

# Problems In Pregnancy Signal Future Health Risks

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Many doctors and patients have long considered two common pregnancy complications as temporary medical problems that essentially go away once the baby is born.

Now there's growing recognition that expectant women who have preeclampsia or gestational diabetes are at much greater risk of developing illness well beyond the baby's birth, including cardiovascular disease and diabetes, compared to women with uncomplicated pregnancies. What's more, the complications have been linked to health problems in the children as late as early adulthood, researchers say.

The medical findings led the American Heart Association last month to issue updated guidelines that list a problem pregnancy as a risk factor for a woman to develop heart problems, along with such well-established dangers as smoking and high cholesterol. The two chief culprits identified in the guidelines, preeclampsia and gestational diabetes, are potentially serious complications that have long been known for their immediate danger to both the mother and the baby.



Preeclampsia, a rapid rise in blood pressure, more than doubles a mother's chance of developing cardiovascular disease, stroke or other conditions five to 15 years after the pregnancy, according to a study of nearly 3.5 million women published in 2007 in the British Medical Journal. Meanwhile, gestational diabetes, a type of diabetes that occurs only during pregnancy, increases both the mother's and baby's risk of developing the full-blown condition later in life.

Both complications can have other long-term consequences for the baby. A study of more than 280,000 Swedish men published in January in the AHA journal Circulation found that those born to mothers with gestational diabetes were more likely to be overweight at age 18 than those whose mothers were free of the complication. A Finnish study published in 2009 in the journal Stroke found a higher risk of stroke in adults born after pregnancies complicated by preeclampsia or high blood pressure.

"How a woman does in her pregnancy gives you a glimpse of what the future will be 10 years down the line," says Jennifer Mieres, a cardiologist at North Shore-LIJ Health System, Long Island, N.Y., and a national spokeswoman for the AHA.

Most medical experts believe that a difficult pregnancy, by putting unusual strains on the body, provides a warning sign for heart risks that are already there. However, the connection between the pregnancy complications and later health risks isn't well understood.

"Pregnancy is like a stress test for the heart," says Heidi Connolly, a cardiologist at Mayo Clinic, Rochester, Minn., with a special interest in pregnancy and heart disease.

Gestational diabetes occurs in as many as 10% of pregnancies, according to the National Institutes of Health. Up to 8% of pregnant women develop preeclampsia.

The conditions are among the leading causes of maternal and fetal death, though such outcomes are uncommon in the U.S. Most cases can be effectively managed with regular

OB/GYN checkups during pregnancies, doctors say. (African-American women and women living in poverty are at higher risk for both complications.)

Because in both cases, symptoms typically go away soon after the baby is born, the long-term implications often go unaddressed.

"Preeclampsia has suffered from this concept that it's just a pregnancy thing," says Eleni Tsigas, executive director of the Preeclampsia Foundation, a Melbourne, FL patient-advocacy group. In the majority of cases where "Mom and baby go home fine," she says, "it disappears from that woman's radar screen."

Laura Dale was 28 years old and in good health when she found she was expecting her first child. The pregnancy was smooth until the sixth month, when her feet began to swell so much she had trouble walking. Her blood pressure began to rise by the 32nd week. But it wasn't until week 35 when she was rushed to the hospital that she learned she had preeclampsia and was told she had to have the baby that night or she might die. "It came on like lightning," she says.

Her son was born just under five pounds. Her blood pressure declined, but a few days later she was back in the hospital with readings so high she thought she was having a stroke. She says her doctor told her he just hoped to get her out of the hospital alive.

Ms. Dale, a pharmaceutical company employee in Easton, Pa., who turns 32 next week, and her son ("a big strapping three-year-old," she says) ultimately survived the ordeal in good shape. Now in May, she plans to run in her fourth half-marathon and is training to run a full marathon next year. She's also looking ahead to having another baby.

"It made me take a better look at my health and my lifestyle," she says. "It probably wouldn't have crossed my mind if I didn't have preeclampsia."

Preeclampsia is characterized by a sudden increase in blood pressure and protein in the urine after at least 20 weeks of pregnancy. Severe headaches and blurred vision are also among symptoms. What causes it isn't clear, but it is associated with damage to the lining of blood vessels, says Elizabeth Ofili, chief of cardiology at Morehouse School of Medicine, Atlanta.

One possible consequence is poor blood flow to the placenta, which in turn deprives the fetus of necessary oxygen and nutrients, undermining development. The only cure is delivery of the

### Early Warnings

Scientists are finding that some common complications during pregnancy can increase long-term risks for the health of the mother and baby.

**Complication:** Gestational diabetes, a type of diabetes that occurs only during pregnancy, affects as many as 10% of pregnant women.

**Short-term impact:** Babies may be born unusually large, leading to risk of premature birth or complicated delivery.

**Long-term impact:** Offspring of mothers who experienced gestational diabetes were more likely to be overweight at age 18 than children whose mothers didn't have the condition, according to a recent large study in Sweden. The subjects' greater body mass in early adulthood was likely due to the diabetes, and not to family genetic or socioeconomic factors, the researchers concluded.

**Complication:** Preeclampsia, a common complication of a first pregnancy, is characterized by a rapid rise in blood pressure after 20 weeks of gestation.

**Short-term impact:** The mother's condition, including blood pressure, typically improves soon after the baby is born. For the baby, there is a risk of premature birth, which can be life threatening or lead to respiratory difficulties and other developmental problems.

**Long-term impact:** Women with a history of preeclampsia had approximately double the risk of cardiac disease later in life compared to women with uncomplicated pregnancies, according to a large Canadian study.

*Sources: Mayo Clinic; Circulation; American Heart Journal*

baby; if it is necessary to induce labor before the baby reaches full term, that further increases risk of developmental problems.

Gestational diabetes, marked by a rise in blood sugar late in pregnancy, may result from an exaggerated interference by hormones in the placenta on the action of insulin in the tissues. One possible consequence is excessive growth of the baby, increasing risk of premature birth and other complications.

There aren't any sure fire ways to prevent either problem. A family history increases risk for both conditions, as does obesity.

Sharonne Hayes, a Mayo Clinic cardiologist, suggests women who are overweight or obese and planning a pregnancy take steps to lose weight before conceiving.

"Women quit smoking, and stop drinking alcohol and caffeine for their kids," she says. "If you lose 40 pounds and wait till next year, your baby will be healthier," says Dr. Hayes. As will the mother. Still, there's no assurance that taking such steps, or perhaps getting high blood pressure under control, will prevent the pregnancy complications.

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