

# Third mRNA COVID-19 vaccine dose appears to be safe

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The third dose of the COVID-19 mRNA vaccine is safe, according to a

study published online April 14 in *JAMA Network Open*.

Michiel J.M. Niesen, Ph.D., from *Harvard T.H. Chan School of Public Health* in Cambridge, Massachusetts, and colleagues evaluated the safety of [third-dose](#) vaccination with U.S. Food and Drug Administration–approved COVID-19 mRNA vaccines. Electronic health record data (December 2020 to October 2021) were used to identify 47,999 individuals receiving three-dose COVID-19 mRNA vaccines.

The researchers found that reporting of severe adverse events remained low after the third vaccine dose, with rates of pericarditis (0.01 percent), anaphylaxis (0 percent), myocarditis (0 percent), and cerebral venous sinus thrombosis (no individuals) consistent with results from earlier studies. Compared to the second dose, significantly more individuals reported low-severity adverse events after the third dose, including fatigue, lymphadenopathy, nausea, headache, arthralgia, myalgia, diarrhea, fever, vomiting, and chills.

"This study provides further evidence suggesting that third-dose vaccination with the same type of COVID-19 mRNA [vaccine](#) as used in the primary series is associated with safe outcomes in eligible populations," the authors write. "Together with previous studies of the safety and effectiveness associated with booster doses, our study suggests that third-dose mRNA COVID-19 vaccination may be appropriate for at-risk populations."

Two authors disclosed financial ties to [pharmaceutical companies](#), including Pfizer and Moderna.

**More information:** Michiel J. M. Niesen et al, Surveillance of Safety of 3 Doses of COVID-19 mRNA Vaccination Using Electronic Health Records, *JAMA Network Open* (2022). [DOI: 10.1001/jamanetworkopen.2022.7038](#)

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