

Migraine surgery offers good long-term outcomes

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Surgery to "deactivate" migraine headaches produces lasting good results, with nearly 90 percent of patients having at least partial relief at five years' follow-up, reports a study in the February issue of *Plastic and Reconstructive Surgery*®, the official medical journal of the American Society of Plastic Surgeons (ASPS).

In about 30 percent of patients, migraine headaches were completely eliminated after surgery, according to the new study, led by Dr. Bahman Guyuron, chairman of Plastic and [Reconstructive Surgery](#) at University Hospitals Case Medical Center and Case Western Reserve University School of Medicine in Cleveland, Ohio.

'Trigger Site' Surgery Reduces or Eliminates Migraine Headaches

Dr. Guyuron, a plastic surgeon, developed the migraine surgery techniques after noticing that some migraine patients had reduced headache activity after undergoing cosmetic forehead-lift procedures. The techniques consist of "surgical deactivation" of "trigger sites" in the muscles or nerves that produce pain.

For example, for patients with frontal migraine headaches starting in the forehead, the muscles in that area were removed, as in forehead-lift surgery. This procedure may reduce headache attacks by relieving pressure on key nerve in the frontal area. Other approaches target other

migraine trigger sites.

Before surgery, each patient was tested with botulinum toxin A (Botox) to confirm the correct trigger sites. For most patients, surgery targeted at least two trigger sites. The five-year results—including standard measures of migraine-related pain, disability, and quality of life—were evaluated in 69 patients.

Eighty-eight percent of these patients had a positive long-term response to surgery. Headaches were significantly decreased in 59 percent of patients, and completely eliminated in 29 percent. The remaining patients had no change in headache activity.

Migraine attacks were less frequent after surgery; average migraine frequency decreased from about eleven to four per month. When attacks occurred, they didn't last as long—average duration decreased from 34 to eight hours. Migraine [surgery](#) also led to significant improvements in quality of life, with few serious adverse effects.

Migraine is a very common problem that interferes with many aspects of daily life for millions of Americans. About one-third of patients are not helped by current treatments. The new surgical techniques have the potential to reduce or eliminate migraine attacks for many patients who do not respond to other treatments. A previous study found good results at one-year follow-up evaluation.

The new report shows that these good outcomes are maintained through five years' follow-up. The findings "provide strong evidence that surgical deactivation of one or more trigger sites can successfully eliminate or reduce the frequency, duration, and intensity of [migraine headache](#), and the results are enduring," Dr. Guyuron and colleagues write. More research will be needed to refine the surgical techniques—as well as to clarify the reasons for the effectiveness of surgical deactivation of

trigger sites in relieving [migraine](#) headaches.

Provided by University Hospitals Case Medical Center

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