

# Prevention of SARS-CoV-2 Infection

Last Updated: December 20, 2023

Summary Recommendation
<ul style="list-style-type: none"><li>The COVID-19 Treatment Guidelines Panel (the Panel) recommends COVID-19 vaccination for everyone who is eligible according to the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices (AI).</li></ul>
Each recommendation in the Guidelines receives a rating for the strength of the recommendation (A, B, or C) and a rating for the evidence that supports it (I, IIa, IIb, or III). See <a href="#">Guidelines Development</a> for more information.

## General Prevention Measures

Transmission of SARS-CoV-2 occurs primarily through exposure to respiratory droplets.<sup>1</sup> Exposure can occur when individuals inhale droplets or particles that contain the virus or touch mucous membranes with hands that have been contaminated with the virus. Exhaled droplets or particles can also deposit the virus onto exposed mucous membranes.

The risk of SARS-CoV-2 transmission can be reduced by covering coughs and sneezes, wearing a well-fitted mask around others, and isolating when experiencing symptoms. Frequent handwashing also effectively reduces the risk of infection.<sup>2</sup> Health care providers should follow the Centers for Disease Control and Prevention (CDC) recommendations for infection control and the appropriate use of personal protective equipment.<sup>3</sup>

## COVID-19 Vaccines

### Recommendation

- The Panel recommends COVID-19 vaccination for everyone who is eligible according to the CDC's Advisory Committee on Immunization Practices (AI).

### Rationale

Vaccination is the most effective way to prevent COVID-19. Two 2023–2024 mRNA vaccines, BNT162b2 (Pfizer-BioNTech) and mRNA-1273 (Moderna), and the 2023–2024 recombinant spike protein with adjuvant vaccine NVX-CoV2373 (Novavax)<sup>4</sup> are currently available in the United States. The adenovirus vector vaccine Ad26.COV2.S (Johnson & Johnson/Janssen) is no longer available in the United States.

COVID-19 vaccination is recommended for everyone aged  $\geq 6$  months in the United States. The Food and Drug Administration (FDA) Emergency Use Authorization fact sheet and the product label for each vaccine provide detailed information on the vaccination schedule and the doses that are approved or authorized for that vaccine. The type and dose of vaccine and the timing of the doses depend on the recipient's age and underlying medical conditions. The CDC regularly updates the clinical considerations for the COVID-19 vaccines currently approved by the FDA or authorized for use in the United States.<sup>5</sup>

### Adverse Events

COVID-19 vaccines are safe and effective. Local and systemic adverse events are relatively common with these vaccines. Most of the adverse events that occurred during vaccine trials were mild or

moderate in severity (i.e., they did not prevent vaccinated people from engaging in daily activities) and resolved after 1 or 2 days. There have been a few reports of severe allergic reactions following COVID-19 vaccination, including rare reports of patients who experienced anaphylaxis after receiving an mRNA vaccine.<sup>6,7</sup>

Thrombosis with thrombocytopenia syndrome is a serious condition characterized by blood clots in large blood vessels and low platelet levels. The prevalence of the syndrome was approximately 4 per million among people who received the Johnson & Johnson/Janssen vaccine.<sup>8,9</sup> That vaccine is no longer available in the United States. If a patient experiences thrombosis and thrombocytopenia syndrome after receiving a COVID-19 vaccine outside of the United States, a hematologist should be consulted about evaluation and management.

Myocarditis and pericarditis after COVID-19 vaccination are rare, and most of the reported cases were very mild and self-limiting.<sup>10</sup> These conditions have occurred most often in male adolescents, young adults, and people who have received mRNA vaccines.

The results of recent studies suggest that adults aged  $\geq 18$  years who received the Johnson & Johnson/Janssen vaccine have an increased risk of Guillain-Barré syndrome.<sup>11</sup> In contrast, people who received mRNA vaccines do not have an increased risk of Guillain-Barré syndrome.<sup>12</sup>

The CDC monitors severe adverse events, such as strokes, and provides regular updates on [selected adverse events of COVID-19 vaccines](#).

### ***Vaccination in Pregnant and Lactating People***

Pregnant and lactating individuals were not included in the initial COVID-19 vaccine trials. However, the CDC and the American College of Obstetricians and Gynecologists recommend vaccination for pregnant and lactating people. This recommendation is based on the accumulated safety and efficacy data on the use of these vaccines in pregnant people, as well on as the increased risk of severe disease in pregnant individuals with COVID-19.<sup>13-17</sup> These organizations also recommend vaccination for people who are trying to become pregnant or who may become pregnant in the future. The American College of Obstetricians and Gynecologists provides guidance for clinicians on counseling pregnant patients about COVID-19 vaccination.<sup>18</sup>

### **Pre-Exposure Prophylaxis**

As of January 2024, no biomedical intervention other than vaccines prevents COVID-19 disease. Previously, the FDA authorized the use of the anti-SARS-CoV-2 monoclonal antibodies tixagevimab plus cilgavimab (Evusheld) as pre-exposure prophylaxis (PrEP) of COVID-19 in people who were not expected to mount an adequate immune response to COVID-19 vaccination and in people with COVID-19 vaccine contraindications.<sup>19</sup> Due to the increased prevalence of Omicron subvariants that are not susceptible to tixagevimab plus cilgavimab, this combination is not currently authorized by the FDA for use as PrEP of COVID-19.<sup>20</sup> It remains critical that these individuals:

- Keep up to date with COVID-19 vaccination unless a contraindication exists.
- Take precautions to avoid infection. The CDC provides [information on the prevention of COVID-19](#) in people who are immunocompromised.
- Be tested for SARS-CoV-2 infection if they experience signs and symptoms consistent with COVID-19 and, if infected, promptly seek medical attention.

## Post-Exposure Prophylaxis

As of January 2024, no biomedical intervention other than vaccines prevents disease after exposure to SARS-CoV-2. Previously, the FDA authorized the use of the anti-SARS-CoV-2 monoclonal antibody products bamlanivimab plus etesevimab and casirivimab plus imdevimab as post-exposure prophylaxis (PEP) in certain people at high risk of progression to severe COVID-19. However, the Omicron subvariants are not susceptible to these products; therefore, their use as SARS-CoV-2 PEP is not recommended.

## References

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