

Infertility treatment linked with slightly higher risk of pregnancy complications

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Women who have undergone infertility treatment, such as in vitro fertilization, are more likely to experience severe pregnancy complications, according to new research published in *CMAJ* (*Canadian Medical Association Journal*).

These include severe postpartum hemorrhage, admission to the intensive care unit and sepsis.

The background rate in Canada of any severe complication is approximately 10 to 15 for every 1000 births. Maternal deaths are even rarer, occurring in 10 or fewer per 100,000 births in Canada. During [pregnancy](#), such complications are often sudden and difficult to predict. It is important to identify women who may be at risk for these "near miss" events so that worse outcomes, including death, may be averted.

"We found that the women who received infertility [treatment](#), especially in vitro fertilization, were about 40% more likely to experience a severe pregnancy complication compared with women who gave birth without any treatment," says lead author Dr. Natalie Dayan, Research Institute of the McGill University Health Centre, Montréal, Quebec. "However, it is important to remember that the absolute number of women who develop these complications remains quite small, meaning that for most women who cannot conceive naturally, this treatment is a very safe and effective method of becoming pregnant and having a child."

In Canada, 1 in 6 couples is affected by infertility and many turn to infertility treatment, with about 18,000 pregnancies occurring after treatments with assisted reproductive technology each year. Fertility experts in Ontario have generated data to not only evaluate the rate of success of these treatments, but also to conduct appropriate surveillance of the mother's health after treatment.

Canadian researchers looked at data on 813 719 live births and stillbirths in Ontario hospitals between 2006 and 2012. They identified 11 546 women who conceived through infertility treatment and matched them with 47 553 women with similar characteristics who conceived without assistance. The [women](#) who conceive with infertility treatment are typically older, report [higher incomes](#), are more often first-time mothers

and carry multiple fetuses.

A severe maternal morbidity event occurred in 30.8 per 1000 infertility-treated pregnancies and in 22.2 per 1000 untreated pregnancies. This [higher risk](#) was seen among recipients of in vitro fertilization, but not among recipients of other forms of infertility treatment, such as intrauterine insemination or ovulation induction with medication.

The current study, like others before it, shows that maternal age greater than 40 years and being pregnant with twins or triplets are each linked with a higher rate of these complications.

Infertility treatment is often given to [older women](#), and multiple pregnancy is also more likely after infertility treatment. The authors note that "[w]hether specific components of treatment using in vitro fertilization, such as the dose of ovarian hyperstimulation or fresh versus frozen embryo transfer, worsen maternal health, or whether the increased risk is a reflection of those who require or choose in vitro fertilization, remains to be determined."

However, the present study does suggest a small added risk from the treatment itself.

Over the last number of years, there have been worthy efforts by the medical and [scientific community](#) to promote optimal maternal health before [infertility](#) treatment. In addition, fertility specialists now often choose to implant only one embryo per mother to avoid risks associated with multiple pregnancies.

This study will promote further in-depth research to understand how such [infertility treatment](#) protocols may be further modified to minimize these rare but important health risks and increase the chances of a successful and safe pregnancy for the mother and her child.

More information: *Canadian Medical Association Journal* (2019).
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