

High blood pressure, pregnancy complications may greatly raise moms' future heart risks

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Women who have high blood pressure before they become pregnant may be twice as likely as those who don't to develop cardiovascular disease within a decade of giving birth, new research finds.

And if their pregnancies involve complications, they are up to 10 times more likely to develop premature cardiovascular problems, according to the study, published Friday in the journal *Hypertension*.

The findings highlight the importance of blood pressure screenings for [women of childbearing age](#) and add to evidence suggesting pregnancy may unmask or accelerate underlying [heart problems](#), said study co-author Fergus McCarthy, a perinatal researcher and senior lecturer in the department of obstetrics and gynecology at University College Cork in Ireland.

"Pregnancy can act as a natural stress test unmasking latent [cardiovascular disease](#) in the form of pregnancy complications," he said. But it is unclear whether those complications "are a marker for more severe chronic hypertension, or whether other mechanisms and attributes contribute to the elevated long-term cardiovascular disease risk associated with them."

An estimated 9% of women of childbearing age in the U.S. have high blood pressure—also called hypertension—according to data from the Centers for Disease Control and Prevention. Among those who do, almost 41% are not managing it and nearly 17% don't even know they have it. Previous studies have shown maternal high blood pressure increases the risk of life-threatening problems for mother and baby.

In the new study, researchers analyzed the link between chronic hypertension and adverse pregnancy outcomes on later cardiovascular events, including stroke, [heart attack](#), stable and unstable angina, [heart disease](#), peripheral artery disease, abdominal aortic aneurysm, [heart](#)

[failure](#) and atrial fibrillation.

Adverse pregnancy outcomes included preeclampsia, gestational hypertension, preterm birth, stillbirth and fetal growth restriction. Women who were diagnosed with high blood pressure prior to pregnancy or before 20 weeks of gestation or who were taking blood pressure-lowering medications were considered to have chronic hypertension.

The study included 1.2 million women up to age 49 who gave birth between 1997 and 2016. Those who had cardiovascular disease or diabetes prior to becoming pregnant were excluded. The women were followed for a median 9.3 years.

Overall, women who had high blood pressure prior to becoming pregnant faced double the risk for later cardiovascular problems, compared to women without hypertension. Women who had high blood pressure and complicated pregnancies experienced the highest risk.

Compared to women without chronic hypertension who had no pregnancy complications, women who had both these problems faced a 9.6-fold higher likelihood of developing heart failure, a 6.4-fold higher likelihood of stroke and were 2.8 times more likely to develop atherosclerosis, or a buildup of plaque in the arteries. Even compared to women who had chronic high blood pressure but no pregnancy complications, women with both faced double the risk for coronary heart disease.

Women who had pregnancy complications but did not have high blood pressure prior to becoming pregnant faced an overall 50% higher risk for future cardiovascular problems, compared to those without chronic hypertension or pregnancy complications.

"It's possible that women who have an adverse pregnancy outcome activate several different biologic pathways that might not turn off after pregnancy," said Dr. Nisha Parikh, an associate professor of clinical medicine at the University of California, San Francisco. "Similar to if you have a heart attack, your physiology isn't the same after that."

The findings highlight the importance of screening women who are considering becoming pregnant so blood pressure can be managed before they do, said Parikh, who was not involved in the research. "Often women don't even know they have high blood pressure until they get pregnant and have it measured during prenatal visits," she said.

Likewise, steps should be taken to prevent pregnancy complications in women with a history of high blood pressure, she said. One way to do this is to give them [low-dose aspirin](#) early in the pregnancy, which has been shown to help prevent a complication called preeclampsia in women at high risk. The condition is characterized by severe [high blood pressure](#) after the 20th week of pregnancy and protein in the urine.

Having a history of pregnancy complications should prompt a more urgent approach to preventing cardiovascular disease and its risk factors through strategies such as adopting a heart-healthy diet and increasing [physical activity](#), according to a 2021 AHA scientific statement about adverse pregnancy outcomes and [cardiovascular disease risk](#).

Because women often delay [pregnancy](#) until their later childbearing years, chronic hypertension—which becomes more prevalent as women get older—is a growing problem among new mothers, Parikh said. "It's not surprising if women give birth at older ages that they would have a higher prevalence of [hypertension](#). Detecting and screening for this is really important."

More information: Sukainah Al Khalaf et al, Association Between

Chronic Hypertension and the Risk of 12 Cardiovascular Diseases Among Parous Women: The Role of Adverse Pregnancy Outcomes, *Hypertension* (2023). [DOI: 10.1161/HYPERTENSIONAHA.122.20628](https://doi.org/10.1161/HYPERTENSIONAHA.122.20628)

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