

# Questions and Answers About Preeclampsia

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**Lee Padove, MD, has spent a quarter-century learning about how pregnancy affects the heart and treating women with preeclampsia, a serious pregnancy complication that causes high blood pressure.**

"I got interested in this about 25 years ago, when I had a mom who had a heart attack right after delivering her babies," says Dr. Padove, a Northside Hospital cardiologist. Fortunately, the mother survived, though she went on to require bypass surgery. The episode inspired him. "I realized there wasn't much known about what's now called cardiac obstetrics."

Thanks in part to his efforts, Northside has been a pioneer in cardiac obstetrics and started one of the first six postpartum maternal health programs in the country. Northside doctors in Atlanta delivered more than 15,000 babies in 2019, the most of any hospital in the nation. Preeclampsia affects between 2 and 8 percent of pregnancies globally, and Dr. Padove and his colleagues see "several hundred" preeclampsia patients a year; they also treat other cardiac diseases and symptoms affecting pregnant women.

Dr. Padove helped us answer common questions about preeclampsia and maternal heart health.

## **What is preeclampsia?**

Preeclampsia is defined by high blood pressure during pregnancy and damage to at least one organ, such as the kidneys or liver. But "it's not just high blood pressure," Dr. Padove says. "It's a problem that starts in the placenta, which is how the baby gets nutrients from the mom, involves damage to other organs and may affect the mother and baby's future health."

The cause of preeclampsia remains unknown, but there are many theories, including that the new blood vessels that grow to feed the placenta cause problems for the cardiovascular system as a whole.

More than 700 women a year in the U.S. die from pregnancy-related complications, including preeclampsia, and a great number more are hospitalized with serious disease, putting enormous stress on these women and their families. In the U.S., maternal deaths have steadily increased over the past two decades, while other wealthy countries have had a decreasing maternal death rate.

## **Why is preeclampsia dangerous?**

Most women who have preeclampsia will give birth to healthy babies and recover from the condition. But preeclampsia is a threat to both mom's and baby's health and can be life-threatening.

Because it affects the placenta, the baby might not get adequate blood, oxygen and nutrients and may not grow as expected, resulting in low birth weight. Moms with preeclampsia often have to deliver early to minimize the risk of harm to themselves or their babies. Early delivery is associated with breathing problems and other challenges for newborns.

Preeclampsia can lead to placental abruption, where the placenta separates from the uterus, causing life-threatening bleeding. Some women's preeclampsia progresses to more severe forms, including HELLP syndrome, which means several organ systems have been affected, and eclampsia, the onset of seizures or a coma. Preeclampsia can cause a stroke or another brain injury.

And unfortunately, preeclampsia can have a long reach.

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"It used to be thought that preeclampsia was solved by delivering the baby," Dr. Padove says. "What we've learned is that it affects the mom's risk for heart disease down the road."

Women who have had preeclampsia are "more likely to get coronary artery disease early in life," he says, as early as 15 to 20 years after their pregnancies.

## How is preeclampsia diagnosed?

Preeclampsia occurs after 20 weeks of pregnancy, the halfway marker of a typical 40-week pregnancy. The earlier it manifests, the more severe it is, Dr. Padove says.

During prenatal visits, pregnant women have their blood pressure checked, and if elevated blood pressure or a spike of 30 mm Hg or more is noted, it requires more testing. Normal blood pressure is below 120/80 mm Hg; readings at or above 140/90 mm Hg could be a red flag. (It's also possible the reading is a temporary glip caused by stress or another factor.) If a woman's blood pressure is high, the doctor will screen other organs, such as a urine test to see how the kidneys are functioning or a blood test to check on the liver.

Women with preeclampsia may experience no noticeable symptoms, or they might have headaches, vision changes, shortness of breath, upper abdominal pain, or nausea and vomiting. Of course, some of these discomforts can be normal features of a healthy pregnancy.

## How is preeclampsia treated?

After preeclampsia is diagnosed, mom and baby will be monitored closely with more frequent blood tests, ultrasounds and non-stress tests than a pregnancy that isn't considered high-risk.

Sometimes, a mom is prescribed blood pressure medication, and in some cases hospitalization is recommended. Ultimately, preeclampsia may force an early delivery to protect either the baby or mother.

Typically, the obstetrician's goal is to delay the delivery of the baby until at least 34 weeks, and ideally 37 weeks, to give the baby the benefit of more time in the womb. It can be difficult to decide when the risk of serious complications from preeclampsia outweighs the risks of preterm birth, so seeing an experienced maternal heart health team is critical.

## Who is at risk for preeclampsia?

Preeclampsia can happen to any pregnant woman, but some groups tend to be more at risk, Dr. Padove says, for reasons that aren't entirely clear. "We don't know why one person gets it and another doesn't," he says.

### Risk factors include:

- Prior preeclampsia diagnosis
- Preexisting high blood pressure
- Having diabetes, kidney disease or an inflammatory condition such as lupus

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- Being African-American
- Obesity
- First pregnancies
- Being pregnant with multiples (twins, triplets, etc.)
- In vitro fertilization
- Large gaps between pregnancies (such as having a baby at 25 and the next at 37)
- Being a very young mom (under 20) or an older mom (35 and older, but especially older than 40)

## **What should a woman with preeclampsia know after her baby is born?**

It's important for a woman who had preeclampsia and her doctors to continue to be vigilant about her heart health, Dr. Padove says. Over the past four years, more than 250 women have participated in Northside's Maternal Heart Health Clinic. The educational program aims to empower women to ward off future heart events with diet, exercise and careful monitoring of blood pressure and cholesterol.

It's likely these self-care measures can make a real difference in a woman's heart risk, Dr. Padove says. "It's important for moms to put emphasis on themselves for a little bit each week, because moms tend to put the emphasis on everyone but themselves."