

Fertility therapy not associated with long-term cardiovascular disease

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Women who gave birth following fertility treatment had no long-term increased risk of death or major cardiovascular events compared to women who gave birth without fertility therapy, according to new research by the Institute for Clinical Evaluative Sciences (ICES) and Women's College Hospital.

The findings, published today in the *Journal of the American College of Cardiology*, are the first to show fertility medications, which can cause short-term pregnancy complications, are not associated with an increased [risk of cardiovascular disease](#) later in life.

"The speculated association between fertility therapy and subsequent cardiovascular disease is not surprising given that more women are waiting until an older age to have children, when they are at greater risk of developing heart disease," said Dr. Jacob Udell, lead author of the study and [cardiologist](#) at Women's College Hospital.

Fertility therapy is used in nearly one percent of all successful pregnancies in North America. But these medications are known to cause short-term complications such as [gestational diabetes](#) and hypertension. These short-term risks, however, do not translate into lasting cardiovascular damage according to the researchers.

In the study, researchers assessed the long-term risk of stroke, heart attack and heart failure following fertility therapy among 1.1 million women after delivery over a 17-year follow-up period in Ontario. They

found:

- A five-fold increase in the use of fertility therapy from 1993 to 2010, particularly among older women.
- The use of fertility therapy was associated with an increase in [pregnancy complications](#) including a near 30 per cent increase of diabetes in pregnancy, 16 per cent increase in placental disorders and a 10 per cent increase in pre-eclampsia.
- Women who delivered following fertility therapy had about half the risk of subsequent death compared to women who did not have fertility therapy.
- Women who delivered following fertility therapy had nearly half the risk of major cardiovascular events such as stroke, [heart attack](#) and [heart failure](#). The researchers do not believe that this is a direct effect of treatment; rather that women undergoing fertility therapy maintain a healthy lifestyle over a long period.
- Researchers reported no increase in the risk of future breast or ovarian cancer in women who gave birth following fertility therapy.
- Women who had fertility therapy also experienced fewer mental health events, including one-third the rate of depression and one-sixth the rate of self-harm.

"Our findings provide some reassurance that fertility therapy does not appear to increase long-term risk of [cardiovascular events](#) following successful [pregnancy](#)," says Dr. Donald Redelmeier, co-author of the study and a senior scientist at ICES. "The existing literature provides mixed messages, with our results yielding a relatively favourable assessment."

One theory is that women who seek fertility therapy maintain healthier behavior after a successful delivery – a pattern that extends across age and income groups, the researchers say. "Those with successful

outcomes may have a powerful and durable change to their lifestyle," says Dr. Redelmeier. "Unknown protective mechanism may also contribute."

"Our findings are encouraging but further research is necessary to explain the full impact of fertility therapy on women's health," Dr. Udell adds. "With a better understanding of the long-term health effects associated with fertility therapy, we can help inform decision making and reduce potential health risks to women."

Provided by Women's College Hospital

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