Spinal Decompression (Laminectomy, Laminotomy, Foraminotomy, and Discectomy) - Single Service

Clinical Guidelines for Medical Necessity Review

Version: 3
Effective Date: April 26, 2024

Important Notices

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Guideline Information:

Specialty Area: Diseases & Disorders of the Musculoskeletal System (M00-M99)
Guideline Name: Spinal Decompression (Laminectomy, Laminotomy, Foraminotomy, and Discectomy) - Single Service

Literature review current through: 12/29/2023
Document last updated: 4/26/2024
Type: [**X**] Adult (18+ yo) | [**X**] Pediatric (0-17yo)

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Medical Necessity Criteria

Service: Spinal Decompression (Laminectomy, Laminotomy, Foraminotomy, and Discectomy)

General Guidelines

- **Units, Frequency, & Duration:** There is no clearly established consensus or criteria regarding surgical intervention timing.
- **Criteria for Subsequent Requests:** None
- **Recommended Clinical Approach:** Spinal decompression may be accomplished within a number of procedures. Laminectomy involves surgical removal of a spinous process, lamina, portions of the facet joint (facetectomy), and ligamentum flavum to increase the spinal canal diameter and reduce stenosis.[1] It is considered the "gold standard" surgical treatment for spinal stenosis.[2] Surgery provides more rapid relief than non-surgical treatment options, although these changes become less significant two years after treatment.[3] Advanced imaging is recommended prior to surgical intervention.[4-6] Laminotomy (hemilaminectomy) involves the removal of a facet joint or partial lamina to allow decompression of the nerve root or dural sac.[1] A laminotomy is frequently performed with a lumbar discectomy for disc herniations.[1] Foraminotomy involves direct compression of a nerve root by enlarging the neural foramen via removal of the lamina, facet joint, and ligamentum flavum.[1] Laminoplasty is performed to access and decompress the cervical spinal canal. The procedure may be performed on the lumbar spine. Annular closure may be performed following a primary discectomy procedure between L4 and S1. Annular closure devices have been developed to use during the procedure to reduce the incidence of reherniation and potential reoperation. Removal of osteophytes may be necessary during the procedure.
- **Exclusions:** Risk of permanent neurological damage, infection, CNS fluid leak, quadriparesis, bowel and/or bladder dysfunction.

Medical Necessity Criteria

Indications

➔ **Spinal decompression without fusion** is considered appropriate if **ANY** of the following is **TRUE**:

- ◆ The procedure is an **anterior or posterior cervical decompression without fusion,** and **ANY** of the following is **TRUE**:

- The patient has **cervical myelopathy** and **ALL** of the following are **TRUE**:
    - **ANY** of the following are **TRUE**[7-8]:
        - **ANY** of the following myelopathy symptoms:
            - Gait disturbance or abnormality; **OR**
            - Lower or upper extremity weakness; **OR**
            - Paresthesias or numbness in the upper extremities; **OR**
            - Loss of dexterity/coordination; **OR**
            - Bowel or bladder dysfunction; **OR**
        - **ANY** of the following myelopathy physical examination findings:
            - Lhermitte's sign: an electric shock-like sensation down the spine or into the upper extremities with forward flexion of the cervical spine; **OR**
            - Hoffman's sign; **OR**
            - **ANY** of the following upper lower motor neuron (ULMN) findings in the upper extremities:
                - Weakness; **OR**
                - Atrophy; **OR**
            - **ANY** of the following upper lower motor neuron (ULMN) findings in the lower extremities:
                - Hypertonicity; **OR**
                - Hyperreflexia; **OR**
                - Positive Babinski (extension of toes with distal to proximal plantar stimulation of foot); **OR**
                - Multiple beats or sustained clonus; **OR**
                - Decreased sensation, proprioception, or vibratory sense; **OR**
                - Loss of sphincter tone; **AND**
    - Advanced imaging (MRI or CT myelogram) reveals spinal cord compressive pathology with myelomalcia or cord signal change consistent with the presentation[6]; **OR**
- The patient has **cervical radiculopathy** and **ALL** of the following are **TRUE:**
    - **ANY** of the **following:**

        - ◆ **ANY** of the following **cervical radiculopathy** symptoms:
            - Neck pain; **OR**
            - Arm pain; **OR**
            - Scapular pain; **OR**
            - Periscapular pain; **OR**
            - Anterior chest pain; **OR**
            - Weakness, numbness, or paresthesia in the upper extremity; **OR**
            - Headache; **OR**
        - ◆ **ANY** of the following **cervical radiculopathy** positive specialty tests:
            - Spurling's test or maneuver or compression test (reproduction of symptoms with neck extension, lateral flexion, and downward compression or loading); **OR**
            - Shoulder abduction test (symptoms relieve with shoulder abduction); **AND**
    - **ANY** of the following is **TRUE**:
        - ◆ Failure of conservative management for greater than 6 weeks, including **ALL** of the following:
            - Oral steroids or anti-inflammatory medication; **AND**
            - Physical therapy including home exercise program; **AND**
            - Epidural steroid injections (ESI) or facet injections/medial branch blocks (MBB); **OR**
        - ◆ The patient's severe pain or disability is affecting their quality of life and limiting their daily life (including working and ability to provide self care); **AND**
    - Diagnostic finding of spinal cord or nerve root compressive pathology consistent with the presentation utilizing **ANY** of the following[9]:
        - ◆ Magnetic resonance imaging (MRI) scans are the preferred advanced imaging diagnostic method; **OR**
        - ◆ Computed tomography (CT) myelography recommended in the event of MRI contraindication; **OR**
- ◆ The procedure is **lumbar decompression without fusion*** and **ANY** of the following is **TRUE**[10]:

- The patient has signs or symptoms of cauda equina syndrome and **ALL** of the following:
    - Advanced imaging (MRI or CT myelogram) reveals moderate to severe lumbar stenosis consistent with clinical symptoms[11]; **AND**
    - **ANY** of the following symptoms of cauda equina syndrome:
        - Bowel, bladder, and erectile dysfunction; **OR**
        - Diffuse motor weakness; **OR**
        - Saddle-distribution anesthesia; **OR**
- The patient has signs or symptoms of **lumbar stenosis** and **ALL** of the following are **TRUE**:
    - **ANY** of the following **lumbar stenosis symptoms**:
        - Lower extremity pain, weakness, fatigue, paresthesias, and sensory changes; **OR**
        - Gluteal and low back pain (LBP); **OR**
        - Bilateral or unilateral symptoms; **OR**
        - Symptoms may present only with activity; **OR**
        - Exacerbating factors include standing, walking, and other upright exercises; **OR**
        - Pain may relieve in a sitting or supine position or with forward flexion at the waist; **OR**
        - Lower extremity pain that is made worse by walking; **AND**
    - Advanced imaging (MRI or CT myelogram) reveals moderate to severe lumbar stenosis consistent with clinical symptoms; **AND**
    - **ANY** of the following:
        - Failure of conservative management for greater than 6 weeks, including **ALL** of the following:
            - Oral steroids or anti-inflammatory medication; **AND**
            - Physical therapy including home exercise program; **AND**
            - Epidural steroid injections (ESI) or facet injections/medial branch blocks (MBB); **OR**
        - The patient's severe pain or disability is affecting their quality of life and limiting their daily life (including working and ability to provide self care); **OR**
- The patient has **lumbar radiculopathy** and **ALL** of the following are **TRUE:**

        - **ANY** of the following **lumbar radiculopathy** symptoms:
            - Lower extremity pain, paresthesia, weakness, or numbness in a myotomal or dermatome distribution; **OR**
            - Increased pain with coughing, sneezing or straining; **OR**
            - Low back pain; **AND**
        - **ANY** of the following **physical examination** findings:
            - Sensory disturbance (i.e., loss of sensation or decreased sensory response) or weakness in a dermatomal/myotomal distribution; **OR**
            - Absent or decreased Achilles reflex; **OR**
            - Reduced spinal mobility; **OR**
            - **ANY** of the following positive specialty tests:
                - Straight leg raise; **OR**
                - Crossed Lasègue's (or crossed straight leg raise); **OR**
                - Femoral nerve stretch; **OR**
                - Slump; **AND**
        - Advanced imaging (MRI or CT myelogram) reveals compressive pathology consistent with clinical findings; **OR**
- The procedure is an **anterior or posterior lumbar discectomy** and **ANY** of the following is **TRUE:**
    - The patient has signs or symptoms of cauda equina syndrome and **ALL** of the following:
        - Advanced imaging (MRI or CT myelogram) reveals disc herniation that causes moderate to severe lumbar stenosis consistent with clinical symptoms[11]; **AND**
        - **ANY** of the following symptoms of cauda equina syndrome:
            - Bowel, bladder, and erectile dysfunction; **OR**
            - Diffuse motor weakness; **OR**
            - Saddle-distribution anesthesia; **OR**
    - The patient has lumbar radiculopathy and **ALL** of the following are **TRUE**:
        - **ANY** of the following lumbar radiculopathy symptoms:
            - Lower extremity pain, paresthesia, weakness, or numbness in a myotomal or dermatome distribution; **OR**
            - Increased pain with coughing, sneezing or straining; **OR**

        - Low back pain; **AND**
    - **ANY** of the following physical examination findings:
        - Sensory disturbance (i.e., loss of sensation or decreased sensory response) or weakness in a dermatomal/myotomal distribution; **OR**
        - Absent or decreased Achilles reflex; **OR**
        - Reduced spinal mobility; **OR**
        - ANY of the following positive specialty tests:
            - Straight leg raise; **OR**
            - Crossed Lasègue's (or crossed straight leg raise); **OR**
            - Femoral nerve stretch; **OR**
            - Slump; **AND**
    - Advanced imaging (MRI or CT myelogram) reveals disc herniation consistent with clinical findings.

*NOTE: Please see the non-indications section. Percutaneous lumbar decompression is not considered appropriate. This procedure is unproven and not medically necessary. There is insufficient evidence of their effectiveness for these indications

Non-Indications

- ➔ **Spinal decompression without fusion** is not considered appropriate if **ANY** of the following are **TRUE**[8]:
    - Any percutaneous procedure is not considered appropriate. This procedure is unproven and not medically necessary. There is insufficient evidence of their effectiveness for these indications; **OR**
    - The procedure is posterior laminectomy without fusion, and the patient has kyphosis or is at-risk for postoperative kyphosis; **OR**
    - Use of annular closure devices.[12,13]

Level of Care Criteria

Inpatient or Outpatient

Procedure Codes (HCPCS/CPT)

HCPCS/CPT Code	Code Description
22899	Unlisted procedure, spine
62287	Decompression procedure, percutaneous, of nucleus pulposus of intervertebral disc, any method

	utilizing needle based technique to remove disc material under fluoroscopic imaging or other form of indirect visualization, with discography and/or epidural injection(s) at the treated level(s), when performed, single or multiple levels, lumbar
62380	Endoscopic decompression of spinal cord, nerve root(s), including laminotomy, partial facetectomy, foraminotomy, discectomy and/or excision of herniated intervertebral disc, 1 interspace, lumbar
63001	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments; cervical
63003	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments; thoracic
63005	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments; lumbar, except for spondylolisthesis
63011	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), 1 or 2 vertebral segments; sacral
63012	Laminectomy with removal of abnormal facets and/or pars inter-articularis with decompression of cauda equina and nerve roots for spondylolisthesis, lumbar (Gill type procedure)
63015	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), more than 2 vertebral segments; cervical

63016	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), more than 2 vertebral segments; thoracic
63017	Laminectomy with exploration and/or decompression of spinal cord and/or cauda equina, without facetectomy, foraminotomy or discectomy (eg, spinal stenosis), more than 2 vertebral segments; lumbar
63020	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, cervical
63030	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; 1 interspace, lumbar
63035	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc; each additional interspace, cervical or lumbar (List separately in addition to code for primary procedure)
63040	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; cervical
63042	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; lumbar
63043	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; each additional cervical interspace (List

	separately in addition to code for primary procedure)
63044	Laminotomy (hemilaminectomy), with decompression of nerve root(s), including partial facetectomy, foraminotomy and/or excision of herniated intervertebral disc, reexploration, single interspace; each additional lumbar interspace (List separately in addition to code for primary procedure)
63045	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; cervical
63046	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; thoracic
63047	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; lumbar
63048	Laminectomy, facetectomy and foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s], [eg, spinal or lateral recess stenosis]), single vertebral segment; each additional vertebral segment, cervical, thoracic, or lumbar (List separately in addition to code for primary procedure)
63050	Laminoplasty, cervical, with decompression of the spinal cord, 2 or more vertebral segments;
63051	Laminoplasty, cervical, with decompression of the spinal cord, 2 or more vertebral segments; with reconstruction of the posterior bony elements (including the application of bridging bone graft and non-segmental fixation devices [eg, wire, suture, mini-plates], when performed)

63052	Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; single vertebral segment (List separately in addition to code for primary procedure)
63053	Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [eg, spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; each additional vertebral segment (List separately in addition to code for primary procedure)
63055	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (e.g., herniated intervertebral disc), single segment; thoracic
63056	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (e.g., herniated intervertebral disc), single segment; lumbar (including transfacet, or lateral extraforaminal approach) (e.g., far lateral herniated intervertebral disc)
63057	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (e.g., herniated intervertebral disc), single segment; each additional segment, thoracic or lumbar (List separately in addition to code for primary procedure)
63064	Costovertebral approach with decompression of spinal cord or nerve root(s) (e.g., herniated intervertebral disc), thoracic; single segment
63066	Costovertebral approach with decompression of spinal cord or nerve root(s) (e.g., herniated intervertebral disc), thoracic; each additional segment (List separately in addition to code for primary procedure)
63075	Discectomy, anterior, with decompression of spinal

	cord and/or nerve root(s), including osteophytectomy; cervical, single interspace
63076	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; cervical, each additional interspace (List separately in addition to code for primary procedure)
63077	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; thoracic, single interspace
63078	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; thoracic, each additional interspace (List separately in addition to code for primary procedure)
63170	Laminectomy with myelotomy (eg, Bischof or DREZ type), cervical, thoracic, or thoracolumbar
63172	Laminectomy with drainage of intramedullary cyst/syrinx; to subarachnoid space
63173	Laminectomy with drainage of intramedullary cyst/syrinx; to peritoneal or pleural space
63185	Laminectomy with rhizotomy; 1 or 2 segments
63190	Laminectomy with rhizotomy; more than 2 segments
63191	Laminectomy with section of spinal accessory nerve
63197	Laminectomy with cordotomy, with section of both spinothalamic tracts, 1 stage, thoracic
63200	Laminectomy, with release of tethered spinal cord, lumbar
63250	Laminectomy for excision or occlusion of arteriovenous malformation of spinal cord; cervical
63251	Laminectomy for excision or occlusion of arteriovenous malformation of spinal cord; thoracic
63252	Laminectomy for excision or occlusion of

	arteriovenous malformation of spinal cord; thoracolumbar
63265	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; cervical
63266	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; thoracic
63267	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; lumbar
63268	Laminectomy for excision or evacuation of intraspinal lesion other than neoplasm, extradural; sacral
63270	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; cervical
63271	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; thoracic
63272	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; lumbar
63273	Laminectomy for excision of intraspinal lesion other than neoplasm, intradural; sacral
63275	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, cervical
63276	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, thoracic
63277	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, lumbar
63278	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, sacral
63280	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, cervical
63281	Laminectomy for biopsy/excision of intraspinal

	neoplasm; intradural, extramedullary, thoracic
63282	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, lumbar
63283	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, sacral
63285	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, intramedullary, cervical
63286	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, intramedullary, thoracic
63287	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, intramedullary, thoracolumbar
63290	Laminectomy for biopsy/excision of intraspinal neoplasm; combined extradural-intradural lesion, any level
63295	Osteoplastic reconstruction of dorsal spinal elements, following primary intraspinal procedure (List separately in addition to code for primary procedure)
0274T	Percutaneous laminotomy/laminectomy (interlaminar approach) for decompression of neural elements, (with or without ligamentous resection, discectomy, facetectomy and/or foraminotomy), any method, under indirect image guidance (eg, fluoroscopic, CT), single or multiple levels, unilateral or bilateral; cervical or thoracic
0275T	Percutaneous laminotomy/laminectomy (interlaminar approach) for decompression of neural elements, (with or without ligamentous resection, discectomy, facetectomy and/or foraminotomy), any method, under indirect image guidance (eg, fluoroscopic, CT), single or multiple levels, unilateral or bilateral; lumbar
C2614	Probe, percutaneous lumbar discectomy
C9757	Laminotomy (hemilaminectomy), with

	decompression of nerve root(s), including partial facetectomy, foraminotomy and excision of herniated intervertebral disc, and repair of annular defect with implantation of bone anchored annular closure device, including annular defect measurement, alignment and sizing assessment, and image guidance; 1 interspace, lumbar
S2350	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; lumbar, single interspace
S2351	Diskectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophytectomy; lumbar, each additional interspace (list separately in addition to code for primary procedure)

Medical Evidence

Rhee et al. (2013) published a systematic review of nonoperative management of cervical myelopathy, concluding that limited published evidence existed for nonoperative treatment of cervical myelopathy and recommended further comparative studies. They therefore recommended not routinely recommending nonoperative treatment in moderate to severe myelopathy.

Karadimas et al. (2013) concluded from a narrative and systematic review that the incidence of cervical spondylotic myelopathy (CSM) will continue to increase as the population ages. Their evidence-based recommendation states that due to common progressive neurological deterioration with CSM, patients should be educated regarding the potential future need for surgical intervention.

In a systematic review by Lannon et al. (2021), degenerative cervical myelopathy (DCM) is described as a leading cause of spinal cord injury and spinal stenosis with increasing incidence. Early surgical referral is recommended along with conservative management to prevent progressive neurologic compromise.

A 2010 guideline from the North American Spine Society (NASS) (Bono et al.) recommended CT myelography in the event of MRI contraindications. Surgical intervention recommended for cervical radiculopathy from degenerative disorders due to the rapid relief of symptoms.

The American College of Radiology (ACR) Expert Panel on Neurological Imaging has published several guidelines related to myelopathic evaluation:

- Agarwal et al. (2021) updated the previous Myelopathy Appropriate Use Criteria, with MRI recommended as initial imaging for acute onset myelopathy as well as chronic or progressive myelopathy due to its superior resolution of soft tissue and ability to evaluate surrounding structures. CT is designated as May Be Appropriate in the ratings, with CT myelography of possible use prior to surgical intervention.
- McDonald et al. (2018) recommend radiography, MRI or CT for initial imaging in new or increasing nontraumatic neck pain, as well as in

cervical radiculopathy. In patients with a history of cervical spine surgery, radiography and noncontrast CT are primary recommendations with a disagreement on the appropriateness of MRI (contrast and noncontrast). CT myelography is rated as May Be Appropriate.

- Hutchins et al. (2021) in the Low Back Pain ACR Appropriateness Criteria recommend noncontrast MRI as Usually Appropriate, and radiography and CT as May Be Appropriate in low back pain with and without radiculopathy. This applies to surgical candidates with persistence or progression of symptoms having failed six weeks of medical management. MRI, CT and CT myelography recommended for suspected cauda equina syndrome. In osteoporosis or chronic steroid use, radiography, noncontrast MRI or CT recommended as Usually Appropriate.

Thomé et al. (2018) conducted a randomized controlled trial of 554 participants focused upon annular closure in lumbar microdiscectomy for prevention of reherniation. They concluded that in patients with a high risk of herniation recurrence after lumbar microdiscectomy, annular closure with a bone-anchored implant lowered the risk of symptomatic recurrence and reoperation. They stated that additional study to determine outcomes beyond 2 years with a bone-anchored annular closure device would be warranted.

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Clinical Guideline Revision History/Information

Original Date: 9/29/2023	
Review History	
Version 2	11/17/2023
Version 3	4/26/2024