MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

# What You Need to Know about the Pfizer and Moderna COVID-19 Vaccines

## How do the vaccines work?

All COVID-19 vaccines cause the immune system to respond against the virus that causes COVID-19. The two available vaccines made by Pfizer and Moderna are both mRNA vaccines.

1. mRNA vaccines give instructions to our cells to make a harmless piece of "spike protein." The spike protein is found on the surface of the virus that causes COVID-19.
2. After the spike protein is made, the cell breaks down the instructions (mRNA) and gets rid of them.
3. The body now recognizes that the spike protein should not be there. It builds immune cells (called antibodies) that will remember how to fight the virus that causes COVID-19 if we are infected in the future.

**Important Note:** mRNA vaccines do not contain a live virus and do not cause disease in the vaccinated person. The mRNA vaccines do not change the recipient's DNA.

The FDA approved another vaccine against COVID-19. The Janssen vaccine is a viral vector vaccine. All 3 vaccines effectively prevent serious illness and death from COVID-19 and have similar potential side effects. To learn more visit: https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines

## How many shots am I going to need?

The Pfizer vaccine requires 2 doses, 21 days apart. The Moderna vaccine requires 2 doses, 28 days apart. It takes time for your body to build protection after any vaccination. The two COVID-19 vaccines may not protect you until 1-2 weeks after your second shot.

## Who should get vaccinated?

The Pfizer vaccine is recommended for people aged 16 years and older. The Moderna vaccine is recommended for people aged 18 years and older.

## Who should not get vaccinated?

If you have had a severe or an immediate allergic reaction to a previous dose or any ingredient in the Pfizer or Moderna COVID-19 vaccines (such as PEG), you should not get it.

- A severe allergic reaction (anaphylaxis) is when a person needs to be treated with epinephrine or EpiPen© or if they must go to the hospital.
- An immediate allergic reaction means a reaction within 4 hours of exposure, including symptoms such as hives, swelling, or wheezing (respiratory distress).

To see a list of ingredients of COVID-19 vaccines visit: https://www.cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html#Appendix-C

## How effective is the vaccine?

In clinical trials, the Pfizer and Moderna vaccines were shown to be about 95% effective at preventing illness caused by the coronavirus.

## How do we know if COVID-19 vaccines are safe?

COVID-19 vaccines were tested in large clinical trials that included tens of thousands of people. This is done to make sure they meet safety standards and see how the vaccines offer protection to people of different ages, races, and ethnicities, as well as those with different medical conditions. No significant safety concerns were identified in the clinical trials. At least 8 weeks of safety data were gathered in the trials. It is unusual for side effects to appear more than 8 weeks after vaccination.

**Important note:** The development of these vaccines has been accelerated while maintaining all safety standards. Rather than eliminating steps from traditional

vaccine development timelines, steps were happening at the same time, such as scaling up manufacturing while safety and efficacy data are collected.

## What are the side effects of the vaccine?

In the vaccine clinical trials, most people did not have serious problems after being vaccinated. The symptoms usually went away on their own within a week. Some people reported 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 to build up protection against disease.
More people experienced these side effects after getting the second dose than the first one. If you do not experience any side effects, be assured that the vaccine is just as effective.

## Is the vaccine safe for pregnant women and people with conditions or medications that can weaken the immune system?

The early clinical trials did not test the vaccines in these populations but based on the current data, the benefit of receiving the COVID-19 vaccine is greater than the risks of getting COVID-19 in this population. **Talk to your health care provider about the potential risks and benefits of the vaccine in your specific situation.**

## I already had COVID-19 and recovered. Do I still need to get vaccinated?

Yes, you should be vaccinated regardless of whether you already had COVID-19. That's because experts do not yet know how long you are protected from getting sick again after recovering from COVID-19. If you were treated for COVID-19 with monoclonal antibodies or convalescent plasma, you should wait 90 days before getting a COVID-19 vaccine. Talk to your health care provider if you are unsure what treatments you received or if you have more questions about getting a COVID-19 vaccine.

## Do I need to wear a mask and avoid close contact with others if I have received 2 doses of the vaccine?

You are considered fully vaccinated 2 weeks after the second dose in a 2-dose series like the Pfizer or Moderna vaccine or 2 weeks after the single-dose vaccine like the Janssen vaccine.

People who have been fully vaccinated can start to do some things that they had stopped doing because of the pandemic. While experts learn more about the protection that COVID-19 vaccines provide under real-life conditions, the CDC will update its guidelines frequently.

Please visit: https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated.html to see the most current guidelines about what fully-vaccinated people can do.

## Where can I learn more about the COVID-19 Vaccines?

For current and accurate information about the COVID-19 vaccines visit:

- Michigan Medicine: COVID-19 Vaccine Information and Update: https://www.uofmhealth.org/coronavirus/vaccine-info-update
- CDC: COVID-19 Vaccines: https://www.cdc.gov/coronavirus/2019-ncov/vaccines
- FDA Pfizer-BioNTech COVID-19 vaccine Frequently-Asked-Questions https://tinyurl.com/yaqwyjam
- FDA Moderna COVID-19 vaccine Frequently-Asked-Questions https://tinyurl.com/7w3t7pp8



Adapted from:
CDC: COVID-19 Vaccines. Access at: https://www.cdc.gov/coronavirus/2019-ncov/vaccines
Approved by: COVID19 Vaccine Patient Education/Communication Workgroup