

CDC: Immunocompromised people 12 and older should get third COVID-19 shot

August 13, 2021

Melissa Jenco, News Content Editor

Article type: [News](#)

Topics: [COVID-19](#), [Immunologic Disorders](#), [Infectious Diseases](#), [Vaccine/Immunization](#)



Editor's note: For the latest news on COVID-19, visit <http://bit.ly/AAPNewsCOVID19>.

Certain people who are immunocompromised — including children as young as 12 years — should receive an additional dose of an mRNA COVID-19 vaccine, federal health officials said Friday.

Centers for Disease Control and Prevention (CDC) Director Rochelle P. Walensky, M.D., M.P.H., signed off on the [recommendation from the agency's vaccine advisory committee](#), calling it “an important step in ensuring everyone, including those most vulnerable to COVID-19, can get as much protection as possible from COVID-19 vaccination.”

Nearly 3% of U.S. adults are immunocompromised. While vaccine effectiveness for the general population is more than 90%, this figure is about 59% to 72% for people who are immunocompromised, according to Kathleen Dooling, M.D., M.P.H., a leader of the CDC's Advisory Committee on Immunization Practice's (ACIP's) COVID-19 vaccine work group. [Studies have found](#) at least 40% of people who are hospitalized with breakthrough infections are immunocompromised.

On Thursday, the Food and Drug Administration (FDA) expanded emergency use authorization of Pfizer-BioNTech and Moderna vaccines to accommodate an additional dose for people who have undergone solid organ transplants or have an equivalent level of immunocompromise. ACIP gave the green light to an additional dose for this population on Friday.

“I think we're looking at a very specific population in the U.S. that was not able to mount an appropriate immune response to the normal two doses,” said ACIP member Helen Keipp Talbot, M.D., M.P.H., an

internist and infectious disease specialist at Vanderbilt University. “This is a very specific population, and it’s not meant for the entire U.S. population.”

The additional dose is different from a booster, which is given to people who had a sufficient initial immune response that waned. Experts stressed that a third dose may be only moderately effective for people who are immunocompromised.

“My only concern about adding a third dose for the immunocompromised is the impression that our immunocompromised population will then be safe,” Dr. Talbot said. “I think the reality is they’ll be safer but still at an incredibly high risk for severe disease and death.”

Clinical considerations

An additional dose of Pfizer-BioNTech or Moderna COVID-19 vaccine can be given to people with moderate to severe immunocompromise at least 28 days after the second dose. Pfizer-BioNTech can be used for people ages 12 and older, while Moderna can be used only for adults 18 and older. Using the same mRNA vaccine for the third doses as was used in the primary series is preferred but not required.

Several members of ACIP advocated for including immunocompromised adolescents in the recommendations for additional doses.

“I’m hearing many devastating stories about young immunocompromised people being admitted to hospitals with life-threatening disease,” said ACIP member Camille N. Kotton, M.D., FIDSA, FAST, clinical director, transplant and immunocompromised host infectious diseases, at Massachusetts General Hospital. “If it were my child who were immunocompromised, I would definitely try to get them an extra dose of vaccine if they were over the age of 12.”

Immunocompromised people who may qualify for an additional dose include:

- those receiving active cancer treatment for tumors or cancers of the blood,
- those who received an organ transplant and are taking medicine to suppress the immune system,
- those who received a stem cell transplant within the last two years or are taking medicine to suppress the immune system,
- people with moderate or severe primary immunodeficiency (e.g., DiGeorge syndrome, Wiskott-Aldrich syndrome),
- people with advanced or untreated HIV infection and
- people undergoing active treatment with high-dose corticosteroids or other drugs that may suppress their immune response.

Clinicians should discuss options with their immunocompromised patients, considering their disease severity, treatments and comorbidities.

“This is a highly heterogeneous group with highly complex medical needs that are going to vary by condition and by individual,” Dr. Dooling said. “Our attempt here was to make these clinical considerations a starting point that will definitely need to be adapted by the clinical care team treating these individuals.”

The CDC recommends any vaccine doses be given at least two weeks before starting or resuming immunosuppressive therapies. It does not recommend serologic testing to assess immune response to vaccination.

This population should continue to wear masks, practice social distancing and avoid crowds. Close contacts of people who are immunocompromised are strongly encouraged to get vaccinated.

The recommendations for an additional dose of COVID-19 vaccine do not apply to people who received the Johnson & Johnson vaccine due to a lack of data. However, the CDC said it is working to provide guidance for this group.

Supporting data

Health officials cited several studies to support an additional vaccine dose for people who are immunocompromised. A [study of a third dose of Moderna](#) in 120 transplant recipients found 55% reached the target antibody level compared to 18% of the placebo group.

[Five additional observational studies](#) among people who did not mount an antibody response to their initial mRNA vaccine series found 33% to 50% did so after a third dose. [Studies did not find](#) any harmful side effects from a third dose.

Booster doses for the general population

Studies have found antibodies persist at least six months after the second dose of mRNA COVID-19 vaccines and eight months after a single dose of the Johnson & Johnson vaccine.

Health officials are studying whether effectiveness will start to wane, who might need a booster dose, whether those doses are safe and effective, and when to give them.

Yvonne A. Maldonado, M.D., FAAP, chair of the AAP Committee on Infectious Diseases, called for booster dose studies to begin in children and adolescents in addition to adults. She also stressed the need for approval of a primary dose series in children under 12 years.

“We are concerned about the safety of our children and the fact they are still vulnerable, even healthy children and especially our immunocompromised (children),” she said.

Resources

- [The CDC will hold a webinar at 2 p.m. ET on Aug. 17 to discuss the new recommendations for an additional dose of COVID-19 vaccine for people who are immunocompromised.](#)
- [COVID-19 vaccine information from the CDC for people who are immunocompromised](#)
- [Information from the CDC on clinical considerations for COVID-19 vaccines](#)
- [CDC webinar on therapeutic options to prevent severe COVID-19 in immunocompromised people](#)
- [CDC COVID vaccination toolkit for pediatricians](#)
- [AAP guidance on providing COVID-19 vaccines to adolescents](#)
- [Information for parents from HealthyChildren.org on preparing children and adolescents for COVID-19 vaccination](#)