

# Vaccination seems less protective against transmission of Delta variant

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(HealthDay)—COVID-19 vaccination is associated with a smaller

reduction in transmission of the Delta variant compared with the alpha variant of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), according to a study published online Jan. 5 in the *New England Journal of Medicine*.

David W. Eyre, B.M., B.Ch., D.Phil., from the Big Data Institute at the University of Oxford in the United Kingdom, and colleagues used contact-testing data from England to perform a retrospective observational cohort study involving adult contacts of SARS-CoV-2-infected adults to examine the associations between transmission and vaccination status of index patients and contacts.

The researchers found that 37 percent of the 146,243 tested contacts of 108,498 index patients had positive SARS-CoV-2 polymerase chain reaction (PCR) tests. For vaccinated index patients who became infected with the [alpha variant](#), receipt of two vaccinations with BNT162b2 or ChAdOx1 nCoV-19 were independently associated with reduced PCR positivity in contacts compared with no vaccination (adjusted rate ratios, 0.32 and 0.48 respectively). The corresponding vaccine-associated reductions in transmission were smaller for the Delta [variant](#) (adjusted rate ratios, 0.50 and 0.76, respectively). Overall, 7 to 23 percent of [vaccine](#)-associated reductions in transmission of the two variants was due to variation in cycle-threshold values (indicative of viral load) in the index patients. Over time, after the second vaccination, the reductions in transmission of the Delta variant decreased, reaching levels that were similar to those in unvaccinated persons by 12 weeks in index patients who had received ChAdOx1 nCoV-19 and dropping considerably in those who received BNT162b2.

"The Delta variant has spread globally and caused resurgences of infection even in areas with high vaccination coverage," the authors write. "Increased onward transmission from persons who become infected despite vaccination is probably an important reason for this

spread."

One author disclosed financial ties to Gilead Sciences.

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

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