

Corporate Medical Policy

Cervical Spine Procedures

File Name: cervical_spine_procedures
Origination: 6/2023
Last Review: 2/2024

Description of Procedure or Service

Neck pain occurs in a large majority of the population and typically involves more than one component of the spine. Components of the spine include vertebrae, intervertebral discs, spinal nerves, other anatomic structures such as ligaments, muscles, and joints. Soft tissue injury or strain, trauma, infection, herniated disc, degenerative spine conditions, neoplastic conditions, and deformities such as kyphosis are some examples of conditions that cause neck pain.

- Cervical radiculopathy describes pain in one or both upper extremities, secondary to compression or irritation to nerve roots in the cervical spine.
- Cervical myelopathy is a term used to describe the compression of the spinal cord in the cervical spine region.
- Disc herniation extrusion of an intervertebral disc beyond the intervertebral space can compress the spinal nerves and result in symptoms of pain, numbness, and weakness.

There are several different cervical spine procedures to treat cervical radiculopathy, cervical myelopathy, and spinal cord injury.

Discectomy is a surgical procedure where one or more intervertebral discs are removed. The primary indication for discectomy is herniation, or extrusion, of an intervertebral disc. Extrusion of an intervertebral disc beyond the intervertebral space can compress the spinal nerves and result in symptoms of pain, numbness, and weakness. Discectomy is intended to treat symptoms by relieving pressure on the affected nerve(s). The most common procedure for cervical discectomy is anterior cervical discectomy. This is an open procedure in which the cervical spine is approached through an incision in the anterior neck. Soft tissues and muscles are separated to expose the spine. The disc is removed using direct visualization. This procedure can be done with or without spinal fusion, but most commonly it is performed with fusion. A less invasive procedure for cervical discectomy is posterior cervical discectomy and foraminotomy. This is performed through a small incision in the back of the neck. The nerves and muscles are separated using a small retractor. The spine is visualized with microscopic guidance, and a portion of the spine (the foramen) is removed to expose the spinal canal. Special instruments are used to remove a portion of the disc or the entire disc. Microdiscectomy, is a minimally invasive surgical procedure performed where portions of a herniated disc are removed.

Cervical fusion joins or fuses bones (vertebrae) in the neck. It is done through an incision either on the front or back of the neck.

Laminectomy is the full removal of the lamina. An incision is made in the back over the affected region, after the posterior neck muscles are dissected to expose the spinal cord, the lamina is removed from the vertebral body along with any inflamed or thickened ligaments that may be contributing to compression. Laminectomy may occasionally be performed for the sole indication

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of radiculopathy due to herniated disc. In these cases, discectomy alone is not sufficient to relieve compression on vital structures, and laminectomy is required for adequate decompression. Compression of the spine due to herniated disc is uncommon, and there are no standardized preoperative criteria to determine which individuals may require laminectomy in addition to discectomy. The following procedures can be considered alternatives to laminectomy for decompression of the spinal cord. The specific indications for these alternative procedures are not standardized, and the evidence is insufficient to determine the effectiveness of these procedures compared with laminectomy.

- Hemilaminectomy is a spine surgery that involves removing part of one of the two laminae on a vertebra to relieve excess pressure on the spinal nerve(s) in the spine.
- Laminotomy is a surgical procedure that removes part of the lamina of a vertebral arch.
- Foraminotomy is a surgical procedure in which an opening is made by removing bone around the area of the spinal column where the spinal nerve roots exit from the spinal cord. Thereby, enlarging the area around the vertebrae in the spinal column.

Related Policies:

Artificial Intervertebral Disc

Automated Percutaneous and Endoscopic Discectomy

Decompression of the Intervertebral Disc Using Laser Energy (Laser Discectomy) or

Radiofrequency Coblation (Nucleoplasty)

Lumbar Spine Procedures

Percutaneous Intradiscal and Intraosseous Radiofrequency Procedures of the Spine

Vertebral Axial Decompression (VAD-X)

****Note: This Medical Policy is complex and technical. For questions concerning the technical language and/or specific clinical indications for its use, please consult your physician.*

Policy

BCBSNC will provide coverage for Cervical Spine Procedures when it is determined to be medically necessary because the medical criteria and guidelines shown below are met.

Benefits Application

This medical policy relates only to the services or supplies described herein. Please refer to the Member's Benefit Booklet for availability of benefits. Member's benefits may vary according to benefit design; therefore, member benefit language should be reviewed before applying the terms of this medical policy.

When Cervical Spine Procedure(s) is covered

BCBSNC will provide coverage for Cervical Spine procedures for 1 or more of the following conditions.

I. Cervical Discectomy or Microdiscectomy, Foraminotomy, Laminotomy Procedure is indicated for 1 or more of the following:

1. Cervical radiculopathy and **ALL** of the following:
 - a. Patient has significant (eg, impacts activities or sleep) symptoms due to nerve root compression (eg, pain, weakness).
 - b. MRI or other neuroimaging finding correlates with clinical signs and symptoms and demonstrates spinal stenosis or nerve root compression (eg, disc abnormality, facet joint hypertrophy).

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- c. Surgery appropriate, as indicated by **1** or more of the following:
 - Progressive (ie, worsening) neurologic deficit (eg, weakness)
 - Failure of nonoperative treatment that must include participation in 6 weeks of physical therapy (including active exercise)
2. Cervical myelopathy and **ALL** of the following:
 - a. Signs or symptoms of myelopathy, as evidenced by **1** or more of the following:
 - Upper limb weakness in more than single nerve root distribution
 - Lower limb weakness in upper motor neuron distribution
 - Loss of dexterity (eg, clumsiness of hands)
 - Bowel or bladder incontinence
 - Frequent falls
 - Hyperreflexia
 - Hoffmann sign
 - Increased extremity muscle tone or spasticity
 - Gait abnormality
 - Positive Babinski sign
 - Alternative clinical signs or symptoms of myelopathy
 - b. MRI or other neuroimaging finding correlates with clinical signs and symptoms and demonstrates cord compression (eg, herniated disk, osteophyte)
3. Need for procedure as part of decompression procedure for primary or metastatic cervical spine tumors.
4. Need for procedure as part of decompression or debridement procedure for cervical spine infection.
5. Need for procedure as part of treating cervical spine injury (eg, trauma), including **1** or more of the following:
 - a. Spinal cord compression (central cord syndrome)
 - b. Hyperextension injury, with or without avulsion fracture
 - c. Unilateral or bilateral facet subluxation
 - d. Unilateral or bilateral facet fracture dislocation
 - e. Foreign bodies
 - f. Bony fracture fragments
 - g. Epidural hematoma
 - h. Other severe or unstable injury

II. Anterior Cervical Fusion Procedure is indicated for 1 or more of the following:

1. Cervical radiculopathy and **ALL** of the following:
 - a. Patient has significant (eg, impacts activities or sleep) symptoms due to nerve root compression (eg, pain, weakness).
 - b. MRI or other neuroimaging finding correlates with clinical signs and symptoms and demonstrates spinal stenosis or nerve root compression (eg, disc abnormality, facet joint hypertrophy).
 - c. Surgery appropriate, as indicated by **1** or more of the following:
 - Progressive (ie, worsening) neurologic deficit (eg, weakness)
 - Failure of nonoperative treatment that must include participation in 6 weeks of physical therapy (including active exercise)
2. Spondylotic myelopathy treatment, as indicated by **ALL** of the following:
 - a. Signs or symptoms of myelopathy are present, as indicated by 1 or more of the following:
 - Upper limb weakness in more than single nerve root distribution
 - Lower limb weakness in upper motor neuron distribution
 - Loss of dexterity (eg, clumsiness of hands)
 - Bowel or bladder incontinence
 - Frequent falls
 - Hyperreflexia
 - Hoffmann sign
 - Increased extremity muscle tone or spasticity

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- Gait abnormality
- Positive Babinski sign
- Alternative clinical signs or symptoms of myelopathy
- b. MRI or other neuroimaging finding correlates with clinical signs and symptoms and demonstrates cord compression (eg, herniated disk, osteophyte)
- 3. Ossification of posterior longitudinal ligament with associated myelopathy
- 4. Congenital spine anomalies causing atlantoaxial instability (eg, with Down syndrome or Klippel-Feil syndrome)
- 5. Degenerative cervical spondylosis with kyphosis-causing cord compression
- 6. Tumor of cervical spine causing pathologic fracture, cord compression, or instability
- 7. Infection of cervical spine requiring decompression or debridement
- 8. Cervical pseudarthrosis and **ALL** of the following
 - a. Symptoms (eg, pain) unresponsive to nonoperative treatment that includes participation in 6 weeks of physical therapy (including active exercise)
 - b. Alternative etiologies of symptoms ruled out.
- 9. Degenerative spinal segment adjacent to prior decompressive or fusion procedure with **1** or more of the following:
 - a. Symptomatic myelopathy corresponding clinically to adjacent level.
 - b. Symptomatic radiculopathy corresponding clinically to adjacent level and unresponsive to nonoperative therapy.
- 10. Posttraumatic cervical instability (eg, unstable anterior column fracture)
- 11. Need for procedure as part of treating cervical spine injury (eg, trauma), as indicated by **ALL** of the following:
 - a. Acutely symptomatic cervical radiculopathy or myelopathy
 - b. MRI or other neuroimaging finding (eg, cord compression, root compression) demonstrates pathologic anatomy corresponding to symptoms.

III. Posterior Cervical Fusion Procedure is indicated for 1 or more of the following:

1. Treatment of multilevel spondylotic myelopathy without kyphosis needed, as indicated by **ALL** of the following:
 - a. Signs or symptoms of myelopathy are present, as indicated by **1** or more of the following:
 - Upper limb weakness in more than single nerve root distribution
 - Lower limb weakness in upper motor neuron distribution
 - Loss of dexterity (eg, clumsiness of hands)
 - Bowel or bladder incontinence
 - Frequent falls
 - Hyperreflexia
 - Hoffmann sign
 - Increased extremity muscle tone or spasticity
 - Gait abnormality
 - Positive Babinski sign
 - Alternative clinical signs or symptoms of myelopathy
 - b. MRI or other neuroimaging finding correlates with clinical signs and symptoms and demonstrates cord compression (eg, herniated disk, osteophyte)
2. Cervical spondylosis with radiographic findings indicating instability or cord compression.
3. Part of stabilization procedure with corpectomy, laminectomy, or other procedure at cervicothoracic junction (ie, C7 and T1)
4. Part of stabilization procedure with laminectomy (eg, at C2)
5. Subluxation and cord compression in rheumatoid arthritis
6. Atlas and axis fracture or nonunion
7. Disruption of posterior ligamentous structures
8. Facet fractures with dislocation
9. Bilateral locked facets
10. Ossification of posterior longitudinal ligament with associated myelopathy

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11. Congenital spine anomalies causing atlantoaxial instability or other cervical spine instability (eg, with Down syndrome or Klippel-Feil syndrome)
12. Cervical instability in skeletal dysplasia or connective tissue disorders
13. Tumor or cyst of cervical spine causing pathologic fracture, cord compression, or instability.
14. Infection of cervical spine requiring decompression or debridement
15. Cervical pseudarthrosis and **ALL** of the following:
 - a. Symptoms (eg, pain) unresponsive to nonoperative therapy that includes participation in 6 weeks of physical therapy (including active exercise).
 - b. Alternative etiologies of symptoms ruled out
16. Posttraumatic cervical instability
17. Need for procedure as part of treating cervical spine injury (eg, trauma), as indicated by **ALL** of the following:
 - a. Acutely symptomatic cervical radiculopathy or myelopathy
 - b. MRI or other neuroimaging finding (eg, cord compression, root compression) demonstrates pathologic anatomy corresponding to symptoms.

IV. Cervical Laminectomy Procedure is indicated for 1 or more of the following:

1. Treatment of myelopathy secondary to cervical spondylopathy, as indicated by **ALL** of the following:
 - a. Spondylopathy at 3 or more levels
 - b. Signs or symptoms of myelopathy, as indicated by 1 or more of the following:
 - Upper limb weakness in more than single nerve root distribution
 - Lower limb weakness in upper motor neuron distribution
 - Loss of dexterity (eg, clumsiness of hands)
 - Bowel or bladder incontinence
 - Frequent falls
 - Hyperreflexia
 - Hoffmann sign
 - Increased extremity muscle tone or spasticity
 - Gait abnormality
 - Positive Babinski sign
 - Alternative clinical signs or symptoms of myelopathy
 - c. MRI or other neuroimaging finding demonstrates cord compression from spondylosis that corresponds with clinical presentation.
2. Ossification of posterior longitudinal ligament with associated myelopathy
3. Congenital cervical stenosis or Chiari malformation with impending or actual cord compression
4. Basilar impression
5. Cord compression due to rheumatoid arthritis (in conjunction with posterior fusion procedure for stabilization)
6. Biopsy or excision of spinal lesions (eg, neoplasm, arteriovenous malformation)
7. Infection of cervical spine requiring decompression or debridement
8. Cervical intradural disk herniation
9. Need for procedure as part of treating cervical spine injury (eg, trauma), as indicated by **ALL** of the following:
 - a. Acutely symptomatic cervical radiculopathy or myelopathy
 - b. MRI or other neuroimaging finding (eg, cord compression, root compression) demonstrates pathologic anatomy corresponding to symptoms.

When Cervical Spine Procedure(s) is not covered

1. Cervical discectomy or microdiscectomy, foraminotomy, laminotomy procedure is not medically necessary unless the above criteria are met.

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2. Anterior Cervical Fusion Procedure is not medically necessary unless the above criteria are met.
3. Posterior Cervical Fusion Procedure is not medically necessary unless the above criteria are met.
4. Cervical Laminectomy Procedure is not medically necessary unless the above criteria are met.

Policy Guidelines

For individuals who have cervical herniated disc(s) and symptoms of radiculopathy rapidly progressing or refractory to conservative care who receive cervical discectomy, the evidence includes 2 RCTs, a long-term observational study, and a systematic review. Relevant outcomes are symptoms, functional outcomes, health status measures, quality of life, and treatment-related mortality and morbidity. There is considerably less evidence on cervical discectomy than on lumbar discectomy. The best evidence on the efficacy of cervical discectomy consists of 2 small RCTs comparing discectomy with conservative care, and a systematic review of these trials. Although there is less evidence for this indication, it does not differ substantially from lumbar herniated disc, showing that patient-reported symptoms and disability favor surgery in the short-term, and that long-term outcomes do not differ. Because cervical discectomy closely parallels lumbar discectomy, with close similarities in anatomy and surgical procedure, it can be inferred that the benefit reported for lumbar discectomy supports a benefit for cervical discectomy. Based on the available evidence and extrapolation from studies of lumbar herniated disc, it is likely that use of discectomy for cervical herniated disc improves short-term symptoms and disability. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have cervical spinal stenosis and spinal cord or nerve root compression who receive cervical laminectomy, the evidence includes RCTs and nonrandomized comparative studies. Relevant outcomes are symptoms, functional outcomes, health status measures, quality of life, and treatment-related mortality and morbidity. There is a lack of high-quality, comparative evidence for this indication, although what evidence there is offers outcomes similar to those for lumbar spinal stenosis. Given the parallels between cervical laminectomy and lumbar laminectomy, a chain of evidence can be developed that the benefit reported for lumbar laminectomy supports a benefit for cervical laminectomy. The evidence is sufficient to determine that the technology results in an improvement in the net health outcome.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable service codes: 22548, 22551, 22552, 22554, 22585, 22590, 22595, 22600, 22614, 63001, 63015, 63020, 63040, 63043, 63045, 63050, 63051, 63076, 63081, 63082, 63185, 63190, 63191, 63250, 63265, 63270, 63275, 63280, 63285, 63300, 63304

BCBSNC may request medical records for determination of medical necessity. When medical records are requested, letters of support and/or explanation are often useful but are not sufficient documentation unless all specific information needed to make a medical necessity determination is included.

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Medical Director review 6/2023

Specialty Matched Consultant Advisory Panel review 2/2024

Medical Director review 2/2024

Policy Implementation/Update Information

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| 07/18/23 | New policy Cervical Spine Procedures developed to incorporate existing coverage criteria for Cervical Discectomy, Cervical Microdiscectomy, Cervical Foraminotomy, Cervical Laminotomy, Anterior Cervical Fusion, Posterior Cervical Fusion and Cervical Laminectomy. BCBSNC will provide coverage for Cervical Spine Procedures when it is determined to be medically necessary because the medical criteria and guidelines are met. Medical Director Review 06/2023. (rp) |
| 4/1/24 | Reference added. Specialty Matched Consultant Advisory Panel review 2/2024. Medical Director review 2/2024. (rp) |

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