Stretching exercises may reduce risk of pre-eclampsia during pregnancy

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Stretching exercises may be more effective at reducing the risk of preeclampsia than walking is for pregnant women who have already experienced the condition and who do not follow a workout routine, according to researchers at the University of North Carolina at Chapel Hill School of Nursing.

Preeclampsia, or pregnancy-induced hypertension, is a condition that affects up to 8 percent of pregnancies every year and is among the leading causes of maternal and fetal illness and death worldwide.

The finding is contrary to existing studies and literature that suggest that rigorous exercise is the most effective way to reduce the risk of preeclampsia, said SeonAe Yeo, Ph.D., an associate professor with a specialty in women's health at the UNC School of Nursing and the study's lead researcher.

Yeo will present the findings Thursday (May 29) at the annual meeting of the American College of Sports Medicine in Indianapolis, Ind. The results will be published in the spring issue of the journal Hypertension in Pregnancy.

Preeclampsia is characterized by a marked increase in blood pressure during pregnancy and may be accompanied by swelling and kidney problems. It is diagnosed when blood pressure readings taken twice in six hours read 140/90 or higher.

“These results seemingly contradict the conventional wisdom that walking is the best protection pregnant women have against developing preeclampsia,” Yeo said. “But for women who were not physically active before becoming pregnant and who have experienced preeclampsia with a previous pregnancy, that might not be the case.”

From November 2001 to July 2006, 79 women with a previous preeclampsia diagnosis and a sedentary lifestyle participated in this National Institute of Nursing Research-funded study. Women were randomly assigned to either the walking group (41 women) or the stretching group (38 women) during the 18th week of pregnancy.

The walking group was asked to exercise for 40 minutes five times a week at moderate intensity, following the program recommended by the Surgeon General and the American College of Obstetrics and Gynecology. Stretchers were also asked to perform slow, non-aerobic muscle movements with a 40-minute video fives times a week. Frequency and duration of exercise decreased in both groups as the pregnancy progressed.

At the end of pregnancy, almost 15 percent of women in the walking group had developed preeclampsia. Less than 5 percent of the stretching group developed the condition. While the incidence of preeclampsia in the walking group was similar to that reported in high-risk pregnancies, the frequency among the stretching group was similar to rates seen among the general population.

“Clearly, walking does not have a harmful effect during pregnancy,” Yeo said. “But for women who are at high risk for preeclampsia, our results may suggest that stretching exercises may have a protective effect against the condition.”

Stretching could provide protection against preeclampsia because

stretchers produced more transferrin than walkers did, Yeo said. Transferrin is a plasma protein that transports iron through the blood and protects against oxidative stress on the body.

Yeo said these results could help prenatal care providers recommend different exercise plans based on an individual pregnant woman's needs and abilities. Following an active exercise plan is good, she said, but only if a pregnant woman is truly able to do it. For some who already have a risk of preeclampsia, stretching might be a better option.

Source: University of North Carolina at Chapel Hill