

First pregnancy complications linked to increased risk of future premature birth

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Women whose first baby is born at full term, but who experience complications in pregnancy, have an increased risk of preterm delivery (before 37 weeks) in their next pregnancy, finds a study from Norway published by *The BMJ* today.

The findings suggest that term complications may share important underlying causes with preterm delivery that persist from [pregnancy](#) to pregnancy—and could therefore help identify women at [increased risk](#) of preterm delivery, despite having had a previous term birth, say the researchers.

Women who deliver at term are generally considered to be at low risk of preterm delivery in later pregnancies, but it is not clear whether pregnancy complications or poor outcomes at birth might increase the risk of preterm delivery.

So researchers based in Norway and in the US set out to explore whether pregnancy complications or poor outcomes after a first term delivery might increase the risk of preterm delivery in the next pregnancy.

Their findings are based on data from Norway's Medical Birth Registry linking first and second pregnancies for 302,192 women between 1999 and 2015.

Term complications included pre-eclampsia (abnormally [high blood pressure](#) and excess protein in the urine), placental abruption (when the placenta comes away from the womb), stillbirth, neonatal death (in the first 28 days), and having a small baby (small for gestational age).

The researchers found that women with any of the five complications at term were at substantially increased risk of preterm delivery in their next pregnancy. The conclusion did not change after taking account of potentially influential factors, such as mother's age, pre-pregnancy weight, [education level](#) and smoking status.

Compared with having none of the five complications in the first pregnancy, having any one of the complications led to a doubling of preterm risk, while having any two or more complications more than tripled the risk.

The absolute risks for preterm delivery in second pregnancy were 3% with none of the five term complications, 6% after term pre-eclampsia, 7% after term [placental abruption](#), 13% after term stillbirth, 10% after term neonatal death and nearly 7% after term small for [gestational age](#).

This is an observational study, so can't establish cause, and the researchers point to some limitations that may have affected the accuracy of their findings.

However, the results are based on high quality population-based birth data, and were largely unchanged after a range of further analyses, suggesting that they withstand scrutiny.

As such, they conclude that serious complications

in pregnancy at term "imply an increased risk not only of recurrence of the same outcome but also of preterm birth in a subsequent pregnancy. These findings might inform antenatal clinical care by helping to identify women at increased risk of [preterm delivery](#)."

And they add that further exploration of the causal factors underlying these shared risks "might provide insight into fundamental biological mechanisms that link a broad range of pregnancy complications."

More information: Term complications and subsequent risk of preterm birth: registry based study, *BMJ* (2020). [DOI: 10.1136/bmj.m1007](https://doi.org/10.1136/bmj.m1007)

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