

Hypertensive pregnancy associated with risks of heart disease later in life

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Compared with women whose blood pressure during pregnancy was normal, women with a history of hypertensive disorders of pregnancy, such as preeclampsia and gestational hypertension, have major

differences in the structure and function of the heart a decade after childbirth, University of Pittsburgh School of Medicine researchers report today in the *Journal of the American College of Cardiology*.

The changes, which mainly affect the left ventricle of the [heart](#), may predispose some women to [ischemic heart disease](#) and [heart failure](#) later in life without them knowing it. The findings may help clinicians identify those at high risk of long-term cardiac complications and enable early therapeutic interventions to prevent [heart disease](#) from developing.

"Hypertension is a silent killer," said lead author Malamo Countouris, M.D., a clinical instructor in cardiology at Pitt's Department of Medicine and a co-director of the UPMC Magee-Womens Hospital Postpartum Hypertension Clinic. "None of the women in our study had clinical symptoms of heart disease—they are young and probably feel well and healthy, and may not be seeing a [health care provider](#) regularly—but it's important to start screening them for high [blood pressure](#) early."

The researchers also found that while hypertensive disorders of pregnancy independently increase a woman's risk of long-term heart complications, the "double-hit group"—those with histories of hypertensive disorders of pregnancy who also had [high blood pressure](#) at the time of assessment—are most at risk.

Fortunately, the risk can be assessed quickly and non-invasively on an echocardiogram. Countouris and her team found that eight to 10 years after delivery, 79% of women from the double-hit group had left ventricular remodeling, or relative thickening of the walls of their left ventricles. This compares to 38.2% of those who had neither, 36.4% in those with histories of only hypertensive disorders of pregnancy and 46.2% in women with current hypertension alone. Having both a history of hypertensive disorder of pregnancy and current hypertension also was associated with poorer left heart diastolic function, which reflected the

left ventricle getting stiffer and not filling with blood to its full capacity.

"Identifying women at high risk can provide a window of opportunity for targeted interventions to prevent heart disease," said Countouris.

"Suggesting simple changes in lifestyle or diet, including regular exercise and better management of other cardiovascular risk factors, can prevent adverse changes in the heart and lower the risk of heart disease later in life."

More studies are needed to clarify the cause-and-effect relationship between complicated pregnancies and long-term effects on the heart, said Countouris.

More information: *Journal of the American College of Cardiology* (2021). [DOI: 10.1016/j.jacc.2020.12.051](https://doi.org/10.1016/j.jacc.2020.12.051)

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