

# Pre-pregnancy heart abnormalities may predict recurrent preeclampsia risk

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Image: Wikimedia Commons

Women who had pregnancy-related high blood pressure multiple times had recognizable heart abnormalities between pregnancies that could help predict their risk for heart and blood vessel disease during subsequent pregnancies and even later in life, according to new research in *Hypertension*, an American Heart Association journal.

Pregnancy-related [high blood pressure](#), or [preeclampsia](#), is a serious disease that affects 3 percent to 8 percent of pregnancies. This study showed how cardiovascular abnormalities detected in non-pregnant [women](#) with a history of preeclampsia might identify the recurrent preeclampsia in subsequent pregnancies.

When preeclampsia develops before 32 weeks of pregnancy, it is considered early. When preeclampsia occurs, the baby may need be delivered early to prevent harm to the mother and baby.

"Women who have early preeclampsia in their first pregnancy should be informed of their risk and should be carefully followed," said Herbert Valensise, M.D., Ph.D., study lead author and associate professor of obstetrics and gynecology at Tor Vergata University School of Medicine in Rome, Italy.

Previous research showed that women who have had preeclampsia are 7 times more likely than women with normal pregnancies to develop the disease in later pregnancies and are more likely to have heart and blood vessel disease later in life. What is unclear is how to predict who is at greater risk for these complications.

In this study, participants included 75 women who had preeclampsia and 147 women who did not have the disease during their previous pregnancy. None were pregnant at the start of the study and all participants underwent heart-imaging tests 12 to 18 months after their first delivery. All participants became pregnant again within 24 months and were followed until the end of their pregnancies. Of the 75 women who had preeclampsia in a previous pregnancy, 22 women (29 percent) developed it again. Participants' average age at the beginning of the study was 34 years.

Researchers found that women who had preeclampsia once and then developed it again in a subsequent pregnancy had pre-pregnancy abnormalities in one of the heart's four chambers. Compared to women who never had preeclampsia or who had it once, these women had abnormal changes in the size and function of the left ventricle, which pumps blood throughout the body. Specifically, the [left ventricle](#) was unusually thick and had to work harder while pumping significantly less

blood.

"Physicians have to look at the complicated pregnancy history as a potential risk factor for cardiovascular complications later in life, and in a subsequent pregnancy," Valensise said. "When we ask about heart risk factors such as smoking, high cholesterol, family history of heart and [blood vessel disease](#), we should also ask about possible high [blood pressure](#) during pregnancy, especially early preeclampsia."

This was a small study. Researchers said larger studies are necessary to confirm their findings.

Provided by American Heart Association

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