

# Surgery doubted as a migraine reliever

June 27 2014, by Amy Norton, Healthday Reporter

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Review of two studies finds inconclusive evidence of success.

(HealthDay)—Migraine surgery is increasingly touted as a potential "cure" for the debilitating headaches, but researchers say the evidence just isn't there to support those claims.

In an analysis of two studies on migraine trigger "deactivation" surgery, researchers found multiple flaws in the study methods. What's more, they say, the surgery carries risks and high costs not covered by insurance, and doesn't jibe with what's known about the underlying causes of migraine.

"The surgery is, first of all, unproven. Second, permanent side effects are not uncommon," said Dr. Paul Mathew, a neurologist and headache specialist at Brigham and Women's Hospital in Boston.

Those lingering problems include persistent itching and numbness in areas affected by the surgery—which is typically offered by [plastic surgeons](#), not headache specialists.

Mathew, who led the research analysis, was scheduled to present his findings this week at the American Headache Society's annual meeting in Los Angeles. Until published in a peer-reviewed journal, the findings should be considered preliminary.

Around 10 percent of the world's population complains of migraines, according to the U.S. National Institutes of Health. Migraines typically cause intense, throbbing pain on one side of the head, along with sensitivity to light and sound, and sometimes nausea and vomiting.

Generally speaking, headache specialists are skeptical of migraine surgery, which also goes by terms such as "nerve decompression" and "trigger point release." The approach was pioneered more than a decade ago by an Ohio plastic surgeon, Dr. Bahman Guyuron, after he found that some patients who had facial "rejuvenation" procedures reported a side effect: relief from migraines.

Since then, plastic surgeons have developed a few approaches to migraine surgery, depending on where they determine the "trigger" to be. The surgeon might remove portions of muscle in the forehead or back of the neck; tissue inside the nose, or a segment of the trigeminal nerve—one of the nerves running from the brain to the face and mouth.

Increasingly, centers offering migraine surgery are popping up across the United States, with some marketing it as a "cure," Mathew said.

A few small studies reported in plastic surgery journals have found that a majority of patients report pain relief after migraine surgery. But the research contains too many flaws to judge its true effectiveness, Mathew

said.

The two studies he analyzed are the largest and most widely cited. One involved 75 patients, with 49 receiving surgery and the rest undergoing "sham" surgery; the other followed 79 patients for five years after surgery.

The success rates appeared high. In the first study, 84 percent of surgery patients reported a 50 percent reduction in their migraines. But so did 58 percent of those who underwent the phony procedure.

More important, Mathew found, it was unclear how patients were selected for surgery, or whether they were using migraine medications before or after the procedure. The studies also measured treatment "success" in ways that aren't standard for headache research.

"It's an invasive procedure that has risks, it's expensive, and it's unproven," said Dr. Audrey Halpern, a headache specialist at NYU Langone Medical Center in New York City. "On its face, we should be skeptical."

Plus, the approach does not fit with the biology of migraine, Halpern and Mathew said.

Researchers have found that migraine is a gene-related disorder that involves dysfunction in the brain. People who suffer migraines can have various "triggers" that set off an attack—such as disrupted sleep, certain foods, or fluctuations in estrogen related to women's menstrual periods. But the underlying issue is "deep in the brain," Mathew said.

It "doesn't make sense," Halpern said, that removing a piece of facial muscle would eliminate a complex brain disorder for large numbers of people.

So why would study patients get relief from surgery? One likely culprit, Mathew said, is the "placebo effect"—a patient's belief that a procedure worked.

He also suspects some study patients actually had pain stemming from a compressed nerve, which was relieved by surgery. Some may have had migraines, too, perhaps triggered by that compressed nerve. In those cases, easing the pressure might have reduced [migraine attacks](#).

Halpern agreed that surgery could conceivably remove a migraine trigger for some people. "No one is saying this shouldn't be studied as a treatment," she said.

But, Halpern added, [surgery](#) should not be marketed as a cure to migraine sufferers who may feel "desperate" for pain relief—particularly since they'll have to foot the \$10,000 to \$15,000 bill.

To people with chronic headaches, Mathew advised seeing a headache specialist to get a treatment plan. "Even when people think they've tried 'everything,'" he said, "they'll probably find that there are treatments they've never heard of."

Halpern agreed, adding that new medications to treat migraine are under development.

People also have to make sure they get enough sleep, limit stress, eat well and get moderate exercise, Halpern said.

**More information:** The U.S. National Institute of Neurological Disorders and Stroke has more on [migraines](#).

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