

Prior SARS-CoV-2 infection ups protection for vaccinated

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(HealthDay)—For individuals vaccinated with mRNA COVID-19

vaccines, prior severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection is associated with a lower risk for breakthrough infection, according to a study published online Nov. 1 in the *Journal of the American Medical Association*.

Laith J. Abu-Raddad, Ph.D., from Cornell University in Doha, Qatar, and colleagues followed 1,531,736 individuals vaccinated with the BNT162b2 or mRNA-1273 vaccines between Dec. 21, 2020, and Sept. 19, 2021, from 14 days after receipt of the second dose. The BNT162b2 cohort included 99,226 individuals with and 290,432 matched individuals without [polymerase chain reaction](#) (PCR)-confirmed infection, while the mRNA-1273 cohort included 58,096 individuals with and 169,514 matched individuals without prior PCR-confirmed infection.

The researchers found that at 120 days of follow-up, the cumulative infection incidence was an estimated 0.15 and 0.83 percent among BNT162b2-vaccinated individuals with and without prior infection, respectively (adjusted hazard ratio for breakthrough infection with prior infection, 0.18). The corresponding cumulative infection incidence among mRNA-1273 individuals was an estimated 0.11 and 0.35 percent (adjusted hazard ratio, 0.35). The risk for breakthrough infection was significantly lower for vaccinated individuals with prior infection six months or more before dose 1 compared with those infected less than six months before dose 1 (adjusted hazard ratios, 0.62 and 0.40 for BNT162b2 and mRNA-1273, respectively).

"Prior [infection](#) among those vaccinated—a hybrid of natural and vaccine immunity—appeared to be associated with additional reduction in [breakthrough infection](#)," the authors write.

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