

# Risk of breakthrough COVID-19 infection after vaccination is higher among people with HIV

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People with HIV have a higher rate of breakthrough COVID-19 infections after vaccination, compared to people without HIV, according

to findings from a study led by researchers at the Johns Hopkins Bloomberg School of Public Health.

In the study, the researchers analyzed anonymized [health records](#) among nearly 114,000 people fully vaccinated with either two doses of mRNA vaccines or one dose of the J&J viral vector [vaccine](#) as of June 30, 2021 through December 31, 2021. Comparing vaccine recipients with and without HIV, the researchers found that the chance of a positive SARS-CoV-2 test result or a COVID-19 diagnosis within nine months after full vaccination, though low, was 28 percent higher among people with HIV. The risk of breakthrough infection during the period examined was 3.8 percent for the non-HIV group and 4.4 percent for the HIV group.

The results are published June 7 in *JAMA Network Open*.

"These findings should alert all people with HIV to their greater risk of COVID-19 breakthrough, and can inform official recommendations about COVID-19 vaccination for people with HIV," says study senior author Keri Althoff, Ph.D., associate professor in the Bloomberg School's Department of Epidemiology.

Public health officials have had concerns about potentially elevated COVID-19 risk among people with weakened immune systems, including those with HIV, since the start of the pandemic. The Centers for Disease Control and Prevention currently recommends that people who are "moderately or severely immunocompromised"—a category that includes people with HIV who are untreated or have low CD4 T-cell counts (

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