

Surgical and Ablative Treatments for Chronic Headaches

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

Applies to all products administered or underwritten by Blue Cross and Blue Shield of Louisiana and its subsidiary, HMO Louisiana, Inc. (collectively referred to as the "Company"), unless otherwise provided in the applicable contract. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

Investigational or experimental services are not covered. This includes any drug, device, procedure, or service provided under the investigational arm of a clinical trial or clinical study. These services are excluded from coverage under benefits.

Note: Botulinum Toxins is addressed separately in medical policy 00012.

Note: Closure Devices for Patent Foramen Ovale and Atrial Septal Defects is addressed separately in medical policy 00016.

Note: Occipital Nerve Stimulation is addressed separately in medical policy 00253.

Note: Ablation of Peripheral Nerves to Treat Pain is addressed separately in medical policy 00503.

Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Company considers surgical treatment for chronic headaches (including but not limited to chronic migraine headache and chronic tension type headache) to be **investigational**.^{*} This includes, but is not limited to, the following procedures:

- Resection of musculature, including but not limited to the corrugator supercilii muscle, or any soft tissue from the forehead, periorbital, occipital or other facial or scalp areas; **or**
- Manipulation or repositioning of any muscle or other soft tissue within these areas; **or**
- Resection of any portion of the trigeminal nerve or its branches; **or**
- Closure of patent foramen ovale.

Based on review of available data, the Company considers surgical and ablative treatments of occipital neuralgia to be **investigational**.^{*} This includes, but is not limited to, the following procedures for treatment of occipital neuralgia:

- Thermal neurolysis (thermal and cryodenervation); **or**
(Note: see Medical Policy 00503- Ablation of Peripheral Nerves to Treat Pain)
- Neuroplasty; **or**
- Decompression of the occipital nerves; **or**
- Resection or partial resection of muscle or tissue.

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

Background/Overview

According to the International Headache Society (IHS), primary headaches are those that are not associated with any demonstrable organic disease, structural or neurologic abnormality. Two types of primary headache are tension-type headache (also known as ordinary headache, stress headache and idiopathic headache) and migraine. Chronic headache, whether migraine or non-migraine, is defined as occurring on 15 or more days per month for more than 3 months.

Tension-type headaches are very common; estimates of lifetime prevalence range from 30% to 70% of the population. Migraines are present in about 28 million people in the United States. The exact pathology of migraines is unknown, but it is felt that a family history of migraine headaches, medications (for example, birth control pills, vasodilators), fatigue, emotional stress and specific foods or alcohol are probable triggers. Migraines manifest as a recurring attack usually lasting for 4-72 hours and involving pain of moderate to severe intensity, often with nausea, sometimes vomiting, sensitivity to light, sound and other sensory stimuli. Management of headaches has consisted largely of pharmacologic treatment (IHS, 2013).

Migraines are generally treated by two approaches: abortive and preventive. The goal of abortive therapy is to prevent a migraine attack or to stop it once it starts. Medications are prescribed to stop a headache during its prodrome stage or once it has begun and may be taken as needed. Preventive treatment is considered if an individual has more than one migraine per week. The goal is to lessen the frequency and severity of the migraine attacks with daily medication.

It has been proposed that activation of peripheral sensory nerves, including the trigeminal nerve, causes release of peptides, (for example, substance P, calcitonin gene-related peptide, neurokinins), resulting in vasodilatation and migraine headache. Also suggested is that trigger points can be identified, particularly in the region of the forehead, at which peripheral nerve activation occurs.

The American Academy of Neurology (AAN, 2024) does not address surgical treatment of migraines. Currently their goals of long-term migraine treatment, both pharmacologic and nonpharmacologic are as follows:

- Reduce attack frequency, severity, and disability;
- Reduce reliance on poorly tolerated, ineffective, or unwanted acute pharmacotherapies; Improve quality of life;
- Avoid acute headache medication escalation;
- Educate and enable individuals to manage their disease to enhance personal control of their migraine;
- Reduce headache-related distress and psychological symptoms.

Occipital neuralgia is classified as a secondary headache by the ICHD. Secondary headaches are usually associated with any disease, structural or neurologic abnormality. In this case, accurate diagnosing is important because treatment of the underlying problem usually eliminates the headache.

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

Rationale/Source

This medical policy was developed through consideration of peer-reviewed medical literature generally recognized by the relevant medical community, U.S. Food and Drug Administration approval status, nationally accepted standards of medical practice and accepted standards of medical practice in this community, technology evaluation centers, reference to regulations, other plan medical policies, and accredited national guidelines.

Summary

The evidence base for surgical and ablative interventions for chronic headache syndromes and occipital neuralgia is characterized by heterogeneous techniques, inconsistent diagnostic definitions, and limited use of blinded, controlled designs, constraining the ability to determine durable net health benefit. For migraine-related trigger site procedures, randomized controlled trials suggest potential symptom improvement in selected participants; however, interpretation is limited by uncertainty about participant selection, variable and sometimes non-validated outcome definitions, incomplete characterization of concurrent medical therapy, and analytic approaches such as multiple unadjusted comparisons that increase the risk of chance findings (Guyuron, 2005; Guyuron, 2009; Mathew, 2014). Studies of patent foramen ovale closure used more rigorous randomized controlled trials but have not shown statistically significant benefit on the prespecified primary efficacy endpoints, and safety signals including serious adverse events have been reported, limiting confidence in net benefit for headache indications (Dowson, 2008; Mattle, 2016; Tobis, 2017). For occipital neuralgia, published studies of nerve decompression, neurolysis, neurectomy, and radiofrequency-based procedures most commonly relied on uncontrolled observational designs. Although improvements in pain intensity and frequency are frequently reported, the absence of sham-controlled or conservative-care comparators precludes confident attribution of benefit and does not allow comparative effectiveness assessment across modalities (Ducic, 2009; Hoffman, 2018; Son, 2022; Vanelderen, 2010).

For individuals who have migraine headaches who receive surgical deactivation of headache trigger sites, the evidence includes randomized controlled trials (RCTs). Relevant outcomes are symptoms, change in disease status, quality of life (QOL), and treatment-related morbidity. Three RCTs have been published; only 1 used a sham control and blinded patients to the treatment group. All 3 reported statistically significantly better outcomes at 12 months in patients who received decompression surgery for migraine headache than the control intervention. However, the trials were subject to methodologic limitations (eg, unclear and variable patient selection processes, variability in surgical procedures depending on trigger site). In addition, findings from 2 trials with no blinding or sham-controls were subject to the placebo effect. Additional sham-controlled randomized studies are needed. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have non-migraine headaches who receive surgical deactivation of headache trigger sites, the evidence includes no published studies. Relevant outcomes are symptoms, change in disease status, QOL, and treatment-related morbidity. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

Discussion

Evidence quality

Across headache surgery, occipital nerve decompression, and radiofrequency techniques, the evidence base is largely derived from uncontrolled case series conducted in specialized centers. This study design increases susceptibility to referral bias, regression to the mean, placebo effects, and confounding from concurrent treatments that are not consistently described. As a result, findings have limited generalizability to routine community practice. Outcomes are predominantly participant-reported, use heterogeneous and sometimes nonvalidated definitions, and are supported by incomplete or variable follow-up. These limitations are particularly consequential for procedures intended to produce irreversible anatomic change, where clinically meaningful benefit must be distinguished from short-term symptomatic fluctuation and where adverse effects may emerge late or be under-ascertained.

Trigger Site and Peripheral Nerve Surgery for Migraine and Chronic Headache

Randomized trials evaluating trigger site deactivation and related peripheral nerve procedures contain findings consistent with symptom improvement in subsets of participants, but the internal validity of those findings is limited by study design and measurement issues.

The earliest randomized trial reported high rates of improvement and some headache elimination after surgery, with much lower improvement in controls, but incomplete characterization of placebo injection sites and responses, and limited reporting of concomitant migraine therapies, complicate interpretation (Guyuron, 2005).

A subsequent blinded, sham-controlled trial incorporated surgical exposure without resection in the sham arm. This strengthened inference relative to uncontrolled series, but evaluated numerous outcomes without clear prespecification and without adjustment for multiplicity, leaving uncertainty regarding which statistically significant findings represent reproducible treatment effects (Guyuron, 2009).

Longer-term observational follow-up suggests that improvement may persist in a proportion of operated participants, but these data are difficult to interpret without concurrent control groups and without standardized accounting for additional procedures during follow-up. Five-year follow-up of the initial trial cohort reported sustained improvement in most participants and complete headache elimination in a minority, but excluded those receiving additional trigger site procedures and did not provide comparable long-term control data (Guyuron, 2011).

A subsequent randomized study compared two surgical trigger-site deactivation techniques (nerve avulsion versus decompression), rather than surgery versus continued medical management or sham intervention, and therefore does not inform comparative effectiveness analysis regarding whether surgical treatment improves outcomes beyond non-surgical care (Guyuron, 2015).

A small, randomized study comparing peripheral neurectomy with medical therapy reported statistically significant improvements in pain intensity, headache burden, and disability scores at 6

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

months in the surgical arm. However, the study enrolled only 26 participants (13 per group), relied exclusively on subjective outcome measures (visual analog score [VAS], migraine headache index [MHI], migraine disability assessment test [MIDAS], pain self-efficacy questionnaire [PSEQ]), and did not describe participant or assessor blinding. In addition, eligibility required a positive response to diagnostic local anesthetic blocks and treatment allocation was influenced by willingness to undergo surgery, introducing substantial selection and expectation bias. The short duration of follow-up further limits conclusions regarding durability of benefit for an irreversible intervention, particularly for outcomes known to be highly placebo- and expectation-sensitive (Bajaj, 2021).

Additional observational studies suggest reduced prescription medication days after surgery among survey responders, including reductions among participants reporting preoperative opioid use, but the lack of a non-surgical comparator and incomplete follow-up limit causal inference and may overestimate benefit if non-responders had poorer outcomes (Ortiz, 2021).

Secondary syntheses reach similar conclusions: a meta-analysis pooling a small number of randomized trials found higher odds of migraine elimination at 1 year in surgical groups but with wide confidence intervals and dependence on the limitations of the underlying trials, while other reviews highlight persistent problems with participant selection, sham control use, and outcome validity (Mathew, 2014; Vincent, 2019).

Patent Foramen Ovale Closure

The randomized evidence evaluating patent foramen ovale closure for migraine is comparatively more mature in design but consistently fails to demonstrate benefit on prespecified primary endpoints.

A double-blind, sham-controlled trial found no difference in complete cessation of migraine at 3 months between closure and sham, while reporting serious adverse events including events deemed related to the device or procedure (Dowson, 2008).

A later randomized trial comparing closure with medical treatment used blinded endpoint evaluation but did not show a statistically significant difference in reduction of migraine days over the primary assessment window, and secondary outcomes were largely non-differentiating (Mattle, 2016).

Another double-blind randomized trial similarly did not show a statistically significant difference on its primary endpoint, even though selected secondary outcomes favored closure, creating an interpretive pattern in which post hoc emphasis on secondary endpoints risks overstating clinical benefit when the trial's primary hypotheses were not met (Tobis, 2017).

Meta-analyses pooling these trials have produced mixed results across different endpoints, including some pooled reductions in migraine attacks but no consistent evidence of complete migraine resolution, and pooled estimates frequently remain imprecise or sensitive to analytic choices (Elbadawi, 2019; Silalahi, 2024; Zhang, 2022).

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

Observational analyses suggesting differential effects by migraine subtype are not informative for comparative effectiveness because they generally lack appropriate control groups and are susceptible to selection effects that cannot be resolved without randomized designs (Shi, 2017).

Occipital Neuralgia

For treatment of occipital neuralgia, studies evaluating nerve decompression and neurolysis or neurectomy frequently report substantial improvements in pain frequency, intensity, and medication use, but these findings arise primarily from uncontrolled case series and retrospective cohorts that cannot distinguish procedure effect from natural history, co-interventions, and measurement bias.

Across surgical decompression and ablative approaches (including neurolysis and radiofrequency-based techniques), the published evidence consists primarily of small, retrospective case series reporting that many treated individuals achieve $\geq 50\%$ pain reduction and reductions in Numeric Rating Scale scores, with relatively low rates of major neurologic complications. However, these findings are derived from uncontrolled designs, heterogeneous diagnostic inclusion (often mixing occipital neuralgia with other chronic headache phenotypes), variable outcome definitions, and selective recruitment from specialized centers. The absence of randomized or well-controlled comparative studies, limited blinding, and substantial risk of selection and reporting bias preclude reliable assessment of treatment effectiveness or durability and limit generalizability to broader clinical populations. Collectively, the evidence is insufficient to establish the net clinical benefit of decompression or ablative surgical interventions for occipital neuralgia or chronic headache syndromes (Austen, 2023; Pietramaggiore, 2023; Son, 2022).

Studies of defined subgroups such as iatrogenic occipital nerve injury similarly report marked improvements on multiple pain measures after mixed operative strategies, but referral and selection effects are likely, and the absence of non-operative comparators prevents estimation of incremental benefit attributable to surgery (Remy, 2024).

Longer follow-up describing reoperation rates adds clinically relevant safety and durability information, and identifies factors such as prior radiofrequency ablation and cervical spine disorders as predictors of reoperation, but does not establish that decompression improves outcomes relative to conservative management or clarify optimal sequencing of interventions (Remy, 2025).

Neurolysis and neurectomy series likewise report high rates of pain relief, including complete relief in substantial minorities, but are limited by lack of controls and often rely on center-specific selection and outcome assessment (Ducic, 2009; Gille, 2004).

In defined postoperative populations such as individuals developing occipital neuralgia after acoustic neuroma resection, mixed procedural approaches alongside conservative management produced pain relief in many participants, but small numbers and heterogeneity of treatments preclude conclusions about which intervention is effective and for whom (Riedy, 2021).

Radiofrequency-based treatments demonstrate a consistent pattern across the available literature: retrospective single-center cohorts of thermal radiofrequency ablation report mean reductions in pain scores and relief lasting several months after select procedures. However, these findings derive from

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

uncontrolled designs with heterogeneous headache phenotypes, variable nerve targets, and nonstandardized outcome definitions, often following positive diagnostic blocks that enrich for responders. Larger datasets increase procedural counts but do not address core threats to validity, including absence of concurrent comparators, inconsistent follow-up intervals, reliance on subjective pain measures, and limited accounting for repeat procedures or co-interventions. Adverse events are reported as uncommon and generally transient, but safety conclusions are constrained by retrospective ascertainment and short, nonuniform surveillance. Collectively, these features preclude reliable estimation of treatment effect size or durability and limit generalizability beyond specialized centers (Abd-Elseyed, 2026; Hoffman, 2018).

Even when comparative designs are introduced, they often compare technical approaches rather than establishing efficacy relative to sham procedures or continued nonsurgical care. For example, a randomized trial comparing proximal versus distal conventional radiofrequency reported superior outcomes with one approach, but this study design does not address whether radiofrequency ablation offers net benefit compared with non-ablative management (AboElfadl, 2025).

Pulsed radiofrequency studies, which evaluate a neuromodulatory rather than neurolytic mechanism, consist primarily of small prospective or retrospective observational series without sham or active comparators. Across these studies, short-term improvements in pain intensity, headache frequency, and medication use are reported, but outcomes are highly expectation-sensitive and difficult to attribute to treatment effect in the absence of blinding or control groups. Additional limitations include short follow-up intervals, reliance on composite or subjective success definitions, and inclusion of heterogeneous headache phenotypes, which together constrain internal validity, limit generalizability, and preclude reliable conclusions regarding comparative effectiveness (Batistaki, 2021; Huang, 2012; Vanelderen, 2010).

Comparative observational work contrasting pulsed radiofrequency with thermal lesion radiofrequency suggests larger and more durable improvements with thermal lesion techniques, but retrospective design and treatment-selection confounding limit causal inference and should be interpreted as hypothesis-generating rather than definitive comparative effectiveness evidence (Yilmaz, 2025).

Integrated Interpretation Across Conditions and Procedures

Taken together, the evidence indicates that reported improvements are common after a range of surgical and ablative interventions, but these signals consistently arise from study designs least able to distinguish treatment effect from bias, expectancy, and natural history. The migraine trigger site surgery literature contains randomized evidence but is constrained by methodological weaknesses and outcome selection issues, while patent foramen ovale closure trials are methodologically stronger, they do not demonstrate benefit on primary efficacy endpoints. For occipital neuralgia, selective guideline support for radiofrequency neurotomy contingent on diagnostic blockade reflects pragmatic clinical practice in the setting of limited evidence rather than confirmation of comparative effectiveness, and emerging observational signals about reoperation risk and prior procedure history highlight the need for controlled research on sequencing and participant selection.

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

Across conditions, the absence of robust sham-controlled or conservative-care comparators, reliance on subjective outcomes, and limited durability data are particularly consequential given the irreversible nature of many interventions. Emerging observational findings related to reoperation risk and prior procedure history underscore important unanswered questions regarding sequencing and selection, but do not overcome the fundamental evidentiary gaps. Collectively, the available evidence remains insufficient to establish durable net health benefit for surgical or ablative interventions for chronic headache or occipital neuralgia.

Supplemental Information

Practice Guidelines and Position Statements

Guidelines or position statements will be considered for inclusion in 'Supplemental Information' if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American Headache Society

The American Headache Society (2013) approved a list of 5 items that provide low value in headache medicine. This list was produced as part of the American Board of Internal Medicine Foundation's Choosing Wisely initiative. One of the 5 recommendations was: "Don't recommend surgical deactivation of migraine trigger points outside of a clinical trial." The 2013 document stated that the value of this procedure is still a research question and that large, multicenter randomized controlled trials with long-term follow-up are needed to provide accurate information on its benefits and harms.

U.S. Preventive Services Task Force Recommendations

Not applicable.

Medicare National Coverage

There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

Ongoing and Unpublished Clinical Trials

As of December 2024, no ongoing or unpublished trials were identified that might influence this review.

References

Peer Reviewed Publications:

1. Abd-Elseyed A, Reilly MJ, Hashimoto N, et al. Radiofrequency ablation of pericranial nerves for treating headaches: 10-year follow-up. *Pain Ther.* 2026; 15:161-173.
2. AboElfadl GM, Hassanien M, Hamed AA, et al. Comparative efficacy of greater occipital nerve radiofrequency approaches for the treatment of combined migraine and cervicogenic headache: randomized clinical trial. *Perioper Care Oper Room Manag.* 2025; 41:100571.

Surgical and Ablative Treatments for Chronic Headaches

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

3. Austen WG Jr, Remy K, Packowski K, et al. Refractory occipital neuralgia treatment with nerve decompression surgery: a case series. *Front Neurol*. 2023; 14:1284101.
4. Bajaj J, Doddamani R, Chandra SP, et al. Comparison of peripheral neurectomy vs. medical treatment for migraine: a randomized controlled trial. *Neurol India*. 2021; 69(Supplement):S110-S115.
5. Batistaki C, Madi AI, Karakosta A, et al. Pulsed radiofrequency of the occipital nerves: results of a standardized protocol on chronic headache management. *Anesth Pain Med*. 2021; 11(5):e112235.
6. Bearden WH, Anderson RL. Corrugator superciliaris muscle excision for tension and migraine headaches. *Ophthalm Plast Reconstr Surg*. 2005; 21(6):418-422.
7. Dirnberger F, Becker K. Surgical treatment of migraine headaches by corrugator muscle resection. *Plast Reconstr Surg*. 2004; 114(3):652-657.
8. Dowson A, Mullen MJ, Peatfield R, et al. Migraine Intervention with STARFlex Technology (MIST) trial: a prospective, multicenter, double-blind, sham-controlled trial to evaluate the effectiveness of patent foramen ovale closure with STARFlex septal repair implant to resolve refractory migraine headache. *Circulation*. 2008; 117(11):1397-1404.
9. Ducic I, Felder JM 3rd, Janis JE. Occipital artery vasculitis not identified as a mechanism of occipital neuralgia-related chronic migraine headaches. *Plast Reconstr Surg*. 2011; 128(4):908-912.
10. Ducic I, Felder JM 3rd, Khan N, Youn S. Greater occipital nerve excision for occipital neuralgia refractory to nerve decompression. *Ann Plast Surg*. 2014; 72(2):184-187.
11. Ducic I, Hartmann EC, Larson EE. Indications and outcomes for surgical treatment of patients with chronic migraine headaches caused by occipital neuralgia. *Plast Reconstr Surg*. 2009; 123(5):1453-1461.
12. Elbadawi A, Barssoum K, Abuzaid AS, et al. Meta-analysis of randomized trials on percutaneous patent foramen ovale closure for prevention of migraine. *Acta Cardiol*. 2019; 74(2):124-129.
13. Gille O, Lavignolle B, Vital JM. Surgical treatment of greater occipital neuralgia by neurolysis of the greater occipital nerve and sectioning of the inferior oblique muscle. *Spine (Phila Pa 1976)*. 2004; 29(7):828-832.
14. Guyuron B, Harvey D, Reed D. A prospective randomized outcomes comparison of two temple migraine trigger site deactivation techniques. *Plast Reconstr Surg*. 2015; 136(1):159-165.
15. Guyuron B, Kriegler JS, Davis J, Amini SB. Comprehensive surgical treatment of migraine headaches. *Plast Reconstr Surg*. 2005; 115(1):1-9.
16. Guyuron B, Kriegler JS, Davis J, Amini SB. Five year outcome of surgical treatment of migraine headaches. *Plast Reconstr Surg*. 2011; 127(2):603-608.
17. Guyuron B, Reed D, Kriegler JS, et al. A placebo-controlled surgical trial of the treatment of migraine headaches. *Plast Reconstr Surg*. 2009; 124(2):461-468.
18. Hoffman LM, Abd-Elsayed A, Burroughs TJ, Sachdeva H. Treatment of occipital neuralgia by thermal radiofrequency ablation. *Ochsner J*. 2018; 18(3):209-214.
19. Huang JH, Galvagno SM Jr, Hameed M, et al. Occipital nerve pulsed radiofrequency treatment: a multi-center study evaluating predictors of outcome. *Pain Med*. 2012; 13(4):489-497.
20. Huayllani MT, Janis JE. Migraine surgery and determination of success over time by trigger site: a systematic review of the literature. *Plast Reconstr Surg*. 2023; 151(1):120e-135e.

Surgical and Ablative Treatments for Chronic Headaches

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

21. Lucia Mangialardi M, Baldelli I, Salgarello M, et al. Decompression surgery for frontal migraine headache. *Plast Reconstr Surg Glob Open*. 2020; 8(10):e3084.
22. Mathew PG. A critical evaluation of migraine trigger site deactivation surgery. *Headache*. 2014; 54(1):142-152.
23. Mattle HP, Evers S, Hildick-Smith D, et al. Percutaneous closure of patent foramen ovale in migraines with aura, a randomized controlled trial. *Eur Heart J*. 2016; 37(26):2029-2036.
24. Nagar VR, Birthi P, Grider JS, Asopa A. Systematic review of radiofrequency ablation and pulsed radiofrequency for management of cervicogenic headache. *Pain Physician*. 2015; 18(2):109-130.
25. Omranifard M, Abdali H, Ardakani MR, et al. A comparison of outcome of medical and surgical treatment of migraine headache: in 1 year follow-up. *Adv Biomed Res*. 2016; 5:121.
26. Ortiz R, Gfrerer L, Panzenbeck P, et al. Trigger site deactivation surgery for headaches is associated with decreased postoperative medication use. *Plast Reconstr Surg Glob Open*. 2021; 9(6):e3634.
27. Pietramaggiori G, Scherer S. Minimally invasive nerve- and muscle-sparing surgical decompression for occipital neuralgia. *Plast Reconstr Surg*. 2023; 151(1):169-177.
28. Pisapia JM, Bhowmick DA, Farber RE, Zager EL. Salvage C2 ganglionectomy after C2 nerve root decompression provides similar pain relief as a single surgical procedure for intractable occipital neuralgia. *World Neurosurg*. 2012; 77(2):362-369.
29. Remy K, Hazewinkel MHJ, Knoedler L, et al. Aetiologies of iatrogenic occipital nerve injury and outcomes following treatment with nerve decompression surgery. *J Plast Reconstr Aesthet Surg*. 2024; 95:349-356.
30. Remy K, Hazewinkel MH, Mullen C, et al. Reoperation following primary greater occipital nerve decompression surgery: incidence, risk factors, and outcomes. *Plast Reconstr Surg*. 2025; 155(1):159-166.
31. Riedy LN, Heiferman DM, Szujewski CC, et al. Occipital neuralgia following acoustic neuroma resection. *J Neurol Surg B Skull Base*. 2021; 83(Suppl 2):e135-e142.
32. Rigatelli G, Dell'Avvocata F, Ronco F, et al. Primary transcatheter patent foramen ovale closure is effective in improving migraine in patients with high-risk anatomic and functional characteristics for paradoxical embolism. *JACC Cardiovasc Interv*. 2010; 3(3):282-287.
33. Shi YJ, Lv J, Han XT, Luo GG. Migraine and percutaneous patent foramen ovale closure: a systematic review and meta-analysis. *BMC Cardiovasc Disord*. 2017; 17(1):203.
34. Silalahi TDA, Hariyanto TI. Efficacy and safety of patent foramen ovale closure for mitigating migraine: a systematic review and meta-analysis of randomized trials and observational studies. *Ther Adv Neurol Disord*. 2024; 17:17562864241271033.
35. Son B. Decompression of the greater occipital nerve for occipital neuralgia and chronic occipital headache caused by entrapment of the greater occipital nerve. *J Neurol Surg A Cent Eur Neurosurg*. 2022; 83(5):461-470.
36. Tobis JM, Charles A, Silberstein SD, et al. Percutaneous closure of patent foramen ovale in patients with migraine: the PREMIUM trial. *J Am Coll Cardiol*. 2017; 70(22):2766-2774.
37. Vanelderden P, Rouwette T, De Vooght P, et al. Pulsed radiofrequency for the treatment of occipital neuralgia: a prospective study with 6 months of follow-up. *Reg Anesth Pain Med*. 2010; 35(2):148-151.

Surgical and Ablative Treatments for Chronic Headaches

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

38. Vincent AJPE, van Hoogstraten WS, Maassen Van Den Brink A, et al. Extracranial trigger site surgery for migraine: a systematic review with meta-analysis on elimination of headache symptoms. *Front Neurol.* 2019; 10:89.
39. Yilmaz A, Kucukbingoz C. Comparative long-term outcomes of pulsed and lesion radiofrequency of the greater occipital nerve in chronic migraine: a 12-month cohort study. *Medicina.* 2025; 61(11):1893.
40. Zhang Y, Wang H, Liu L. Patent foramen ovale closure for treating migraine: a meta-analysis. *J Interv Cardiol.* 2022; 2022: 6456272.

Government Agency, Medical Society, and Other Authoritative Publications:

1. American Academy of Neurology. Practice parameter: evidence-based guidelines for migraine headache (an evidence-based review): report of the Quality Standards Subcommittee of the American Academy of Neurology. *Neurology.* 2000; 55(6):754-762.
2. American Academy of Neurology. Practice parameter: pharmacological treatment of migraine headache in children and adolescents: report of the American Academy of Neurology Quality Standards Subcommittee and the Practice Committee of the Child Neurology Society. *Neurology.* 2004; 63(12):2215-2224.
3. American Headache Society. American Headache Society urges caution in using any surgical intervention in migraine treatment. 2012. Available at: <https://www.brighamandwomensfaulkner.org/assets/Faulkner/headache-center/documents/ahs-migraine-surgery-statement.pdf>.
4. American Society of Plastic Surgeons. Policy statement migraine headache surgery. Approved March 16, 2018. Available at: https://www.plasticsurgery.org/documents/Health-Policy/Positions/ASPS-Statement_Migraine-Headache-Surgery.pdf.
5. Chen PK, Chen HM, Chen WH, Treatment Guideline Subcommittee of the Taiwan Headache Society. Treatment guidelines for acute and preventive treatment of cluster headache. *Acta Neurol Taiwan.* 2011; 20(3):213-227.
6. Loder E, Weizenbaum E, Frishberg B, et al. Choosing wisely in headache medicine: the American Headache Society's list of five things physicians and patients should question. *Headache.* 2013; 53(10): 1651-9. PMID 24266337
7. International Headache Society. Headache Classification Committee of the International Headache Society. The International Classification of Headache Disorders. 3rd Edition. *Cephalalgia.* 2013; 33(9):629-808.
8. Lee DW, Pritzlaff S, Jung MJ, et al. Latest evidence-based application for radiofrequency neurotomy (LEARN): best practice guidelines from the American Society of Pain and Neuroscience. *J Pain Res.* 2021; 14:2807-2831.

Websites for Additional Information

1. National Headache Foundation. Available at: <http://www.headaches.org/>.
2. U.S. National Library of Medicine. Medline Plus: Migraine. Available at: <http://www.nlm.nih.gov/medlineplus/migraine.html>

Surgical and Ablative Treatments for Chronic Headaches

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

Policy History

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

08/01/2019	Medical Policy Committee review
08/14/2019	Medical Policy Implementation Committee approval. New policy.
08/06/2020	Medical Policy Committee review
08/12/2020	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
09/16/2020	Coding update
08/05/2021	Medical Policy Committee review
08/11/2021	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
08/04/2022	Medical Policy Committee review
08/10/2022	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
08/03/2023	Medical Policy Committee review
08/09/2023	Medical Policy Implementation Committee approval. Title changed from “Surgical Deactivation of Headache Trigger Sites” to “Surgical and Ablative Treatments for Chronic Headaches”. Extensive policy revision. Added a reference to medical policy 00503 to the thermal neurolysis investigational bullet for surgical and ablative treatments of occipital neuralgia.
08/01/2024	Medical Policy Committee review
08/14/2024	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
08/07/2025	Medical Policy Committee review
08/13/2025	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
09/03/2026	Medical Policy Committee review
09/09/2026	Medical Policy Implementation Committee review
09/17/2026	Medical Quality Management Committee approval. Coverage eligibility unchanged.

Next Scheduled Review Date: 09/2027

Coding

The five character codes included in the Louisiana Blue Medical Policy Coverage Guidelines are obtained from Current Procedural Terminology (CPT®)†, copyright 2025 by the American Medical Association (AMA). CPT is developed by the AMA as a listing of descriptive terms and five character identifying codes and modifiers for reporting medical services and procedures performed by physician.

The responsibility for the content of Louisiana Blue Medical Policy Coverage Guidelines is with Louisiana Blue and no endorsement by the AMA is intended or should be implied. The AMA disclaims responsibility for any consequences or liability attributable or related to any use, nonuse

Surgical and Ablative Treatments for Chronic Headaches

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

or interpretation of information contained in Louisiana Blue Medical Policy Coverage Guidelines. Fee schedules, relative value units, conversion factors and/or related components are not assigned by the AMA, are not part of CPT, and the AMA is not recommending their use. The AMA does not directly or indirectly practice medicine or dispense medical services. The AMA assumes no liability for data contained or not contained herein. Any use of CPT outside of Louisiana Blue Medical Policy Coverage Guidelines should refer to the most current Current Procedural Terminology which contains the complete and most current listing of CPT codes and descriptive terms. Applicable FARS/DFARS apply.

CPT is a registered trademark of the American Medical Association.

Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
CPT	15824, 15826, 64716, 64722, 64732, 64734, 64744, 64771, 64772, 64999, 67900, 93580
HCPCS	No codes
ICD-10 Diagnosis	G43.001-G43.E19, G44.001-G44.099, G44.201-G44.229, G501, M54.81, R51.0-R51.9

*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

- A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or
- B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:
 1. Consultation with technology evaluation center(s);
 2. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
 3. Reference to federal regulations.

‡ Indicated trademarks are the registered trademarks of their respective owners.

NOTICE: If the Patient's health insurance contract contains language that differs from the BCBSLA Medical Policy definition noted above, the definition in the health insurance contract will be relied upon for specific coverage determinations.

Surgical and Ablative Treatments for Chronic Headaches

Policy # 00683

Original Effective Date: 08/14/2019

Current Effective Date: 10/01/2026

NOTICE: Medical Policies are scientific based opinions, provided solely for coverage and informational purposes. Medical Policies should not be construed to suggest that the Company recommends, advocates, requires, encourages, or discourages any particular treatment, procedure, or service, or any particular course of treatment, procedure, or service.

NOTICE: Federal and State law, as well as contract language, including definitions and specific contract provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage.

NOTICE: If an authorization for an ongoing course of treatment has been provided to a member and the member changes from one health plan to another health plan (e.g., a member moves from carrier A to Louisiana Blue), Louisiana Blue may honor the previous health plan's authorization for the same service under the same type of in-network benefit for a 90-day transition period. Documentation of the authorization for the ongoing course of treatment from the previous health plan must be provided to us by the member or their provider and the services provided for the course of treatment must otherwise be a covered service under the Louisiana Blue health plan. This provision does not apply to medications covered under the plan's pharmacy benefit.