



Oscar Clinical Guideline: Pain Management: Epidural Steroid Injections, Selective Nerve Root Blocks (SNRB), and Intradiscal Steroid Injections (CG048, Ver. 7)

Pain Management: Epidural Steroid Injections, Selective Nerve Root Blocks (SNRB), and Intradiscal Steroid Injections

Disclaimer

Clinical guidelines are developed and adopted to establish evidence-based clinical criteria for utilization management decisions. Clinical guidelines are applicable according to policy and plan type. The Plan may delegate utilization management decisions of certain services to third parties who may develop and adopt their own clinical criteria.

Coverage of services is subject to the terms, conditions, and limitations of a member's policy, as well as applicable state and federal law. Clinical guidelines are also subject to in-force criteria such as the Centers for Medicare & Medicaid Services (CMS) national coverage determination (NCD) or local coverage determination (LCD) for Medicare Advantage plans. Please refer to the member's policy documents (e.g., Certificate/Evidence of Coverage, Schedule of Benefits, Plan Formulary) or contact the Plan to confirm coverage.

Summary

The Plan members with chronic back and neck pain may qualify for diagnostic and therapeutic procedures to further characterize or treat their pain. Back pain can be radicular, where it radiates to other parts of the body, or non-radicular, where it is localized to the back or neck. Radicular back pain is often caused by pressure on a spinal nerve root, such as from a herniated disk, spinal stenosis, or degenerative disk disease. Injections of pain medication and/or steroids into the epidural space can help diagnose and treat radicular back pain. This guideline does not apply to epidural pain medication given during labor and delivery.

For pain management with facet joint injections and radiofrequency facet denervation, please see CG047: Pain Management: Facet Joint Injections and Radiofrequency Facet Denervation.

Definitions

“Straight-Leg Raise Test” (also called Lasègue's sign, Lasègue test, or Lazarević's sign) is a simple office test where the patient lies on his or her back, and one leg is flexed at the hip while extended at the knee. The test is deemed positive when there is radiating pain down the leg as it is raised between 30 degrees and 70 degrees. This suggests a herniated disk or other radiculopathy, and is not typically observed in facet joint syndromes.

“Radicular Pain” (i.e., radiculopathy) refers to pain that radiates along the course of a spinal nerve root. Signs of radicular pain include positive straight leg test, dermatomal pattern of sensory loss, pain or numbness radiating below the level of the knee (lumbar), pain or numbness in the shoulder, arm, hand, or fingers (cervical), or diminished reflexes. Radicular pain is not characteristic of facet joint syndromes.

“Radiculitis” is radicular pain without objective neurological findings on physical examination.

“Non-Radicular Pain” is pain that does not radiate and is typically most intense local to the source, rather than spreading in a predictable distribution like radicular pain. Facet joint syndrome typically causes this type of pain.

“Epidural Steroid Injection (ESI)” is an injection of anesthetic and steroid medication into the epidural space to treat radicular back pain caused by spinal nerve root compression. There are several different approaches for these injections:

- Caudal: Needle is inserted near the tailbone into the sacral hiatus to treat pain or symptoms in the lower extremity.
- Interlaminar: Needle is inserted with a paramedian or midline intralaminar approach to treat vertebral levels with both the left and right nerve roots being treated.
- Transforaminal: Needle is inserted into neuroforaminal space (to either side of the vertebra) just above the appropriate nerve root and outside the epidural space, treating only one nerve root at a time.

“Selective Nerve-Root Block (SNRB)” is the injection of anesthetic and/or steroids around a single nerve root rather than into the epidural space, typically performed for diagnostic purposes or prior to spinal surgery.

“Activities of Daily Living (ADLs)” are defined as routine activities that most healthy persons perform daily without requiring assistance. These include, but are not limited to: bathing, communication, dressing, feeding, grooming, mobility, personal hygiene, self-maintenance, skin management, and toileting.

“Vertebral Levels” refers to the different vertebrae of the spinal column. There are 7 cervical vertebrae, 12 thoracic, and 5 lumbar.

“Epidurography” is a procedure where radiologic contrast material is injected into the epidural space and an X-ray is taken.

“Epiduroscopy” is a procedure where a small camera is inserted into the epidural space to help visualize pathology and inject medications.

“Fluoroscopy” is an X-ray technique used to visualize internal structures of the patient’s body.
“Intradiscal Steroid Injection” is where steroids are injected directly into the disk between two vertebral bodies.

Clinical Indications

Initial Epidural Injections (Caudal, Interlaminar, or Transforaminal)

The Plan considers initial epidural injections of the cervical or lumbar spine (with or without added steroid agents, *and* with fluoroscopic or CT guidance) medically necessary when ALL of the following criteria are met:

1. Presence of radicular pain or radiculitis that is suggestive of spinal nerve root compression, as defined above; *and*
2. Pain interferes with ADLs; *and*
3. Pain has not responded to at least 6 weeks of conservative therapy, as defined by the following:
 - a. Trial of appropriate medications (e.g., NSAIDs, analgesics, etc.); *and*
 - b. Physical therapy, spinal manipulation therapy, or other specific interventions tailored to the member’s unique presentation.
4. There are no current medical problems that may increase the risk of side effects, including but not limited to the following:
 - a. Local infection at the injection site; *or*
 - b. Systemic infection; *or*
 - c. Bleeding disorders (unless benefits deemed to outweigh risks); *or*
 - i. Members are on anticoagulation/antiplatelet therapy with intermediate risk of serious bleeding as classified by American Society of Regional Anesthesia and Pain Medicine are determined to be clinically appropriate to proceed with or without anticoagulation/antiplatelet therapy before the procedure; *or*
 - d. Any other unstable medical condition such as cauda equina or vertebral fracture.
5. Alternative causes of the pain such as intraspinal tumor, other space occupying spinal lesion, or non-spinal etiologies of the pain have been ruled out and/or adequately addressed; *and*
6. The epidural injections are part of a comprehensive pain management plan that includes physical therapy, education, oral medications, or other specific and appropriate interventions; *and*
7. The injections are into the cervical and/or lumbar spine region(s); *and*
8. The injections are administered at a frequency of no less than two week intervals (i.e., one injection week one and another week for a given vertebral level), and limitations related to injection level, anatomic region, and approach include:
 - a. For caudal and interlaminar injections:
 - i. Maximum of 1 nerve root level injected, per session; *and*
 - ii. Maximum of one anatomic region (e.g., cervical, lumbar) injected, per session; *and*
 - iii. No transforaminal injections are administered in the same session; *or*

- b. For transforaminal injections:
 - i. Maximum of two injections per session (e.g., single nerve root level bilaterally, or two nerve roots unilaterally); *and*
 - ii. Maximum of one anatomic region (e.g., cervical, lumbar), per session; *and*
 - iii. No caudal or interlaminar injections are administered in the same session.

Subsequent Epidural Injections (Caudal, Interlaminar, or Transforaminal)

The Plan considers subsequent epidural injections of the cervical or lumbar spine (with or without added steroid agents, *and* with fluoroscopic or CT guidance) medically necessary when ALL of the following criteria are met:

1. The "Initial Epidural Injection" criteria above continue to be met for the vertebral region being injected; *and*
2. The previous injection resulted in at least partial symptomatic relief, defined as at least 50% relief in pain and/or symptoms for the duration of effect of the agent(s) used:
 - a. Hours for anesthetic-only injections; *and/or*
 - b. At least 2 weeks for injections containing both anesthetic and steroid; *and*
3. A time period of at least 2 weeks has passed since the previous injection; *and*
4. The pain and/or symptoms have recurred; *and*
 - a. For caudal and interlaminar injections - no more than 4 injections per spinal region (e.g., 4 to the cervical region, 4 to the lumbar region) in a rolling 12 month time period; *and/or*
 - b. For transforaminal injections - No more than 4 injections per unilateral cervical or lumbar nerve root level in a rolling 12 month time period; *and*
5. The injections will be administered for a maximum of two times per session at a frequency of no less than two week intervals (i.e., one injection week one and another week for a given vertebral level); *and*
 - a. For caudal and interlaminar injections:
 - i. Maximum of 1 nerve root level injected, per session; *and*
 - ii. Maximum of one anatomic region (e.g., cervical, lumbar) injected, per session; *and*
 - iii. No transforaminal injections are administered in the same session; *or*
 - b. For transforaminal injections:
 - i. Maximum of two injections per session (e.g., single nerve root level bilaterally, or two nerve roots unilaterally); *and*
 - ii. Maximum of one anatomic region (e.g., cervical, lumbar), per session; *and*
 - iii. No caudal or interlaminar injections are administered in the same session.

Initial Selective Nerve Root Block (SNRB)

The Plan considers initial selective nerve root block (SNRB) using anesthetic only (e.g., no steroid component, *and* with fluoroscopic or CT guidance) medically necessary when **ALL** of the following criteria are met:

1. The member has radicular pain; *and*
2. The etiology of the pain remains uncertain after appropriate diagnostic workup including imaging studies and physical exam, as evidenced by the following situations:
 - a. History and physical suggest monoradiculopathy, but imaging and/or electrodiagnostic studies reveal no abnormality; *or*
 - b. History and physical suggest monoradiculopathy, and imaging and/or electrodiagnostic studies suggest pathology of an adjacent nerve root; *or*
 - c. The clinical history is suggestive of both nerve root and peripheral nerve or joint disease; *or*
 - d. The member is planned for exploratory spinal surgery; *or*
 - e. The member has had previous spinal surgery.
3. The pain was unresponsive to non-invasive treatment, including physical therapy and appropriate analgesic medications; *and*
4. No more than two injections are administered per session (e.g., single nerve root level bilaterally, or two nerve roots unilaterally).
5. No more than one anatomic region is treated (e.g., cervical, lumbar), per session.
6. No caudal or interlaminar injections are done in the same session.

Subsequent Selective Nerve Root Block (SNRB)

The Plan considers subsequent selective nerve root block (SNRB) using anesthetic with steroid component (and with fluoroscopic or CT guidance) medically necessary when **ALL** of the following criteria are met:

1. The initial injection resulted in at least 50% relief in pain and/or symptoms for a duration of effect of the anesthetic used; *and*
2. Any **ONE** of the following conditions is met:
 - a. Radiculopathy is due to postsurgical or post-traumatic scar tissue; *or*
 - b. Radiculopathy without a definitive surgically correctable pathology; *or*
 - c. Radiculopathy with a surgically correctable pathology but the member is not a surgical candidate; *and*
3. No more than two injections are administered per session (e.g., single nerve root level bilaterally, or two nerve roots unilaterally).
4. No more than one anatomic region is treated (e.g., cervical, lumbar), per session.
5. No caudal or interlaminar injections are done in the same session.
6. No more than 3 injections are administered per unilateral nerve root in a 6 month period.

Experimental or Investigational / Not Medically Necessary

The Plan considers epidural steroid injections experimental, investigational, unproven, and/or not medically necessary when the above criteria are not met, or in any of the following procedures, conditions, or situations:

- Injection at a thoracic vertebral level
- Treatment of more than one anatomic region (e.g., cervical, lumbar), per session
- Treatment of non-radicular pain or nonspecific back pain
- Treatment of myofascial pain syndrome
- Treatment of spinal stenosis without radiculopathy
- Treatment of post-herpetic neuralgia
- Patients with poorly controlled diabetes
- Repeat injections in the absence of response to initial treatment at the same level
- More than 4 injections in a rolling 12 month period to the same region (e.g., cervical or lumbar)
- Ultrasound guidance of needle placement
- Bolus or continuous injection through an existing or new epidural catheter
- Multiple injection types performed in the same session (e.g., epidural, facet joint, sympathetic block, etc)
- Severe osteoporosis as defined by multiple compression fractures or a fracture at the same level as stenosis.

The Plan considers the following associated procedures, clinical situations, and diagnoses experimental, investigational, unproven, and/or not medically necessary:

- Monitored anesthesia care (MAC): MAC is not considered medically necessary for ESI or SNRB injections as these procedures can be managed with local anesthesia administered by an outpatient provider
- Fluoroscopy in pregnant women as radiation exposure to the fetus is contraindicated
- A planned "series of 3" injection regardless of outcome, as criteria require evidence that previous injections provide a therapeutic benefit
- Epiduroscopy for guidance of epidural injections or diagnostic purposes
- Intradiscal steroid injections

Evidence for Experimental or Investigation / Not Medically Necessary

Epidural steroid Injection at a thoracic vertebral level: There is limited evidence regarding the safety and efficacy of ESI for thoracic vertebral levels. Manchikanti et al (2010) looked at 40 patients with chronic mid or upper radicular back pain treated with ESI, finding that 80-85% of patients experienced pain relief at 12 months; however there was no placebo control to determine the effect. A later study by the same researchers in 2014 randomized patients to local anesthetic vs. steroid plus anesthetic for thoracic ESI. There was significant improvement from baseline in both groups, but again there was a lack of control. Further research is needed to determine a potential benefit in this patient population.^{8, 42-44}

Treatment of non-radicular pain or nonspecific back pain: In 2013, the American Academy of Neurology (AAN) released a "Choosing Wisely" campaign to highlight high value recommendations to optimize care. As a part of this campaign, one of the recommendations was "Don't perform epidural steroid injections to treat non-radicular low back pain". Chou et al (2009) provided guidelines from the American Pain Society highlighting a lack of evidence for epidural injection for long-term use or for use of non-radicular back pain. Further evidence is needed; however, it appears the existing research does not support this indication.^{18, 41}

Treatment of myofascial pain syndrome: Standard of care treatment for myofascial pain syndrome is *not* epidural steroid injections, and the evidence regarding the safety and efficacy for this indication is limited

Treatment of spinal stenosis without radiculopathy: The Chou et al (2009) American Pain Society guideline concluded that epidural steroid injection for patients with symptomatic spinal stenosis was not offered based on insufficient or poor evidence after analysis of 78 randomized trials. A review of UpToDate guidelines on lower back pain states that "The available evidence does not support the use of epidural injections of corticosteroids and/or anesthetics in LSS [lumbar spinal stenosis]. Most studies of this approach include a heterogeneous patient population with back pain, radicular pain, and/or neurogenic claudication".^{17-19, 23, 87}

Treatment of post-herpetic neuralgia: Van Wijck et al (2006) reported the PINE study results on ESI for preventing postherpetic neuralgia. 598 patients were enrolled and received standard therapy with oral antivirals and analgesics vs. standard therapy plus an ESI. They found that treatment with ESI was not effective for long-term prevention.⁷¹

Patients with poorly controlled diabetes: Steroids are known to cause acute increases in blood glucose, which can be dangerous in patients with poorly controlled diabetes. Even et al (2012) conducted a study to examine the magnitude of increase in blood glucose after ESI, and found "an average 125.96 ± 100.97 [mg/dL] increase in blood glucose levels after injection" and concluded that "Patients with poorly controlled diabetes could be at risk of serious acute complications of this increase in blood glucose."⁷⁴

Ultrasound guidance of needle placement: There is limited evidence of the clinical outcomes using ultrasound guidance for needle placement in ESI. Park et al (2013) and Jee et al (2013) conducted studies comparing ultrasound guided injections to fluoroscopy guided injections. Both studies found no difference between fluoroscopy and ultrasound in terms of clinical outcomes; however, there may be an advantage of ultrasound in avoiding radiation exposure and identifying abnormal vasculature that could potentially be injured or injected. Further evidence is required to confirm any potential benefit and guide clinical use.⁷⁵⁻⁷⁷

Bolus or continuous injection through an existing or new epidural catheter: There is limited data on the safety or efficacy of steroid injection through epidural catheters for the treatment of back pain.

Multiple injection types performed in the same visit (e.g., epidural, facet joint, sympathetic block, etc): The causal pathology cannot be effectively determined in cases of multiple injections in the same visit, which limits guidance of future therapies. Furthermore, interactions between therapies may be difficult to predict.

Intradiscal injection: An UpToDate clinical review states that "In general, we do not suggest intradiscal glucocorticoid injections for patients with subacute or chronic low back pain." In a prospective, double-blind, randomized trial looking at 135 patients with chronic back pain, intradiscal prednisolone vs. contrast injection alone showed no difference in pain intensity at 12 months or in any other surrogates of pain control at 1-12 months.⁷⁸⁻⁸⁴

Epiduroscopy for guidance of epidural injections or diagnostic purposes: The existing data is limited and further research is needed to guide therapeutic and diagnostic epiduroscopy. Furthermore, existing non-invasive imaging techniques have proven adequate. The National Institute for Clinical Excellence (NICE, 2004) found that "current evidence on the safety and efficacy of endoscopic epidural procedures does not appear adequate for these procedures to be used without special arrangements for consent and for audit or research...The studies identified were small and uncontrolled. Some measures used in these studies to assess outcomes, such as scores of pain and function, were of unknown validity".^{3, 14, 57, 62-63, 85-86}

Severe Osteoporosis

In 2018 Kerezoudis et al systematic review, epidural steroid injections were associated with significant decrease in bone mineral density in four out of six studies. In 2018 Nah et al retrospective review, there was a decrease of bone mineral density in postmenopausal women with epidural steroid injections even while on anti-osteoporotic medications.

Applicable Billing Codes (HCPCS/CPT Codes)

Epidural Steroid Injection	
CPT/HCPCS Codes considered medically necessary if criteria are met:	
Code	Description
62320	Injection(s), of diagnostic or therapeutic substance(s) (eg, anesthetic, antispasmodic, opioid, steroid, other solution), not including neurolytic substances, including needle or catheter placement, interlaminar epidural or subarachnoid, cervical or thoracic; without imaging guidance [when specified as

	epidural steroid injection]
62321	Injection(s), of diagnostic or therapeutic substance(s) (eg, anesthetic, antispasmodic, opioid, steroid, other solution), not including neurolytic substances, including needle or catheter placement, interlaminar epidural or subarachnoid, cervical or thoracic; with imaging guidance (ie, fluoroscopy or CT) [when specified as epidural steroid injection]
62322	Injection(s), of diagnostic or therapeutic substance(s) (eg, anesthetic, antispasmodic, opioid, steroid, other solution), not including neurolytic substances, including needle or catheter placement, interlaminar epidural or subarachnoid, lumbar or sacral (caudal); without imaging guidance [when specified as epidural steroid injection]
62323	Injection(s), of diagnostic or therapeutic substance(s) (eg, anesthetic, antispasmodic, opioid, steroid, other solution), not including neurolytic substances, including needle or catheter placement, interlaminar epidural or subarachnoid, lumbar or sacral (caudal); with imaging guidance (ie, fluoroscopy or CT) [when specified as epidural steroid injection]
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
64483	Injection(s), anesthetic agent(s) and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); lumbar or sacral, single level
64484	Injection(s), anesthetic agent(s) and/or steroid, transforaminal epidural, with imaging guidance (fluoroscopy or CT); lumbar or sacral, each additional level
77003	Fluoroscopic guidance and localization of needle or catheter tip for spine or paraspinal diagnostic or therapeutic injection procedures (epidural or subarachnoid)
77012	Computed tomography guidance for needle placement (e.g., biopsy, aspiration, injection, localization device), radiological supervision and interpretation. [(Do not report 77012 in conjunction with 10009, 10010, 10030, 27096, 32408, 32554, 32555, 32556, 32557, 62270, 62272, 62328, 62329, 64479, 64480, 64483, 64484, 64490, 64491, 64492, 64493, 64494, 64495, 64633, 64634, 64635, 64636, 0232T, 0481T, 0629T, 0630T)]

ICD-10 codes considered medically necessary if criteria are met:	
<i>Code</i>	<i>Description</i>
M47.20 - M47.28	Other spondylosis with radiculopathy
M50.00 - M50.93	Cervical disc disorders
M51.05, M51.15, M51. 25, M51.35, M51.45, M51.85	Thoracolumbar intervertebral disc disorders
M51.06, M51.16, M51. 26,, M51.36, M51.46, M51.86	Lumbosacral intervertebral disc disorders
M53.0 - M53.1	Cervicocranial - cervicobrachial syndrome
M53.80 - M53.83 M53.85 - M53.87	Other specified dorsopathies [cervical and lumbar regions]
M54.10 - M54.18	Radiculopathy
M54.2	Cervicalgia
M54.30 - M54.32	Sciatica
M54.40 - M54.42	Lumbago with sciatica
Additional ICD-10 codes considered medically necessary for diagnostic selective nerve root block (SNRB) using anesthetic only:	
Z98.890	Other specified postprocedural states [when related to previous spinal surgery]
ICD-10 codes not considered medically necessary:	
<i>Code</i>	<i>Description</i>
B02.22	Post-herpetic trigeminal neuralgia
M47.011 - M47.16, M47.811 - M48.08	Spinal stenosis

M79.10 - M79.18	Myalgia [Myofascial pain syndrome]
M80.00-M80.8A XS	Osteoporosis with current pathological fracture
M99.20 - M99.79	Other stenosis

CPT/HCPCS codes <i>not</i> considered medically necessary or considered experimental or investigational for indications listed in this guideline:	
<i>Code</i>	<i>Description</i>
00600 - 00670	Anesthesia for procedures on the spine and spinal cord [includes monitored anesthesia care; when administered with epidural steroid injections, selective nerve root blocks, and intradiscal steroid injections]
0228T	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with ultrasound guidance, cervical or thoracic; single level
0229T	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with ultrasound guidance, cervical or thoracic; each additional level
0230T	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with ultrasound guidance, lumbar or sacral; single level
0231T	Injection(s), anesthetic agent and/or steroid, transforaminal epidural, with ultrasound guidance, lumbar or sacral; each additional level
76942	Ultrasonic guidance for needle placement (eg, biopsy, aspiration, injection, localization device), imaging supervision and interpretation
99155	Moderate sedation services provided by a physician or other qualified health care professional other than the physician or other qualified health care professional performing the diagnostic or therapeutic service that the sedation supports; initial 15 minutes of intraservice time, patient younger than 5 years of age
99156	Moderate sedation services provided by a physician or other qualified health care professional other than the physician or other qualified health care professional performing the diagnostic or therapeutic service that the sedation supports; initial 15 minutes of intraservice time, patient age 5 years or older

99157	Moderate sedation services provided by a physician or other qualified health care professional other than the physician or other qualified health care professional performing the diagnostic or therapeutic service that the sedation supports; each additional 15 minutes intraservice time (List separately in addition to code for primary service)
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