Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)

Women's Health and COVID-19

Advancing Women's Health Through Inclusion in Research

How does COVID-19 impact women's health?

The COVID-19 pandemic posed unique challenges for women, widening economic and social gaps and compromising access to health care. Statistics showed that SARS-CoV-2 infection during pregnancy increased the risk for serious illness (including the need for respiratory support), pregnancy complications (such as preterm birth), and death. As a result of these and other factors, pregnancy-related deaths in the United States increased during the pandemic. Although staying up to date on COVID-19 vaccines protects against severe disease and death, people may still have concerns about the effects of COVID-19 vaccines on menstruation, fertility, and pregnancy. Scientific evidence clearly indicates that COVID-19 vaccines are safe, do not impair fertility, and are especially important during pregnancy.

How does NICHD support research on women's health and COVID-19?

NICHD emphasizes the importance of inclusion—of women, pregnant and lactating people, and those with disabilities—in clinical studies to gather crucial evidence and help people and providers make informed decisions, not just about COVID-19, but about all medical needs. The institute strives to protect these groups *through* research, rather than *from* research. During the COVID-19 pandemic, NICHD's research focused on helping women, pregnant and nursing people, and others make informed decisions about vaccination and care.

Success Snapshots

Confirming Vaccine Safety Before, During, and After Pregnancy

NICHD-supported researchers found no link between COVID-19 vaccines and a lower chance of conception and no link between the vaccines and miscarriage. SARS-CoV-2 infections during pregnancy, on the other hand, were linked to pregnancy complications, including preterm birth and cesarean delivery. Studies also showed that COVID-19 vaccination during pregnancy and breastfeeding passed protective antibodies to newborns, preventing disease for several months.

Defining Effects on Menstrual Cycle Length

After anecdotal reports surfaced about COVID-19 vaccines and menstrual changes, NIH funded research projects to evaluate these concerns. Researchers co-funded by NICHD found that receiving one dose of a COVID-19 vaccine could cause a slight increase—less than 1 day—in menstrual cycle length for some people. This finding was later confirmed in a large international study. For most people, the increase was gone in their next cycle. Later research found a similar short-term change in cycle length from SARS-CoV-2 infection.

Selected NICHD-Funded Projects on Women's Health and COVID-19

Menstruation & Gynecological Studies

Pinpointing Effects of Vaccination on the Menstrual Cycle

Aspects of menstruation, such as regularity, number of bleeding days, flow, and symptoms, reflect overall health status in the same way as blood pressure, body temperature, heart rate, and respiratory rate. NICHD encourages researchers to include menstruation as a fifth "vital sign" for understanding health.

Early research on COVID-19 vaccinations showed a slight, temporary change in cycle length. Later analyses found that this increase was more likely if the vaccine was received in the first half of the menstrual cycle, and less likely among those who got the vaccine after ovulation. Follow-up studies also found that some people had heavier menstrual flow or bleeding during their first period after vaccination. Flow returned to normal in the next cycle, and the number of heavy flow days was similar before and after vaccination.

Identifying Long COVID Risks for People with Endometriosis

Long COVID refers to lingering health problems that occur well after SARS-CoV-2 infection, and these problems often affect a person's quality of life. NICHD-funded researchers found that people with a history of endometriosis—a common gynecological condition in which uterine lining-like tissue grows outside the uterus—may be at slightly higher risk for long COVID. Thus, health care providers should be aware of endometriosis history when treating people with COVID-19, and those who have endometriosis may want to get vaccinated and follow other measures to prevent infection.

Learn More About Research on Women's Health and COVID-19

Research on COVID-19 During Pregnancy and Postpartum: https://go.nih.gov/U6yB4nZ

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Fertility & Pregnancy Research

Evaluating Concerns About Fertility

Studies found that COVID-19 vaccination—of either partner—does not reduce the chances of conception. However, there was a slightly lower chance of conception if the male partner had SARS-CoV-2 infection within 60 days before a menstrual cycle. This finding suggests that COVID-19, not vaccines, may temporarily reduce male fertility.

Emphasizing the Benefits of COVID-19 Prevention During Pregnancy

NICHD-supported research found that SARS-CoV-2 infection during pregnancy increases the risk for pregnancy problems, including hypertensive disorders of pregnancy, preterm birth, and postpartum hemorrhage. Pregnant women with COVID-19 are also more likely to become sicker, get admitted to an intensive care unit, and die, compared to non-pregnant women with COVID-19.

Conversely, research confirmed that COVID-19 vaccinations are safe and effective during pregnancy. Studies found no link between pregnancy loss and vaccination of either partner, before or during pregnancy. In fact, COVID-19 vaccination during pregnancy boosted newborn immunity, even in infants born preterm. One analysis suggested that widespread COVID-19 vaccination of pregnant people in 2022 likely halted a spike in preterm birth rates that began at the start of the pandemic.