to optimize protection.

The U.S. Occupational Safety and Health Administration (OSHA), in their [“Guidance on Mitigating and Preventing the Spread of COVID-19 in the Workplace”](#), states that **“vaccination is the key element in a multi-layered approach to protect workers.”**

### 5. What are breakthrough infections?

COVID-19 vaccines are highly effective at preventing serious infection, illness, and death. However, since vaccines are not 100% effective at preventing infection, some people who are fully vaccinated will still get COVID-19. [An infection of a fully vaccinated person is referred to as a “breakthrough infection”.](#)

Fully vaccinated people with a breakthrough infection are less likely to develop serious illness than those who are unvaccinated and get COVID-19 -- this means they are much less likely to be hospitalized or die than people who are not vaccinated. People who get breakthrough infections can be contagious. CDC is collecting data on vaccine breakthrough infections and is monitoring the safety and effectiveness of all Food and Drug Administration (FDA)-authorized and approved COVID-19 vaccines.

## 6. 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 after 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>10</sup>

While rare, more severe side effects such as 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, people 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>7</sup> The recognized benefits of the vaccines outweigh the potential harms of becoming infected with COVID 19.

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



The U.S. Food and Drug Administration (FDA) has given full approval to the Pfizer-BioNTech COVID-19 Vaccine (now known as Comirnaty for marketing) for the prevention of COVID-19 disease in individuals 16 years of age and older. The vaccine also continues to be available under emergency use authorization (EUA), including for individuals 12 through 15 years of age and for the administration of a third dose in certain immunocompromised individuals.<sup>11</sup>

The Moderna two-dose vaccine and the J&J/Janssen vaccine, which is administered as a single dose, are both approved under Emergency Use Authorization (EUA) system.<sup>12</sup> The EUA system allows the FDA to help strengthen the nation’s public health protections during public health emergencies. The 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.

You should contact your healthcare provider if you:

1. Are 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>6</sup>

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

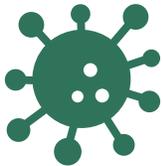
The CDC considers people fully vaccinated two weeks after the second dose for both two-dose vaccines (Pfizer-BioNTech and Moderna) and two weeks after receiving the one-dose vaccine (J&J/Janssen).<sup>12</sup>



### 9. 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; this is an area under study.

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> See question 11 for information on booster shots.



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

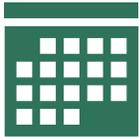
Anyone currently infected with COVID-19 should wait to get vaccinated until after they fully recover, and they are out of isolation/quarantine. In addition, if you were treated for COVID-19 symptoms with monoclonal antibodies or convalescent plasma, you should wait 90 days before getting a COVID-19 vaccine. 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>14</sup>

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

Two of the vaccines that have thus far been approved or given 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 or approved dosing schedule for each COVID-19 vaccine is highly recommended.<sup>15</sup>



## 12. Who should get a booster shot?

CDC recommends that people with moderately to severely compromised immune systems receive an additional dose of mRNA COVID-19 vaccine at least 28 days after a second dose of Pfizer-BioNTech COVID-19 vaccine or Moderna COVID-19 vaccine.<sup>16</sup> The CDC does not currently recommend additional doses or booster shots for any other population at this time, although the science surrounding this issue continues to rapidly evolve.

On August 18, 2021, the U.S. Department of Health and Human Services (DHHS) announced preliminary plans indicating that booster vaccine doses of the Pfizer and Moderna mRNA vaccines may be used in the fall of 2021 to provide continued protection against COVID-19.<sup>17</sup> Booster shots may also be needed for people who received the Johnson & Johnson (J&J) vaccine.

The DHHS representatives and researchers will be evaluating data on this issue as it comes available, and the DHHS representatives plan to keep the public informed with a timely plan concerning the need for and availability of booster shots.

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

If you are fully vaccinated, you can resume activities that you did before the pandemic. However, it is important to note:



It is still possible for you to contract the virus, although you may not notice any symptoms. To reduce the risk of being infected with COVID-19 and spreading it to others, wear a mask indoors in public if you are in an area of [substantial or high transmission](#). You might choose to wear a mask regardless of the level of transmission if you or a family member have a weakened immune system or are at increased risk for another reason.

If you had close contact with someone who has COVID-19, you should get tested 3-5 days after your exposure, even if you don't have symptoms. You should also wear a mask indoors in public for 14 days following exposure or until your test result is negative. You should isolate for 10 days if your test result is positive. These precautions help reduce your chance of being exposed to the virus or spreading it to others.<sup>13, 18</sup>



#### 14. 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 can 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.

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

Everyone aged 12 years and older should get fully vaccinated against COVID-19 as soon as possible. Initially, COVID-19 cases surged in crowded urban areas like New York City, but by July 2020, cases were surging in rural America as well. By the fall months of 2020, the number of cases per 100,000 residents in rural areas was greater than that of urban areas.<sup>19-22</sup>



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### References

1. CDC. Key Things to Know About COVID-19 Vaccines. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/keythingstoknow.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 MMWR: Cavanaugh AM, Spicer KB, Thoroughman D, Glick C, Winter K. Reduced Risk of Reinfection with SARS-CoV-2 After COVID-19 Vaccination — Kentucky, May–June 2021. MMWR Morb Mortal Wkly Rep 2021;70:1081-1083. DOI: <http://dx.doi.org/10.15585/mmwr.mm7032e1>.
4. CDC. Understanding mRNA COVID-19 Vaccines. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/mrna.html>.
5. CDC. Understanding Viral Vector COVID-19 Vaccines. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/viralvector.html>.
6. CDC. Delta Variant: What We Know About the Science. <https://www.cdc.gov/coronavirus/2019-ncov/variants/delta-variant.html>.
7. 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>.
8. Moline HL, Whitaker M, Deng L, et al. Effectiveness of COVID-19 Vaccines in Preventing Hospitalization Among Adults Aged ≥65 Years — COVID-NET, 13 States, February–April 2021. MMWR Morb Mortal Wkly Rep 2021;70:1088-1093. DOI: <http://dx.doi.org/10.15585/mmwr.mm7032e3>.
9. Rosenberg ES, Holtgrave DR, Dorabawila V, et al. New COVID-19 Cases and Hospitalizations Among Adults, by Vaccination Status — New York, May 3–July 25, 2021. MMWR Morb Mortal Wkly Rep. ePub: 18 August 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7034e1>.
10. CDC. Vaccines & Immunizations: Answering Patients' Questions. <https://www.cdc.gov/vaccines/covid-19/hcp/answering-questions.html>.

11. FDA. News Release: FDA Approves First COVID-19 Vaccine. <https://www.fda.gov/news-events/press-announcements/fda-approves-first-covid-19-vaccine>.
12. FDA. Emergency Use Authorization. <https://www.fda.gov/emergency-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/emergency-use-authorization>.
13. CDC. When You've Been Fully Vaccinated. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated.html>.
14. CDC. Frequently Asked Questions about COVID-19 Vaccination. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html>.
15. 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>.
16. CDC. COVID-19 Vaccines for Moderately to Severely Immunocompromised People. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/recommendations/immuno.html>.
17. CDC. Joint Statement from HHS Public Health and Medical Experts on COVID-19 Booster Shots. Released 8/18/21. <https://www.cdc.gov/media/releases/2021/s0818-covid-19-booster-shots.html>.
18. CDC. Interim Public Health Recommendations for Fully Vaccinated People. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html>.
19. USDA Economic Research Service. The COVID-19 Pandemic and Rural America. <https://www.ers.usda.gov/covid-19/rural-america/>.
20. USDA Economic Research Service. Rural America at a Glance: 2020 Edition. <https://www.ers.usda.gov/publications/pub-details/?pubid=100088>.
21. The Daily Yonder. COVID-19 Dashboard for Rural America. <https://dailyyonder.com/covid-19-dashboard-for-rural-america/#cases-deaths>.
22. CDC. COVID-19: Rural Communities. <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/other-at-risk-populations/rural-communities.html>.