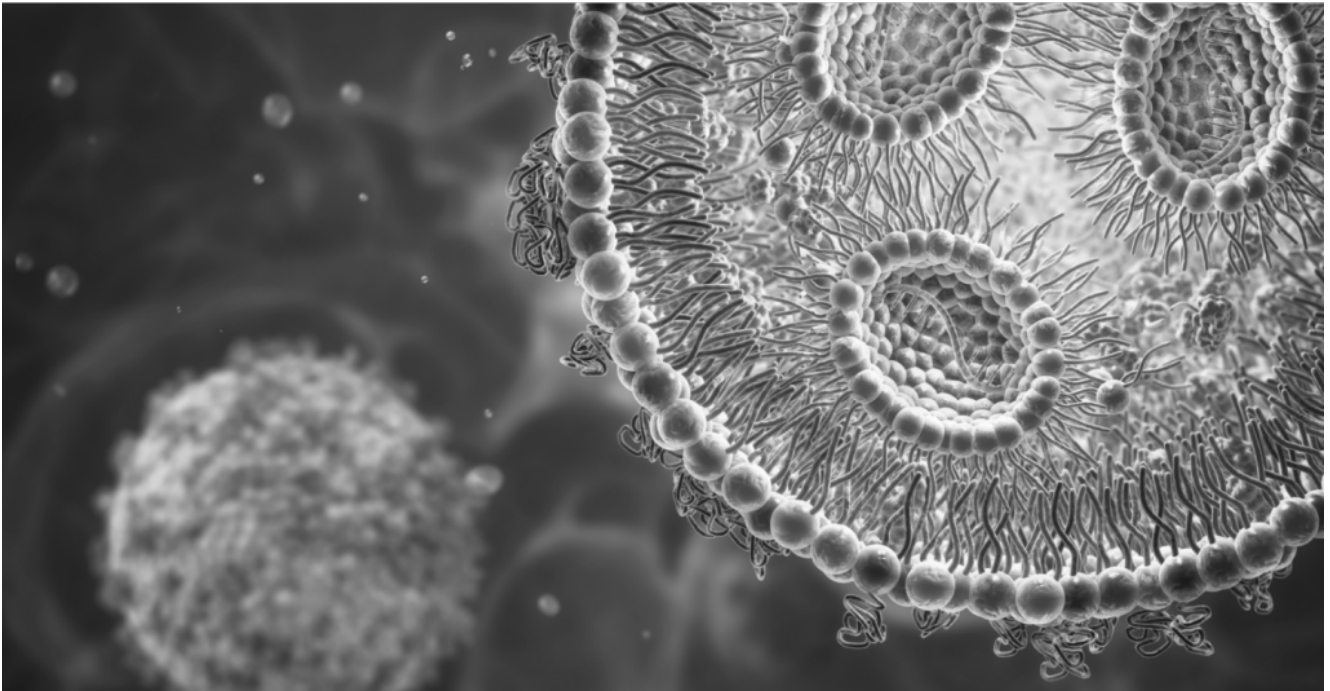


Study Finds COVID Vaccine mRNA in 70% of Breast Milk Samples



A new study adds to a growing body of evidence suggesting that the mRNA from COVID-19 vaccines does not remain at the injection site but “spreads systemically” throughout the body.

In a Lancet paper [published in September](#), researchers detected mRNA in 70% of women who provided breast milk samples up to 45 hours following vaccination. Although the mRNA detected was largely fragmented and retained only 12 to 25% of its original integrity, the researchers said further studies are needed to determine the minimum amount of mRNA that could trigger an immune response in newborns.

Researchers collected breast milk samples from 13 healthy postpartum, lactating women before vaccination and at least twice daily for five days after vaccination. Seven mothers provided breast milk samples after receiving their first and second vaccine doses, resulting in 20 total vaccine exposures and 154 breast milk samples.

Vaccine mRNA was then examined in whole breast milk and breast milk extracellular vesicles. Extracellular vesicles (EVs) are small delivery vehicles released by cells that carry biomolecules such as protein, lipids, noncoding RNA, microRNA, messenger RNA, and DNA. Breast milk contains large amounts of EVs that regulate gene expression, immune function, development, and infant growth.

Of the 13 lactating women who received either the Moderna or Pfizer vaccine, trace mRNA amounts were detected in 10 of 20 exposures up to 45 hours following vaccination. According to the study, the SARS-CoV-2 spike protein was not expressed.

Before breast milk collections, all participants tested negative for COVID-19, and prevaccination samples were negative for COVID-19 vaccine mRNA. Although all women were instructed to provide samples of 5 milliliters or greater, actual amounts were often below the threshold, hindering the experiment.

“Our proposed model suggests that after intramuscular administration, the vaccine mRNA enclosed in lipid nanoparticles is transported to the mammary glands through either hematogenous or lymphatic pathways,” the researchers wrote. “Within the mammary cells’ cytosol, a portion of the released vaccine mRNA is recruited and packaged into the developing extracellular vesicles, which are then released into the breast milk.”

The researchers said the significance of their research extends beyond the scope of mRNA COVID-19 vaccines and offers “valuable insights into the transport and presence of vaccine mRNA in breast milk, which can be relevant for assessing the safety and efficacy of future mRNA-based therapies administered to lactating women.”

Lead author Dr. Nazeeh Hanna, chief of the division of neonatology at NYU Langone Hospital and professor of

pediatrics at NYU Long Island School of Medicine, told The Epoch Times in an email that it's unfortunate so many people have overlooked the real value of the study.

"It is not about the COVID vaccine only but future mRNA therapy that is currently being developed," Dr. Hanna said. "We need to make sure we get it right for the next time. This is what we wrote in the conclusion of the Lancet paper."

Based on the study's results, Dr. Hanna said he doesn't believe there's a risk of breastfeeding after receiving the vaccine if a mother waits two days following vaccination, as they did not detect vaccine mRNA after that time. He also does not feel there's a risk if a mother is to get vaccinated and is nursing a child older than 6 months of age because the Centers for Disease Control and Prevention (CDC) allows for the vaccination of infants at 6 months of age or older.

However, mothers with infants under 6 months of age should consult their doctor, who will propose one of two options, according to Dr. Hanna:

"Continue breastfeeding since the associated risk is low," or "temporarily pause breastfeeding for these two days post-vaccination and use previously stored breast milk to feed the child—this is a common practice by many breastfeeding mothers. Once the 2-day period is over, the mother can resume breastfeeding."

Other Studies Suggest mRNA Can Transfer Through Breast Milk

Pfizer and Moderna [excluded pregnant and lactating women](#) from their clinical trials and never conducted human pharmacokinetic studies with COVID-19 vaccines. Pharmacokinetic studies assess how the human body interacts with mRNA (also referred to as "modified RNA") in vaccines for

the entire duration of exposure, showing how the contents in vaccines travel throughout the body and how they're excreted.

Despite the unknowns, the CDC and the American College of Obstetrics and Gynecology began recommending COVID-19 vaccines for pregnant and lactating women in July 2021.

The Lancet study is not the first to suggest that mRNA from COVID-19 vaccines can be potentially transferred to infants through breast milk in recently vaccinated mothers. An August 2021 study [published in Nature](#) found that lactating mothers who received Pfizer's COVID-19 vaccine secreted SARS-CoV-2-specific IgA and IgG antibodies into breast milk, with the most significant increase at three to seven days after the second vaccine dose.

A 2022 study in [Frontiers Immunology](#) analyzed samples from 35 breastfeeding mothers and found that most mothers had "detectable SARS-CoV-2 antibody isotypes and neutralizing antibodies in serum and breastmilk," especially after their second Pfizer vaccine dose. Although researchers concluded a "likely lack of significant exposure or sensitization" of breastmilk-fed infants of vaccinated mothers from low levels of mRNA present in breast milk, they only analyzed the serums of five infants over 8 months of age to reach that conclusion.

Adverse Events Reported in Nursing Infants

According to the CDC, "[available data](#) on the safety of COVID-19 vaccination while breastfeeding indicates no severe reactions after the first or second dose, neither in the breastfeeding person nor the breastfed child," and there has been "no evidence to suggest that COVID-19 vaccines are harmful to either people who have received a vaccine and are breastfeeding or to their babies."

Yet confidential Pfizer documents obtained through a Freedom of Information Act lawsuit in April 2021—before the June 2021 recommendation that pregnant and lactating women get vaccinated—[provide evidence](#) for 215 reports of infant exposure to Pfizer’s COVID-19 vaccines through lactation reported to the company’s safety database.

Of the 215 reports, 174 were reports of “exposure via breastmilk/maternal exposure during breastfeeding.” The other 41 cases listed adverse events in infants indirectly exposed to Pfizer’s COVID-19 vaccine through breastmilk, such as fever, facial paralysis, lymphadenopathy, and vomiting.

A [2021 data analysis](#) from the CDC’s Vaccine Adverse Event Reporting System conducted by immunologist and molecular biologist Jessica Rose, who holds a doctorate in computational biology, showed 177 reports of adverse events. Three reports were related to infants under age one exposed through maternal vaccination. VAERS data show breastfeeding infants of mothers who recently received COVID-19 vaccines experienced adverse events ranging from high fevers to undereating.

The mother of one infant (VAERS ID: 1124474) received her first dose of a COVID-19 vaccine at 9:15 am. She breastfed her son three hours later, and while breastfeeding, the child developed acute anaphylaxis. The mother did not experience an adverse event, only her infant did.

A 2021 study [published in Breastfeeding Medicine](#) found that more than 85 percent of 180 breastfeeding women who received an mRNA COVID-19 vaccine reported local or systemic symptoms, with higher frequency following the second dose. “Few symptoms” were reported in nursing infants, which were considered “not serious.”

Data Show Widespread Distribution of mRNA

Data shows LNPs can travel throughout the body to various tissues and organs, and therefore logical to think lipid nanoparticles (LNPs) containing mRNA could spread through vaccination to the mammary glands. Byram Bridle, a Canadian virologist and vaccinologist, [obtained a Pfizer biodistribution study](#) in rodents from Japan that showed LNPs could pass through biological tissues and membranes and travel to various organs.

In the biodistribution study, 75 percent of LNPs had left the injection site within 48 hours of vaccination and were concentrated in the spleen and liver. Levels were also detected in the ovaries, adrenal glands, brain, eyes, heart, testes, uterus, pituitary gland, spinal cord, thymus, and bone marrow.

Numerous studies have found LNPs containing [mRNA still circulating](#) in the blood after vaccination, with [one study showing](#) the presence of mRNA and free spike proteins—for the entire 60-day duration of the study—in the cytoplasm and nuclei of germinal cells in armpit lymph nodes on the same side of the body as the injection site.

A [recently published paper](#) in biomedicines found that LNPs in COVID-19 vaccines containing potentially inflammatory synthetic mRNA do not remain at the injection site after vaccination but are widely distributed throughout the body and can cross-protective membranes.

The paper cites a European Medicines Agency report that found “mRNA could be detected in the brain following intramuscular administration at about 2% of the level found in plasma.” Another study cited in the paper describes how lipid nanoparticles can easily cross the blood-brain barrier.

According to a 2022 study in Biomedicines, [similar vaccine formulations](#) were tracked in various tissues of rodents up to five days post-injection by Moderna and 14 days by Pfizer, but no human biodistribution data are currently available for any of the two licensed products—SPIKEVAX and Comirnaty. In the same study, researchers detected mRNA in blood 15 days following vaccination.

[Other research](#) detected spike proteins in circulating exosomes that carry nucleic acids, proteins, lipids, and metabolites throughout the body for at least four months after vaccination with Pfizer's COVID-19 vaccine.