

Migraine surgery produces 'dramatic improvements' in functioning, study finds

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In addition to reducing headache frequency and severity, surgical treatment for migraine leads to significant improvements in everyday functioning and coping ability, according to a study in the January issue of *Plastic and Reconstructive Surgery*, the official medical journal of the American Society of Plastic Surgeons (ASPS).

"Our study demonstrates the high functional disability experienced by migraine [patients](#), compared to those with other [pain](#) conditions, " comments ASPS Member Surgeon William Gerald Austen, Jr, of Massachusetts General Hospital. "The results also show that migraine surgery can lead to dramatic improvements in functioning and coping ability, even in patients who are very disabled before surgery."

Standard Pain Assessments Show Functional Improvement after Migraine Surgery

Surgery has become recognized as an effective treatment option for selected patients with chronic, severe migraine headaches who do not respond to standard treatments. Developed by plastic surgeons who noticed that some migraine patients had fewer headaches after [cosmetic forehead-lift](#), migraine surgery procedures address trigger sites linked to certain headache patterns.

However, most studies evaluating migraine surgery have relied on migraine-specific questionnaires. "Pain questionnaires used in the

evaluation of better-understood and more common pain syndromes have not been applied to migraine surgery," Dr. Austen and coauthors write.

The study evaluated the performance of one such questionnaire—the Pain Self Efficacy Questionnaire (PSEQ)—in migraine surgery patients. The PSEQ has been used to study treatment outcomes in patients with a wide range of pain conditions. It provides information not only on pain scores, but also on functional disability and ability to cope with pain when performing normal daily activities.

The study included 90 patients who underwent migraine surgery, performed by Dr. Austen, between 2013 and 2015. Before and after surgery, patients were evaluated on a standard migraine questionnaire (the Migraine Headache Inventory, or MHI) and on the PSEQ. The final analysis included 74 patients who completed both questionnaires at one-year follow-up after migraine surgery.

Before migraine surgery, the patients had "extremely poor" PSEQ scores, indicating a high level of disability. Preoperative pain coping scores in migraine patients were substantially lower than reported for patients with other types of [chronic pain](#)—for example, neuropathic (related to nerve damage) pain, arthritis, or lower back pain.

One year after migraine surgery, the patients had a very large percent improvement in average PSEQ score: on average, 112 percent higher than baseline. That was much higher than in studies of patients with other types of chronic pain: for example, an average 19 percent improvement after nonsurgical treatment for low back pain.

Migraine surgery improved functioning and coping even in patients with very low initial PSEQ scores. That's in contrast to patients with musculoskeletal problems such as [low back pain](#), in whom low PSEQ scores predict poor treatment outcomes.

"It seems that migraine surgery patients can recover function and ability to cope with pain very well after surgery, in stark contrast to what has been shown in other pain conditions," Dr. Austen and coauthors write. They note that surgery also led to an average 76 percent improvement in the migraine-specific MHI score, measuring outcomes like headache frequency, duration, and severity.

The new study shows "continued positive outcomes" after migraine surgery in appropriately selected patients, including large improvements in migraine-related disability. Dr. Austen and colleagues conclude, "Chronic pain questionnaires such as the PSEQ add to our understanding of functional outcome after surgery and put pain in [migraine surgery](#) patients in perspective to better-known pain conditions."

More information: Lisa Gfrerer et al. Ability to Cope with Pain Puts Migraine Surgery Patients in Perspective, *Plastic and Reconstructive Surgery* (2017). [DOI: 10.1097/PRS.0000000000003955](https://doi.org/10.1097/PRS.0000000000003955)

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