

# Clinical Policy: Selective Nerve Root Blocks and Transforaminal Epidural Steroid Injections

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[Coding Implications](#)

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## Description

Transforaminal epidural steroid injections (TFESIs) and selective nerve root blocks (SNRBs) are alternatives to interlaminar epidural steroid injections for the treatment of radicular pain. SNRBs consist of a small amount of local anesthetic injected adjacent to a spinal nerve root, and are most often used to diagnose the source of pain.<sup>1</sup> During a TFESI, a larger amount of local anesthetic or corticosteroid is injected into the intervertebral foramen, where the injectate spreads to target multiple nerves. SNRBs and TFESIs share similar safety considerations, procedural techniques, and anatomical benchmarks.<sup>1</sup>

## Policy/Criteria

It is the policy of Pennsylvania Health and Wellness<sup>®</sup> that invasive pain management procedures performed by a physician are **medically necessary** when *the relevant criteria are met and the patient receives only one procedure per visit, with radiographic guidance, and the participant(s) is/are not currently being treated with full anticoagulation therapy. If on warfarin, international normalized ratio (INR) should be  $\leq 1.4$  prior to the procedure.* Discontinuing anti-platelet therapy is a clinical decision balancing risks and benefits of the procedure on therapy, versus the underlying medical condition if not treated appropriately.

## I. Selective Nerve Root Blocks

- A. *One selective nerve root block (SNRB) for chronic pain is considered **medically necessary** to establish a diagnosis and confirm beneficial response when all the following criteria are met:*
1. Request is for an SNRB with a local anesthetic at a single nerve root;
  2. There is persistent radicular pain in a defined nerve root level and the diagnosis remains uncertain after standard evaluation (neurologic examination, radiological studies and electrodiagnostic studies);
  3. Pain interferes with activities of daily living (ADLs) and has lasted for at least 3 months;
  4. The participant/enrollee has failed to respond to conservative therapy including all of the following:
    - a.  $\geq 6$  weeks chiropractic, physical therapy or prescribed home exercise program;
    - b. Nonsteroidal anti-inflammatory drugs (NSAID)  $\geq 3$  weeks or NSAID contraindicated or not tolerated;
    - c.  $\geq 6$  weeks activity modification;
  5. The participant/enrollee is not currently being treated with full anticoagulation therapy. For patients on warfarin, international normalized ratio (INR) should be  $\leq 1.4$  prior to the procedure.-  
Discontinuing anti-platelet therapy is a clinical decision balancing risks and benefits of the procedure on therapy, versus the underlying medical condition if not treated appropriately;
  6. Absence of systemic infection or local infection at the site of a planned injection.

- B. *A second SNRB for chronic pain* is considered **medically necessary** when multilevel pathology is suspected and it has been at least two weeks since the prior injection.
- C. *One SNRB for acute pain management* is considered **medically necessary** when all of the following are met:
  - 1. Pain has lasted for < 3 months;
  - 2. There is severe radicular pain in a specific nerve root distribution that interferes substantially with ADLs;
  - 3. Severe pain persists after treatment with NSAID and/or opiate (both  $\geq 3$  days or contraindicated/not tolerated);
  - 4. The participant/enrollee cannot tolerate chiropractic or physical therapy and the injection is intended as a bridge to therapy.
- D. *SNRBs* are considered **not medically necessary** for any other indication because effectiveness has not been established.

## II. Transforaminal Epidural Steroid Injections

- A. *One TFESI for acute pain management* (pain lasting < 3 months) is considered **medically necessary** when all of the following are met:
  - 1. There is severe radicular pain in a specific nerve root distribution that interferes substantially with ADLs;
  - 2. If a cervical TFESI is requested, non-particulate steroid must be used and the procedure must be conducted with real-time imaging, such as fluoroscopy;
  - 3. Severe pain persists after treatment with NSAID and/or opiate (both  $\geq 3$  days or contraindicated/not tolerated);
  - 4. Cannot tolerate chiropractic or physical therapy and the injection is intended as a bridge to therapy.
- B. *One transforaminal epidural steroid injection (TFESI) for chronic pain* is considered **medically necessary** when all of the following are met:
  - 1. TFESI is requested for a single level bilaterally or up to two levels unilaterally;
  - 2. If a cervical TFESI is requested, non-particulate steroid must be used and the procedure must be conducted with real-time imaging, such as fluoroscopy;
  - 3. There is persistent radicular pain caused by disc herniation in a defined nerve root level, or spinal stenosis confirmed by physical exam and imaging;
  - 4. Pain interferes with ADLs and has lasted for at least 3 months;
  - 5. Failure to respond to conservative therapy including all of the following:
    - a.  $\geq 6$  weeks chiropractic, physical therapy or prescribed home exercise program;
    - b. NSAID  $\geq 3$  weeks or NSAID contraindicated or not tolerated;
    - c.  $\geq 6$  weeks activity modification.
- C. *A second TFESI for chronic pain* that **did not** improve from the initial injection is considered **medically necessary** when meeting all of the following:
  - 1. Request is for a TFESI at one level bilaterally or up to two levels unilaterally;

2. If a cervical TFESI is requested, non-particulate steroid must be used and the procedure must be conducted with real-time imaging, such as fluoroscopy;
3. At least two weeks have passed since the first TFESI;

**D.** *Subsequent TFESIs for recurrence of chronic pain that **had improved** from the first or second TFESI are considered **medically necessary** with all of the following:*

1. The TFESI is requested at a single level bilaterally or up to two levels unilaterally;
2. If a cervical TFESI is requested, non-particulate steroid must be used and the procedure must be conducted with real-time imaging, such as fluoroscopy;
3. There was  $\geq 50\%$  relief and functional improvement for at least 2 months;
4. At least 2 months have passed since the last TFESI;
5. Less than 4 injections have been given at the same site within 12 months;
6. Less than 12 months have elapsed since the initial injection at the level requested.

**E.** *Continuation of injections beyond 12 months or more than 4 therapeutic injections is considered **not medically necessary** because effectiveness and safety has not been established. When more definitive therapies cannot be tolerated or provided, consideration will be made on a case by case basis.*

**F.** *TFESIs for any other indication are considered **not medically necessary** because effectiveness has not been established.*

## Background

### *Epidural steroid injections/selective nerve root blocks*

There is great controversy regarding the effectiveness of invasive interventions for spinal pain. Epidural glucocorticoid injections have been used for pain control in patients with radiculopathy, spinal stenosis, and nonspecific low back pain despite inconsistent results as well as heterogeneous populations and interventions in randomized trials. Epidural injections are performed utilizing 3 approaches in the lumbar spine: caudal, interlaminar, and transforaminal. Generally, candidates for epidural steroid injection are individuals who have acute radicular symptoms or neurogenic claudication unresponsive to traditional analgesics and rest, with significant impairment in activities of daily living. Epidural steroid injections have been used in the treatment of spinal stenosis for many years, and no validated long-term outcomes have been reported to substantiate their use. However, significant improvement in pain scores, have been reported at 3 months. A SNRB is primarily used to diagnose the specific source of nerve root pain. In a SNRB, a local anesthetic is used. When used for therapeutic indications, a steroid is added and it is usually referred to as a selective transforaminal epidural steroid injection.

Zhai et al conducted a meta-analysis to assess the effects of various surgical and nonsurgical modalities, including epidural injections, used to treat lumbar disc herniation (LDH) or radiculitis.<sup>2</sup> A systematic literature search was conducted to identify RCTs which compared the effect of local anesthetic with or without steroids. The outcomes included pain relief, functional improvement, opioid intake, and therapeutic procedural characteristics. The reviewers concluded that the meta-analysis confirms that epidural injections of local anesthetic with or without steroids have beneficial but similar effects in the treatment of patients with chronic low back and lower extremity pain.<sup>2</sup>

Results of a 2 year follow-up of 3 randomized, double-blind, controlled trials, with a total of 360 patients with chronic persistent pain of disc herniation receiving either caudal, lumbar interlaminar or transforaminal epidural injections, showed similar efficacy of the 3 techniques with local anesthetic alone or local anesthetic with steroid.<sup>3</sup> Interlaminar injections with steroids were superior to transforaminal at 12-months.<sup>3</sup>

### **Coding Implications**

This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2020, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

<b>CPT® Codes</b>	<b>Description</b>
64479	Injection(s), anesthetic agent(s) and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); cervical or thoracic, single level
64480	Injection(s), anesthetic agent(s) and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); cervical or thoracic, each additional level (List separately in addition to code for primary procedure)
64483	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); lumbar or sacral, single level
64484	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); lumbar or sacral, each additional level (List separately in addition to code for primary procedure)

<b>HCPCS Codes</b>	<b>Description</b>
N/A	

### **ICD-10-CM Diagnosis Codes that Support Coverage Criteria**

+ Indicates a code requiring an additional character

<b>ICD-10-CM Code</b>	<b>Description</b>
G56.00-G56.93	Mononeuropathies of upper limb
G57.00-G57.93	Mononeuropathies of lower limb
M48.061- M48.062	Spinal stenosis, lumbar region
M50.00-M50.93	Cervical disc disorders
M51.04-M51.06	Thoracic, thoracolumbar, and lumbosacral intervertebral disc disorders with myelopathy

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M51.14-M51.27	Thoracic, thoracolumbar and lumbosacral intervertebral disc disorders with radiculopathy
M54.12	Radiculopathy, cervical region
M54.13	Radiculopathy, cervicothoracic region
M54.14	Radiculopathy, thoracic region
M54.15	Radiculopathy, thoracolumbar region
M54.16	Radiculopathy, lumbar region
M54.17	Radiculopathy, lumbosacral region
M54.30-M54.32	Sciatica
M54.40-M54.42	Lumbago with sciatica
M54.5	Low back pain

Reviews, Revisions, and Approvals	Revision Date	Approval Date
New policy developed. Split from retired CP.MP.118 Injections for Pain Management. No criteria change.	09/18	10/18
Revised frequency interval of TFESI in II.D.3 to at least 2 months apart. Reference reviewed and updated. Anticoagulation indication moved to policy/criteria section as it is applicable to all injections in this policy. Minor wording changes to match ESI clinical policy. Removed the following codes from the policy as they relate to cervical spine: CPT-64479, 64480. ICD10-G56.00-G56.93, M50.00-M50.93, M54.12, M54.13, Specialist review	12/19	
Removed restriction of TFESI to lumbar region. Added CPT codes: 64479 and 64480. Added ICD-10 codes: G56.00-G56.93, M50.00-M50.93, M54.12, M54.13. Added the statement to all TFESI indications that for cervical TFESI, non-particulate steroid must be used and the procedure must be conducted with real-time imaging, such as fluoroscopy. Revised the not medically necessary statement regarding TFESI for all other indications and locations to only note all other indications. Clarified criteria in II.B, C, and D.1 that a request for TFESI is for one level bilaterally or up to two levels unilaterally. References reviewed and updated. Minor revision to description of CPT 64479, 64480, 64483 and 64484. Replaced “member” with “participant/enrollees/enrollee” in the disclaimer.	6/2021	
Annual review. References reviewed and updated. In policy statement, removed option for procedures “without radiographic guidance.” Reviewed by specialist. Changed “Last Review Date” in header to “Date of Last Revision” and changed “Date” in Revision log to “Revision Date”.		

## References

1. Bicket MC, Benzon HT, Cohen SP. Transforaminal Epidural Steroid Injections and Selective Nerve Root Blocks. In: Essentials of pain medicine (Fourth Edition). Chapter 63 –Elsevier. 2018, p. 573-584.e2. <https://doi.org/10.1016/B978-0-323-40196-8.00063-2>. Accessed July 27, 2021.
2. Zhai J, Zhang L, Li M, et al. Epidural injection with or without steroid in managing chronic low back and lower extremity pain: a meta-analysis of ten randomized controlled trials. *Int J Clin Exp Med*. 2015;8(6):8304-8316. Published 2015 Jun 15.
3. Manchikanti L, Singh V, Pampati V, Falco FJ, Hirsch JA. Comparison of the efficacy of caudal, interlaminar, and transforaminal epidural injections in managing lumbar disc herniation: is one method superior to the other? *Korean J Pain*. 2015;28(1):11-21. doi: 10.3344/kjp.2015.28.1.11
4. American College of Occupational and Environmental Medicine: Chronic Pain Guideline. [http://www.dwc.ca.gov/dwc/MTUS/ACOEM\\_Guidelines/Chronic-Pain-Guideline.pdf](http://www.dwc.ca.gov/dwc/MTUS/ACOEM_Guidelines/Chronic-Pain-Guideline.pdf). Published May 15, 2007. Accessed July 27, 2021.
5. Chou R, Hashimoto R, Friedly J, et al. Pain Management Injection Therapies for Low Back Pain. Rockville (MD): Agency for Healthcare Research and Quality (US); 2015. Accessed July 27, 2021.
6. Chou R. Subacute and chronic low back pain: Nonsurgical interventional treatment. UpToDate. [www.uptodate.com](http://www.uptodate.com). Published June 10, 2021. Accessed July 26, 2021.
7. Chou R, Qaseem A, Snow V, et al. Diagnosis and treatment of low back pain: a joint clinical practice guideline from the American College of Physicians and the American Pain Society [published correction appears in *Ann Intern Med*. 2008 Feb 5;148(3):247-8]. *Ann Intern Med*. 2007;147(7):478-491. doi: 10.7326/0003-4819-147-7-200710020-00006
8. Chou R, Loeser JD, Owens DK, et al. Interventional therapies, surgery, and interdisciplinary rehabilitation for low back pain: an evidence-based clinical practice guideline from the American Pain Society. *Spine (Phila Pa 1976)*. 2009;34(10):1066-1077. doi:10.1097/BRS.0b013e3181a1390d
9. Chou R, Hashimoto R, Friedly J, et al. Epidural Corticosteroid Injections for Radiculopathy and Spinal Stenosis: A Systematic Review and Meta-analysis. *Ann Intern Med*. 2015;163(5):373-381. doi: 10.7326/M15-0934
10. Heggeness MH. AAOS endorses back pain guidelines. American Academy of Orthopaedic Surgeons. <https://www.maine-general.org/app/files/public/6460f387-09dc-4968-b162-eee6121a1497/aaosbackpainguidelines.pdf>. Published September 2010. Accessed August 10, 2021.
11. Manchikanti L, Datta S, Derby R, et al. A critical review of the American Pain Society clinical practice guidelines for interventional techniques: part 1. Diagnostic interventions. *Pain Physician*. 2010;13(3):E141-E174.
12. Manchikanti L, Datta S, Gupta S, et al. A critical review of the American Pain Society clinical practice guidelines for interventional techniques: part 2. Therapeutic interventions. *Pain Physician*. 2010;13(4):E215-E264.
13. Manchikanti L, Abdi S, Atluri S, et al. An update of comprehensive evidence-based guidelines for interventional techniques in chronic spinal pain. Part II: guidance and recommendations. *Pain Physician*. 2013;16(2 Suppl):S49-S283.
14. Novak S, Nemeth WC. The basis for recommending repeating epidural steroid injections for radicular low back pain: a literature review. *Arch Phys Med Rehabil*. 2008;89(3):543-552.



15. Staal JB, de Bie R, de Vet HC, Hildebrandt J, Nelemans P. Injection therapy for subacute and chronic low-back pain. *Cochrane Database Syst Rev*. 2008;2008(3):CD001824. Published 2008 Jul 16. Accessed July 27, 2021.
16. Vorobeychik Y, Sharma A, Smith CC, et al. The Effectiveness and Risks of Non-Image-Guided Lumbar Interlaminar Epidural Steroid Injections: A Systematic Review with Comprehensive Analysis of the Published Data. *Pain Med*. 2016;17(12):2185-2202.
17. Singh JR, Cardozo E, Christolias GC. The clinical efficacy for two-level transforaminal epidural steroid injections. *PM R*. 2017;9(4):377-382. doi:10.1016/j.pmrj.2016.08.030
18. Smith CC, Booker T, Schaufele MK, Weiss P. Interlaminar versus transforaminal epidural steroid injections for the treatment of symptomatic lumbar spinal stenosis. *Pain Med*. 2010;11(10):1511-1515. doi: 10.1111/j.1526-4637.2010.00932.x
19. Schaufele MK, Hatch L, Jones W. Interlaminar versus transforaminal epidural injections for the treatment of symptomatic lumbar intervertebral disc herniations. *Pain Physician*. 2006;9(4):361-366.
20. Chang-Chien GC, Knezevic NN, McCormick Z, Chu SK, Trescot AM, Candido KD. Transforaminal versus interlaminar approaches to epidural steroid injections: a systematic review of comparative studies for lumbosacral radicular pain. *Pain Physician*. 2014;17(4):E509-E524.
21. Robinson J, Kothari MJ. Treatment and prognosis of cervical radiculopathy. UptoDate. [www.uptodate.com](http://www.uptodate.com). Published February 11, 2021. Accessed July 26, 2021.
22. Manchikanta L, Knezevic NN, Nuvani A, et al. Epidural Interventions in the Management of Chronic Spinal Pain: American Society of Interventional Pain Physicians (ASIPP) Comprehensive Evidence Based Guidelines. [www.painphysicianjournal.com](http://www.painphysicianjournal.com). *Pain Physician*. 2020: 23:S27-S208.
23. Evolving evidence review: Epidural steroid injections for the treatment of thoracic spine pain. Hayes. [www.hayesinc.com](http://www.hayesinc.com). Published July 23, 2021. Accessed July 27, 2021.