

# **Lupus Society of Illinois**

## **Lupus and the COVID-19 Vaccine**

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# Introduction

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- Our presentation today will focus on lupus and the COVID-19 vaccine
- Content will be provided from the public health perspective and should not be used in substitution for consultation with your Rheumatologist or Primary Care Provider treating you or a loved one's lupus symptoms

# Public Health

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- Public health is the science of protecting and improving the health of people and their communities
- This work is achieved by promoting healthy lifestyles, researching disease and injury prevention, and detecting, preventing and responding to infectious diseases

# Hydrochloroquine

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- The Food and Drug Administration (FDA) has not approved hydrochloroquine for the treatment of COVID-19
- The FDA revoked an earlier Emergency Use Authorization for COVID-19 treatment
- The only currently FDA approved treatment is Remdesivir which has demonstrated lower efficacy in individuals with lupus prescribed hydrochloroquine
- There is currently no shortage of hydrochloroquine
- Use of hydrochloroquine does not prevent acquiring COVID-19

## Lupus & COVID-19

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- It's important that you emphasize to anyone who might come in frequent contact with you that lupus puts you at higher risk from infections including COVID-19
- If you've come in contact with someone who is positive for COVID-19, please follow CDC guidelines and local health department recommendations for self-reporting and quarantining
- Lupus is a chronic autoimmune disease. This can make the immune system less effective at fighting infections

## Lupus & COVID-19

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- Medications that suppress the immune system which people with lupus often take can also limit your body's ability to respond to infections. As a result, people with lupus are less able to fight off viruses, like COVID-19
- When people with lupus do get sick, their illness may also trigger a lupus flare
- People with lupus may also have other conditions that put them at higher risk for serious illness from coronavirus such as diabetes, cardiovascular disease, kidney disease, and a weakened immune system

## At-Risk Groups

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Adults of any age with the following conditions are at increased risk of severe illness from the virus that causes COVID-19:

- Cancer
- Chronic kidney disease
- COPD (chronic obstructive pulmonary disease)
- Down Syndrome
- Heart conditions, such as heart failure, coronary artery disease, or cardiomyopathies
- Immunocompromised state (weakened immune system) from solid organ transplant
- Obesity (body mass index [BMI] of 30 kg/m<sup>2</sup> or higher but < 40 kg/m<sup>2</sup>)
- Severe Obesity (BMI ≥ 40 kg/m<sup>2</sup>)
- Pregnancy
- Sickle cell disease
- Smoking
- Type 2 diabetes mellitus

## COVID-19 Variants

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- Viruses constantly change through mutation, and new variants of a virus are expected to occur over time
- Sometimes new variants emerge and disappear. Other times, new variants emerge and persist
- Multiple variants of the virus that causes COVID-19 have been documented in the United States and globally during this pandemic



## FDA Vaccine Facts

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- The Path for the COVID-19 Vaccine from Research to Emergency Use Authorization

<https://www.fda.gov/media/143890/download>

## Role of Vaccines

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- Vaccines work by mimicking the infectious bacteria or viruses that cause disease
- Vaccination stimulates the body's immune system to build up defenses against the infectious bacteria or virus (organism) without causing the disease
- The parts of the infectious organism that the immune system recognizes are foreign to the body and are called antigens
- Vaccination exposes the body to these antigens

## Vaccine Safety

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- Over 52 million doses of COVID-19 vaccine were administered in the United States from December 14, 2020, through February 14, 2021
- COVID-19 vaccines are safe and effective. COVID-19 vaccines were evaluated in tens of thousands of participants in clinical trials
- Millions of people in the United States have received COVID-19 vaccines, and these vaccines will undergo the most intensive safety monitoring in U.S. history

## How the Immune System Works

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- To understand how COVID-19 vaccines work, it helps to first look at how our bodies fight illness. When germs, such as the virus that causes COVID-19, invade our bodies, they attack and multiply. This invasion, called an infection, is what causes illness
- Our immune system uses several tools to fight infection. Blood contains red cells, which carry oxygen to tissues and organs, and white or immune cells, which fight infection. Different types of white blood cells fight infection in different ways:
- Macrophages are white blood cells that swallow up and digest germs and dead or dying cells. The macrophages leave behind parts of the invading germs called antigens. The body identifies antigens as dangerous and stimulates antibodies to attack them.
- B-lymphocytes are defensive white blood cells. They produce antibodies that attack the pieces of the virus left behind by the macrophages
- T-lymphocytes are another type of defensive white blood cell. They attack cells in the body that have already been infected

## How COVID Vaccines Work

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- COVID-19 vaccines help our bodies develop immunity to the virus that causes COVID-19 without us having to get the illness
- Different types of vaccines work in different ways to offer protection, but with all types of vaccines, the body is left with a supply of “memory” T-lymphocytes as well as B-lymphocytes that will remember how to fight that virus in the future
- It typically takes a few weeks for the body to produce T-lymphocytes and B-lymphocytes after vaccination
- It is possible that a person could be infected with the virus that causes COVID-19 just before or just after vaccination and then get sick because the vaccine did not have enough time to provide protection

## Vaccine Type

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Currently, two vaccines are authorized and recommended to prevent COVID-19:

- Pfizer-BioNTech COVID-19 vaccine (21 days between shots)
- Moderna COVID-19 vaccine (28 days between shots)

# What to Expect After You are Vaccinated

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## Common Side Effects

- On the Arm: Pain, Swelling
- Throughout the Rest of Your Body: Fever, Chills, Tiredness, Headache
- Side effects can affect your ability to do daily activities, but they should go away in a few days

## Vaccine Guidance

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- With most COVID-19 vaccines, you will need 2 shots in order 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



## How COVID Vaccines Get to You

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- Vaccine manufacturers; the federal government; state, local, and territorial jurisdictions; and other partners are working to make sure safe and effective vaccines are getting to you as quickly as possible
- CDC makes recommendations for who should get the vaccine first, then each state makes its own plan

<https://coronavirus.illinois.gov/s/vaccination-location>

## The Reason for Vaccination

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- Getting vaccinated is one of many steps you can take to protect yourself and others from COVID-19
- Protection from COVID-19 is critically important because for some people, it can cause severe illness or death
- Vaccines work with your immune system so your body will be ready to fight the virus if you are exposed

## IDPH COVID-19 Information

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- <http://dph.illinois.gov/covid19>
- <http://dph.illinois.gov/covid19/vaccine-faq>

# COVID-19 Reminders

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- Remember to social distance (6 feet apart)
- Wash your hands
- Wear face masks

# References

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<https://www.cdcfoundation.org/what-public-health>

<http://dph.illinois.gov/>

<https://coronavirus.illinois.gov/s/vaccination-location>

<https://www.cdc.gov/coronavirus/2019-ncov/index.html>

<https://www.fda.gov/media/143890/download>

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

<https://www.fda.gov/vaccines-blood-biologics/development-approval-process-cber/vaccine-development-101>

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/safety/safety-of-vaccines.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](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)



ANY QUESTIONS?



THANKS FOR LISTENING!