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New Studies Investigate How COVID-19 May Impact Breast Milk and Pregnancy

Researchers at University of California San Diego School of Medicine are launching a pair of studies to answer critical questions regarding the roles COVID-19 may play in breast milk and pregnancy.

Breastmilk and COVID-19

The University of California San Diego School of Medicine and the Family Larsson-Rosenquist Foundation (FLRF) are collaborating to launch studies into breastfeeding and breast milk as they relate to COVID-19. As part of a larger consortium, researchers will address two critical questions:

- Is COVID-19 transmitted via human milk?
- Can breast milk protect infants from COVID-19?

“We already know breast milk contains properties that help protect infants from diseases, such as diarrhea and pulmonary infections. We urgently need to determine whether or not the virus is found in breast milk and discover breast milk components with antiviral properties that could protect infants from COVID-19,” says Lars Bode, PhD, principal investigator and director of UC San Diego’s [Larsson-Rosenquist Foundation Mother-Milk-Infant Center of Research Excellence \(MOMI CORE\)](#).

[FLRE](#) is donating \$100,000 in an expedited, streamlined process to assist researchers at MOMI CORE. “This generous donation from FLRF will help us to mobilize immediately,” said Bode, professor of pediatrics at UC San Diego School of Medicine.



Researchers are investigating potential links between pregnancy and breastfeeding and COVID-19. Photo: [Pixabay](#).

“We have been establishing top-level research resources around the world over the past five years, and now, with that infrastructure in place, we and our research partners are better prepared to respond to emergency situations in an agile manner,” said Göran Larsson, chairman of the FLRF Board. “We are proud to support MOMI CORE’s work, and hope others can do the same.”

In a concerted effort with other human milk research labs, MOMI CORE is developing sample collection protocols and assays to determine whether or not the virus is present in breast milk. These technologies will be available for clinical studies planned at UC San Diego and elsewhere. In parallel, MOMI CORE is teaming up with UC San Diego virologists and infectious disease specialists to screen breast milk components for their potential antiviral properties.

“We have very limited data on how breastfeeding and human milk bioactives impact COVID-19, but we need to find out to help stop the pandemic,” said Bode. “In these extraordinary times, health professionals need reliable information to both protect the practice of breastfeeding and ensure the health of breastfeeding mothers and their children.”

Pregnancy and COVID-19

Another new and related study with researchers at UC San Diego School of Medicine involves a newly launched effort to examine the short-and long-term effects of the novel coronavirus in pregnancy and breastfeeding.

The observational study is being conducted by the [Organization of Teratology Information Specialists \(OTIS\)](#), the professional scientific society that includes the [MotherToBaby](#) service, which provides evidence-based information on the safety of medications and other exposures during pregnancy and breastfeeding.

“Women and their health care providers need answers as quickly as possible regarding the effects of COVID-19 during pregnancy and while breastfeeding,” said Christina Chambers, PhD, MPH, principal investigator, professor in the Department of Pediatrics at UC San Diego School of Medicine and director of OTIS and MotherToBaby. “We know that pregnant and breastfeeding moms are contracting COVID-19, but the fact of the matter is that we know very little about its short-and long-term effects on a developing baby.

“To date, there are only a few case reports of pregnancy outcomes following maternal infection with this new virus. However, prior research on respiratory infections, such as seasonal influenza, has indicated that pregnant women in general are at higher risk than non-pregnant women for complications from the infection, which in turn can lead to more common pregnancy

complications, such as preterm delivery. In addition, a high fever early in pregnancy may pose a risk for the developing fetus, and women should discuss treatment options with their health care provider.”

The study will recruit pregnant women who reside anywhere in the United States or Canada. Mothers will be interviewed by telephone over the course of their pregnancy and postpartum period and will be asked to release relevant medical records from their health care providers. This information will be used to assess the course of pregnancy and outcomes for both mother and the infant.

Researchers will also track infant growth and development, via the child’s pediatrician, for at least one year. This work will be coordinated with other efforts being initiated throughout the U.S. and other countries.

Additionally, women who are breastfeeding and come into contact with COVID-19 will be asked to enroll in UC San Diego’s [Human Milk Biorepository](#), a related study of breastmilk. Using a common protocol developed in coordination with MOMI CORE, breast milk and infant samples will be collected along with an interview regarding the mother’s symptoms and treatments, as well as information on the growth and developmental outcomes of the breastfed infant or toddler.

“We hope pregnant and breastfeeding women see the importance in helping the world understand this novel virus and consider volunteering for the study. There is much to be learned in a short period of time that can help women who are currently or may become pregnant or breastfeed,” said Chambers, director of clinical research for the Department of Pediatrics.

Pregnant women and breastfeeding mothers can learn more about the study or how to enroll by visiting mothertobaby.org/join-study or by calling MotherToBaby at 877-311-8972.

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