

Hypertension during pregnancy can increase later risk of heart disease

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Research published today in the journal *Circulation* has found that women with high blood pressure in pregnancy, including conditions such as preeclampsia, have an increased risk of developing cardiovascular disorders later in life, including stroke and heart failure.

Led by King's College London, the team of researchers studied [electronic health records](#) from 1997 to 2016 to recreate a UK population-based cohort of 1.3 million [women](#) covering nearly 1.9 million completed pregnancies. They used [statistical analysis](#) to determine the associations between hypertensive disorders of [pregnancy](#), such as preeclampsia with 12 cardiovascular disorders.

They found that during the 20-year study period, 18,624 cardiovascular events occurred (such as heart attacks, stroke, heart failure), of which 65% occurred in women under 40 years of age.

High blood pressure in pregnancy affects up to 10% of pregnancies often causing complications in the woman and requiring early delivery of their baby.

Women who had one or more pregnancies affected by preeclampsia or other types of pregnancy hypertension were more likely to have a stroke, [heart attack](#), [heart failure](#), or similar event.

Women with pregnancy high blood pressure had twice the number of deaths in this follow-up period from cardiovascular disease compared with women without pregnancy high blood pressure. These women also developed chronic hypertension 4.5 times faster than women without pregnancy high blood pressure.

The increased risk that occurred in those women with previous pregnancy high blood pressure was found as early as one year after pregnancy compared to women without pregnancy [high blood pressure](#).

Currently in the UK, women are screened for the development of cardiovascular disease from 40 years of age. This research suggests that the age for cardiovascular screening may need to be lowered for women with a history of pregnancy hypertensive disorders as they are at higher

risk of heart and blood vessel problems than women who had unaffected pregnancies. Hypertensive disorders of pregnancy could be considered as a natural screening tool for premature cardiovascular events, enabling cardiovascular risk prevention through national initiatives.

Lead author, Dr. Fergus McCarthy from University College Cork, said: "This research further supports the evidence that what occurs in pregnancy has lifelong implications for a mother's health. By looking at pregnancy outcomes, we may have an excellent opportunity to identify women at high risk of [cardiovascular disease](#) and offer them [early interventions](#) after pregnancy to try and reduce this risk. It is critical now that we focus our research on potential interventions to improve the long-term health of mothers."

Professor Lucy Chappell, Department of Women & Children's Health at King's College London said: "These results clearly show that we should now look at how we share this information with women who have had pregnancy hypertension, and that we need to find out what interventions work for these women so that they can reduce their risk of heart disease later in life. It is essential that we work with women and all the healthcare professionals involved in their care so that we can tailor the interventions appropriately to this period of a woman's life."

The next steps in this research are to determine what interventions, such as diet modifications, salt reduction, exercise or medications that may protect the [heart](#), may work in the women after pregnancy to try and reduce this risk and improve long term health.

Provided by King's College London

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