

02-20000-41

Original Effective Date: 01/15/13

Reviewed: 06/22/23

Revised: 07/15/23

Subject: Surgical Treatment of Occipital Neuralgia and Headache

THIS MEDICAL COVERAGE GUIDELINE IS NOT AN AUTHORIZATION, CERTIFICATION, EXPLANATION OF BENEFITS, OR A GUARANTEE OF PAYMENT, NOR DOES IT SUBSTITUTE FOR OR CONSTITUTE MEDICAL ADVICE. ALL MEDICAL DECISIONS ARE SOLELY THE RESPONSIBILITY OF THE PATIENT AND PHYSICIAN. BENEFITS ARE DETERMINED BY THE GROUP CONTRACT, MEMBER BENEFIT BOOKLET, AND/OR INDIVIDUAL SUBSCRIBER CERTIFICATE IN EFFECT AT THE TIME SERVICES WERE RENDERED. THIS MEDICAL COVERAGE GUIDELINE APPLIES TO ALL LINES OF BUSINESS UNLESS OTHERWISE NOTED IN THE PROGRAM EXCEPTIONS SECTION.

Position Statement	Billing/Coding	Reimbursement	Program Exceptions	Definitions	Related Guidelines
Other	References	Updates			

DESCRIPTION:

Occipital neuralgia is a distinct type of headache described as piercing, throbbing, or jabbing chronic pain, in the distribution of the greater or lesser occipital nerves. It is characterized by pain in the cervical and posterior areas of the head, and may or may not radiate to the sides of the head, or into the facial and frontal areas. Typically, the pain of occipital neuralgia begins in the neck and then spreads upwards. Some individuals may also experience pain in the scalp, forehead, or behind the eyes. The pain is caused by irritation or injury to the nerves, e.g., trauma, inflammation, gout, diabetes, vasculitis and localized infections. In many cases, however, no cause can be found.

Treatments for occipital neuralgia range from rest, heat, massage, exercise, antidepressants, nerve blocks, neurectomy, cervical rhizotomy, surgical release of the occipital nerve within the trapezius to neurolysis of the great occipital nerve with or without section of the inferior oblique muscle. However, the effectiveness of many of the invasive procedures has not been firmly established.

Migraine is a common headache disorder with a prevalence in the United States of approximately 18% in women and 6% in men. **Migraine without aura** is a recurrent headache disorder manifesting in attacks that last 4 to 72 hours. Typical characteristics of the headache are unilateral location, pulsating quality, moderate or severe intensity, aggravation by routine physical activity, and association with nausea and/or photophobia and phonophobia. **Migraine with aura** is a recurrent headache disorder manifesting in attacks of reversible focal neurologic symptoms that usually develop gradually over 5 to 20 minutes and last for less than 60 minutes. Headache with the features of migraine without aura usually follows the aura symptoms.

A variety of medications are used to treat acute migraine episodes. These include medications that are taken at the outset of an attack to abort the attack, and medications to treat the pain and other symptoms of migraines once they are established. Another proposed treatment of migraine headaches is surgical deactivation of trigger sites. The procedure was developed by plastic surgeon Dr. Bahman Guyuron, following observations that some patients who had cosmetic forehead lifts often reported improvement or elimination of migraine symptoms post-surgery. The procedure is based on the theory that migraine headaches arise due to inflammation of trigeminal nerve branches in the head and neck caused by irritation of the surrounding musculature, bony foramen, and perhaps fascia bands.

Tension headache is the most common type of headache in adults. These headaches are commonly referred to as stress headaches. A tension headache may appear periodically ("episodic," less than 15 days per month) or daily ("chronic," more than 15 days per month). An episodic tension headache may be described as a mild to moderate constant band-like pain, tightness, or pressure around the forehead or back of the head and neck.

Cluster headache refers to a type of headache that recurs over a period of time. People who have cluster headaches experience an episode one to three times per day during a period of time (the cluster period), which may last from two weeks to three months. People who suffer from cluster headaches get them at the same time each year, such as the spring or fall. A cluster headache typically awakens a person from sleep one to two hours after going to bed. These nocturnal attacks can be more severe than the daytime attacks. Cluster headaches can be more intense than a migraine attack. The headaches may disappear completely (go into "remission") for months or years, only to recur.

Cervicogenic headache (CGH) is a relatively common and still controversial form of headache caused by disease or dysfunction of structures in the cervical spine (e.g., congenital anomalies of the cranio-vertebral junction such as basilar invagination, and atlanto-axial dislocation; injury of the ligaments, muscles, or joints of the neck). It can be triggered by vascular or scar tissue compression of the C2 root and ganglion as well as irritation of other upper cervical nerve roots (e.g., C3, C4). In patients with CGH, attacks or chronic fluctuating periods of neck/head pain may be provoked and/or worsened by sustained neck movements or stimulation of ipsilateral tender points. There are no diagnostic imaging techniques of the cervical spine and associated structures that can determine the exact source of pain.

POSITION STATEMENT:

Surgical release, decompression, destruction or excision of cranial nerves, or manipulation, resection or repositioning of any muscle, soft tissue, or blood vessels is considered **experimental or investigational** for treatment of occipital neuralgia and all types of headache.

These interventions include, but are not limited to:

- Neurectomy
- Nerve root decompression/microdecompression
- Ganglionectomy
- Transposition/transection/avulsion/manipulation/repositioning/resection of nerve, muscle or soft tissue

- Vascular ligation of superficial extracranial arteries
- Neuroplasty
- Rhizotomy

There is insufficient clinical evidence in the peer-reviewed literature to support the safety and effectiveness of these procedures.

BILLING/CODING INFORMATION:

CPT Coding:

There is no specific CPT code for this procedure but it may be reported using one of the following:

64716	Neuroplasty and/or transposition; cranial nerve (specify)
64722	Decompression; unspecified nerve(s); specify
64732	Transection or avulsion of; supraorbital nerve
64734	Transection or avulsion of; infraorbital nerve
64771	Transection or avulsion of other cranial nerve, extradural

REIMBURSEMENT INFORMATION:

None applicable.

PROGRAM EXCEPTIONS:

Federal Employee Program (FEP): Follow FEP guidelines.

State Account Organization (SAO): Follow SAO guidelines.

Medicare Advantage: No National Coverage Determination (NCD) and/or Local Coverage Determination (LCD) were found at the time of the last guideline reviewed date.

DEFINITIONS:

None applicable.

RELATED GUIDELINES:

[09-E0400, Oxygen](#)

[02-61000-06, Occipital Nerve Stimulation](#)

[02-61000-24, Deep Brain Stimulation and Responsive Neurostimulation](#)

OTHER:

None applicable.

REFERENCES:

1. Abd-Elseyed A, et al. Radiofrequency Ablation of Pericranial Nerves for Treating Headache Conditions: A Promising Option for Patients. *Ochsner J*. 2018 Spring;18(1):59-62.
2. American Academy of Neurological Surgeons (AANS). Occipital Neuralgia. February 2013. Accessed 09/04/13 at <http://www.aans.org/Patient%20Information/Conditions%20and%20Treatments.aspx>.
3. American Headache Society. American Headache Society Urges Caution in Using Any Surgical Intervention in Migraine Treatment (2012).
4. American Headache Society. (2019). The American Headache Society position statement on integrating new migraine treatments into clinical practice. *Headache: The Journal of Head and Face Pain*, 59(1), 1-18.
5. Assina R, Sarris CE, Mammis A. The history of craniotomy for headache treatment. *Neurosurg Focus*. 2014 Apr;36(4):E9.
6. Baldelli I, Mangialardi ML, Salgarello M, Raposio E. Peripheral Occipital Nerve Decompression Surgery in Migraine Headache. *Plast Reconstr Surg Glob Open*. 2020 Oct 14;8(10):e3019. doi: 10.1097/GOX.0000000000003019.
7. Blue Cross Blue Shield Association Evidence Positioning System®. 7.01.135 - Surgical Deactivation of Headache Trigger Sites, 03/23.
8. Blue Cross Blue Shield Association Evidence Positioning System®. 7.01.154 - Ablation of Peripheral Nerves to Treat Pain, 10/20.
9. Bogduk N, Govind J. Cervicogenic headache: an assessment of the evidence on clinical diagnosis, invasive tests, and treatment. *Lancet Neurol* 2009; 8: 959–68.
10. Chepla KJ, et al. Clinical outcomes following supraorbital foraminotomy for treatment of frontal migraine headache. *Plast Reconstr Surg*. 2012 April ; 129(4): 656e–662e.
11. Choi I, Jeon SR. Neuralgias of the Head: Occipital Neuralgia. *J Korean Med Sci*. 2016 Apr;31(4):479-88. doi: 10.3346/jkms.2016.31.4.479. Epub 2016 Mar 9.
12. ClinicalTrials.gov. Identifier NCT02351544: Prospective, Multi-Center Evaluation of the Efficacy of Peripheral Trigger Decompression Surgery for Migraine Headaches. Ohio State University, April 2018.
13. Diener HC, Bingel U. Surgical treatment for migraine: Time to fight against the knife. *Cephalalgia*. 2015 May;35(6):465-8.
14. Dirnberger F, Becker K. Surgical treatment of migraine headaches by corrugator muscle resection. *Plast Reconstr Surg* 2004; 114(3):652-7; discussion 58-9.
15. Ducic I, Hartmann EC, Larson EE. Indications and Outcomes for Surgical Treatment of Patients with Chronic Migraine Headaches Caused by Occipital Neuralgia. *Plastic and Reconstructive Surgery* • May 2009.
16. Guyuron, Bahman, et al. A Placebo-Controlled Surgical Trial of the Treatment of Migraine Headaches. *Plastic and Reconstructive Surgery* (2009).
17. Guyuron, B et al. Comprehensive surgical treatment of migraine headaches. *Plastic and reconstructive surgery* 115.1 (2005): 1.
18. Hagan RR, Fallucco MA, Janis JE. Supraorbital Rim Syndrome: Definition, Surgical Treatment, and Outcomes for Frontal Headache. *Plast Reconstr Surg Glob Open*. 2016 Jul 12;4(7):e795.
19. Hong J, Roberts DW. The surgical treatment of headache. *Headache*. 2014 Mar;54(3):409-29.
20. InterQual® Clinical Evidence Summary: Headache (2013)
21. Janis JE, Barker JC, Javadi C, Ducic I, Hagan R, Guyuron B. A review of current evidence in the surgical treatment of migraine headaches. *Plast Reconstr Surg*. 2014 Oct;134(4 Suppl 2):131S-41S.

22. Jung SJ, et al. A Case of Occipital Neuralgia in the Greater and Lesser Occipital Nerves Treated with Neurectomy by Using Transcranial Doppler Sonography: Technical Aspects. *Korean J Pain* 2011 March; Vol. 24, No. 1: 48-52.
23. Li F, Ma Y, Zou J, Li Y, Wang B, Huang H, Wang Q, Li L. Micro-surgical decompression for greater occipital neuralgia. *Turk Neurosurg.* 2012;22(4):427-9.
24. Liu MT, Armijo BS, Guyuron B. A comparison of outcome of surgical treatment of migraine headaches using a constellation of symptoms versus botulinum toxin type A to identify the trigger sites. *Plastic and reconstructive surgery* 129.2 (2012): 413.
25. 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.* Nov-Dec 2013;53(10):1651-1659.
26. Lucia Mangialardi M, Baldelli I, Salgarello M, Raposio E. Decompression Surgery for Frontal Migraine Headache. *Plast Reconstr Surg Glob Open.* 2020 Oct 15;8(10):e3084. doi: 10.1097/GOX.0000000000003084.
27. MBA, JD. Five-Year Outcome of Surgical Treatment of Migraine Headaches. *Plastic and Reconstructive Surgery* (2011).
28. National Institute of Neurological Disorders and Stroke (NINDS). National Institutes of Health (NIH). Occipital Neuralgia. Updated December 14, 2009. Accessed 11/01/13 at <http://www.ninds.nih.gov/disorders/occipitalneuralgia/occipitalneuralgia.htm>.
29. Omeranifard M, Abdali H, Ardakani MR, Talebianfar M. A comparison of outcome of medical and surgical treatment of migraine headache: In 1 year follow-up. *Adv Biomed Res.* 2016 Jul 29;5:121.
30. Page P. Cervicogenic headaches: An evidence-led approach to clinical management. *Int J Sports Phys Ther.* 2011;6(3):254-66.
31. Park, Seung Won et al. The Effect of Radiofrequency Neurotomy of Lower Cervical Medial Branches on Cervicogenic Headache. *Journal of Korean Neurosurgical Society* 50.6 (2011): 507-511.
32. Peric A, Rasic D, Grgurevic U. Surgical Treatment of Rhinogenic Contact Point Headache: An Experience from a Tertiary Care Hospital. *Int Arch Otorhinolaryngol.* 2016 Apr;20(2):166-71.
33. Pietramaggiore G, Scherer S. Minimally Invasive Nerve- and Muscle-Sparing Surgical Decompression for Occipital Neuralgia. *Plast Reconstr Surg.* 2023 Jan 1;151(1):169-177. doi: 10.1097/PRS.0000000000009777. Epub 2022 Oct 18.
34. Racicki S, Gerwin S, Diclaudio S, Reinmann S, Donaldson M. Conservative physical therapy management for the treatment of cervicogenic headache: a systematic review. *J Man Manip Ther.* 2013 May;21(2):113-24.
35. Raposio G, Raposio E. Surgical therapy of occipital (Arnold) neuralgia: A case series. *Ann Med Surg (Lond).* 2022 Aug 6;80:104237. doi: 10.1016/j.amsu.2022.104237.
36. Sanniec K, Borsting E, Amirlak B. Decompression-Avulsion of the Auriculotemporal Nerve for Treatment of Migraines and Chronic Headaches. *Plast Reconstr Surg Glob Open.* 2016 Apr 13;4(4):e678.
37. Son BC. 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 Sep;83(5):461-470. doi: 10.1055/s-0041-1739228. Epub 2022 Jan 6. PMID: 34991172.
38. Son BC, Choi JG. Hemifacial Pain and Hemisensory Disturbance Referred from Occipital Neuralgia Caused by Pathological Vascular Contact of the Greater Occipital Nerve. *Case Rep Neurol Med.* 2017;2017:3827369.
39. UpToDate. Cervicogenic headache. 2018. Accessed at [uptodate.com](https://www.uptodate.com).

40. UpToDate. Chronic daily headache: Associated syndromes, evaluation, and management. 2022. Accessed at uptodate.com
41. UpToDate. Cluster headache: Treatment and prognosis. 2021. Accessed at uptodate.com.
42. UpToDate. Occipital neuralgia. 2023. Accessed at uptodate.com.
43. UpToDate. Tension-type headache in adults: Acute treatment. 2022. Accessed at uptodate.com.
44. Vollesen AL, et al. Migraine and cluster headache - the common link. J Headache Pain. 2018 Sep 21;19(1):89. doi: 10.1186/s10194-018-0909-4.
45. WebMD. Tension headaches. Accessed at <http://www.webmd.com/migraines-headaches/guide/tension-headaches> on 10/26/12.
46. WebMD. Cluster headaches. Accessed at <http://www.webmd.com/migraines-headaches/guide/cluster-headaches> on 10/26/12.
47. Wei DY, Jensen RH. Therapeutic Approaches for the Management of Trigeminal Autonomic Cephalalgias. Neurotherapeutics. 2018 Apr;15(2):346-360. doi: 10.1007/s13311-018-0618-3.

COMMITTEE APPROVAL:

This Medical Coverage Guideline (MCG) was approved by the Florida Blue Medical Policy and Coverage Committee on 06/22/23.

GUIDELINE UPDATE INFORMATION:

01/15/13	New Medical Coverage Guideline.
12/15/13	Scheduled review. Position statement maintained. Updated references.
10/15/14	Scheduled review. Position statement maintained. Revised CPT coding. Updated references.
10/15/15	Scheduled review. Position statement maintained. Updated references.
11/15/16	Scheduled review. Revised Description section. Position statement maintained. Updated references.
11/15/17	Scheduled review. Position statement maintained. Updated references.
11/15/18	Scheduled review. Maintained position statement and updated references.
10/15/19	Scheduled review. Maintained position statement and updated references.
06/15/21	Scheduled review. Maintained position statement and updated references.
07/15/23	Scheduled review. Maintained position statement and updated references.