

COVID-19 Vaccines and Lupus

What to Know

Because people with lupus can be immunocompromised and more vulnerable to infection, including COVID-19, learning about vaccines to protect against the virus is critical.

The following answers commonly asked questions about COVID-19 vaccines with recommendations from the U.S. Centers for Disease Control and Prevention as well as the American College of Rheumatology

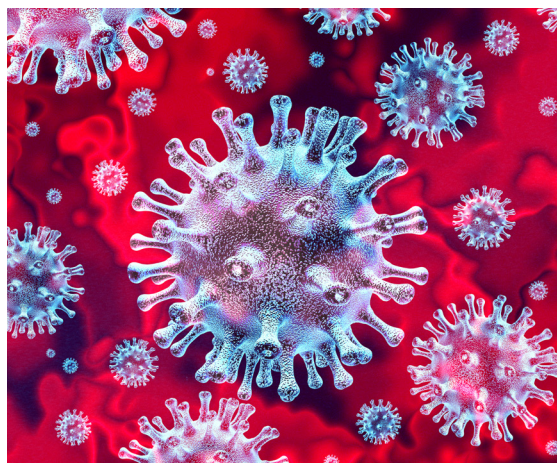
Why are people with lupus considered immunocompromised?

People with lupus are predisposed (at greater risk) to infections because of their disease as well as the medications they take to manage it by suppressing the immune system. According to the American College of Rheumatology (ACR) COVID-19 Vaccine Clinical Guidance, preventing COVID-19 is a priority for these people. [Click here](#) for a complete list of these medications.

What vaccines are approved to protect against the novel coronavirus?

Three vaccines are approved and authorized in the U.S. to prevent COVID-19:

- The two-dose messenger RNA (mRNA) vaccine from Pfizer/BioNTech is approved for everyone ages five and older
- The two-dose mRNA vaccine from Moderna is approved for adults ages 18 and older.
- The one-dose adenovirus-vector vaccine from Johnson & Johnson/Janssen is approved under Emergency Use Authorization for adults ages 18 and older.



What is a messenger RNA vaccine?

Messenger RNA (mRNA) vaccines contain synthetic genetic material modeled after the genetic material found in SARS-CoV-2 (the virus that causes COVID-19). Our cells use the genetic material to manufacture small pieces of the “spike” protein that cover the surface of the virus and allow it to attach to and enter human cells. The mRNA vaccine causes various cells of the immune system to fight the virus in different ways. For instance, immune cells known as B cells produce molecules called antibodies that stop the spike protein from attaching to human cells. By blocking the attachment of the virus to human cells, the antibodies help prevent cells from getting infected with the virus and ultimately keep you from getting seriously ill. mRNA vaccines have been in development for years, but the Pfizer/BioNTech and Moderna vaccines are the first to complete all stages of drug development and receive approval in the U.S.

What is an adenovirus-vector vaccine?

An adenovirus-vector vaccine uses a virus that doesn’t cause disease called adenovirus as a vector (or carrier) of genetic material for the spike protein from SARS-CoV-2. Once the adenovirus vector is inside our cells, the genetic material (in this case, DNA) provides the template for our cells to produce spike proteins. The spike proteins prompt B cells to make antibodies that fight the virus if we become infected in the future. In addition to the FDA-approved vaccine from Johnson & Johnson/Janssen, adenovirus-vector vaccines are being developed by Oxford-AstraZeneca and other companies.



Who is COVID-19 vaccination recommended for and by whom?

As of November 3, 2021, COVID-19 vaccination is recommended for everyone aged 5 years and older in the United States for the prevention of coronavirus disease 2019.

The CDC recommends that children between the ages of 5 and 11 years receive the Pfizer-BioNTech pediatric COVID-19 vaccine. Previously, the CDC had already recommended COVID-19 vaccination with the Pfizer-BioNTech COVID-19 vaccine for everyone aged 12 years and older. The Moderna and Janssen (Johnson & Johnson) COVID-19 vaccines are also approved for people 18 and older.

Which vaccines for the novel coronavirus are recommended for people with lupus?

The American College of Rheumatology (ACR), the premier professional organization for rheumatologists, the specialist typically most involved in lupus care, issued and updated their guidelines as new research and regulatory developments arise. Their guidelines recommend that people with autoimmune inflammatory rheumatic diseases such as lupus be vaccinated with either mRNA vaccine from Pfizer-BioNTech or Moderna. [Click here](#) for the complete recommendations from ACR.

What are the latest CDC recommendations related to COVID-19 booster shots?

As of November 19, 2021, the CDC approved recommendations for a booster shot at six months after their initial shots for all adults age 18 years and older who had received a Pfizer-BioNTech or Moderna COVID-19 vaccine:

The CDC had already approved the booster shot for adults 18 and older who received the Johnson & Johnson COVID-19 vaccine two or more months prior.

Pregnant people can receive any of the currently FDA-approved or FDA-authorized COVID-19 vaccines as a booster dose.

All adults have the option to receive any of the FDA-approved or FDA-authorized COVID-19 booster products (Pfizer-BioNTech, Moderna [50 µg in a volume of 0.25ml], or Janssen). People may consider the benefits and risks of each product and discuss with their healthcare provider which product is most appropriate for them.

What are the latest recommendations regarding COVID-19 vaccination for people with lupus?

As of February 11, 2022, the CDC recommends that people with moderate and severe immunocompromising conditions and treatments receive an additional primary dose as well as a booster dose of either mRNA vaccine three months later. The CDC defines moderate to severe immunocompromised people to include those taking high-dose corticosteroids and certain immunosuppressive drugs - many of which are often given to manage lupus.ⁱ

Why are additional doses recommended for immunocompromised people?

The CDC points to studies finding that some immunocompromised people may not build the same level of immunity after vaccination that others do and may need an additional dose to be adequately protected against COVID-19. Also, some small studies found that immunocompromised people who had been fully vaccinated made up a large proportion of those who were hospitalized.

What is the difference between a primary dose and a booster dose?

An additional primary dose refers to a third dose of the original vaccine at the same volume. This is recommended only for moderately to severely immunocompromised people who may not have mounted a sufficient defense against COVID-19 with the first two doses. A booster dose is recommended for all adults; the Moderna vaccine is given at half the dosage while the Pfizer-BioNTech and Janssen J&J vaccine is the same dosage as the primary vaccine.ⁱⁱ

What is recommended for immunocompromised people who are not protected by vaccination?

The FDA granted emergency use authorization for AstraZeneca's Evusheld, to prevent COVID-19 in individuals 12 years of age and older weighing at least 40 kg who have not been exposed to the virus and are either moderate to severely immunocompromised and may not mount a strong enough response to vaccination or cannot take any of the COVID-19 vaccines because of severe adverse reactions. However, taking Evusheld does not mean people should not be vaccinated against COVID-19 if they can.ⁱⁱⁱ

When getting a booster, do I need to stick with the same vaccine I received initially?

As of November 2021, the CDC issued recommendations that allows for mixing and matching booster vaccines. However, the ACR recommends consulting with your rheumatologist about what is best for you.

NOTE TO READERS:

Despite vaccination, people are reminded to follow guidelines to prevent infection including wearing a mask, staying six feet away from others you don't live with and avoiding crowds, and indoor spaces that are not well ventilated. It is also important to discuss the COVID-19 vaccines and other vaccines with your rheumatologist or other healthcare provider to determine what is right for you.

ⁱ U.S. Centers for Disease Control and Prevention. Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Approved or Authorized in the United States. Available at: <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#vaccination-people-immunocompromised>

ⁱⁱ U.S. Centers for Disease Control and Prevention. Interim Clinical Considerations for Use of COVID-19 Vaccines Currently Approved or Authorized in the United States. Available at: <https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#booster-dose>

ⁱⁱⁱ U.S. Food and Drug Administration. Evusheld Letter of Authorization. December 20, 2021.