



Medical Coverage Policy

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Coverage Policy Number 0587

Open Neuroplasty Lumbar Plexus

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Related Coverage Resources

- [Lumbar Fusion \(Arthrodesis\) Guideline](#)
- [Lumbar Decompression Guideline](#)
- [Lumbar Microdiscectomy \(Laminotomy, Laminectomy, or Hemilaminectomy\)](#)

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will be denied as not covered. Coverage Policies relate exclusively to the administration of health benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. In certain markets, delegated vendor guidelines may be used to support medical necessity and other coverage determinations.

Overview

This Coverage Policy addresses open surgical neuroplasty procedure involving the lumbar plexus (CPT® 64714).

Coverage Policy

Open Neuroplasty Lumbar Plexus is considered medically necessary when there is documented nerve compression (i.e., MRI, CT, EMG/NCS, US) in the lumbar plexus causing significant symptoms and the following criteria are met:

- Conservative treatments (i.e., physical therapy, oral medications, injection-based treatment) have failed or not indicated (i.e., acute trauma).
- Imaging and clinical findings support surgical intervention.

Open Neuroplasty Lumbar Plexus is considered not medically necessary for any other indication, including but not limited to lumbar spine decompression.

Health Equity Considerations

Health equity is the highest level of health for all people; health inequity is the avoidable difference in health status or distribution of health resources due to the social conditions in which people are born, grow, live, work, and age.

Social determinants of health are the conditions in the environment that affect a wide range of health, functioning, and quality of life outcomes and risks. Examples include safe housing, transportation, and neighborhoods; racism, discrimination, and violence; education, job opportunities and income; access to nutritious foods and physical activity opportunities; access to clean air and water; and language and literacy skills.

General Background

The lumbar plexus is a network of nerves located in the lower back (lumbar region). It is formed by the anterior rami of the L1 to L4 spinal nerve roots and occasionally includes a contribution from T12.

This plexus provides sensory innervation to the lower abdomen, buttocks, groin, genital region, thigh, and medial leg. It also controls the motor function of the anterior thigh muscles (such as the quadriceps) and the adductor muscles of the thigh.

The lumbosacral plexus is a larger nerve network that includes both the lumbar and sacral plexuses. Together, they coordinate much of the motor and sensory activity of the lower body.

Lumbosacral plexopathies (LSPs) typically present with asymmetric, focal weakness, numbness, dysesthesia, and/or paresthesia across multiple contiguous lumbosacral nerve root distributions. Evaluation involves electrodiagnostic studies, laboratory tests, and neuroimaging. Diagnosis is

based on clinical and EMG findings. Common causes of LSP include diabetic lumbosacral radiculoplexus neuropathy, idiopathic lumbosacral radiculoplexus neuropathy, and primary neoplastic invasion or compression.

Lumbar plexus decompression is less common than spinal nerve decompression. Compression of the lumbar plexus is typically caused by scar tissue, trauma, or anatomical entrapment, and may result in chronic pelvic or lower limb pain not originating from spinal nerve roots. In contrast, spinal nerve compression is usually due to disc herniation or spinal stenosis, leading to radicular pain and muscle weakness.

The primary goal of open surgical neuroplasty of the lumbar plexus is to relieve nerve pressure caused by scar tissue, adhesions, or other compressive factors. This procedure uses a direct surgical approach, allowing precise access to the affected area for targeted nerve decompression.

It is typically recommended for individuals experiencing pain, muscle weakness, or functional impairment due to nerve compression that has not responded to conservative treatments. The main objectives are to restore normal nerve function, alleviate pain, and improve mobility and overall quality of life.

Literature Review

Due to the low incidence of lumbosacral plexus (LSP) injuries, there is a lack of robust, peer-reviewed evidence evaluating the effectiveness of open surgical neuroplasty compared to conservative management or other less invasive treatments.

Nichols et al. (2022) conducted a systematic review to assess surgical interventions for LSP injuries. They highlighted that these injuries are rare, complex, and vary significantly in severity. Because of their infrequency, the existing literature is limited, consisting mostly of case reports and small retrospective studies. This review was noted as the first comprehensive evaluation of surgical treatments for LSP injuries.

The authors categorized LSP injuries by nerve location and type of surgical intervention, aiming to consolidate available data and evaluate functional and pain outcomes. A total of sixty-two studies were included, representing 173 individual patients.

Nichols et al. (2022) concluded that nerve grafts and transfers are effective in improving pain and functional outcomes. The best results were observed in femoral and obturator nerve injuries, while multilevel and incomplete sciatic nerve injuries showed better outcomes than complete sciatic nerve injuries.

Medicare Coverage Determinations

	Contractor	Determination Name/Number	Revision Effective Date
NCD	National	No determination found.	
LCD		No determination found.	

Note: Please review the current Medicare Policy for the most up-to-date information.
(NCD = National Coverage Determination; LCD = Local Coverage Determination)

Coding Information

Notes:

1. This list of codes may not be all-inclusive since the American Medical Association (AMA) and Centers for Medicare & Medicaid Services (CMS) code updates may occur more frequently than policy updates.
2. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

Considered Medically Necessary when criteria in the applicable policy statements listed above are met:

CPT®* Codes	Description
64714	Neuroplasty, major peripheral nerve, arm, or leg, open; lumbar plexus

***Current Procedural Terminology (CPT®) ©2024 American Medical Association: Chicago, IL.**

References

1. Nichols DS, Fenton J, Cox E, Dang J, Garbuzov A, McCall-Wright P, Chim H. Surgical Interventions for Lumbosacral Plexus Injuries: A Systematic Review. *Plast Reconstr Surg Glob Open.* 2022 Aug 24;10(8):e4436. doi: 10.1097/GOX.0000000000004436. PMID: 36032367; PMCID: PMC9400934.
2. Rubin DI. Brachial and lumbosacral plexopathies: A review. *Clin Neurophysiol Pract.* 2020 Aug 13;5:173-193. doi: 10.1016/j.cnp.2020.07.005. PMID: 32954064; PMCID: PMC7484503.
3. Wang S, Xia D, Song D, Lu N, Chen A. Could nerve transplantation be the future of this field: a bibliometric analysis about lumbosacral plexus injury. *Int J Surg.* 2024 Jun 1;110(6):3734-3744. doi: 10.1097/JS9.0000000000001332. PMID: 38518081; PMCID: PMC11175794.

Revision Details

Type of Revision	Summary of Changes	Date
New	New coverage policy	12/1/2025

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