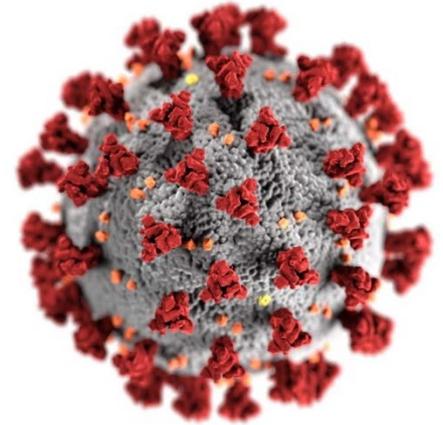


# COVID-19 Vaccine Basics: What Healthcare Personnel Need to Know

Presentation developed by:  
CDC COVID-19 Response  
Vaccine Task Force  
December 2020



Vaccinate with **Confidence**

[cdc.gov/coronavirus](https://cdc.gov/coronavirus)

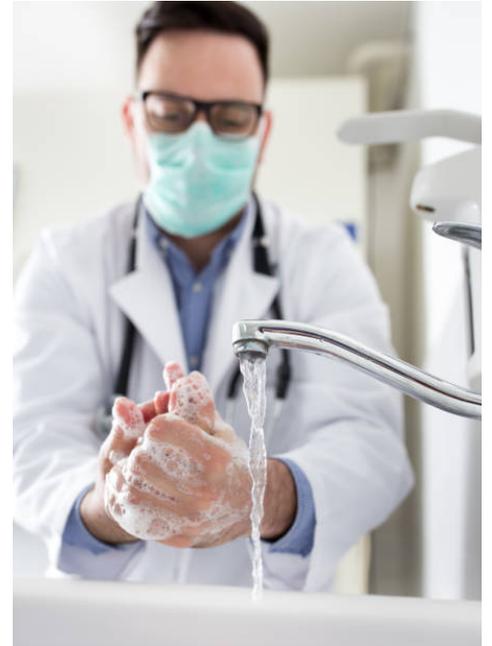
# What we know about COVID-19

- Infection with SARS-CoV-2, the virus that causes COVID-19, can result in a range of illnesses, from mild symptoms to severe illness and death.
- We don't know how SARS-CoV-2 will affect each person.
- Some people are more likely than others to become severely ill, such as older adults (65+ years) or people with certain medical conditions.



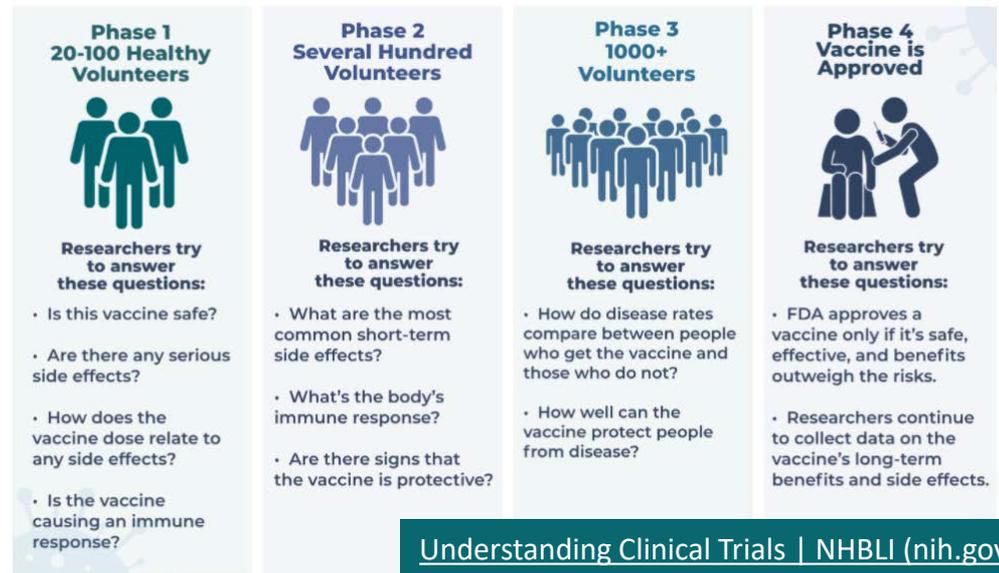
# How to prevent COVID-19

- Wear a mask that covers your mouth and nose.
- Avoid close contact with others. Stay at least 6 feet (about 2 arms' length) from other people.
- Avoid touching your eyes, nose, and mouth with unwashed hands.
- Clean and disinfect frequently touched surfaces daily.
- Wash hands often with soap and water.
- Use an alcohol-based hand sanitizer with at least 60% alcohol if soap and water are not available.

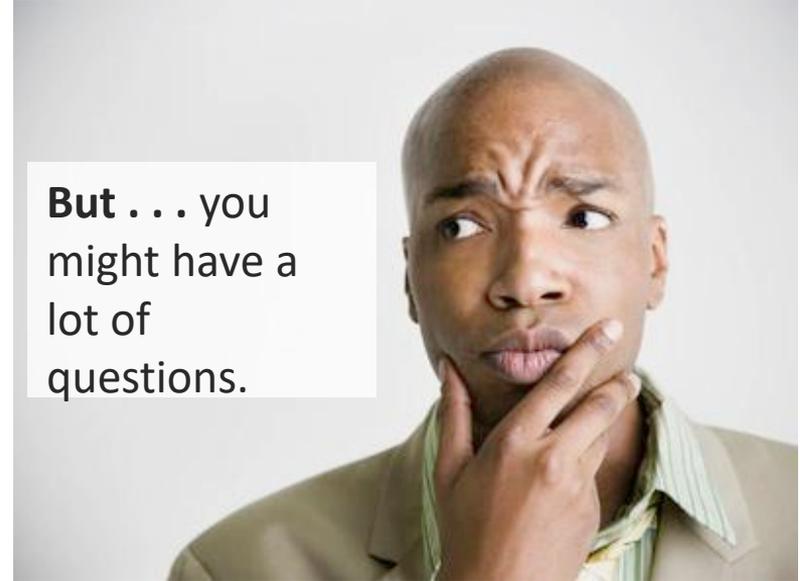


# Adding new measures for prevention: COVID-19 vaccines

- Multiple COVID-19 vaccines are in development, several of which are in large scale (Phase 3) trials.
- FDA's Emergency Use Authorization is a process that helps facilitate the availability and use of medicines and vaccines during public health emergencies, such as the current COVID-19 pandemic.
- COVID-19 vaccines are being held to the **same safety standards** as all vaccines.



# Healthcare personnel are first in line for COVID-19 vaccine



# COVID-19 vaccines expected to receive FDA Emergency Use Authorizations (EUAs)

- Two vaccines expected to receive Emergency Use Authorizations (EUAs) from the FDA:
  - **Pfizer/BioNTech (BNT162b2)**: 2 doses given at least 21 days apart
  - **Moderna (mRNA-1273)**: 2 doses given at least 28 days apart
- Both vaccines were tested in tens of thousands of adults from diverse backgrounds, including older adults and communities of color.
- Clinical trial data show that both vaccines are safe and effective at preventing COVID-19.
- It is unknown how long protection from vaccines might last.

Sources: <https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-conclude-phase-3-study-covid-19-vaccine>  
<https://investors.modernatx.com/news-releases/news-release-details/modernas-covid-19-vaccine-candidate-meets-its-primary-efficacy>

# COVID-19 vaccine trials by the numbers

As of November 30, 2020

## Pfizer/BioNTech

- **43,931** enrolled
- **150** clinical sites
  - **39** U.S. states
- Racial/ethnic distribution
  - **13%** - Hispanic
  - **10%** - African American
  - **6%** - Asian
  - **1%** - Native American
- **45%** ages 56-85

## Moderna

- **30,000** enrolled
- **89** clinical sites
  - **32** U.S. states
- Racial/ethnic distribution
  - **20%** - Hispanic
  - **10%** - African American/Black
  - **4%** - Asian
  - **3%** - All others
- **64%** ages 45 and older
  - **39%** ages 45-64
  - **25%** ages 65+

Source: <https://www.pfizer.com/science/coronavirus/vaccine>; <https://www.modernatx.com/cove-study>

For more information, visit [www.clinicaltrials.gov](http://www.clinicaltrials.gov)

# These COVID-19 vaccines are mRNA vaccines.

- mRNA vaccines teach our cells how to make a harmless piece of the “spike protein” for SARS-CoV-2.
  - After the protein piece is made, the cell breaks down the instructions (the mRNA) and gets rid of them.
- Cells display this piece of spike protein on their surface, and an immune response is triggered inside our bodies. This produces antibodies to protect us from getting infected if the SARS-CoV-2 virus enters our bodies.
- mRNA vaccines do not use the live virus that causes COVID-19. They **CANNOT** give someone COVID-19.
- mRNA vaccines **DO NOT** affect or interact with our DNA in any way.

# About these COVID-19 mRNA vaccines

- These mRNA vaccines are expected to produce side effects after vaccination, especially after the 2nd dose.
- Side effects may include:
  - fever
  - headache
  - muscle aches
- 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.



# Fast-tracking COVID-19 vaccines while ensuring safety

- Researchers used existing networks to conduct COVID-19 vaccine trials.
- Manufacturing began while clinical trials are still underway. Normally, manufacturing doesn't begin until after completion of the trials.
- mRNA vaccines are faster to produce than traditional vaccines.
- FDA and CDC are prioritizing review and authorization of COVID-19 vaccines.

\*For more information, visit the COVID-19 Prevention Network:  
[www.coronaviruspreventionnetwork.org/about-covpn](http://www.coronaviruspreventionnetwork.org/about-covpn)

# Safety of COVID-19 vaccines is a top priority.

- COVID-19 vaccines are being held to the **same safety standards** as all vaccines.



## Before authorization

- **FDA** carefully reviews all safety data from clinical trials.
- **ACIP** reviews all safety data before recommending use.



## After vaccine authorization

- **FDA** and **CDC** closely monitor vaccine safety and side effects.

# Monitoring vaccine safety is a regular, ongoing part of vaccine development.

- **Existing** systems and data sources are used to monitor safety of vaccines after they are authorized or licensed, such as:
  - [Vaccine Adverse Event Reporting System \(VAERS\)](#)
  - [Vaccine Safety Datalink \(VSD\)](#)
  - [Clinical Immunization Safety Assessment \(CISA\)](#)
  - [Biologics Effectiveness and Safety System \(BEST\)](#)
- **New** systems are being developed to monitor vaccine safety, such as **v-safe**:
  - Active surveillance that uses text messaging to initiate web-based survey monitoring
  - Any clinically important events reported by a participant would be sent to VAERS for follow-up



# COVID-19 vaccination will help protect you from COVID-19.

## Getting a COVID-19 vaccine...



- Will help create an immune response in your body against the virus.
- May help keep you from getting severely ill, even if you do get COVID-19.



- Can protect your family, your coworkers, and patients.

# COVID-19 vaccination is a safer way to build protection.

- Getting the virus that causes COVID-19 may offer some natural protection, known as immunity. But experts don't know how long this protection lasts.
- The risk of severe illness and death from COVID-19 far outweighs any benefits of natural immunity.
- COVID-19 vaccination will help protect you by creating an antibody response without the risk of severe illness.



# Vaccination is one measure to help stop the pandemic.

- While COVID-19 mRNA vaccines appear to be highly effective, additional preventive tools remain important to limit the spread of COVID-19.
- The combination of getting vaccinated and following CDC recommendations to protect yourself and others offers the best protection from COVID-19.
  - Cover your nose and mouth with a mask.
  - Avoid close contact. Maintain social distancing.
  - Clean and disinfect.
  - Wash your hands.



## The facts:

# COVID-19 mRNA vaccines will not give you COVID-19.

- **None** of the COVID-19 vaccines in use or under development use the live virus that causes COVID-19.
- People can experience normal side effects, such as fever, after vaccination. These side effects are signs that the body is building immunity.
- It takes a few weeks for the body to build immunity after vaccination. A person could be infected with the virus that causes COVID-19 just before or just after vaccination and get sick. This is because the vaccine has not had enough time to provide protection.

## The facts:

# COVID-19 mRNA vaccines will not cause you to test positive on COVID-19 viral tests.

- Vaccines currently authorized for use or in development won't cause you to test positive on viral tests, which are used to see if you have a **current infection**.
- There is a possibility you may test positive on some antibody tests, which show **previous infection**. This would indicate that the vaccine likely triggered an immune response in your body and that you may have some level of protection against the virus.



## The facts:

**People who have gotten sick with SARS-CoV-2, the virus that causes COVID-19, may still benefit from vaccination.**

- People may be advised to get a COVID-19 vaccine even if they have already had the virus. This is because a person can become infected with the virus more than once.
- At this time, experts do not know how long someone is protected from getting sick again after recovering.



# What to expect before, during, and after COVID-19 vaccination

## ■ Before

- Learn about COVID-19 vaccines.
- See if COVID-19 vaccination is recommended for you.

## ■ During

- Read the fact sheet that tells you about the specific COVID-19 vaccine you receive.
- Receive a vaccination record card.

## ■ After

- With most COVID-19 vaccines, you will need two shots.
- Expect some side effects.
- Enroll in v-safe.
- Continue using all the measures to protect yourself.

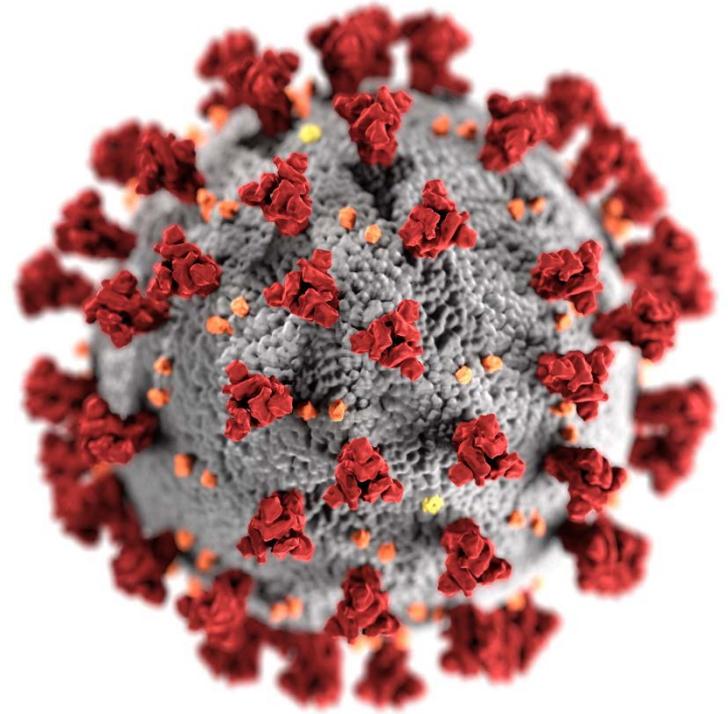
# Protect yourself, your family, friends, coworkers, patients, and community. Get vaccinated.

- Choose to get vaccinated yourself when it is available to you.
- Participate in **v-safe** and help CDC monitor for any health effects after vaccination.
- Share your experience with coworkers, friends, and family.
- Know the basics about the COVID-19 vaccine.  
Help answer questions from your family and friends.
- Visibly show you received a vaccine, such as by wearing a sticker or button.



# Learn more!

The image is a screenshot of the CDC website's 'Vaccines' page for COVID-19. At the top left is the CDC logo with the text 'Centers for Disease Control and Prevention' and 'CDC 24/7. Saving Lives. Protecting People™'. To the right is a search bar with 'COVID-19' entered and a search icon. Below the search bar is a banner for 'Coronavirus Disease 2019 (COVID-19)' featuring a row of six people wearing face masks and the text 'WEAR A MASK.'. A navigation menu below the banner includes 'Your Health', 'Community, Work & School', 'Healthcare Workers & Labs', 'Health Depts', 'Cases & Data', and 'More'. The main content area is titled 'YOUR HEALTH' and 'Vaccines', with a sub-header 'Updated Nov. 20, 2020' and social media icons for Facebook, Twitter, LinkedIn, and YouTube. A large image shows a healthcare worker in a white coat and blue mask administering a vaccine to a woman in a pink shirt and black mask. A text box overlaid on the image reads: 'Safety Is a Top Priority. The U.S. vaccine safety system ensures that all vaccines are as safe as possible. [Learn more.](#)' On the left side, there is a sidebar menu with 'Your Health' at the top, followed by 'Things You Need to Know', 'Symptoms', 'Testing', and 'Vaccines' (which is highlighted). Under 'Vaccines', there are links for '8 Things to Know', 'About COVID-19 Vaccines', 'Facts about COVID-19 Vaccines', 'How CDC is Making Vaccine Recommendations', 'Ensuring the Safety of Vaccines', and 'Ensuring COVID-19 Vaccines W...'. At the bottom of the page, a dark blue banner contains the URL: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/index.html>



For more information, contact CDC  
1-800-CDC-INFO (232-4636)  
TTY: 1-888-232-6348 [www.cdc.gov](http://www.cdc.gov)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

