

# Response to one COVID-19 vaccine dose strong in previously infected

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(HealthDay)—For persons with a history of previous infection with

severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), the neutralizing antibody titer is higher after one dose of mRNA vaccine than after two vaccine doses among previously uninfected persons, according to a research letter published online April 14 in the *New England Journal of Medicine*.

Gabriele Anichini, from the University of Siena in Italy, and colleagues conducted an observational cohort study involving 100 [health care workers](#), including 38 who had a documented history of SAR-CoV-2 infection and 62 who had not been previously infected. Both groups received the mRNA [vaccine](#) BNT162b2. Serum samples were obtained 10 days after administration of the first dose in previously infected participants and 10 days after the second dose in previously uninfected participants.

The researchers observed no significant difference in circulating anti-spike immunoglobulin G antibody titers between the samples from previously infected and uninfected participants (mean level: 20,120 and 22,639 arbitrary units/mL, respectively). Samples from previously infected participants had significantly higher levels of neutralizing antibodies than those from previously uninfected participants (geometric mean titer: 569 versus 118).

"These findings provide evidence that after the administration of a single dose of vaccine, the humoral response against SARS-CoV-2 in persons with a history of SARS-CoV-2 infection is greater than the response in previously uninfected participants who have received a second dose," the authors write.

**More information:** [Abstract/Full Text](#)

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