

Aspirin may lower stroke risk in women with history of preeclampsia

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Middle-aged women with a history of preeclampsia have a greater risk of stroke, and aspirin may be able to reduce the risk, according to a new study led by researchers at Columbia University Vagelos College of Physicians & Surgeons. The study was published today in the journal *Neurology*, along with an accompanying editorial and podcast.

Why it matters

Though preeclampsia rates are declining or stable in other developed nations, they are rapidly rising in the United States, where about one in 20 pregnancies is complicated by preeclampsia and other pregnancy-related hypertensive disorders.

Preeclampsia increases the long-term risk of cardiovascular disease, including stroke, a leading cause of disability and death in women. Although younger stroke patients are usually less impaired by stroke in the short term than older patients, years of disability and loss of income can have severe long-term consequences.

Background

Low-dose [aspirin](#) treatment during pregnancy decreases the incidence of preeclampsia among high-risk women, but most women stop taking aspirin after delivery. It is unknown whether aspirin use after delivery offers long-term benefits.

What the study found

The researchers used data from 84,000 women enrolled in the California Teachers Study; of these, roughly 4,000 had a history of preeclampsia. Women were considered regular aspirin users if they reported taking aspirin three or more times a week after delivery for at least one year.

The researchers found that the overall stroke risk was 30 percent higher in women with a history of preeclampsia, compared to those with no history.

Regular aspirin use seemed to erase the increased risk of stroke associated with preeclampsia, but only in women under 60. Aspirin users in this age group with a history of preeclampsia had the same stroke risk as women with no history of the condition. In comparison, formerly preeclamptic women in this age group who did not take aspirin had a 50 percent greater risk of stroke.

Aspirin use had no significant effect on reducing excess stroke risk in women over 60 with a history of preeclampsia.

What it means

The study is a first step in exploring the idea that aspirin may prevent strokes in women with a history of preeclampsia.

"It would be premature, at this point, to recommend aspirin for all women with a history of preeclampsia, since aspirin can have serious side effects, such as bleeding that leads to hospitalization," says lead author Eliza C. Miller, MD, a neurologist at Columbia University Irving Medical Center.

But Miller says that aspirin may be warranted for some of these women.

Many organizations currently recommend [low-dose aspirin](#) to prevent heart attack and stroke for some people at high risk of cardiovascular disease.

"A history of preeclampsia is currently not considered when calculating 10-year cardiovascular risk, but it probably needs to be incorporated into risk-estimation guidelines," Miller says. "Some women with this history may need primary preventive treatment with aspirin, even in the absence of additional vascular risk factors."

Next steps

The current study was observational and shows only that aspirin is associated with reduced stroke risk in women with a history of preeclampsia.

Randomized controlled trials are needed to establish the efficacy of aspirin for the primary prevention of stroke in selected women with a history of preeclampsia.

Study limitations

The study group was largely white and may not be representative of all women with the condition. "Some groups of [women](#), especially African Americans, are at higher risk for both [preeclampsia](#) and [stroke](#), and it's possible we would see an even stronger effect of aspirin in such groups," says Miller.

More information: Steven K. Feske et al, Stroke prevention, *Neurology* (2018). [DOI: 10.1212/WNL.0000000000006802](https://doi.org/10.1212/WNL.0000000000006802)

Provided by Columbia University Irving Medical Center

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