

# Six pregnancy complications are among red flags for heart disease later in life

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Six pregnancy-related complications—high blood pressure, gestational diabetes, preterm delivery, small-for-gestational-age delivery, pregnancy loss or placental abruption—increase a woman's risk for developing cardiovascular disease (CVD) later in life, according to a new scientific statement from the American Heart Association, published today in the

Association's flagship journal *Circulation*. The statement calls for vigorous prevention of these risk factors and primary prevention of CVD for women who experience these complications as they transition out of pregnancy and postpartum care into primary care, with continued follow-up to monitor CVD risk throughout life.

About 10% to 15% of pregnant [women](#) experience adverse pregnancy outcomes, which are maternal or fetal complications, that include the six closely tied to later CVD risk, as well as other measures tied to the health of the baby such as low birth weight, large-for-gestational age and fetal growth restriction.

"Adverse pregnancy outcomes are linked to women having hypertension, diabetes, abnormal cholesterol and [cardiovascular disease](#) events, including heart attack and stroke, long after their pregnancies," said Nisha I. Parikh, M.D., M.P.H., chair of the scientific statement writing committee and associate professor of medicine in the cardiovascular division at the University of California at San Francisco. "Preventing or treating [risk factors](#) early can prevent cardiovascular disease, therefore, adverse pregnancy outcomes can be a powerful window into cardiovascular disease prevention if women and their [health care professionals](#) harness the knowledge and use it for health improvement."

This comprehensive statement reviews the latest scientific literature on adverse pregnancy outcomes and cardiovascular disease, specifically focused on health disparities, lifestyle and prevention recommendations. "The evidence linking adverse pregnancy outcomes to later cardiovascular disease is consistent over many years and confirmed in nearly every study we examined. This statement should inform future prevention guidelines in terms of the important factors to consider for determining women's risk for heart diseases and stroke," Parikh said.

The statement reports the magnitude of risk related to several pregnancy

complications:

- High blood pressure in pregnancy, called gestational hypertension, increases a woman's risk of cardiovascular disease later in life by 67%, and increases the odds of a stroke by 83%. Gestational hypertension is defined as blood pressure during pregnancy that is at or above 140/90 mm Hg after 20 weeks of pregnancy in a woman with previously normal readings.
- Preeclampsia ([high blood pressure](#) during pregnancy coupled with signs of damage to liver, kidneys or another vital organ) is a severe condition and is linked to a 2.7 times higher risk of later cardiovascular disease.
- Gestational diabetes (new onset of Type 2 diabetes during pregnancy) increases a woman's risk of cardiovascular disease by 68% and increases the risk of Type 2 diabetes after pregnancy by 10-fold.
- Having a preterm delivery (childbirth before 37 weeks) has been found to double a woman's risk of developing cardiovascular disease and is strongly associated with later heart disease, stroke and cardiovascular disease.
- Placental abruption (separation of the placenta from the uterus before childbirth) is associated with an 82% increased risk of cardiovascular disease.
- Stillbirth (death of a baby prior to delivery) is associated with about double the risk of CVD.

More studies examining the association of pregnancy complications and cardiovascular risk in Black, Hispanic and Asian women are needed. Women in these racial/ethnic groups experience more adverse pregnancy outcomes and have higher burdens of cardiovascular disease risk factors and cardiovascular disease compared with white women. The statement writing group suggests aggressive risk factor modification is especially important to prevent cardiovascular disease in women in these

racial/ethnic groups who have had adverse pregnancy outcomes.

A healthy diet improves the cardiovascular health of all women, and studies suggest a healthy eating pattern during the three years before pregnancy is associated with lower risks of pregnancy complications. "Adopting a heart healthy diet, healthy sleep patterns and increasing physical activity among women experiencing adverse pregnancy outcomes, should start during pregnancy and continue in post-partum and through the rest of the patient's lifespan. These are important lifestyle interventions to decrease CVD risk," said Parikh.

The statement also notes that lactation/breastfeeding may lower a woman's later-life risk of CVD and metabolic disorders including Type 2 diabetes. The writing group also suggests opportunities to improve the transition of care after pregnancy:

- Longer postpartum follow-up care, sometimes referred to as the "fourth trimester," to screen for CVD risk factors and provide CVD prevention counseling.
- Improve the transfer of health information between obstetrics professionals and primary care physicians to eliminate inconsistencies in electronic health record documentation, thus improving patient care.
- A short and targeted health history for each woman to confirm if they have any of the six risk factors during pregnancy: hypertension in pregnancy, [gestational diabetes](#), preterm delivery, small-for-gestational-age delivery, [pregnancy loss](#) or placental abruption.

"If a woman has had any of these adverse pregnancy outcomes, consider close blood pressure monitoring, Type 2 diabetes and lipid screening, and more aggressive risk factor modification and CVD prevention recommendations," Parikh said. "Our data lends support to the prior

AHA recommendation that these important adverse pregnancy outcomes should be "risk enhancers" to guide consideration for statin therapy aimed at CVD prevention in women."

The statement also suggests considering preventive medications as appropriate for certain patients. However, more research is needed to better understand the impact of medicines to prevent cardiovascular disease for women after adverse pregnancy outcomes.

In an accompanying editorial, Eliza C. Miller, M.D., M.S., assistant professor of neurology at Columbia University, writes that [pregnancy](#) and the postpartum period are a critical time window in a woman's life to identify cardiovascular [disease](#) risk and improve a woman's health trajectory. "Pregnancy and the postpartum period should be considered the "golden year" of opportunity for clinicians to identify young women at risk and work with them to improve their cardiovascular health futures," said Miller.

**More information:** *Circulation* (2021). [DOI: 10.1161/CIR.0000000000000961](#)

Provided by American Heart Association

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