

Gestational carriers face higher health risks during pregnancy compared to IVF and natural conceptions, study shows

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Gestational carriers, also known as surrogates, experience an elevated risk of severe maternal morbidity and adverse pregnancy outcomes

compared to women who conceive naturally or through in vitro fertilization (IVF), according to research presented at the [ESHRE 40th Annual Meeting](#) in Amsterdam.

The population-based study analyzed 937,938 singleton births in Ontario, Canada between 2012 and 2021, comparing outcomes among unassisted conceptions, IVF conceptions and gestational carriers. The study abstract was published in *Human Reproduction*.

The findings uncovered marked variations in outcomes across the different [conception](#) methods. Gestational carriers faced a severe maternal morbidity rate of 7.1%, notably higher than the rates observed in unassisted conceptions (2.4%) and IVF conceptions (4.6%).

Specifically, gestational carriers experienced elevated rates of postpartum hemorrhages and hypertensive disorders, both serious complications during pregnancy.

Among gestational carriers, rates of postpartum hemorrhages were 13.9%, compared to 5.7% in unassisted conceptions and 10.5% in IVF conceptions. Similarly, hypertensive disorders, the most common medical problem encountered during pregnancy, affected gestational carriers at a rate of 13.9%, compared to 6.6% in unassisted conceptions and 11.6% in IVF conceptions.

Marina Ivanova, study author from Queen's University in Kingston, Canada, said, "There are several potential mechanisms that might explain the increased risk of severe maternal morbidity among gestational carriers.

"These include differences in baseline health or sociodemographic characteristics of those who choose to become gestational carriers, potential differences in [prenatal care](#) and monitoring, the physiological

and [psychological impact](#) associated with carrying a pregnancy for another person, as well as the effects of the treatments used during the IVF process."

"While some literature proposes that gestational carriers are carefully chosen based on favorable characteristics for a healthy pregnancy, our cohort did not consistently reflect this idea," adds Dr. Maria Velez, study supervisor and senior author.

"Gestational carriers were also less likely to be in the highest income bracket, and we know that lower socioeconomic status is associated with higher serious maternal morbidity rates. However, [sociodemographic characteristics](#) were accounted for in the analysis, and the results were similar, which suggest potential different mechanisms."

A gestational carrier is defined as a woman who bears a genetically unrelated child for another person or couple. Typically, IVF is used to fertilize the intended parent's egg, and the resulting embryo is placed in the gestational [carrier's](#) uterus.

Since the introduction of this method, the use of gestational carriers has been on the rise due to a number of factors, including increasing levels of infertility, a growing number of male same-sex couples seeking to have children, greater social acceptance of different family forms, advancements in medical technology and an increase in fertility clinics worldwide.

Despite the elevated risk of severe maternal morbidity and adverse pregnancy outcomes, the study did not find any significant difference in [health outcomes](#) for babies up to 28 days old between gestational carriers, unassisted conceptions, and IVF conceptions. Serious health problems were present in 6.5%, 6%, and 9.1% of neonates, respectively.

Marina Ivanova explains, "Even with the increased risk of severe maternal morbidity among gestational carriers, we were surprised to find no significant increase in severe neonatal morbidity compared to unassisted conceptions. While gestational carriers experience more complications, these do not necessarily lead to worse outcomes for the newborns, which is a positive finding.

"In contrast, among women from the general population, severe maternal morbidity is associated with a higher risk of severe neonatal [morbidity](#). This difference therefore warrants further investigation."

Professor Dr. Karen Sermon, Chair of ESHRE, explains, "These results highlight the impact of socioeconomic status on our [reproductive health](#), and the need to surround candidate gestational carriers with the best standard of care. It is reassuring—and also intriguing—that children born to gestational carriers do not seem to be impacted by the higher [pregnancy](#) risks."

More information: Ivanova, M., et al. Severe maternal and neonatal morbidity among gestational carriers: A population-based cohort study, *Human Reproduction* (2024).
academic.oup.com/humrep/issue/39/Supplement_1

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