

## **COVID-19 Vaccine Frequently Asked Questions (FAQs)**

### **Are the COVID-19 vaccines safe?**

mRNA vaccines are being held to the same rigorous safety and effectiveness standards as all other types of vaccines in the United States. The only COVID-19 vaccines the Food and Drug Administration (FDA) will make available for use in the United States (by approval or emergency use authorization) are those that meet these standards.

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

### **What is mRNA?**

mRNA vaccines are a new type of vaccine that are relatively quick and inexpensive to make, and potentially safer than traditional vaccines. To trigger an immune response, many vaccines use a weakened or inactivated virus. Instead, mRNA vaccines use a small piece of the genetic code of the virus that teaches our cells how to make a piece of COVID-19 that triggers an immune response inside our bodies. That immune response produces antibodies which protects us from getting infected if the real virus enters our bodies.

In other words, mRNA vaccines use a small sequence of RNA from the spike of the COVID virus. This enables our bodies to develop an immune response to the spike. This is enough for our immune system to identify the whole virus and protect us.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5906799/>

[https://www.nejm.org/doi/full/10.1056/NEJMoa2022483?query=featured\\_coronavirus](https://www.nejm.org/doi/full/10.1056/NEJMoa2022483?query=featured_coronavirus)

### **How effective are the vaccines?**

Pfizer is reporting that their vaccine is 95% effective against COVID-19, with one vaccinated patient developing severe COVID infection. Moderna is reporting a 94.1% effectiveness against COVID-19 and 100% effectiveness against severe COVID-19 for their vaccine.

Effectiveness for both vaccines were consistent across all age, race and ethnicity, and gender demographics.

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Vaccine details:

- The Pfizer vaccine requires two doses separated by at least 21 days, but no more than 28 days.
- The Moderna vaccine requires two doses separated by at least 28 days.

Getting both doses is key to full vaccine effectiveness.

**How long will immunity last?**

It is too early to determine how long immunity will last. On-going research is taking place to determine if any additional inoculations (besides the two initial injections) will be needed.

**What are the expected side effects?**

The most common adverse reactions included injection site pain and redness, fatigue, muscle and/or joint pain, headache, possibly even feeling poorly for a day or so. The COVID-19 vaccine does not give you COVID-19. These side effects show that the immune system is reacting the way it is supposed to in order to fight the virus, should you become exposed.

Based upon preliminary data, the first dose has fewer side effects than the second dose and older recipients experience fewer side effects.

- Jackson et al. An mRNA Vaccine against SARS-CoV-2- Preliminary report. NEJM 2020; 20:1920-1931. <https://www.nejm.org/doi/full/10.1056/nejmoa2022483>
- Walsh et al. Safety and immunogenicity of two RNA-Based COVID-19 vaccine candidates. NEJM 2020; online publication Oct 14. <https://www.nejm.org/doi/full/10.1056/NEJMoa2027906>
- Anderson et al. Safety and immunogenicity of SARS-CoV-2 mRNA-1273 vaccine in older adults. NEJM 2020; online publication Sept 29 <https://www.nejm.org/doi/full/10.1056/NEJMoa2028436>
- Walsh et al. Safety and immunogenicity of two RNA-Based COVID-19 vaccine candidates. NEJM 2020; online publication Oct 14 Data from published Phase I/II trials Community-dwelling older adults <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7583697/>

**What are the differences between vaccines?**

The CDC reports that currently there are three main types of COVID-19 vaccines that are undergoing large-scale clinical trials in the United States.

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- **mRNA vaccines** contain material from the virus that gives our cells instructions for how to make a harmless piece of COVID-19. Our bodies recognize that the piece should not be there and builds an immune response that will remember how to fight the virus that causes COVID-19 if we are infected in the future.
- **Protein subunit vaccines** include harmless pieces of the virus that cause COVID-19 instead of the entire virus. Once vaccinated, our immune system recognizes that the proteins don't belong in the body and builds an immune response. If we are ever infected in the future, our immune system will recognize and fight the virus.
- **Vector vaccines** contain a weakened version of a live virus—a different virus than the one that causes COVID-19—that has genetic material from the virus that causes COVID-19 inserted in it. Once it is inside our cells, the genetic material gives cells instructions to make a small piece of the COVID-19 virus. This prompts our bodies to build an immune response that will remember how to fight that virus if we are infected in the future.

[https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/how-they-work.html?CDC\\_AA\\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fvaccines%2Fabout-vaccines%2Fhow-they-work.html](https://www.cdc.gov/coronavirus/2019-ncov/vaccines/different-vaccines/how-they-work.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fvaccines%2Fabout-vaccines%2Fhow-they-work.html)

### **Who can be vaccinated?**

There are currently no contraindications (reasons why a drug/medication should not be used) for the vaccines. Recommendations regarding pregnant women are still unknown. The FDA will determine what age groups are eligible for the vaccine. Vaccine trials have only recently included children.

### **Should I wait to get the COVID-19 vaccine?**

You should be vaccinated once the vaccines are made available to you. This will benefit you and those with whom you come in contact, if you are exposed to the virus.

### **How will the vaccine be prioritized?**

The CDC is recommending that the initial vaccinations be offered to healthcare personnel and individuals in long term care facilities. Next in line would likely be front line essential workers

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like police, emergency medical personnel and firefighters, then would come people with medical conditions and older adults.

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

The FDA will meet and decide to authorize the vaccines and make recommendations about administration eligibility.

### **Where can I get a vaccine?**

The initial distribution of vaccine will be limited until manufacturing ramps up. During the first phase of limited supply, the Federal government will ship vaccine directly to hospitals, contracted pharmacies and State Health Departments. State governments will prioritize groups who should receive the initial doses.

The first groups recommended to receive vaccine are health care workers and staff and residents of nursing homes. As the supply of vaccine increases, vaccine will become available to more people until all who want vaccine are able to get it.

### **Will it cost anything to get the vaccine?**

According to the CDC, 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. 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.

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/faq.html#:~:text=Vaccine%20doses%20purchased%20with%20US,the%20shot%20to%20someone.>