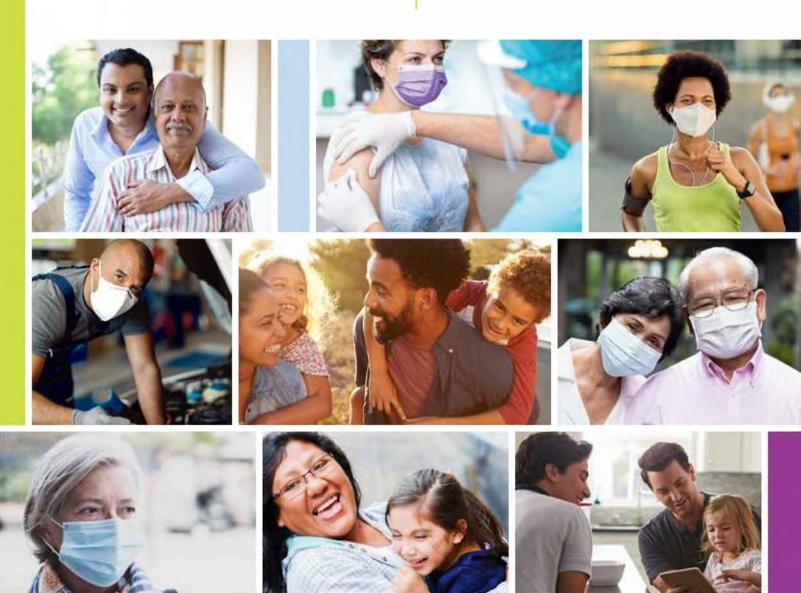
Better For It

Understanding Immunization and the COVID-19 Vaccines



Protecting Our Bodies & Our Communities



Power & Immunity

An informational guide for understanding immunization and the COVID-19 vaccine

How to Use This Guide

National vaccination initiatives in the United States support the critical work of achieving health equity for all Americans. While this guide in not intended to be a persuasive tool, it has been developed to provide families and individuals with the information they need to explore concerns, answer questions, and start a conversation about general immunization and the COVID-19 vaccine.

The information you'll find here is a brief compilation of the vast information provided by the Centers for Disease Control and Prevention (CDC), the U.S. Food and Drug Administration (FDA), and other credible sources. It also features trusted medical, governmental, and civic voices and celebrates their contributions in saving American lives.

Use this guide:

- to supplement your own research on the vaccines.
- to start a dialogue with your family members, friends, physician, faith advisor, and coworkers.
- to share accurate information on social media.
- to learn the contributions of diverse scientists and public health advocates who strive to bring this pandemic to an end.

The most influential voices are often those closest to you. Use this guide to help keep one another accountable as you seek out the best information for making personal and community health decisions.

Anthem
Foundation

From the
Beginning

A history of vaccines in the U.S.

4

How the Body Fights Disease

Understanding how viruses and vaccines work

5

The Need for Unity

Accelerating safe COVID-19 vaccines to meet new threats

When You've Been

7

24

Inside

Resources

ully Vaccinated	
accination Side Effects	12
esponding to Faith ommunities	13
ey Talking Points	15
nderstanding Clinical rials	17
ocial Media Shareables	21





Harold Wimmer

American Lung Association President & CEO

For the more than 36 million people in the U.S. who suffer from lung disease as well as communities of color who are at higher risk for experiencing complications of COVID-19, it is even more critical that we urgently work on reducing its impact. Our Association was founded on the principle of using education, advocacy and research to eradicate tuberculosis, and we will use those same principles to ensure our nation can address today's pandemic and is prepared for future lung infections like COVID-19.

From the Beginning

Nationwide immunization has its roots in other cultures. As smallpox ravaged Boston and the world in 1716, a West African slave known as Onesimus introduced the concept of inoculation to the U.S by sharing a practice from sub-Saharan Africa that could prevent the spread of the disease. This practice saved hundreds of lives and laid the foundation for the smallpox vaccine that followed 100 years later.

Scientists advanced studies in bacteriology in the 1930s, developing antitoxins and vaccines against killer diseases like diptheria, tetanus, typhoid, and many more. Through the mid-20th century, rapid advancements in vaccine research and techniques led to immunizations against polio and childhood diseases like measles, mumps, and rubella, and in more recent decades, vaccines that thwart Hib, hepatitis, chickenpox and shingles.

Public hesitancy in being vaccinated largely gave way to general acceptance as scientific data proved the effectiveness of immunizations against life-threatening diseases.

chickenpox, 9,000 hospitalizations

and 100 deaths prevented by

chickenpox vaccination in U.S.



single-dose COVID-19

vaccine.

Vaccines 1796 1885 1921 **Eradicate Deadly Edward Jenner** Louis Pasteur develops Albert Calmette successfully introduces smallpox rabies vaccine. tests first tuberculosis **Diseases** vaccine: WHO vaccine on humans. declares smallpox eradicated in 1980. 1985 1971 1953 1932 Haemophilus influenzae Type Maurice Hilleman Dr. Jonas Salk cures polio Pearl Kendrick creates whooping B (Hib) vaccine licensed. deploys the measles, with a vaccine. (Polio cough vaccine; followed by Placed on the recommended mumps, rubella (MMR) survives only in poorest, diptheria/pertussis/ tetanus (DPT) schedule in 1989. most marginalized vaccine in 1948. (160,000 lives vaccine. communities-WHO.) saved each year-Cleveland Clinic) 2006/ 1995 2020 2021 2017 Varicella (Chickenpox) vaccine First shingles vaccine, Food and Drug Administration Food and Drug Administration became available in the U.S. Each Zostavax, comes on (FDA) authorizes emergency (FDA) authorizes emergency year, more than 3.5 million cases of the market. In 2017, use of Pfizer and Moderna use of Johnson & Johnson's

vaccines against COVID-19.

(Virus globally claims 2+ million

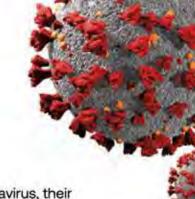
lives-Johns Hopkins University.)

second vaccine, Shingrix

licensed, providing a

more robust response.

How the Body Fights Disease



Whenever a person is exposed to or infected with germs such as a coronavirus, their body will make use of germ-fighting tools like white blood cells to fight the infection. After exposure, the person's immune system remembers how to protect the body against that particular disease should it encounter it again.

How Vaccines Work

There are several kinds of vaccines. Some contain the same germs that cause disease; however, the germs have been weakened or deadened. Others contain either a harmless part of the germ or its genetic material (such as the synthetic messenger RNA used for some COVID-19 vaccines).

A vaccine stimulates your immune system so that you produce the same antibodies you would make if you were exposed to the real disease. It helps your body learn to recognize and fight an invasion of a particular germ. Thus, you get to develop immunity to that disease without having to get the disease first.

Familiar Vaccines

You and your family may already be comfortable with many of the vaccines commonly accepted in the U.S. Vaccines are a vital part of preventing disease and maintaining a healthy population.

- Seasonal Flu
- Hepatitis A & B
- Human papillomavirus (HPV)
- Rabies

- Polio
- Measles, Mumps & Rubella (MMR)
- Tuberculosis (TB)
- Tetanus

- Whooping Cough
- Pneumonia
- Meningitis
- Smallpox
- Chickenpox

COVID-19 Vaccines

The chart below describes three of the various types of vaccines that are being explored for use or are already being distributed in the U.S. Currently, the Pfizer vaccine is approved by the FDA for ages 16+ and all three vaccines are recommended by the FDA: Pfizer-BioNTech (Comirnaty), Moderna, and Johnson & Johnson. They work by teaching the cells in the body to make a protein that is unique to the virus. This triggers an immune response and prepares your body in case you encounter the real virus. Messenger RNA vaccines do not use the live virus and do not interact with one's DNA. Neither vaccine contains preservatives, eggs or latex. Their inactive ingredients include oil, sugar, and salt.

Johnson & Johnson's COVID-19 vaccine uses a harmless modified version of a different virus, also known as a viral vector. A small piece of the genetic instructions with coronavirus genes for the SARS-COV-2 spike protein is added to the vector. After vaccination, the modified virus enters a person's cells which read and follow the genetic instructions needed to make the spike protein on their own surface. The immune system takes notice of these foreign proteins and makes antibodies against them that will protect the person if they are ever exposed to SARS-CoV-2 in the future.

Types of vaccines	DNA and RNA	Subunit	Viral vector
		AT.T	HOH
How it works	This vaccine uses DNA or RNA molecules to teach the immune system to target key viral proteins.	This vaccine uses a piece of a virus' surface to focus your immune system on a single target.	This approach takes a harmless virus and uses it to deliver viral genes to build immunity.
Advantages	Easy and quick to design.	Focuses the immune response on the most important part of the virus for protection and cannot cause infection.	Live viruses tend to elicit stronger immune responses than dead viruses or subunit vaccines.
Disadvantages	Never been done before. There are no licensed DNA or RNA vaccines currently in use.	May not stimulate a strong response, other chemicals may need to be added to boost long-term immunity.	Important to pick a viral vector that is truly safe. An immune response to the viral vector could make the vaccine less effective.
Existing examples	• None	Pertussis Hepatitis B Human papillomavirus (HPV)	Ebola Veterinary medicine
Group testing this approach for COVID-19	Moderna (RNA) Inovio (DNA) Pfizer (RNA)	Novavax AdaptVac	University of Oxford & AstraZeneca CanSino Biologics Johnson
Sources: CDC; NIAID; FI	DA	MICHELLE GUERRER	O and JONATHAN WOSEN U-T

United Against COVID-19

Before the COVID-19 vaccines, the fastest vaccine ever developed was for mumps and took 4 years. This has given many pause about the rapid production of the COVID-19 vaccines. Fortunately, the method for the vaccines' speedy development was scientific and ethical. Here is how the vaccines were "fast-tracked":

Strong Head Start

It's important to understand that since COVID-19 is a member of the coronavirus family, scientists benefited from existing data and years of vaccine research that began with SARS (2002) and MERS (2012). These viruses laid the groundwork so that scientists didn't have to start from scratch to develop a vaccine. Additionally, researchers advanced mRNA technology which had already been studied for decades. This technology does not involve a live virus and is easier to manufacture.

Global Cooperation

The speedy development of the COVID-19 vaccines was accomplished through worldwide cooperation and data-sharing between international researchers, scientists and government agencies. Chinese researchers shared the needed viral genome sequence with 20 institutions in January of 2020, and the World Health Organization combined the work of 300 scientists and to make important assessments about the virus. Plus, because scientists utilized mRNA technology, they were able to start testing within months.

Unprecedented Investment

Developing a vaccine under normal circumstances requires researchers to spend time raising millions of dollars. That's why the U.S. Congress, through its Operation Warp Speed initiative and the CARES Act dedicated \$10 billion to the rapid development of COVID-19 vaccines. The European Commission similarly pledged \$8 billion for COVID-19 vaccine research. These financial commitments took years off the usual process.

Working In Parallel

Vaccine development is usually done in a step-by-step order. To expedite the COVID-19 vaccine, many processes were done simultaneously instead. Manufacturing of potential vaccines began before they were proven to work so that they could be sent out soon after approval. Likewise, instead of waiting for the final vaccine, The Advisory Committee on Immunization Practices held early meetings to prioritize the distribution of the vaccine before it was even developed.

Efficient Clinical Trial Processes

While experts agree that rigorous safety testing, patient enrollment and clinical trial phases were not "fast-tracked," the paperwork for regulatory approvals was accelerated. The Food & Drug Administration shortened its approval timeline from 10 months to 3 weeks and offered emergency use authorization. And because of the large number of testing sites and increased volunteer interest, trial participation quickly reached tens of thousands. Phase 2 and 3 of clinical trials were combined (a common practice), and that helped to ethically speed the process along.







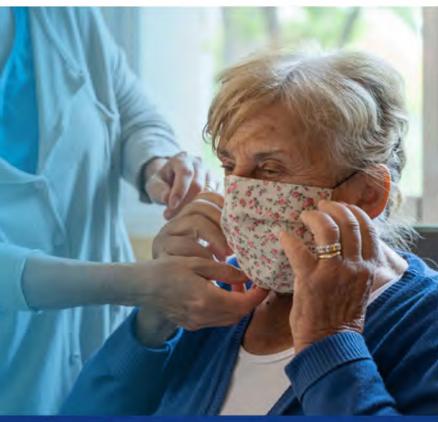






A Global Race Against Time

In a pandemic, time is measured in lives lost and people left with severe, debilitating health effects. The sooner we inoculate every American adult, the better chance we stand of ending COVID-19 and moving our country forward.



New Threats:

The Emergence of Transmissible Coronavirus Variants



New strains of COVID-19 that emerged in Brazil, the United Kingdom, and South Africa are now in the U.S. Many health experts expect the Pfizer, Moderna and Johnson & Johnson vaccines to better protect against emerging strains that could prove more contagious or deadly, but they acknowledge that the situation is evolving. These experts caution that the vaccines might need to be upgraded for ongoing mutations. Health professionals say early testing data from the vaccine companies show some effectiveness against new COVID-19 variations.



Vaccines should be available to most people at no cost. However, vaccination providers can charge an administrative fee for giving someone the shot. No one should be denied a vaccine if they are unable to pay the vaccine administration fee.

When You've Been Fully Vaccinated

How to Protect Yourself and Others

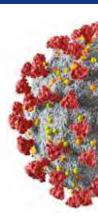
COVID-19 vaccines are effective at protecting you from getting sick. Based on what we know about COVID-19 vaccines, people who have been fully vaccinated can start to do some things that they had stopped doing because of the pandemic.

We're still learning how vaccines will affect the spread of COVID-19. After you've been fully vaccinated against COVID-19, you should keep taking precautions in public places like wearing a mask, staying 6-feet

apart from others, and avoiding crowds and poorly ventilated spaces until we know more.

Have You Been Fully Vaccinated?

People are considered fully vaccinated:







What's Changed

If you've been fully vaccinated:

- You can gather indoors with fully vaccinated people without wearing a mask.
- You can gather indoors with unvaccinated people from one other household (for example, visiting with relatives who all live together) without masks, unless any of those people or anyone they live with has an increased risk for severe illness from COVID-19.
- If you've been around someone who has COVID-19, you do not need to stay away from others or get tested unless you have symptoms.
 - However, if you live in a group setting (like a correctional or detention facility or group home) and are around someone who has COVID-19, you should still stay away from others for 14 days and get tested, even if you don't have symptoms.

What Hasn't Changed

For now, if you've been fully vaccinated:

- You should still take steps to protect yourself and others in many situations, like wearing a mask, staying at least 6 feet apart from others, and avoiding crowds and poorly ventilated spaces. Take these precautions whenever you are:
 - In public
 - Gathering with unvaccinated people from more than one other household
 - Visiting with an unvaccinated person who is at increased risk of severe illness or death from COVID-19 or who lives with a person at increased risk
- You should still avoid medium or large-sized gatherings.
- You should still delay domestic and international travel. If you do travel, you'll still need to follow CDC requirements and recommendations.
- You should still watch out for symptoms of COVID-19, especially if you've been around someone who is sick. If you have symptoms of COVID-19, you should get tested and stay home and away from others.
- You will still need to follow guidance at your workplace.

When You've Been Fully Vaccinated

Centers for Disease Control and Prevention https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated.html



What We Know and What We're Still Learning

- We know that COVID-19 vaccines are effective at preventing COVID-19 disease, especially severe illness and death.
 - We're still learning how effective the vaccines are against variants of the virus that causes COVID-19. Early data show the vaccines may work against some variants but could be less effective against others.
- We know that other prevention steps help stop the spread of COVID-19, and that these steps are still important, even as vaccines are being distributed.
 - We're still learning how well COVID-19 vaccines keep people from spreading the disease.
 - Early data show that the vaccines may help keep people from spreading COVID-19, but we are learning more as more people get vaccinated.
- We're still learning how long COVID-19 vaccines can protect people.
- As we know more, CDC will continue to update our recommendations for both vaccinated and unvaccinated people.

Until we know more about those questions, everyone — even people who've had their vaccines — should continue taking basic prevention steps when recommended.

Vaccination Side Effects

What are the most common side effects after getting a COVID-19 vaccine?

After getting vaccinated, you may have some side effects, which are normal signs that your body is building protection. The most common side effects are pain and swelling in the arm where you received the shot. In addition, you may have fever, chills, tiredness, and headache. These side effects may affect your ability to do daily activities, but they should go away in a few days. (Centers for Disease Control and Prevention 2021).

Learn more from the CDC of what to expect after getting a COVID vaccine.

https://www.cdc.gov/coronavirus/ 2019-ncov/vaccines/expect/after.html



Helpful Tips for Common Side Effects

If you have pain or discomfort, talk to your doctor about taking over-the-counter medicine, such as ibuprofen, aspirin, antihistamines, or acetaminophen, for any pain and discomfort you may experience after getting vaccinated. You can take these medications to relieve post-vaccination side effects if you have no other medical reasons that prevent you from taking these medications normally. It is not recommended you take these medicines before vaccination for the purpose of trying to prevent side effects, because it is not known how these medications may impact how well the vaccine works. (Centers for Disease Control and Prevention 2021)

To reduce pain and discomfort where you got the shot

- · Apply a clean, cool, wet washcloth over the area
- Use or exercise your arm

To reduce discomfort from fever

- Drink plenty of fluids
- Dress lightly

When to call the doctor

In most cases, discomfort from fever or pain is normal. Contact your doctor or healthcare provider:

- If the redness or tenderness where you got the shot increases after 24 hours
- If your side effects are worrying you or do not seem to be going away after a few days

Remember

- Side effects can affect your ability to do daily activities, but they should go away in a few days. With most COVID-19 vaccines, you will need 2 shots for them to work. Get the second shot even if you have side effects after the first shot unless a vaccination provider or your doctor tells you not to get a second shot.
- It takes time for your body to build protection after any vaccination. COVID-19 vaccines that require 2 shots may not protect you until a week or two after your second shot.
- Continue to follow local public health recommendations until all have been vaccinated and protected. (Centers for Disease Control and Prevention 2021)
- · Wear a mask.
- Watch your distance (6-feet apart).
- · Wash your hands.



Answers for Faith and Spiritual Leaders

As some of the most trusted voices in the community, faith and spiritual leaders are often relied upon for guidance on complex topics. When it comes to the COVID-19 vaccine, spiritual advisors might be concerned about offering advice and insights without having all the facts. These talking points are designed to support your desire to keep followers well informed. While there is no need to persuade anyone to act, it is helpful to address concerns and point them to accurate, reliable information. These points may be used as conversation starters or as a part of weekly communications within your faith community.

Quick Responses

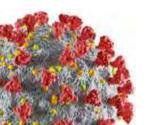
Note: Much of the information regarding the COVID-19 vaccine develops and updates quickly. Visit lung.org/vaccine-tracker for the most current information.

Q: Are you endorsing the new COVID-19 vaccine?

A: I am not endorsing any particular vaccine. These are decisions you must make for yourself and your family. I want to help you find the best information you need to make that decision.

Q: Wasn't the vaccine developed too quickly?

A: The speedy development of the COVID-19 vaccine was accomplished through worldwide cooperation and data-sharing by international researchers, scientists, and government agencies. The paperwork was fast-tracked, but the clinical trials were not. Authorized vaccines had tens of thousands of participants to test the safety and effectiveness of the vaccines.





Quick Responses

Q: How do the current vaccines work?

A: The Pfizer and Moderna recommended two-dose vaccines use mRNA technology that works by teaching the cells in the body to make a protein that triggers an immune response. They do not contain actual virus so you cannot get COVID-19 from either vaccine. Pfizer's vaccine proved 95% effective in preventing mild to severe COVID-19 disease in clinical trials. The Moderna vaccine was 94.1% effective at preventing laboratory-confirmed COVID-19 illness in people who received two doses and had no evidence of being previously infected. The single-dose Johnson & Johnson vaccine was 72% effective in the U.S. against moderate to severe COVID-19. Johnson & Johnson's vaccine is an experimental viral vector vaccine that uses a weakened live pathogen (adenovirus) as the delivery method (vector) for transporting a recombinant vaccine for COVID-19. Recombinant vaccines use a small piece of genetic material from the virus to trigger an immune response.

Q: I heard there could be serious side effects.

A: There may be temporary pain where you got the shot, fatigue, headache, chills, fever, joint and muscle pain. This is common for most vaccines as your body builds immunity but may last up to a week for the COVID-19 vaccines. In rare cases, people have had adverse experiences or allergic reactions. You should talk with your doctor if you have a history of allergic reactions to vaccines. Also, be sure to check FDA.gov about the outcomes of clinical trials.

Q: How much will the vaccine cost and where can I get it?

A: The COVID-19 vaccine will be available to many people at no cost. Your doctor may apply an administrative fee, but this may be covered under most insurance plans. Check your local health department to find a location to get vaccinated.

Q: Do I need a COVID-19 booster?

A: A vaccine booster is recommended to anyone 18 and older six months after receiving the Pfizer-BioNTech or Moderna COVID-19 vaccine or two months after receiving the Janssen/Johnson & Johnson vaccine.

Q: I don't want to take it because I don't trust the government.

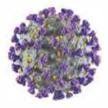
A: You have a right to feel that way. Suspicion can be an important protective measure, and it can inspire you to get the facts. The COVID-19 vaccine was developed with the same safety standards as vaccines you may already be comfortable with like the flu vaccine. A group of scientists developed the COVID-19 vaccine—not the government.

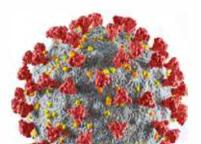
Q: How can I keep my children safe?

A: Vaccination is the best protection against COVID-19 illness. COVID-19 vaccination is recommended and available for children five years and older. The vaccine has not yet been authorized for children under 5 but there are ongoing clinical trials underway to determine safety and efficacy for younger children. Children should continue to wear masks and practice spatial distancing as recommended.

Q: I am afraid to take the COVID-19 vaccine.

A: It is normal to feel fearful, but we must not be guided by fear. Scientific information is available to help you make an informed decision. Carefully consider your decision and don't feel obligated to act until you are ready.





Discussion

Circle of Trust Talking Points



The most influential voices are often those closest to home and your heart. Family and friends are your circle of trust—influencers whom you count on to discuss life, careers, healthcare and current events. Our most trusted advisors are our moms, dads, grandparents, childhood friends, college roommates, or social network connections. But unless an immunopathologist lives next door, those we know personally can be ill-informed by unreliable social media memes and water-cooler hearsay. If you are that trusted voice for your friends and family, here are some simple responses to tough COVID-19 vaccine conversations in your inner circle.

I already got COVID so I'm not going to worry about it.

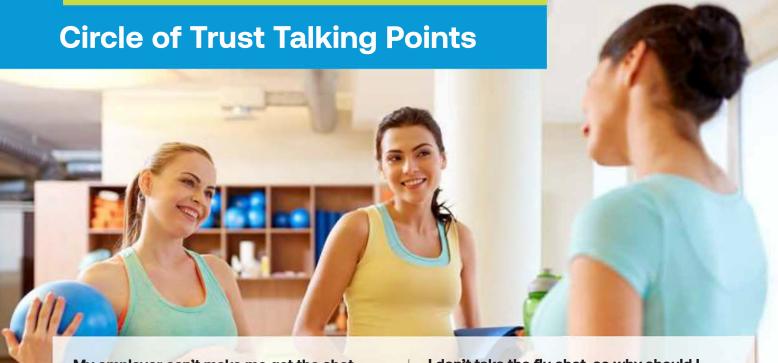
Due to the severe health risks associated with COVID-19 and the fact that reinfection with COVID-19 is possible, the CDC recommends you should be vaccinated regardless of whether you already had COVID-19 infection. If you were treated for COVID-19 symptoms with monoclonal antibodies or convalescent plasma, the CDC advises you to wait 90 days before getting a COVID-19 vaccine. It's best to talk to your doctor if you are unsure which treatments you received or if you have more questions about getting a COVID-19 vaccine. Health experts advise that there may be a "very high rate" of reinfection with COVID-19 if the new variants become dominant. Though the vaccines may not offer the same level of protection against these new strains, they can protect against serious disease and hospitalization. If you do become reinfected and have no symptoms or just mild ones, you might still spread the virus. That's why health officials urge vaccination as a longer-term solution and encourage all of us to wear masks, keep physical distance and frequently wash our hands.

I'm not going to be someone's guinea pig. I'll let other people take it first and see if I grow a third eye.

Millions of people have taken the vaccine and serious side effects are extremely rare. Some people experience pain where they got the shot and some experience fever and muscle aches which are normal immune responses.

Why do I need two shots to be fully vaccinated?

The number of shots you receive will depend on which vaccine you receive. For the Pfizer and Moderna vaccines, the first shot offers some degree of protection, but you gain optimal immunity 7-10 days after the second dose. When taken in two doses, clinical trials showed the Pfizer vaccine to be 95% effective at preventing mild to severe COVID-19 disease, while Moderna's vaccine was 94.1% effective at preventing laboratory-confirmed COVID-19 illness in people who received two doses who had no evidence of being previously infected. Now authorized for emergency use, the Johnson & Johnson vaccine requires a single dose. In clinical trials, it proved to be 72% effective in the U.S. in protecting against moderate to severe COVID-19.



My employer can't make me get the shot, can they?

Now that the Pfizer vaccine has FDA approval, employers can make vaccination a condition of employment.

When I'm fully vaccinated do I still need to wear a mask?

Even if you are fully vaccinated, it is still recommended to wear a mask indoors in public when in areas of substantial or high transmission. You may choose to wear a mask regardless of the transmission level in your community, especially if you are at higher risk for serious illness from COVID-19.

Wearing a mask is required on planes, buses, trains and other forms of public tranportation.

I'm not letting them inject me with coronavirus.

The current mRNA vaccines from Pfizer and Moderna are not made with the live virus. You cannot get COVID-19 from the mRNA vaccines. The Johnson & Johnson vaccine is a new viral vector vaccine that uses a weakened live pathogen (adenovirus) as the delivery method (vector) for transporting a recombinant vaccine for COVID-19. Recombinant vaccines use a small piece of genetic material from the virus to trigger an immune response.

I don't take the flu shot, so why should I take this?

Those who get vaccinated protect the most vulnerable among us including those who might not be able to receive vaccines. This is important for the seasonal flu, but it is even more critical for COVID-19 which has taken hundreds of thousands of American lives.

Why aren't the vaccines FDA approved?

The Pfizer vaccine is approved by the FDA and all three vaccines are recommended by the FDA.

I heard the vaccine causes infertility and Bell's Palsy?

These are both misleading claims. It is critical to check the facts, consider real clinical trial statistics, and do a basic search for myths about vaccines. Start with trusted government websites including CDC.gov and FDA.gov.

I'm ready for my freedom and getting vaccinated as soon as I can.

Take time to become informed about your decision either way. After vaccination, be sure to continue mask-wearing in crowded, indoor public places as it is possible to spread the virus even if you won't become as ill from it.

Clinical Trials

About Clinical Trials

Human clinical trials are tests done in a clinical research setting to observe the safety and effectiveness of a vaccine. All clinical trials include a series of mandatory phases that must be completed before a vaccine can be approved for dissemination. Many are concerned that the clinical trials for the COVID-19 vaccine were rushed. This is not the case. Take a look at how classical trials stack up against the COVID-19 trials.

PRECLINICAL STAGE:

Scientists test a new vaccine on cells and then on animals to see if it produces an immune response.

PHASE 1 SAFETY TRIALS:

Scientists give the vaccine to 30-100 people to test for safety, dosage, and confirm immune response.

PHASE 2 EXPANDED TRIALS:

Scientists give the vaccine to several hundred people who are divided into target populations and demographics to test if the vaccine acts differently in them.

PHASE 3 EFFICACY TRIALS:

Scientists give the vaccine to 20,000-30,000 people and wait to see how many become infected compared to participants who receive a placebo. This phase is large enough to reveal evidence of rare side effects.

PHASE 4 POST MARKETING SURVEILLANCE:

Scientists observe the vaccine in the general population with attention to longterm effects.



Clinical Trial Comparison

Classical vaccines

Preclinical stage (18–30 months)

Phase I (dozens of volunteers ~30 months)

Phase II (hundreds of volunteers ~32 months)

Phase III (thousands of volunteers ~30 months)

Approval, Manufacture, Vaccination (12–24 months)

COVID-19 vaccines

Preclinical stage (0 months)

Phase I (dozens of volunteers ~6 months)

Phase II (hundreds of volunteers ~6 months)

Phase III (thousands of volunteers ~0 months)

Approval, Manufacture, Vaccination (billions of doses/ individuals ~6 months)

Towards effective COVID-19 vaccines: Updates, perspectives and challenges (Review). International Journal of Molecular Medicine

A Lesson on Double-Blinded Studies

A double-blinded, placebo-controlled method of research is considered the gold standard for developing a vaccine. The COVID-19 vaccine clinical trials were conducted using this method. The below infographic illustrates how this method works. Visit covidvaccinefacts.org to learn more.



10,000 INDIVIDUALS ENROLL IN A CLINICAL TRIAL

to study a vaccine meant to stop the spread of a certain disease.



Participants are RANDOMLY GIVEN EITHER THE VACCINE OR THE PLACEBO.

P - Placebo V - Vaccine



NO ONE, NEITHER THE RESEARCHERS NOR PARTICIPANTS.

knows who received the vaccine and who received the placebo.



During the clinical trial, a number of individuals within the study WILL CONTRACT THE DISEASE.



Once a certain number of volunteers get sick, researchers "unblind" the study to REVEAL WHICH PARTICIPANTS WITH THE DISEASE RECEIVED THE VACCINE AND WHICH DID NOT.







This allows researchers to determine IF THE VACCINE WAS SUCCESSFUL AT PROTECTING AGAINST THE DISEASE.

P - Placebo V - Vaccine





IF A GREATER SHARE OF THOSE WHO ARE SICK RECEIVED THE PLACEBO INSTEAD OF THE VACCINE,

then the vaccine has met an acceptable efficacy standard.





In other words,
THE VACCINE WAS
EFFECTIVE AT PROTECTING
AGAINST THE DISEASE AND
KEEPING PEOPLE HEALTHY.

This double-blinded, placebo-controlled method of research is considered

THE GOLD STANDARD FOR VACCINE DEVELOPMENT.



Social Media Shareables & Activities

Inspire your social networks to get the answers they need to make a solid vaccine decision by sharing this guide. Use the hashtag #powerandimmunity. For more like these, visit Lung.org/vaccine-toolkit.











Social Media Shareables & Activities

Encourage your friends and family to get the information they need to make a vaccine decision. Try these engagement activities to spread the word and help educate your community about immunization and the COVID-19 vaccine.

Launch a COVID Quiz Hour



Invite community, friends and family to join you for a virtual, interactive quiz show or game night--but be sure to make it fun! Use the guide to create questions about the COVID-19 vaccines and test everyone's knowledge on the subject. Check out TriviaMaker.com or Mentimeter.com to keep it visually engaging. Be sure to keep tabs open for CDC.gov and Lung.org so that you can point participants to more resources.

Offer a Ride to an Elder



If there is a loved one in your life who is eligible for the COVID-19 vaccine, but needs a little help getting there, volunteer to serve them. Whether you cover the cost and make the arrangements, or taxi them yourself, it will be appreciated. Serve those who are a part of your household and remember to practice mask wearing in cars.

Start a TikTok Challenge



Add your own twist to the "This or That" Challenge on TikTok. You'll get started with RUN DMC's "It's Tricky" and rotate two related options or survey questions at the top left and right of the screen. The TikTokers must choose which side they prefer or which answer they are sure of by dancing off-screen in the direction of their preference. Try phrases like "Taking it now" or "Taking it later"; "mRNA" or "Viral vector"; "60% effective" or "95% effective"; "Plain mask" or "Printed mask". The challenge is often performed with multiple people (those living in the same household, of course).

Check out updates from American Lung Association's TikTok!

Social Media Shareables & Activities

Have an Info Session Watch Party



Review the guide for the featured COVID-19 information sessions. Use Facebook or a similar platform to gather your friends online and watch one of the replays together. Send formal invites so that everyone shows up. Remind everyone to jot down thoughts for discussion with one another after the online event.

Make Use of Your Group Chats



Announce to friends and family that each day for the next 5 days you'll be dropping one COVID-19 vaccine-related fact into the group text. This will help get your circle of loved ones accustomed to receiving credible information from you. Let them know that you may not have all of the answers, but they can learn more at Lung.org/vaccine-toolkit.

Start a COVID-19 Room on Clubhouse

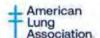


Stay ahead of the conversation by leading it on Clubhouse. This new social media platform allows users to host public, audio-only discussions on any topic of interest. COVID-19 is already listed as a featured topic on the platform. Take the lead and use this toolkit to host a Q&A. Consider inviting a credentialed expert to join the room. Clubhouse is currently only available for iPhone users. Direct participants to Lung.org/vaccine-toolkit for updated information.

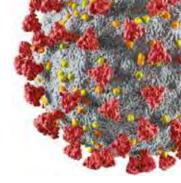
Practice the Three Cs: Candid Convos on Covid



Gather friends and family virtually once a week on your favorite social platform to share the latest updates on how and where vaccines are available in your community. Use ALA, CDC and state and local health department source materials to check the facts and correct misinformation.



Resources



American Lung Association COVID-19 Resources

https://www.lung.org/lung-health-diseases/lung-disease-lookup/covid-19/vaccine

American Lung Association COVID-19 Town Hall Series

https://www.lung.org/lung-health-diseases/lung-disease-lookup/covid-19/action-initiative/town-hall

Moderna Fact Sheet and FAQ

https://www.fda.gov/media/144638/download

Pfizer Fact Sheet and FAQ

https://www.fda.gov/media/144414/download

Johnson & Johnson Vaccine Development

https://www.jnj.com/latest-news

V-safe After Vaccination Health Checker

https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/vsafe.html

Why Are Vaccines Important?

https://www.lung.org/blog/why-are-vaccines-important

National Immunization Awareness Month:

How Vaccines Have Helped Reduce Our Rate of Death and Disease in the U.S.

https://www.lung.org/media/press-releases/national-immunization-1

COVID-19 Vaccine FAQ

https://www.lung.org/lung-health-diseases/lung-disease-lookup/covid-19/vaccine/faq

Do You Need to Pay Anything out of Pocket for a COVID-19 Vaccine?

https://www.aarp.org/health/conditions-treatments/info-2021/covid-vaccine-costs.html

How CDC Is Making COVID-19 Vaccine Recommendations

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

Coronavirus Vaccine Hesitancy in Black and Latinx Communities

https://bit.ly/3oYlnAW

NAACP CORONAVIRUS (COVID-19) INFORMATION

https://naacp.org/coronavirus/





+ American Lung Association.

The Better For It Series began as a collaboration between the American Lung Association and the Center for Black Health & Equity.

All information in this document is accurate and science-based as of its publishing in March, 2021. We acknowledge that the public health situation around COVID-19 is fluid and rapidly changing.

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