**Two Studies Show that COVID-19 Vaccination Does Not Increase Pregnancy Risks**

By Valerie DeBenedette

Two large studies have found that being vaccinated against COVID-19 during pregnancy does not increase your risk of having problems in the period around the birth nor does it increase risk of poor outcomes for the pregnancy.

Because no increased risk was found, these studies support the safety of being vaccinated against COVID-19 during pregnancy. Vaccination rates for pregnant women lag behind rates for other groups.

The studies were published online in the same issue of *JAMA*, an important medical journal. They were accompanied by an editorial that expressed the hope that their results would help improve the acceptance of vaccination for COVID-19 during pregnancy.

The [first study](https://jamanetwork.com/journals/jama/fullarticle/2790608?guestAccessKey=f715555d-15b6-4d25-9406-08da90571449&utm_source=silverchair&utm_medium=email&utm_campaign=article_alert-jama&utm_content=olf&utm_term=032422) was done in Canada using information from a birth registry in the province of Ontario and the province’s COVID-19 vaccination database. It used information from all births that took place between December 14, 2020, and September 30, 2021, and compared pregnancies where the mother had received at least one dose of a vaccine against COVID-19 either during the pregnancy, after the pregnancy, or had not been vaccinated at all. The study evaluated information from nearly 98,000 women during that time period.

Nearly all the women had received at least one dose of one either the Pfizer or Moderna vaccine against COVID-19. Both of these vaccines use messenger RNA (mRNA) to create an immune response in the body that protect against infection from a virus, in this case, the COVID-19 virus.

The researchers collected data on whether there had been problems such as a hemorrhage after birth, infection of the membranes around the baby, admission of the baby to a neonatal intensive care unit, a low Apgar score five minutes after birth, and cesarean sections, both all cesareans and emergency cesareans. They found no significant differences between the mothers who had been vaccinated during the pregnancy and those who had been vaccinated after the pregnancy in the risks of any of those problems. The risks were also found to be similar to those seen in women who had not received any COVID-19 vaccination.

They concluded: “COVID-19 vaccination during pregnancy, compared with vaccination after pregnancy and with no vaccination, was not significantly associated with increased risk of adverse peripartum outcomes.”

The [second study](https://jamanetwork.com/journals/jama/fullarticle/2790608?guestAccessKey=f715555d-15b6-4d25-9406-08da90571449&utm_source=silverchair&utm_medium=email&utm_campaign=article_alert-jama&utm_content=olf&utm_term=032422) published in JAMA used information on nearly 160,000 single-baby births that took place in Sweden and Norway between January 1, 2021, and January 12, 2022, (Sweden) or January 15, 2022 (Norway). The information was obtained from the national birth registries of Sweden and Norway and was linked to vaccination registries in both countries. About 28,500 of these pregnant women had been vaccinated during their pregnancy, with almost all receiving an mRNA vaccine. The few women who did not receive an mRNA vaccine received a vaccine that uses a modified version of the virus.

The researchers compared women who had received a COVID-19 vaccination to those who had not received one. That comparison showed that there was no added risk for such problems as premature birth, stillbirth, the baby being small for its gestational age, low Apgar scores, or admission to a neonatal unit. They found that being vaccinated against COVID-19 during pregnancy was not associated with increased risk for any of these problems.

Both of these studies are what are called retrospective cohort studies, which means that they looked back at data that has already been collected on large groups of people and then analyzed that data.

Becoming infected with COVID-19 during pregnancy is linked with a greater chance of the mother dying or of a problem with the birth, the [editorial](https://jamanetwork.com/journals/jama/fullarticle/2790610) pointed out. Vaccines against COVID-19 prevent severe illness from occurring in all people who become infected, including women who are pregnant.

However, vaccination rates in pregnant women have lagged behind vaccination rates in other adults. In the United States, the vaccination rate for pregnant women is estimated to be 68%, the editorial stated.

When the vaccines against COVID-18 were first given emergency approval during the pandemic, being hesitant to get the shots was understandable, the editorial noted. MRNA vaccines were new and the clinical trials to test their safety for them had not included pregnant women.

But that has changed as more people, including pregnant women, have become vaccinated. “Over the past 14 months, a substantial body of evidence supporting the safety of the mRNA COVID-19 vaccines in pregnancy has accumulated.“ The two new studies, done with information from more than 250,00 pregnancies in three countries, provide “the strongest evidence to date regarding the safety of COVID-19 vaccines in pregnancy.”

The editorial called the findings “reassuring” and stated that they were consistent with other published date from more than 40,000 live births in the United States and from nearly 25,000 live births in Israel.

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