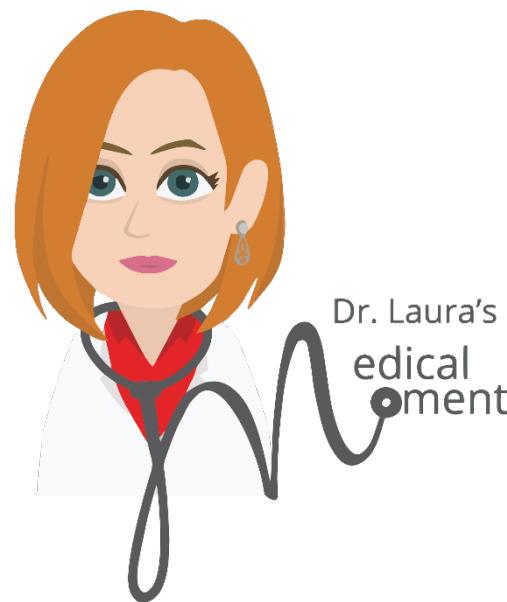


Well Aware: Practical Tips for the Developmental Disability Community During the COVID-19 Pandemic

Presented by: Dr. Laura Sorg
DODD Medical Director



Part Three: *Myths and Facts* COVID 19 Vaccine



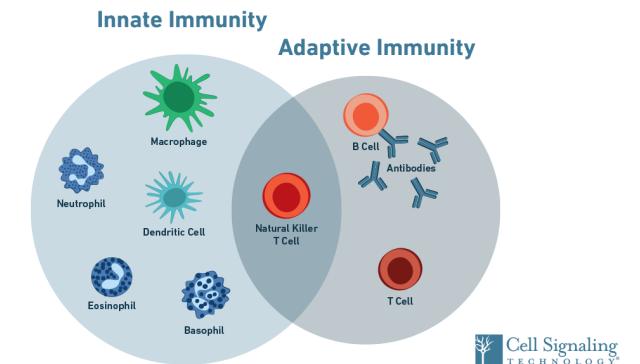
-Before We Begin....A Word of Caution:

- Remember to talk to your doctor if you have specific questions regarding your health status and vaccination
- By and Large, MOST people should be vaccinated for COVID -19. There are FEW people who should not receive the vaccine.



What Is Our Immune System?

- Every day, we are constantly exposed to potentially harmful microbes of all sorts.
- Our immune system helps to protect us against these harmful microbes as well as certain diseases.
- It recognizes foreign invaders like bacteria, viruses, and parasites and takes immediate action.
- Humans possess two types of immunity: innate and adaptive.

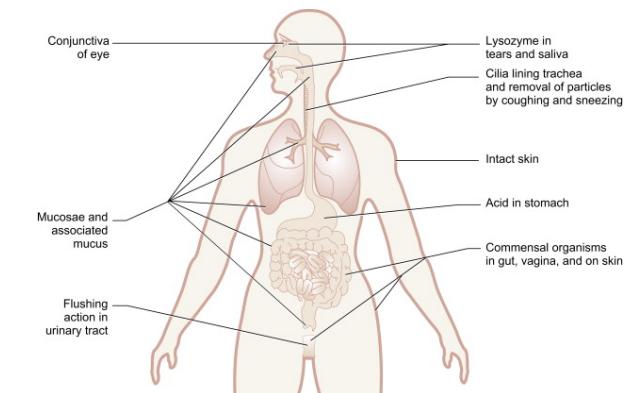


Innate Immunity is a first-line defense from things like viruses that try to enter our bodies.

This is achieved through protective barriers.

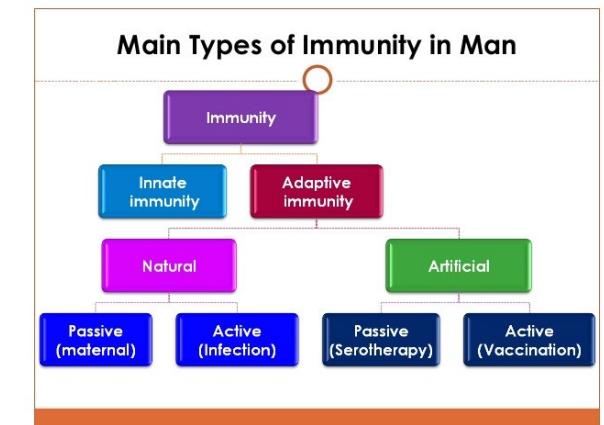
These barriers include:

- Skin that keeps out the majority of pathogens
- Mucus that traps particles
- Stomach acid that destroys the bad guys
- Enzymes in our sweat and tears that help create anti-bacterial compounds
- Immune system cells that attack all foreign cells entering the body



Adaptive or Acquired Immunity

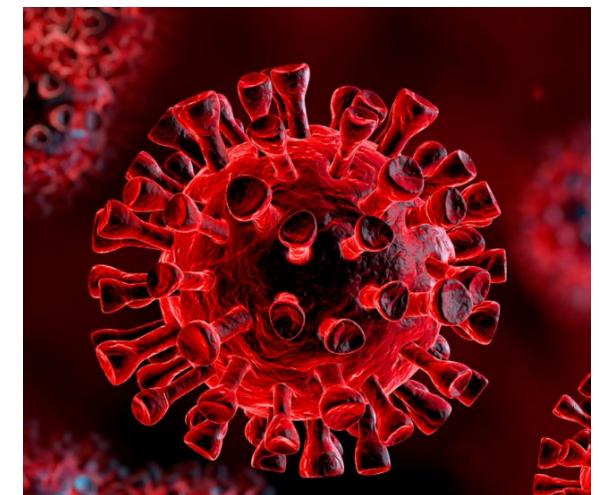
- This is a system that learns to recognize a pathogen (or bad guy).
- It is regulated by cells and organs in our body like the spleen and lymph nodes.
- When a foreign substance enters the body, these cells and organs create antibodies.
- Our immune system then adapts by remembering the foreign substance so that if it enters again.
- These antibodies and cells are even more efficient and quick to destroy it..... Enter vaccines!!!



Let's Talk Briefly about COVID 19:

What is COVID-19?

- It is a short way of saying Coronavirus Disease 2019 (aka Sars-CoV2).
- Its nickname is Coronavirus or COVID.
- It is a terrible virus making people sick all around the world.
- Getting this virus is bad for you.



What is a vaccine?

- A vaccine is a way for your body to make immunity without getting COVID.
- This is a form of Adaptive Immunity.
- It usually comes in a shot.
- It protects you from getting sick.
- Each vaccine typically protects you from one illness.
- For example, the flu vaccine protects you from getting the flu. The COVID-19 vaccine protects you from getting COVID 19.



There are multiple companies manufacturing vaccines for COVID 19

So far, in the US, two companies have received an Emergency Use Authorization(EUA) from the FDA for this vaccine.

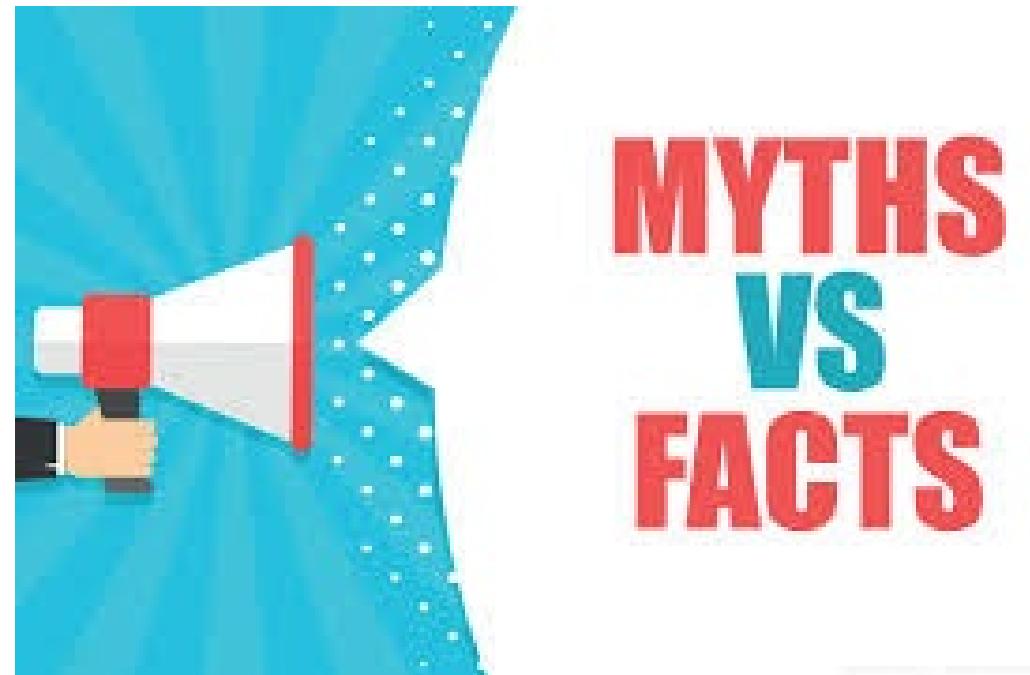
Moderna and Pfizer are the two major manufacturers.

Both companies have produced a safe, effective vaccine.

The vaccine showed 50% protection after one shot and 94% protection after two shots!



Myths vs Facts: COVID 19 Vaccine



Myth: COVID-19 vaccines aren't safe.

FACT: COVID-19 vaccines are safe and effective.

- Safety is a top priority.
- The development process for COVID-19 vaccines had many steps. NO STEPS WERE SKIPPED.
- These steps were comparable with those used to develop other vaccines such as the flu or measles vaccine.
- These vaccines have successfully protected millions of Ohioans for decades.
- The FDA, as well as independent medical experts, have ensured that EVERY detail of COVID-19 vaccines is thoroughly and rigorously evaluated.

-Evidence shows that COVID-19 vaccines are safe and work to prevent COVID-19.

-Of the first two vaccines to be granted FDA emergency use authorization:

[Pfizer BioNTech vaccine was 95% effective](#)

[Moderna vaccine was 94% effective](#)

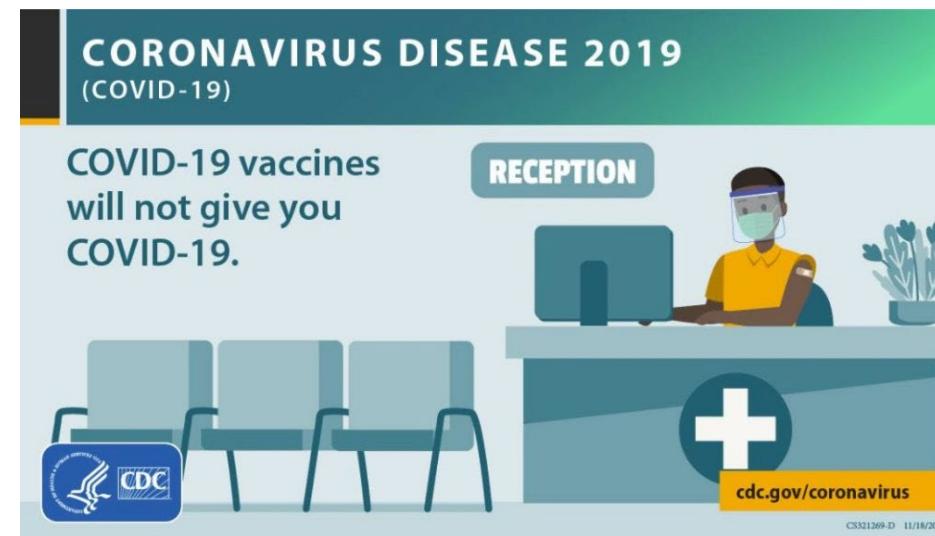
-More than 70,000 participants received the vaccine in phase 3 clinical trials

-These individuals were from a variety of ages, ethnicities and had a variety of health conditions.

-Although the COVID-19 vaccines themselves have been developed recently, the technology used in mRNA vaccines has been studied for decades.

Safety

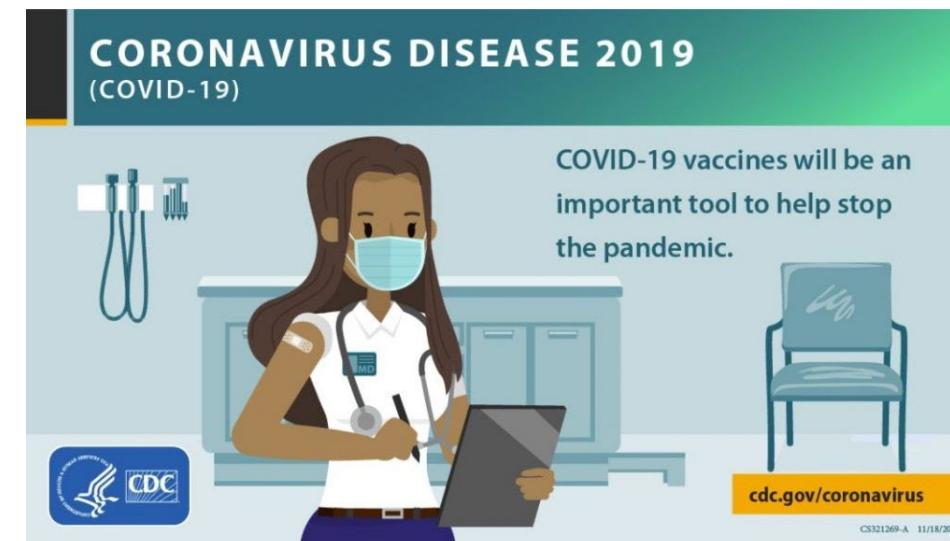
- NOT made out of live pathogens
 - NOT infectious
 - You cannot catch COVID from these vaccines
- The mRNA does NOT integrate into your genome or DNA
 - The mRNA in the vaccine lasts up to 24 hours in the body, it's then broken down
- Not made from eggs



Myth: COVID-19 vaccines were rushed and developed too quickly.

FACT: COVID-19 vaccine development and clinical trials were thorough.

Thanks to a strategic scientific effort to streamline processes, could be developed more efficiently.



- There have been **NO** shortcuts in the vaccine development process.

- The process has been quicker as a result of strategic efforts.
- Phases 1, 2 and 3 were run concurrently (or at the same time).
- This meant that scientists could reduce or eliminate months-long waiting periods during which documents would be prepared or be waiting for review.
- In addition, during the process of vaccine development, the CEOs of nine major vaccine companies pledges to work together to find a vaccine to help fight COVID.
- They worked together instead of competing against one another.



Messenger RNA (mRNA), used by the first two vaccines to receive FDA emergency use authorization while new, is **NOT** unknown.

Researchers have been studying mRNA since at least 1990.

Early-stage clinical trials using mRNA vaccines have been carried out for Influenza, Zika, Rabies, and cytomegalovirus (CMV) since 2006.

Recent advancements in science have allowed these COVID-19 vaccines using mRNA to be developed as safe and effective vaccines.

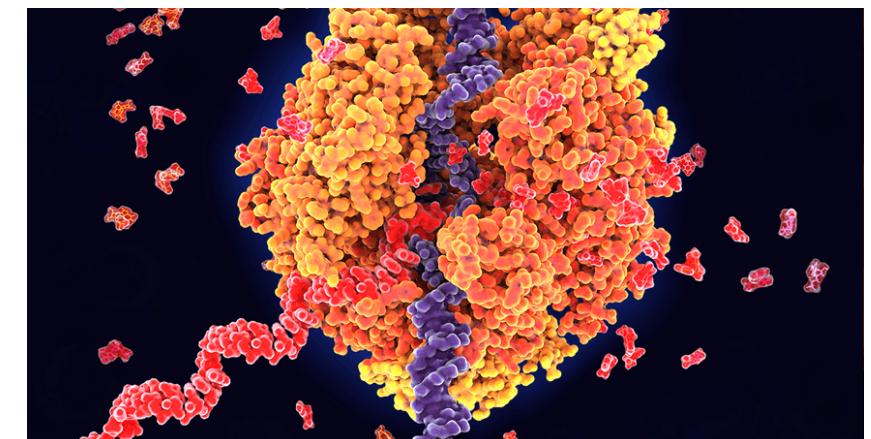


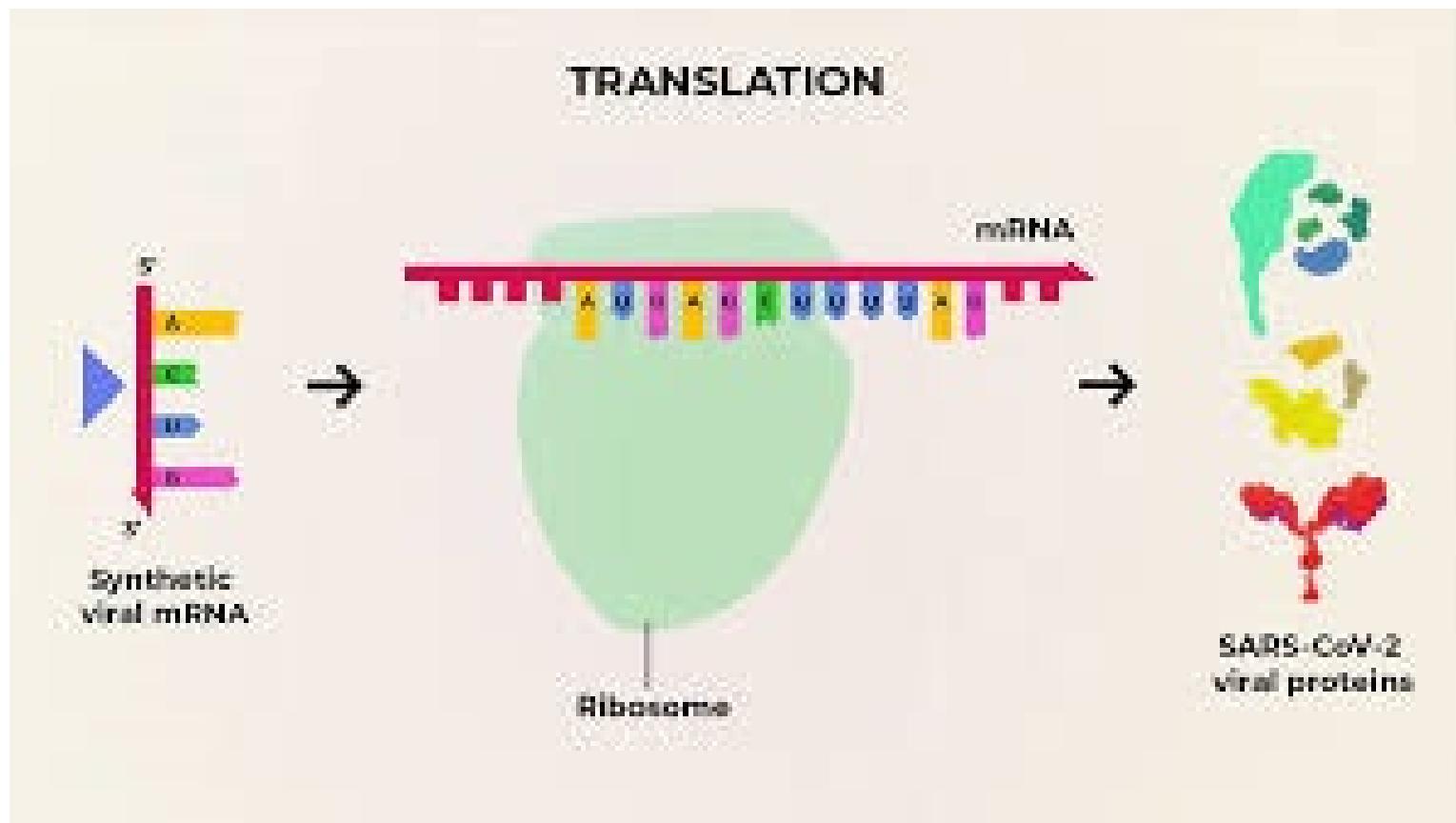
Myth: Vaccines that use mRNA will alter my DNA or genetic makeup.

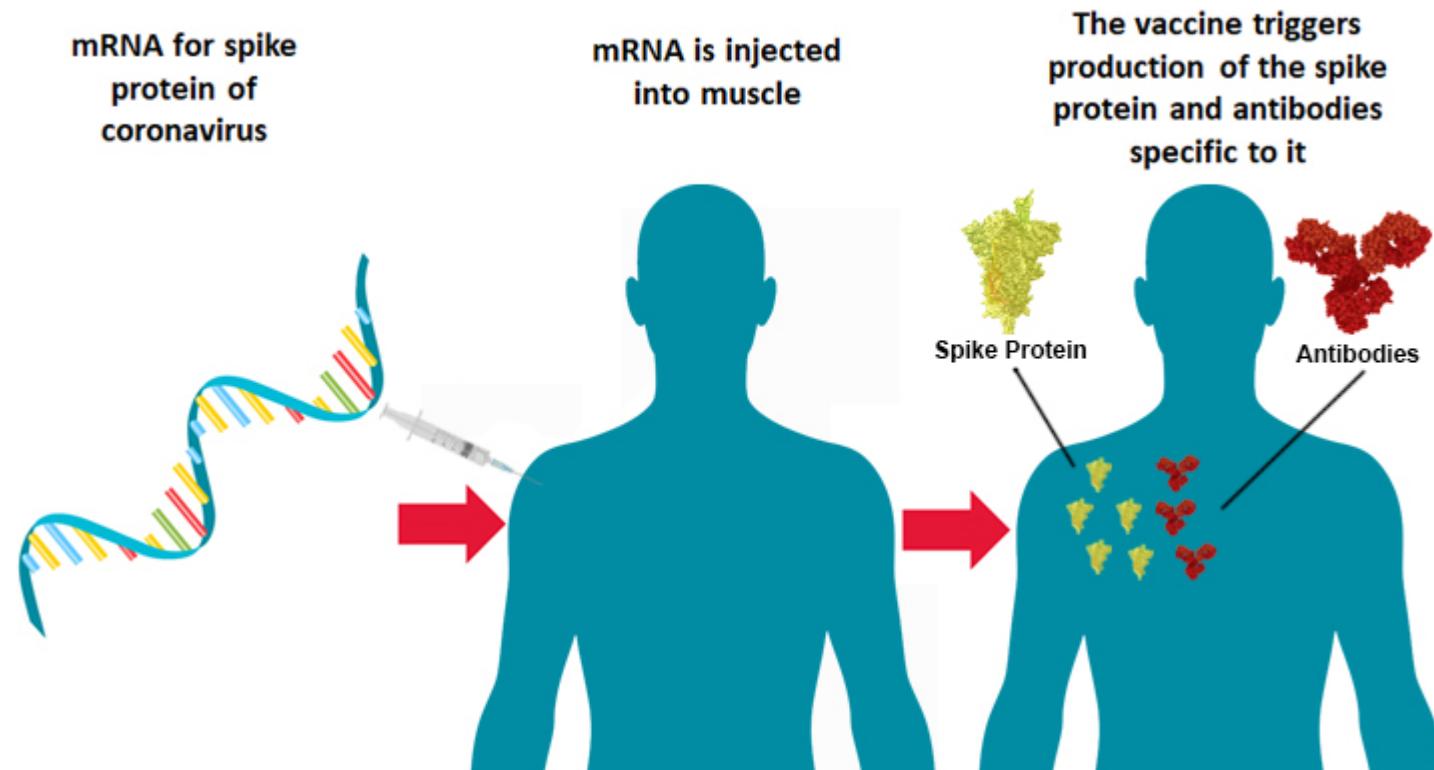
FACT: Receiving an mRNA vaccine will not alter your DNA.

-Messenger ribonucleic acid, or mRNA, is **NOT** able to alter or modify a person's genetic makeup (DNA).

-The mRNA from a COVID-19 vaccine never enters the nucleus of the cell, which is where your DNA is kept, and therefore does NOT affect or interact with your DNA in any way.

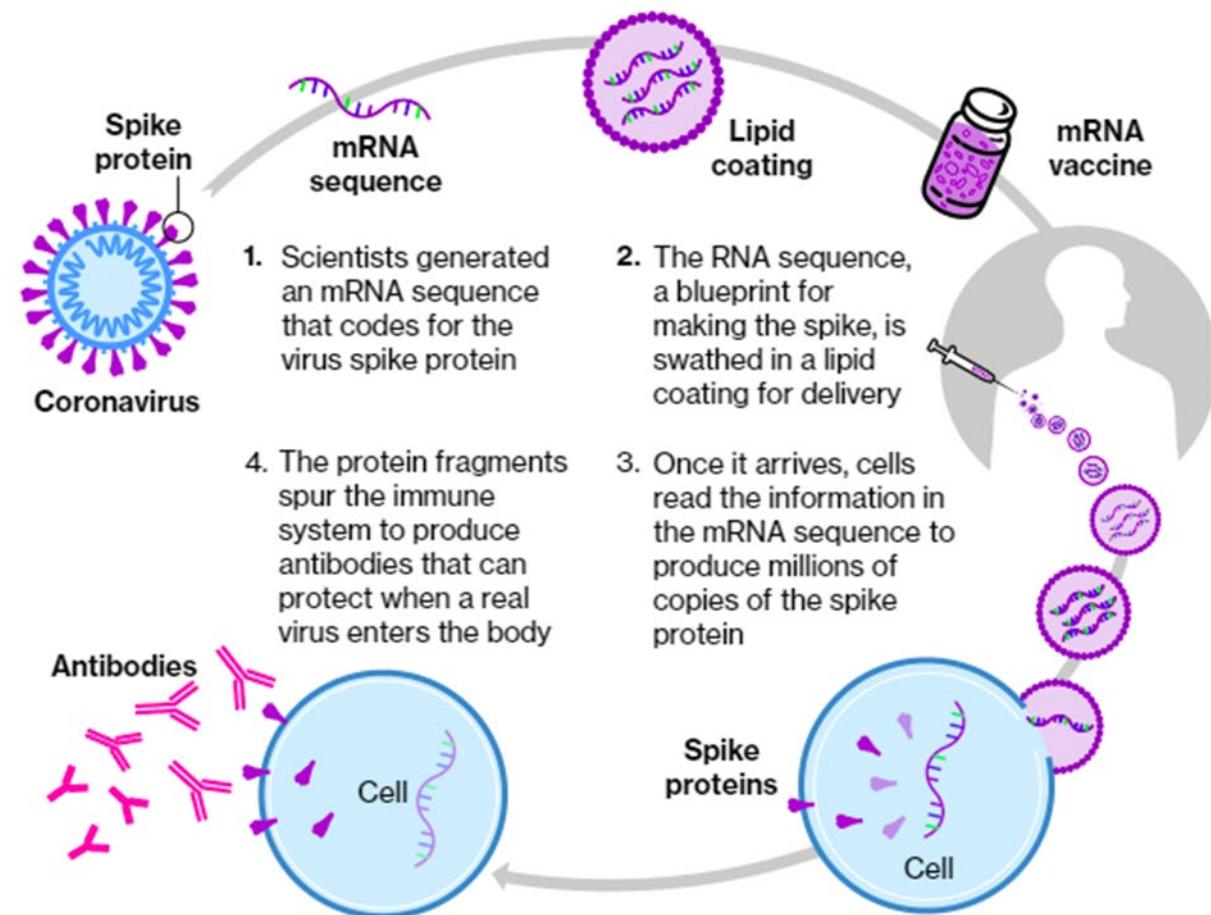






What is mRNA?

- The mRNA from COVID-19 vaccines can most easily be described as a set of instructions for your body .
- It tells your body to make a harmless piece of “spike protein”.
- This allows our immune systems to recognize that this protein doesn’t belong there.
- We can then begin building an immune response and making antibodies.
- COVID-19 vaccines that use mRNA work with the body’s natural defenses to safely develop immunity to the virus.
- Basically, the vaccine gives your cells a blueprint or instructions on how to make antibodies against the virus.



Sources: Pfizer, Bloomberg research

Myth: COVID vaccines aren't effective

FACT: COVID vaccines are VERY effective

- Early trial have shown these vaccines generate a reliable immune response
- They have also been generally well-tolerated by individuals
- Both have shown to be about 95% effective at preventing COVID-19 infection in pre-clinical data
- One part of the Moderna study showed 100%!!!
- We won't know how long the vaccine immunity will last until we gather more data



Myth: The COVID vaccine will 'give' you COVID

Fact: The vaccine is not a 'live' vaccine so cannot give you the virus

What could you expect from getting the vaccine?

- Possible side effects: low grade fever, muscle pain, joint pain, headache, nausea, fatigue
- These occurred more frequently when compared to the flu vaccine, the second dose has more side effects – it indicates that the vaccine is working
- Our bodies can mount these 'side effects' when we are building immunity to something
- Acetaminophen or ibuprofen can help with side effects.

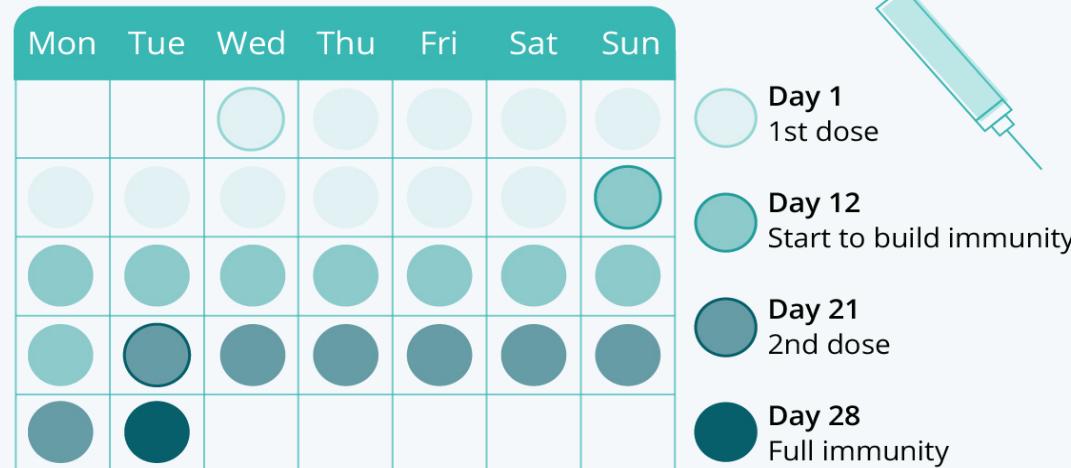


- These symptoms are normal and are a sign that the body is building immunity.
- It typically takes a few weeks for the body to build immunity after vaccination, and the vaccines available require two doses.
- That means it is possible that a person could be infected with the virus that causes COVID-19 just before, or just after, getting the vaccination.
- It takes the vaccine time to provide protection.



The Pfizer/BioNTech Vaccination Process

Vaccination process for the Pfizer/BioNTech Covid-19 BNT162b2 vaccine



Source: Pfizer/BioNTech via BBC



Myth: If I have recovered from COVID-19, I don't need to get the COVID-19 vaccine.

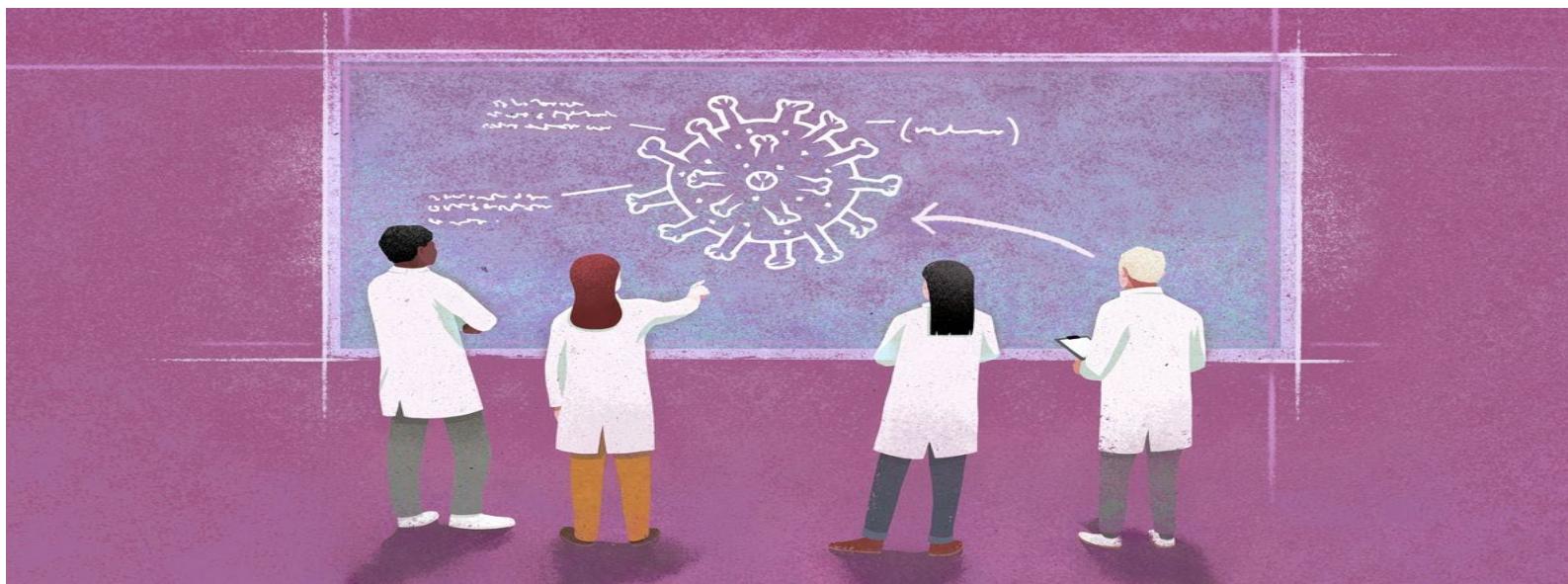
FACT: People who have recovered from COVID-19 should still get vaccinated. You CAN get COVID again.

-At this time, experts do not know how long someone is protected from getting sick again after recovering from COVID-19.

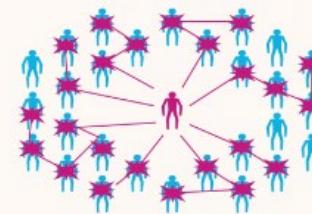
-Due to the severe health risks associated with COVID-19, and because re-infection with COVID-19 is possible, people may be advised to get a COVID-19 vaccine even if they have been sick with COVID-19 before.



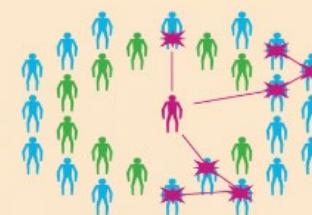
- The immunity someone gains from having an infection, called natural immunity, varies from person to person.
- Both natural immunity and vaccine-induced immunity are important aspects of COVID-19 that experts are trying to learn more about.
- To reach Herd Immunity against COVID-19, experts state vaccination is very much needed.



HOW HERD IMMUNITY WORKS



When no one has immunity, contagion has many opportunities to spread quickly.



The more immunity we have in the system, the less often contagion comes into contact with the susceptible.



Spread of contagious disease is contained.

Visualizing herd immunity

If enough people have immunity, the virus is less likely to spread because the few who aren't immune are less likely to come in contact with someone who is infected.

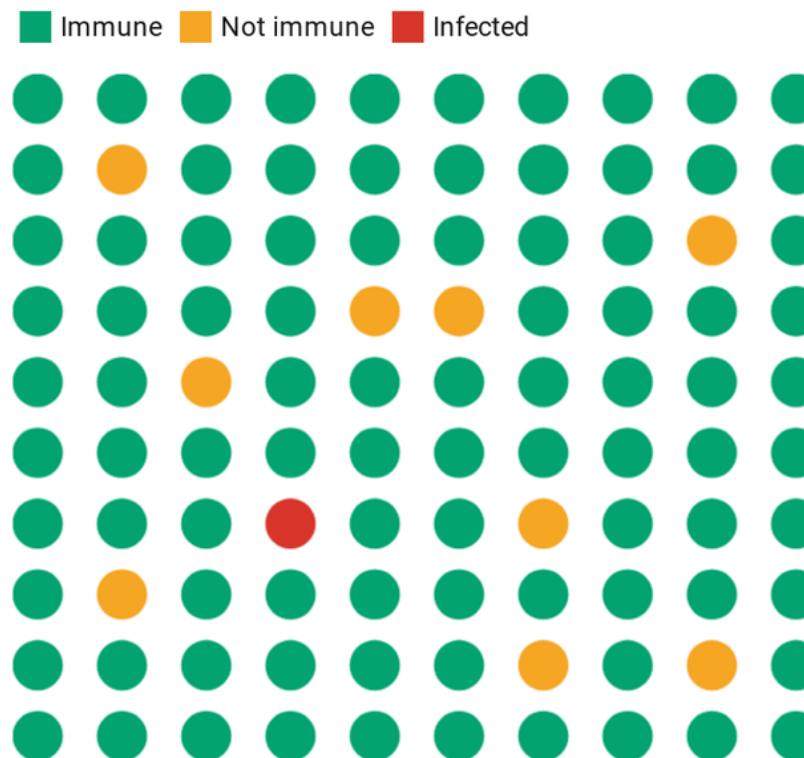


Chart: The Conversation, CC-BY-ND • Source: Sara Krehbiel

Myth: I am young and healthy, why should I get a vaccine to stop the pandemic?

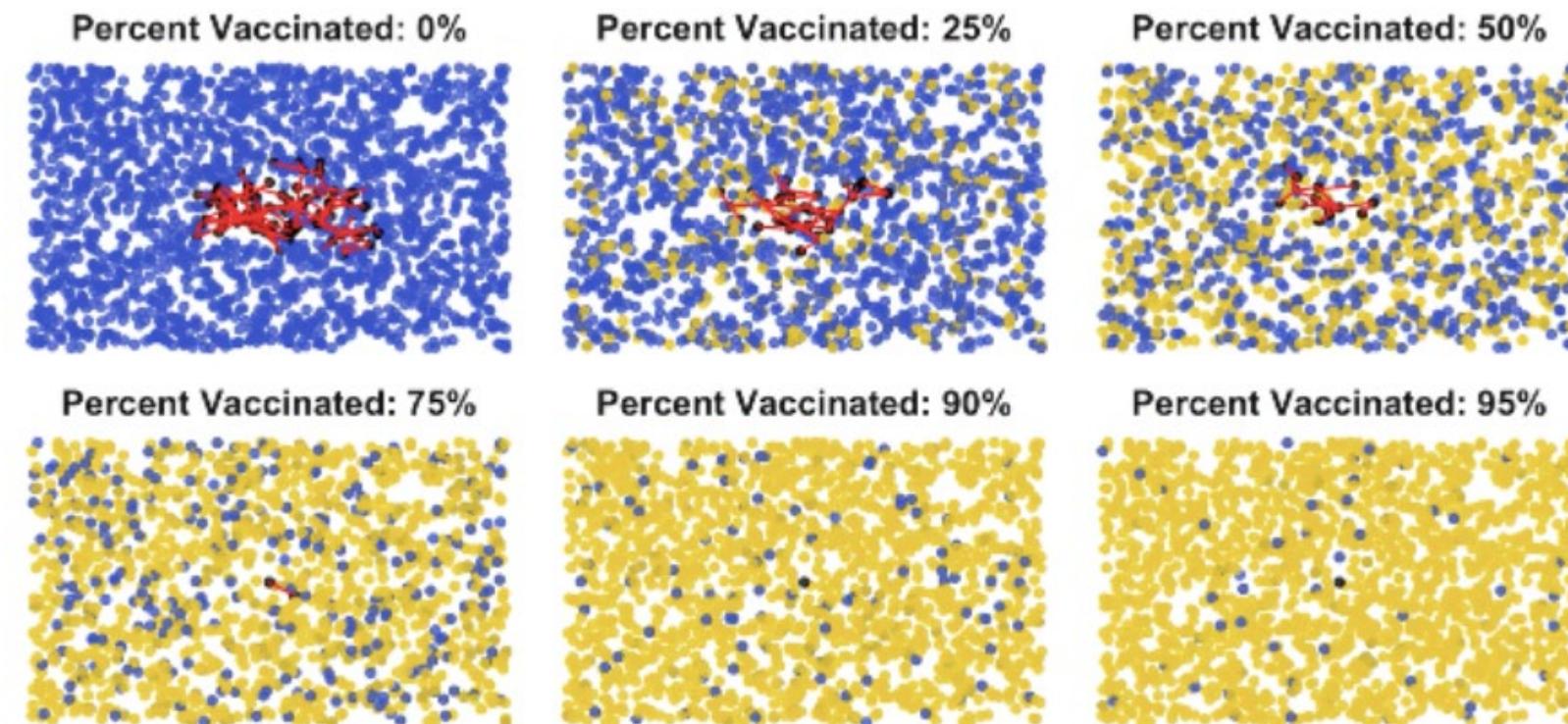
FACT: COVID knows no bounds, age or race.

- Viruses mutate
- New mutations from England and South Africa have been identified
- The new mutation from England has been identified as 70% more infectious. It has been identified in Ohio.
- There seem to be more children getting this variant thus far



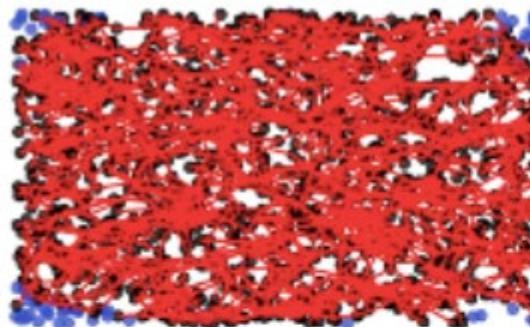
The difference a vaccine can make in this Pandemic.....

If we had a vaccine when COVID first started.....

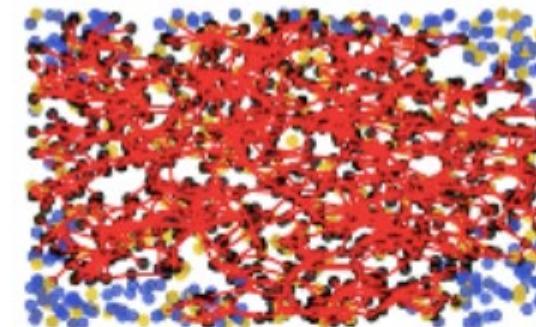


Where we would be projected at this point during the pandemic....

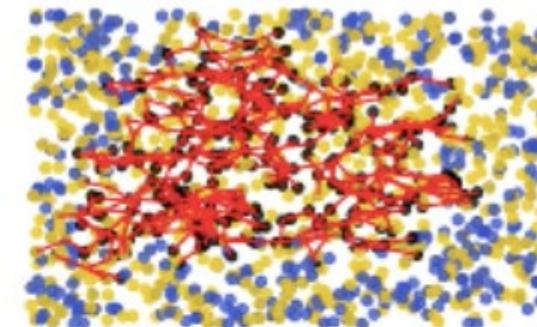
Percent Vaccinated: 0%



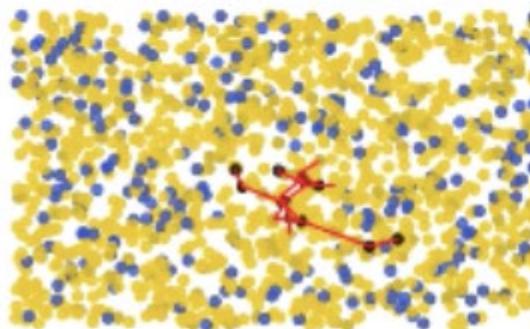
Percent Vaccinated: 25%



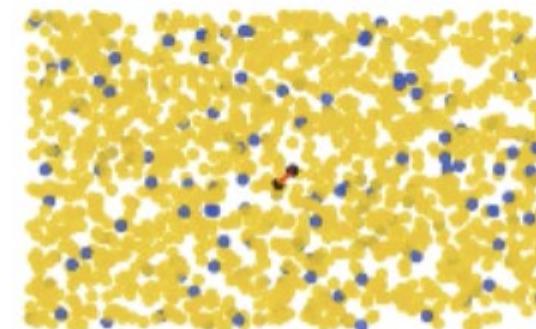
Percent Vaccinated: 50%



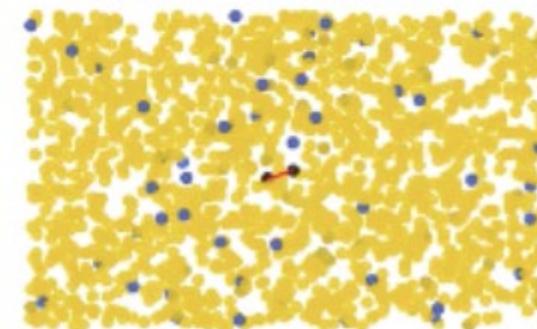
Percent Vaccinated: 75%



Percent Vaccinated: 90%

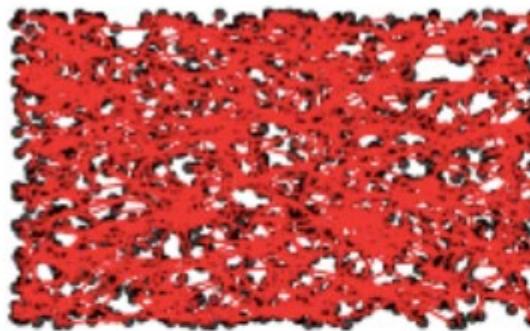


Percent Vaccinated: 95%

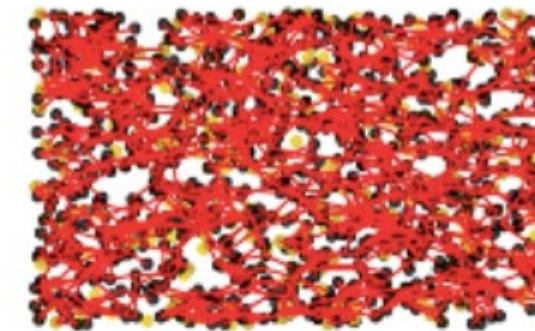


Where we will be depending on vaccination efforts in 2021.....

Percent Vaccinated: 0%



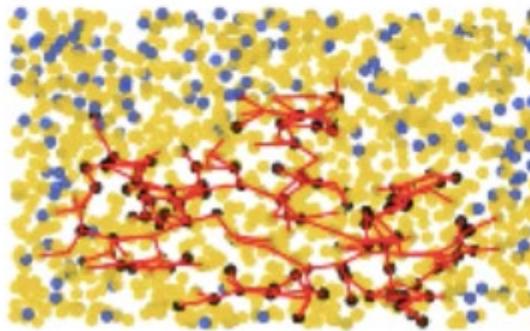
Percent Vaccinated: 25%



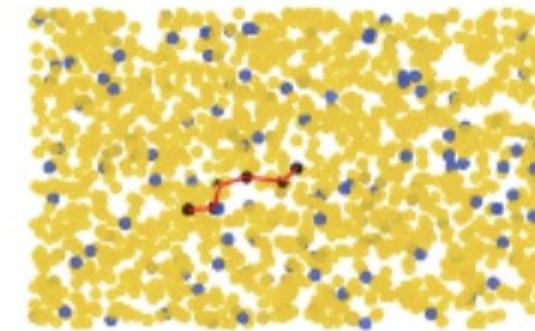
Percent Vaccinated: 50%



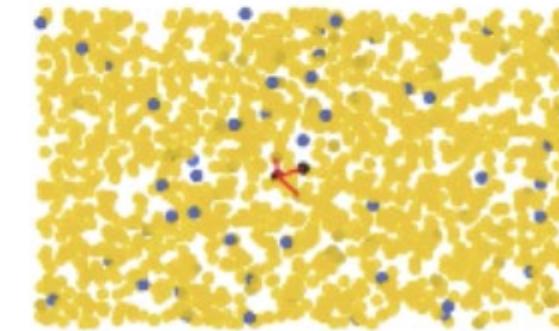
Percent Vaccinated: 75%



Percent Vaccinated: 90%



Percent Vaccinated: 95%



Ohio's Vaccination Program

A Phased Approach

**During Phase 1
vaccine supply will
be limited.**

Vaccine administration will
be focused on reaching
critical groups.

PHASE 1A



- Health care workers and personnel, who are routinely involved with the care of COVID-19 patients
- Residents and staff at nursing homes
- Residents and staff at assisted living facilities
- Patients and staff at state psychiatric hospitals
- People with developmental disabilities and those with mental health disorders, including substance use disorders, who live in group homes, residential facilities, or centers and staff at those locations
- Residents and staff at our Ohio veterans homes
- EMS responders

All available vaccines will be administered to those who choose to receive it.



MIKE DEWINE
GOVERNOR OF OHIO

Ohio

Department
of Health

coronavirus.ohio.gov



Ohio's Vaccination Program – A Phased Approach

During Phase 1
vaccine supply
will be limited.

Vaccine
administration
will be focused on
reaching critical
groups.

PHASE 1B



GOAL: Save Lives

- Ohioans age 65 and older
- Those living with severe congenital, developmental, or early-onset medical disorders

GOAL: In-Person School by March 1st

- Adults who work in schools

All available vaccines will be administered to those who choose to receive it.



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Estimates of COVID-19 Vaccine **Phase 1B** populations across Ohio



Ohio | Department
of Health

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Population	Est. Population
Ages 85+	~ 220,000
Ages 75- 84	~ 580,000
Ages 65-74	~ 1,000,000
Severe, congenital, developmental or early-onset medical disorders	~ 77,000
K-12 teachers and staff	~ 334,000
Total	~ 2,211,000

Phase 1b Timeline:

- The week of Jan. 19: Ohioans 80 years of age and older.
- The week of Jan. 25: Ohioans 75 years of age and older; those with severe congenital or developmental disorders.
- The week of Feb. 1: Ohioans 70 years of age and older; employees of K-12 schools that wish to remain or return to in-person or hybrid models.
- The week of Feb. 8: Ohioans 65 years of age and older.



- DODD is thankful for the Ohio County Boards of Developmental Disabilities.
- They are currently working with county and local departments of health regarding vaccine allocation and distribution.
- Each county has been provided with a list of individuals in Category 1b.
- The County Boards of DD will NOT be administering the vaccine but will continue to work with local boards of health in this effort.
- DODD and DOH are constantly monitoring the vaccine initiative and have been working together with the Governor's office on this ongoing effort.

COVID-19 VACCINE

What you need to know



WHO SHOULD GET THE COVID-19 VACCINE?	It is highly recommended that all healthcare workers get vaccinated against COVID-19 when available.	
WHAT SIDE EFFECTS MAY OCCUR?	Like with many other vaccines, side effects are minimal. You may experience some pain and redness at the injection site. Other common side effects may include fatigue, fever, chills and headache. Most symptoms resolve within a day or sooner.	
HOW MANY DOSES DO I NEED?	2	Most COVID-19 vaccines require two doses to reach their full effectiveness, including the two currently being reviewed by the Food and Drug Administration (FDA).
IS THE COVID-19 VACCINE SAFE?	YES	Both COVID-19 vaccines were well tolerated in over 70,000 participants with no serious adverse events reported. The FDA requires close monitoring of all side effects during the trials and will continue monitoring for any safety event even once authorized for emergency use.
WILL THE COVID-19 VACCINE WORK?	YES	Both vaccines being reviewed by the FDA have shown to be greater than 94% effective in preventing a COVID-19 infection. The vaccine may also reduce your risk of getting a severe COVID-19 infection. This was seen across all ages, genders, races and ethnicities.

COVID-19 VACCINE

Vaccine Myths & Facts



<p><u>MYTH</u></p> <p>YOU CAN GET COVID-19 FROM THE VACCINE.</p>	<p>FACT: None of the COVID-19 vaccines currently in development in the United States use a live COVID-19 virus. This means there is nothing in the vaccine that can cause an infection. When your body responds to the vaccine, you may have a fever or other symptoms. This is NOT an infection, but your immune system working to protect your body against future infection. This is a common in many vaccines.</p>
<p><u>MYTH</u></p> <p>THE VACCINE WILL MAKE ME TEST POSITIVE FOR COVID-19.</p>	<p>FACT: None of the COVID-19 vaccines in development will make you test positive for a viral COVID-19 test. These are the tests that can tell if you have a current COVID-19 infection. If your body develops an immune response from the vaccine, you may test positive on an antibody test. These tests show if you have a previous infection and may have protection against the virus in the future.</p>
<p><u>MYTH</u></p> <p>THE COVID-19 VACCINE WILL CHANGE MY DNA.</p>	<p>FACT: Messenger Ribonucleic Acid, or mRNA, is not able to alter or modify your DNA. Your cells use mRNA as a template to build proteins outside of the cell nucleus where all your DNA is stored. A mRNA vaccine delivers instructions to your cell to make a harmless virus protein to tell your immune system to activate but will never enter the cell's nucleus. Once the protein is made, the vaccine mRNA is broken down by the cell.</p>
<p><u>MYTH</u></p> <p>SIDE EFFECTS FROM THE COVID-19 VACCINE ARE WORSE THAN THE INFECTION.</p>	<p>FACT: If you are infected with COVID-19, there is no way to know how bad your symptoms will be. If symptoms become severe, it may result in hospitalization or even death. Sometimes symptoms of a COVID-19 infection can last up to 3 months. To date, over 1.64 million people worldwide have died from COVID-19.</p> <p>Side effects may occur from the COVID-19 vaccine and may be like symptoms of a mild COVID-19 infection. These include headache, muscle ache and fever and will subside in a day or so. For most people, symptoms of COVID-19 will be worse and last longer than side effects from the vaccine.</p>