

High blood pressure may raise future kidney disease risk for pregnant women

February 28 2022, by Laura Williamson, American Heart Association News



Women with high blood pressure conditions during pregnancy may face double the risk for kidney disease within several years after giving birth, according to a new study that finds the risk climbs to nearly fourfold for women who already had high blood pressure before pregnancy.

The study, published Friday in the American Heart Association journal *Hypertension*, found the risk was higher for Black women than white women.

While previous research has looked at pregnancy-related high blood pressure and [kidney disease](#), the new study's authors said those analyses did not include a diverse racial representation—even though Black women have higher rates of these conditions than their white peers. According to the Centers for Disease Control and Prevention, Black women also are three times more likely to die from pregnancy-related problems than white women.

It all underscores the need for good prenatal care, said study co-author Dulaney Wilson, a research assistant professor in the department of public health sciences at the Medical University of South Carolina in Charleston.

"Whoever is taking care of these women, they need to be aware that kidney disease—though the overall rate is still low—could be a serious problem," Wilson said. "This is something we'd like to prevent if at all possible."

More than 15% of women are affected by some type of pregnancy-related hypertension during their reproductive years, according to an AHA scientific statement published in December. The conditions include preeclampsia, which can affect the kidney, liver, lungs and brain; eclampsia, when preeclampsia progresses to seizures or coma; gestational hypertension, a rise in blood pressure after 20 weeks of

pregnancy; and chronic hypertension, high blood pressure before or during the first 19 weeks of pregnancy and more than 12 weeks after the baby is born. These disorders can lead to death or organ damage, including end-stage kidney disease, when the kidneys can no longer function on their own.

Researchers analyzed hospital records for 391,838 women who gave birth in South Carolina between 2004 and 2016, along with relevant birth and death certificate data. About 35% of the women were Black and 65% were white. They ranged in age from 12 to 49 at the time they gave birth and were followed at three, five and 14 years after delivery.

The risk of kidney disease after three years was 2.29-fold in women who developed pregnancy-related hypertension compared to women without blood pressure problems. But the risk was highest among women who also had high blood pressure prior to pregnancy. These women were 3.8 times as likely to develop kidney disease within three years after giving birth than their peers who had no blood pressure issues. By 14 years after delivery, it decreased to a 2.7-fold higher risk compared to women who had no blood pressure issues before or during pregnancy.

When the results were broken down by race, the risk for Black women was even greater. Black women who had both high blood pressure prior to pregnancy and pregnancy-related hypertension disorders had triple the risk for developing kidney disease within 14 years of delivery compared to Black women with no blood pressure issues, whereas white women had 1.97 times greater risk than their peers.

While she expected to find disparities between Black and [white women](#), Wilson said, "I was really surprised by the magnitude of the difference."

"This study lends further support to the idea that pregnancy can be a window into your future health," said Judette Louis, an associate

professor and chair of the department of obstetrics and gynecology at the Morsani College of Medicine at the University of South Florida in Tampa.

Most studies of high blood pressure during pregnancy have focused on subsequent cardiovascular risk to the mother, said Louis, who was not involved in the study. But this new research suggests the stress of pregnancy may be exacerbating or unearthing other underlying conditions.

The study, she said, also exposes more ways in which the social determinants of health—the conditions in the places people live, work and play—may be disproportionately impacting Black women.

"Some of the social determinants of health, such as a lack of access to care, may predispose them to having a delayed diagnosis and treatment for [high blood pressure](#), which in turn can lead to problems like end-stage kidney disease," Louis said.

Knowing that Black women may face a higher risk for kidney disease following pregnancy should prompt health care professionals to ask them about their pregnancy health history, she said. "They need to be aggressive in looking for modifiable risk factors and counsel women about the importance of continuing their own health care after delivering a baby," which can be a problem for women with limited or no insurance coverage.

Steps to keep blood pressure within the normal range include staying physically active, eating a diet high in fruits and vegetables and low in saturated fats, and limiting sodium.

Wilson said women who are at risk should take their own blood pressure regularly prior to and during [pregnancy](#).

"The first step is to measure it," she said. "You can't tell what your [blood pressure](#) is by how you're feeling unless it's really high or really low. It's useful to keep track of it on a regular basis. Prevention is better than anything else, but if you can't prevent it, then catch it early."

More information: Angela M. Malek et al, Hypertensive Disorders of Pregnancy With and Without Prepregnancy Hypertension Are Associated With Incident Maternal Kidney Disease Subsequent to Delivery, *Hypertension* (2022). [DOI: 10.1161/HYPERTENSIONAHA.121.18451](#)

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