



Corporate Medical Policy - 1/20/11 Revision

Lumbar Spine Fusion Surgery

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Last Review: 9/2010

Description of Procedure or Service

Low back pain is a common affliction affecting over 80% of the general population at some time in the course of life. Although much of low back pain does not have a precisely identifiable cause, low back pain can be caused by a variety of conditions including degenerative disc disease, muscle strain, skeletal trauma, infection and tumor. Most cases of low back pain without an identifiable cause improve with conservative therapy including physical therapy, exercise, and/or analgesics. When the spine becomes unstable, for example, due to spondylolisthesis, trauma, infection or tumor, and for certain other identified causes of chronic, unremitting back pain, a fusion procedure is often recommended to provide stability or pain relief to the affected portion of the spine.

Arthrodesis (fusion) procedures in the lumbar (lower) spine are surgical procedures that join two or more lumbar vertebrae together into one solid bony structure. These procedures may be used to treat spine instability, cord compression due to severe degenerative disc disease, fractures in the lumbar spine or destruction of the vertebrae by infection or tumor. There are several methods or approaches to this surgery.

The most common approach to arthrodesis (fusion) of the lumbar spine is the posterior approach. After the vertebrae are exposed through the back, pressure on the nerve roots and/or spinal cord is removed ("decompressed"). This usually includes removing part or all of the nearby lamina bone, facet joints, any free disc fragments, or filing down any nearby bone spurs to relieve the nerves inside the spinal canal of tension and pressure. Additional decompression for the nerve roots and spinal cord may be required by cutting a larger opening in the neural foramina, the openings through which the spinal nerves pass out from the spinal cord to the limbs. This procedure is called "foraminotomy."

In preparation for the spinal fusion, a layer of bone off the back surfaces of the affected spinal column is removed. Small strips of bone called bone grafts are then removed from the top rim of the pelvis and placed over the now exposed bone surfaces of the spinal column. As healing occurs, the bone strips will fuse across the spaces in between the vertebral bodies, such as the disc spaces or the facet joint spaces.

To reinforce the fusion procedure, the bones may be fixated in place using a combination of metal screws, rods, and plates. This instrumentation holds together the vertebrae to be fused, to prevent them from moving during the bone healing process.

Other approaches to the lumbar spinal fusion include: 1) Anterior/anterolateral approach: The decompression of the nerves and intervertebral fusion is similar to the posterior approach, except that the intervertebral space is fused by approaching the spine through the abdomen instead of the lower back. 2) Anterior/ Posterior Lumbar Fusion: The intervertebral space is fused by approaching the spine through both the abdomen and the lower back. 3) Lateral extracavitary approach: The

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intervertebral space is fused by approaching the spine from the side or laterally.

For conditions such as **disc herniation** and spinal stenosis, medical literature suggests that back surgery with and without fusion result in similar improvement in symptoms over time. For these same conditions, decompression surgery alone is often equally as effective as decompression with arthrodesis (fusion) surgery.

Related Policies:

Percutaneous Axial Anterior Lumbar Fusion

This policy addresses specifically the circumstances under which arthrodesis (fusion) surgery of the lumbar spine is considered medically necessary in adults. It does not address decompression surgery. Pediatric and adolescent cases will be addressed on an individual consideration basis.

****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 Lumbar Spinal Fusion 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 Lumbar Spine Fusion Surgery is covered

BCBSNC will provide coverage for Lumbar Spinal Fusion procedures for any one of the following conditions:

1. Spinal fracture with instability or neural compression
2. Spinal repair surgery for dislocation, tumor or infection (including abscess, osteomyelitis, discitis, or fungal infection) when debridement is necessary and the extent of the debridement to help eradicate the infection creates or could create an unstable spine.
3. Spinal tuberculosis
4. Spinal stenosis with ALL of the following:
 - a. Associated spondylolisthesis demonstrated on plain x-rays; **and**
 - b. Any one of the following:
 - Neurogenic claudication or radicular pain that results in significant functional impairment in a patient who has failed at least 3 months of conservative care and has documentation of central/lateral recess/or foraminal stenosis on MRI or other imaging. **or**
 - Severe or rapidly progressive symptoms of **motor loss**, neurogenic claudication or cauda equina syndrome.
5. Severe, progressive idiopathic scoliosis (i.e., lumbar or thoracolumbar) with Cobb angle > 40 degrees.
6. Severe degenerative scoliosis with any one of the following:
 - a. Documented progression of deformity with persistent axial (non-radiating) pain and impairment or loss of function unresponsive to at least 3 months of

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- conservative therapy. **or**
- b. Persistent and significant neurogenic symptoms (claudication or radicular pain) with impairment or loss of function, unresponsive to at least 3 months of conservative care.
7. Isthmic spondylolisthesis, either congenital (Wiltse type I) or acquired pars defect (Wiltse II), documented on x-ray, and with persistent back pain (with or without neurogenic symptoms), with impairment or loss of function, unresponsive to at least 6 months of conservative nonsurgical care.
8. Recurrent, same level, disk herniation, at least 6 months after previous disk surgery, with recurrent neurogenic symptoms (radicular pain or claudication), with impairment or loss of function, unresponsive to at least 3 months of conservative nonsurgical care, and with neural structure compression documented by appropriate imaging, and in a patient who had experienced significant interval relief of prior symptoms.
9. Adjacent Segment Degeneration, at least 6 months after previous fusion, with recurrent neurogenic symptoms (radicular pain or claudication), with impairment or loss of function, unresponsive to at least 3 months of conservative nonsurgical care, and with neural structure compression documented by appropriate imaging, and in a patient who had experienced significant interval relief of prior symptoms.
10. Pseudarthrosis, documented radiographically, no less than 6 months after initial fusion, with persistent axial back pain, with or without neurogenic symptoms, with impairment or loss of function, in a patient who had experienced significant interval relief of prior symptoms.
11. Iatrogenic or degenerative flatback syndrome with significant sagittal imbalance; when fusion is performed with spinal osteotomy.

Please Note:

This policy addresses specifically the circumstances under which arthrodesis (fusion) surgery of the lumbar spine is considered medically necessary. It does not address decompression surgery.

When Lumbar Spine Fusion Surgery is not covered

BCBSNC will not provide coverage for lumbar spine arthrodesis (fusion) surgery when it is considered not medically necessary.

1. Lumbar spine arthrodesis (fusion) surgery is considered not medically unless one of the above conditions is met.
2. Lumbar spinal fusion is also considered not medically necessary if the sole indication is any one or more of the following conditions:
 - Disk Herniation
 - Degenerative Disk Disease
 - Initial discectomy/laminectomy for neural structure decompression
 - Facet Syndrome

Policy Guidelines

Conservative nonsurgical therapy for the duration specified must include the following:
-Use of prescription strength analgesics (including anti-inflammatory medications if not contraindicated), **and**
-Participation in physical therapy (including active exercise), **and**

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-Evaluation and appropriate management of associated cognitive, behavioral or addiction issues when present.

Significant functional impairment or loss of function may include documentation of the following: Inability or significantly decreased ability to perform normal daily activities of work, school or at-home duties.

Persistent debilitating pain is defined as:

- a. Significant level of pain on a daily basis defined on a Visual Analog Scale (VAS) as greater than 4; **and**
- b. Pain on a daily basis that has a documented impact on activities of daily living in spite of optimal conservative non-surgical therapy as outlined above and appropriate for the patient.

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: 22533, 22534, 22558, 22585, 22612, 22614, 22630, 22632, 22800, 22802, 22804, 22808, 22810, 22812, 22840, 22841, 22842, 22843, 22844, 22845, 22846, 22847, 22848, 22849, 22851, 20930, 20931, 20936, 20937, 20938.

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.

Scientific Background and Reference Sources

Weinstein JN, et al. Surgical versus nonsurgical treatment for lumbar degenerative spondylolisthesis. *New England Journal of Medicine* 2007;356(22):2257-70.

Deyo RA, Mirza SK, Martin BI, et al. Trends, major complications, and charges associated with surgery for lumbar spinal stenosis in older adults. *JAMA*. 2010;303(13):1259-1265

North American Spine Society (NASS) Diagnosis and treatment of degenerative lumbar spinal stenosis. NASS Clinical Practice Guidelines [Internet] Burr Ridge, IL: North American Spine Society 2007 Jun. Accessed October 7, 2009 from <http://www.spine.org/>.

Brox JJ, et al. Lumbar instrumented fusion compared with cognitive intervention and exercises in patients with chronic back pain after previous surgery for disc herniation: a prospective randomized controlled study. *Pain* 2006;122(1-2):145-55

Thome C, et al. Outcome after less-invasive decompression of lumbar spinal stenosis: a randomized comparison of unilateral laminotomy, bilateral laminotomy, and laminectomy. *Journal of Neurosurgery: Spine* 2005;3(2):129-41.

Transfeldt EE, Mehbood AA. Evidence-based medicine analysis of isthmic spondylolisthesis treatment including reduction versus fusion in situ for high-grade slips. *Spine* 2007;32(19 Suppl):S126-9.

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Specialty Matched Consultants – 8/2010

Senior Medical Director - 9/2010

Policy Implementation/Update Information

9/28/10 New policy written. BCBSNC will provide coverage for Lumbar Spinal Fusion when it is determined to be medically necessary because the medical criteria and guidelines are met. Notice given 9/28/2010. Policy effective 1/1/2011. (btw)

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.