

# Migraine raises risk of most common form of stroke

November 16 2009

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Pooling results from 21 studies, involving 622,381 men and women, researchers at Johns Hopkins have affirmed that migraine headaches are associated with more than twofold higher chances of the most common kind of stroke: those occurring when blood supply to the brain is suddenly cut off by the buildup of plaque or a blood clot.

The risk for those with migraines is 2.3 times those without, according to calculations from the Johns Hopkins team, to be presented Nov. 16 at the American Heart Association's (AHA) annual Scientific Sessions in Orlando. For those who experience aura, the sighting of flashing lights, zigzag lines and blurred side vision along with migraines, the risk of so-called ischemic stroke is 2.5 times higher, and in women, 2.9 times as high.

Study participants, mostly in North America and Europe, were between the ages 18 and 70, and none had suffered a stroke prior to enrollment.

Senior study investigator and cardiologist Saman Nazarian, M.D., says the team's latest analysis, believed to be the largest study of its kind on the topic, reinforces the relationship between migraine and stroke while correcting some discrepancies in previous analyses. For examples, a smaller combination study in 2005 by researchers in Montreal showed a bare doubling of risk, yet mixed together different mathematical measures of risk, while the Hopkins study kept them separate, pooling together only like measures. As well, another half dozen recent and smaller studies from Harvard University yielded mixed results, some

showing a link between migraines and ischemic stroke, while one did not show a tie-in.

Nazarian says that while nearly 1,800 articles have been written about the relationship between migraine and ischemic stroke, the Hopkins review was more selective, combining only studies with similar designs and similar groups of people, and more comprehensive, including analysis of unpublished data.

"Identifying people at highest risk is crucial to preventing disabling strokes," says Nazarian, an assistant professor at the Johns Hopkins University School of Medicine and its Heart and Vascular Institute. "Based on this data, physicians should consider addressing stroke risk factors in patients with a history or signs of light flashes and blurry vision associated with severe headaches."

Prevention and treatment options for migraine, he says, range from smoking cessation and taking anti-blood pressure or blood-thinning medications, such as aspirin. In women with migraines, stopping use of oral contraceptives or hormone replacement therapy may be recommended.

Such widespread use of hormone-controlling drugs is what Nazarian says may explain why women with migraines have such high risk of ischemic stroke. Contraceptives and other estrogen therapies are both known to contribute to long-term risk factors for cardiovascular diseases and stroke, such as high blood pressure and increased reactivity by clot-forming blood platelets.

Nazarian says the researchers' next steps are to evaluate if preventive therapies, especially aspirin, offset the risk of ischemic [stroke](#) in people with migraines.

Source: Johns Hopkins Medical Institutions

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