

# People who suffer migraine headaches may be at double the risk of stroke

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Credit: Sasha Wolff/Wikipedia

People who suffer migraine headaches with auras are at roughly double the risk of suffering the most common type of stroke.

The risk is more than tripled in [migraine sufferers](#) who smoke. And migraineurs who smoke and use [birth control pills](#) are seven times more likely to suffer strokes.

Migraine headaches also increase the risk of heart attacks and arterial claudication (leg pain due to poor circulation).

Numerous individual studies and meta-analyses have demonstrated that people who have migraines with aura are at a higher risk for [ischemic stroke](#). (A meta-analysis combines results of multiple studies.) Citing these and other studies, Loyola University Medical Center neurologists Michael Star, MD, and José Biller, MD, describe the association between [stroke](#) and migraine in a chapter in the new text *Headache and Migraine Biology and Management*.

About 85 percent of strokes are ischemic, meaning they are caused by blood clots in the brain. Migraine with aura is a [migraine headache](#) that is preceded by an aura, which typically includes flashes of light, bright spots, blind spots and perhaps tingling in the hands or face.

Recent studies also suggest there is a link between migraines and hemorrhagic strokes, which are caused by bleeding in the brain.

"The biology underlying the relationship between migraine and stroke is poorly defined," Drs. Star and Biller write.

Researchers have proposed several possible explanations for the migraine-stroke association:

- Migraine sufferers are more likely to have risk factors for cardiovascular disease, including low levels of HDL (so-called "good cholesterol") and high levels of c-reactive protein.
- Specific genes may predispose people to suffer both migraines

and stroke.

- Medications to treat migraines may increase the risk of stroke.
- A phenomenon that occurs during migraine aura, called cortical spreading depression, might trigger an ischemic stroke. A [cortical spreading depression](#) is a slowly propagated wave of depolarization, followed by depression of brain activity occurring during migraine aura. It includes changes in neural and vascular function.

"Taking all of these possible explanations into account, the research may point to stroke and [migraine](#) sharing a reciprocal causal relationship," Drs. Star and Biller write. "There is a significant amount of research attempting to further elucidate this multifaceted relationship."

Dr. Star is a co-chief resident in neurology and Dr. Biller is a professor and chair in the Department of Neurology of Loyola University Chicago Stritch School of Medicine.

Provided by Loyola University Health System

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