

Prehypertension in late pregnancy linked with underweight newborns, stillbirths

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Women who develop prehypertension late in pregnancy may be more likely to give birth to underweight or stillborn babies than women whose blood pressure remains normal, according to new research in the American Heart Association's journal *Hypertension*.

Prehypertension is a systolic pressure (the top number) between 120-129 millimeters of mercury (mm Hg) or a diastolic pressure (the bottom number) between 80-89 mm Hg, or both.

Hypertension ([blood pressure](#) of 140/90 mm Hg or above) has previously been associated with low birth weight and stillbirth. However, this may be the largest study to examine blood pressure changes to prehypertensive levels in women whose blood pressure was normal at the beginning of their pregnancy, researchers said.

"Working as a clinical doctor in obstetrics, I often meet women with 'borderline [high blood pressure](#),' and I wanted to find out if they had increased risks of adverse fetal outcomes," said Anna-Karin Wikström, M.D., Ph.D., study lead author and associate professor of obstetrics at Uppsala University in Sweden.

For this study, researchers evaluated diastolic pressure, which measures the pressure in the arteries between heartbeats. They defined [low birth weight](#) as born small for gestational age (SGA) - with a birthweight among the 2.5 percent lightest in a specific gestational week.

Compared to women whose blood pressure remained normal, researchers found:

Women who had prehypertension in late pregnancy (36 weeks) were 69 percent more likely to give birth to a baby that was underweight and 70 percent more likely to have a stillbirth.

Those who experienced a 15 point or greater increase in diastolic blood pressure and developed

prehypertension were more than twice as likely to deliver a small baby.

Among all women studied (with or without prehypertension), the likelihood of having a small baby increased by 2 percent for each single point rise in [diastolic blood pressure](#).

Researchers analyzed medical records from 2008 to 2014 of more than 150,000 women in the Stockholm-Gotland Obstetric Database. Records included [blood pressure readings](#) before 20 weeks and after 34 weeks of pregnancy. Only women who carried their babies for 37 weeks or longer, and whose blood pressure never surpassed 140/90 during pregnancy, and were carrying only a single baby were included in the study.

In all, about 11 percent of the [women](#) developed prehypertension. Among all deliveries, there were 2,416 small-for-gestational-age infants and 194 stillbirths.

Researchers accounted for the mother's age and weight, as well as whether she was a smoker or had diabetes, to determine if these and other factors explained the connection they found between blood pressure and birth outcomes. After adjustments, the connection remained significant. However, researchers emphasized that their study showed only an association, not a cause-and-effect relationship, between blood pressure and fetal outcomes.

Provided by American Heart Association

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