

USET Tribal Epidemiology Center

Recommendations for Tribal Consideration

USET TEC COVID-19 Guidance 2021-04: COVID-19 Vaccine Booster Doses



Background

Vaccination against SARS-CoV-2, the virus that causes COVID-19, is one of the most effective forms of prevention against COVID-19. Vaccination offers [strong protection](#) against severe illness, hospitalization, and death, and increasing evidence shows that it also reduces transmission to a lesser extent. However, as the pandemic continues, there have been observed decreased in vaccine effectiveness over time, particularly due to the highly transmissible Delta variant. In response, the US Food and Drug Administration (FDA) and the Centers for Disease Control and Prevention (CDC) have authorized the use of booster doses for all three COVID-19 vaccines that are available in the US: Pfizer-BioNTech, Moderna, and Johnson & Johnson.

COVID-19 Vaccine Additional Doses vs Booster Doses

An additional (3rd) dose of mRNA COVID-19 vaccine (Moderna and Pfizer-BioNTech) is recommended for people with [moderately to severely compromised immune systems](#). In contrast to a booster dose, which is recommended to people whose level of protection has waned over time, this 3rd dose is intended to increase the immune response in people whose initial response may have been lessened due to their weaker immune system.

Booster Doses for Johnson & Johnson COVID-19 Vaccine Recipients

Studies have shown that the Johnson & Johnson COVID-19 vaccine has lower vaccine effectiveness compared to the Moderna and Pfizer-BioNTech COVID-19 vaccines. Therefore, to boost the overall effectiveness, the CDC is recommending that [all individuals 18 years of age and older](#) who received the one-dose Johnson & Johnson vaccine as their primary series should receive a booster dose of any authorized COVID-19 vaccine, at least 2 months after initial vaccination.

COVID-19 mRNA Booster Doses for Certain High-Risk Populations

Booster doses for recipients of both mRNA COVID-19 vaccines (Moderna and Pfizer-BioNTech) are now authorized for certain individuals who are at higher risk from COVID-19. For both, a booster dose of any authorized COVID-19 vaccine will be available to those who are eligible and have completed the initial two-dose series at least 6 months prior to receiving the booster.

The CDC recommends that among those who have completed a primary series of Moderna or Pfizer-BioNTech vaccine, at least six months ago, booster doses should be given to:

- Individuals 65 years of age and older
- Individuals in long term care facilities over the age of 18
- Individuals 50-64 years of age who are at high risk of severe COVID-19 due to underlying conditions (e.g., obesity, chronic lung diseases, heart disease, diabetes [[full list](#)])

In addition, the CDC recommends that among those who completed a primary series of Moderna or Pfizer-BioNTech vaccine at least six months ago, based on their individual risks/benefits, booster doses [may be given to](#):

- Individuals 18-49 years of age who are at high risk of severe COVID-19 due to underlying conditions
- Individuals 18-64 years of age whose job or living situation puts them at high risk of exposure and transmission from COVID-19 (e.g., healthcare workers, teachers, staff and residents in homeless shelters or prisons [[full list](#)])



Use of Heterologous Booster Doses

Anyone who is recommended to receive a booster dose may choose from any of the FDA-authorized COVID-19 booster products available, even if it differs from their primary series. Boosting with the same product as the primary series does increase the initial immune response, although one study has shown that using a non-matching booster had [similar or higher immune responses](#) in comparison, particularly with the mRNA vaccines. The CDC has no recommendation in either direction, however, primary series and additional (3rd) doses should be completed with the same product. The decision on which booster product to receive should be made with a healthcare provider in consideration of one's individual risks and benefits.

Individual Risk-benefit Assessment

For recipients of Moderna or Pfizer-BioNTech who fall into the “may receive” category and are unsure whether they should receive a booster dose, each person should take into consideration their individual benefits and risks. While all available vaccines have been evaluated carefully, there are some risks to vaccination as with any medical treatment. Serious adverse events are very rare, but some people may be at a higher risk of developing certain conditions, which may also impact the choice of booster product.

- For Moderna and Pfizer-BioNTech COVID-19 vaccines, there is a rare risk of myocarditis & pericarditis, primarily among men under 30
- For Johnson & Johnson COVID-19 vaccine, there is a rare risk of thrombosis with thrombocytopenia syndrome (TTS), primarily among women aged 18-49 years.
- The Johnson & Johnson vaccine also has a rare risk of Guillain-Barré Syndrome (GBS), primarily among men between 50-64 years

The following is a risk/benefit scenario to help guide the decision-making process for receiving a booster dose. Be advised that these are guidelines, and a decision should be made with a medical professional when possible.

Consider your risk of exposure:

- Do you work or live in settings where exposure is more likely to occur, such as hospitals, schools, shelters?
- What is level of [community transmission](#) where you live?
- What is the [rate of vaccination](#) in your community?

Consider your risk for developing COVID-19, if exposed:

- How long has it been since you completed your primary vaccination series?
- Have you previously had COVID-19 and if so, how long has been since then?

Consider your risk for severe COVID-19 infection, if infected:

- Do you have any [serious underlying conditions](#)?
- If so, how severe are they?

Consider the consequences of a COVID-19 infection:

- Do you live with people who are medically frail, immunocompromised, or ineligible for vaccine (such as children)?
- What would be the consequences if you developed long-term post-COVID complications?



Does the Availability of Booster Doses Change the Definition of Who is Fully Vaccinated?

The CDC's definition of who is considered fully vaccinated has not changed. Regardless of whether someone is recommended to receive a booster dose or third shot, if they have completed a primary series of one of the three authorized COVID-19 vaccine at least two weeks ago, they are considered fully vaccinated.

Further Resources

1. [Some COVID-19 Vaccine Recipients Can Get Booster Shots](#)
2. [Heterologous SARS-CoV-2 Booster Dosing](#)
3. [COVID-19 Vaccine Effectiveness Research](#)
4. [USET/USET SPF COVID-19 Response and Relief Effort](#)

The USET TEC is available to assist with any questions on this guidance or other concerns. Please do not hesitate to contact us at usetepi@usetinc.org.