

Childbearing increases chance of developing the metabolic syndrome

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Childbearing is associated directly with future development of the metabolic syndrome — abdominal obesity, high triglycerides, insulin resistance and other cardiovascular disease risk factors — and for women who have had gestational diabetes, the risk is more than twice greater, according to a study co-authored by University of Alabama at Birmingham (UAB) researchers published in the *American Journal of Obstetrics and Gynecology*.

UAB Professor of Preventive Medicine Cora E. Lewis, M.D., M.S.P.H., and colleagues used data collected in the CARDIA (Coronary Artery Risk Development in Young Adults) study to determine the correlation between a higher incidence of the [metabolic syndrome](#) among women ages 18-30 at the start of the study who bore at least one child during the 20-year period following.

"Pregnancy can have lasting, adverse physiological effects and may result in behavioral changes," Lewis said. "Some previous studies have shown an association between childbearing and the metabolic syndrome, and some have shown that a history of gestational diabetes is a strong predictor of [Type 2 diabetes](#)."

"However, these studies lacked the preconception measurements to establish a baseline with which to measure the changes brought on by pregnancy," she said. "Many have not had control groups of women who had not had pregnancies, and thus they have rarely provided conclusive evidence linking pregnancy-related risk factor changes to disease onset."

CARDIA began following participants ages 18-30 years in 1985-1986 and continues today, and we had the necessary information to track women both before and after pregnancy and to compare women with pregnancies to those without."

Of the 2,787 women in the CARDIA study, 1,451 were included in this study analysis. Of those, 706 had no births and 745 had at least one birth during the 20 years following. Of the 745, 88 had at least one birth complicated by gestational diabetes.

After controlling for preconception measurements of [body mass index](#) (BMI), all metabolic syndrome components and physical activity, Lewis and her colleagues found that women who had given birth to one child or more than one child were independently associated with a higher incidence of the metabolic syndrome (33 percent and 62 percent higher, respectively) than women who had not had children. Among women with gestational diabetes, once baseline adjustments were made, the researchers found that they were nearly two-and-a-half times more likely to develop the metabolic syndrome than those women who had not had gestational diabetes-complicated pregnancies.

"Our findings suggest that childbearing can contribute to the development of the metabolic syndrome and that part of the association may be through weight gain and lack of physical activity," Lewis said. "And, although women with gestational diabetes had the highest relative risk of developing the metabolic syndrome, those with non-gestational diabetes pregnancies made up the larger at-risk group."

Lewis and her colleagues suggested that future studies may determine whether reductions in weight retention and central obesity, and reductions through treatment of cholesterol and triglycerides, after pregnancy may prevent disease later in life. They also suggested postpartum screening of cardio-metabolic risk factors, especially among

women with gestational diabetes, may offer an important opportunity for disease prevention among women of reproductive and older ages.

Until then, Lewis said, the best way for everyone to prevent disease, including [women](#) of childbearing age, is to make the necessary lifestyle changes: exercise regularly and eat a healthy diet.

Source: University of Alabama at Birmingham ([news](#) : [web](#))

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