



# Addressing the belief that COVID-19 vaccination is “not needed”

## The Issue

Some people remain unconvinced that they will benefit from COVID-19 vaccination or they doubt that the benefits will outweigh possible risks. This is especially true of younger adults (many of whom consider themselves to be at low risk of serious illness) and people who have recovered from COVID-19 infection. Some people believe that natural immunity following a COVID-19 infection is equal or superior to immunity produced by a vaccine.

## Sound Bites

- > Vaccination is the safest way to help build protection against COVID-19.
- > Getting vaccinated helps keep you from getting seriously ill even if you do get COVID-19; your vaccination may also protect people around you, particularly people at increased risk for severe illness from COVID-19.
- > Although many people have no symptoms or mild symptoms of COVID-19, the disease can have serious, life-threatening complications—and there is no way to know how COVID-19 will affect you. And if you get sick, you could spread the disease to friends, family, and others around you.
- > Even if you’ve had COVID-19, you will get stronger immunity from vaccination and better protection against variants. A person’s immune response to a natural infection is highly variable.



## Questions for Exploring Patient Concerns

- > What do you know about the differences between immunity produced by COVID-19 infection and immunity produced by a vaccine?
- > What do you know about getting a vaccine after having COVID-19?
- > What concerns you most about getting a COVID-19 vaccine?
- > What would have to be true for you to think it was important to get a COVID-19 vaccine?
- > What if I told you...? (Provide information about the benefits of vaccination versus natural immunity or following COVID-19 illness.)

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### What We Know

The Centers for Disease Control and Prevention (CDC) currently recommends COVID-19 vaccination for all people 12 years of age and older in the United States. This includes people who already had COVID-19 and recovered.

**Vaccination vs. Natural Immunity.** There is widespread agreement among public health and infectious disease experts that for people who have not been infected with SARS-CoV-2, vaccination is the preferable and safer choice for building immunity against COVID-19. The vaccines were designed specifically to generate an effective and reproducible immune response. Serious side effects appear to be both rare and manageable, and long-term side effects are unlikely.

The same cannot be said of COVID-19 illness. Although many people who have been infected with SARS-CoV-2 develop a robust immune response, there is a reported “massive dynamic range” in the response, with a 200-fold difference in antibody levels. The degree of immune protection may be related to both the amount of virus a person is exposed to and the severity of COVID-19 illness, with milder cases offering less protection. COVID-19 can have serious, life-threatening complications, and there is no reliable way to predict whether a person will develop severe disease. Young people are not invulnerable to serious complications; in one study of 3,222 young adults (18 to 34 years of age) in the United States who required hospitalization for COVID-19 early during the pandemic, 684 patients (21%) required intensive care, 331 (10%) required mechanical ventilation, and 88 (2.7%) died.<sup>1</sup> And people with milder cases of COVID-19 could spread the disease to family, friends, and others who might be at greater risk.

Additionally, even mild COVID-19 illness can result in life-disrupting “long COVID”: persistent symptoms such as profound fatigue, loss of taste and smell, and brain fog that contribute to a decline in health-related quality of life. In a longitudinal prospective cohort of 177 adults with laboratory-confirmed severe SARS-CoV-2 infection, persistent symptoms up to 9 months after illness onset were reported by 17 of 64 patients (26.6%) 18 to 39 years of age, 25 of 83 patients (30.1%) 40 to 64 years of age, and 13 of 30 patients (43.3%) 65 years of age or older.<sup>2</sup>

**Vaccination Following COVID-19 Illness.** Emerging data indicate that people who recovered from COVID-19 and then were vaccinated may develop the strongest and longest-lasting protection of all.

Researchers at The Rockefeller University in New York assessed a cohort of 63 COVID-19–convalescent individuals at 1.3, 6.2, and 12 months after infection.<sup>3</sup> Between the 6-month and 12-month visits, 26 (41%) of the participants received at least one dose of an mRNA vaccine. In all patients, plasma neutralizing activity and the number of receptor binding domain (RBD)–specific memory B cells remained relatively stable from 6 to 12 months. Vaccination boosted the neutralizing response by 1.5 orders of magnitude and increased the number of RBD-specific memory cells by more than an order of magnitude. The authors concluded that people who recover from COVID-19 and then are vaccinated should enjoy high levels of protection against emerging SARS-CoV-2 variants with no need for booster shots.

There are also anecdotal reports and some preliminary evidence that vaccination can help improve symptoms of long COVID. The authors of a recent analysis of 812 people in the United Kingdom with long COVID speculated that the vaccines helped to reset the immune system, letting the body know its defenses should respond to the virus but not attack itself any more.<sup>4</sup>

The CDC recommends that anyone who was treated for COVID-19 with monoclonal antibodies or convalescent plasma should wait 90 days before getting a COVID-19 vaccine.

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### References

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