

No sign of COVID-19 vaccine in breast milk

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Messenger RNA vaccines against COVID-19 were not detected in human milk, according to a small study by UC San Francisco, providing early evidence that the vaccine mRNA is not transferred to the infant.

The study, which analyzed the [breast milk](#) of seven women after they received the mRNA vaccines and found no trace of the [vaccine](#), offers

the first direct data of vaccine safety during breastfeeding and could allay concerns among those who have declined vaccination or discontinued breastfeeding due to concern that vaccination might alter [human milk](#). The paper appears in *JAMA Pediatrics*.

Research has demonstrated that vaccines with mRNA inhibit transmission of the virus that causes COVID-19. The study analyzed the Pfizer and Moderna vaccines, both of which contain mRNA.

The World Health Organization recommends that breastfeeding people be vaccinated, and the Academy of Breastfeeding Medicine has said there is little risk of vaccine nanoparticles or mRNA entering breast tissue or being transferred to milk, which theoretically could affect infant immunity.

"The results strengthen current recommendations that the mRNA vaccines are safe in lactation, and that lactating individuals who receive the COVID vaccine should not stop breastfeeding," said corresponding author Stephanie L. Gaw, MD, Ph.D., assistant professor of Maternal-Fetal Medicine at UCSF.

"We didn't detect the vaccine associated mRNA in any of the milk samples tested," said lead author Yarden Golan, Ph.D., a postdoctoral fellow at UCSF. "These findings provide an experimental evidence regarding the safety of the use of mRNA-based vaccines during lactation."

The study was conducted from December 2020 to February 2021. The mothers' mean age was 37.8 years and their children ranged in age from one month to three years. Milk samples were collected prior to vaccination and at various times up to 48 hours after vaccination.

Researchers found that none of the samples showed detectable levels of

vaccine mRNA in any component of the milk.

The authors noted that the study was limited by the [small sample size](#) and said that further [clinical data](#) from larger populations were needed to better estimate the effect of the vaccines on lactation outcomes.

More information: Yarden Golan et al, Evaluation of Messenger RNA From COVID-19 BTN162b2 and mRNA-1273 Vaccines in Human Milk, *JAMA Pediatrics* (2021). [DOI: 10.1001/jamapediatrics.2021.1929](https://doi.org/10.1001/jamapediatrics.2021.1929)

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