

# Spinal Fusion and Decompression (for Pennsylvania Only)

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[Instructions for Use](#)

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Related Policies
• <a href="#">Discogenic Pain Treatment (for Pennsylvania Only)</a>
• <a href="#">Epidural Steroid Injections for Spinal Pain (for Pennsylvania Only)</a>
• <a href="#">Facet Joint and Medial Branch Block Injections for Spinal Pain (for Pennsylvania Only)</a>
• <a href="#">Spinal Fusion and Bone Healing Enhancement Products (for Pennsylvania Only)</a>
• <a href="#">Total Artificial Disc Replacement for the Spine (for Pennsylvania Only)</a>
• <a href="#">Vertebral Body Tethering for Scoliosis (for Pennsylvania Only)</a>

## Application

This Medical Policy only applies to the state of Pennsylvania. Any requests for services that do not meet criteria set in the PARP will be evaluated on a case-by-case basis. Refer to [Pennsylvania Exceptions, Pennsylvania Code, Title 55, Chapter 1101](#).

## Coverage Rationale

Spinal procedures for the treatment of spine pain are proven and medically necessary in certain circumstances. For medical necessity clinical coverage criteria, refer to the InterQual® CP: Procedures:

- Decompression +/- Fusion, Cervical
- Decompression +/- Fusion, Lumbar
- Decompression +/- Fusion, Thoracic
- Fusion, Cervical Spine
- Fusion, Lumbar Spine
- Fusion, Thoracic Spine

Click [here](#) to view the InterQual® criteria.

Laminectomy procedures to provide surgical exposure to treat lesions within the spinal canal are proven and medically necessary.

Isolated facet fusion, with or without instrumentation, is unproven and not medically necessary due to insufficient evidence of efficacy.

Dynamic stabilization systems for the treatment of degenerative spondylolisthesis are unproven and not medically necessary due to insufficient evidence of efficacy.

Total facet joint arthroplasty is unproven and not medically necessary due to insufficient evidence of efficacy.

Dividing treatment of symptomatic, multi-site spinal pathology via anterior or posterior approach into serial, multiple, or staged sessions when one session can address all sites is unproven and not medically necessary due to insufficient evidence of safety and efficacy.

## Definitions

**Dynamic Stabilization:** Also known as soft stabilization or flexible stabilization has been proposed as an adjunct or alternative to spinal fusion for the treatment of severe refractory pain due to degenerative Spondylolisthesis, or continued severe refractory back pain following prior fusion, sometimes referred to as failed back surgery syndrome. Dynamic Stabilization uses flexible materials rather than rigid devices to stabilize the affected spinal segment(s). These flexible materials may be anchored to the vertebrae by synthetic cords or by pedicle screws. Unlike the rigid fixation of spinal fusion, dynamic stabilization is intended to preserve the mobility of the spinal segment. (Veritas Health, 2022)

**Facet Arthroplasty:** The implantation of a spinal prosthesis to restore posterior element structure and function, as an adjunct to neural decompression. (Veritas Health, 2022)

**Isolated Facet Fusion:** A minimally invasive back procedure that uses specially designed bone dowels made from allograft material (donated cortical bone) that are inserted into the facet joints. The procedure is designed to stop facet joints from moving and is intended to eliminate or reduce back pain caused by facet joint dysfunction (Gellhorn, 2013).

**Lumbar Spinal Stenosis (LSS):** Narrowing or constriction of the lumbar spinal canal that may result in painful compression of a nerve and/or blood vessel(s) supplying the nerve. (Veritas Health, 2022)

**Spinal Fusion:** Also called arthrodesis, is a surgical technique that may be done as an open or minimally invasive procedure. There are many different approaches to spinal fusion, but all techniques involve removing the disc between two or more vertebrae and fusing the adjacent vertebrae together using bone grafts and/or spacers placed where the disc used to be. Spacers can be made of bone or bone substitutes, metal (titanium), carbon fiber, polymers or bioresorbable materials and are often supported by plates, screws, rods and/or cages. (Veritas Health, 2022)

**Staged Multi Session:** Includes procedures performed on different days or requiring an additional anesthesia session.

## Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by federal, state, or contractual requirements and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

CPT Code	Description
0202T	Posterior vertebral joint(s) arthroplasty (e.g., facet joint[s] replacement) including facetectomy, laminectomy, foraminotomy, and vertebral column fixation, injection of bone cement, when performed including fluoroscopy, single level, lumbar spine
0219T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; cervical
0220T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; thoracic
0221T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; lumbar

CPT Code	Description
0222T	Placement of a posterior intrafacet implant(s), unilateral or bilateral, including imaging and placement of bone graft(s) or synthetic device(s), single level; each additional vertebral segment (List separately in addition to code for primary procedure)
0719T	Posterior vertebral joint replacement, including bilateral facetectomy, laminectomy, and radical discectomy, including imaging guidance, lumbar spine, single segment
22532	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
22533	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar
22534	Arthrodesis, lateral extracavitary technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic or lumbar, each additional vertebral segment (List separately in addition to code for primary procedure)
22548	Arthrodesis, anterior transoral or extraoral technique, clivus-C1-C2 (atlas-axis), with or without excision of odontoid process
22551	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophyctomy and decompression of spinal cord and/or nerve roots; cervical below C2
22552	Arthrodesis, anterior interbody, including disc space preparation, discectomy, osteophyctomy and decompression of spinal cord and/or nerve roots; cervical below C2, each additional interspace (List separately in addition to code for separate procedure)
22554	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); cervical below C2
22556	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); thoracic
22558	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); lumbar
22585	Arthrodesis, anterior interbody technique, including minimal discectomy to prepare interspace (other than for decompression); each additional interspace (List separately in addition to code for primary procedure)
22590	Arthrodesis, posterior technique, craniocervical (occiput-C2)
22595	Arthrodesis, posterior technique, atlas-axis (C1-C2)
22600	Arthrodesis, posterior or posterolateral technique, single interspace; cervical below C2 segment
22610	Arthrodesis, posterior or posterolateral technique, single interspace; thoracic (with lateral transverse technique, when performed)
22612	Arthrodesis, posterior or posterolateral technique, single interspace; lumbar (with lateral transverse technique, when performed)
22614	Arthrodesis, posterior or posterolateral technique, single interspace; each additional interspace (List separately in addition to code for primary procedure)
22630	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace; lumbar
22632	Arthrodesis, posterior interbody technique, including laminectomy and/or discectomy to prepare interspace (other than for decompression), single interspace; each additional interspace (List separately in addition to code for primary procedure)
22633	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace; lumbar
22634	Arthrodesis, combined posterior or posterolateral technique with posterior interbody technique including laminectomy and/or discectomy sufficient to prepare interspace (other than for decompression), single interspace, lumbar; each additional interspace (List separately in addition to code for primary procedure)

CPT Code	Description
22800	Arthrodesis, posterior, for spinal deformity, with or without cast; up to 6 vertebral segments
22802	Arthrodesis, posterior, for spinal deformity, with or without cast; 7 to 12 vertebral segments
22804	Arthrodesis, posterior, for spinal deformity, with or without cast; 13 or more vertebral segments
22808	Arthrodesis, anterior, for spinal deformity, with or without cast; 2 to 3 vertebral segments
22810	Arthrodesis, anterior, for spinal deformity, with or without cast; 4 to 7 vertebral segments
22812	Arthrodesis, anterior, for spinal deformity, with or without cast; 8 or more vertebral segments
22830	Exploration of spinal fusion
22840	Posterior non-segmental instrumentation (e.g., Harrington rod technique, pedicle fixation across 1 interspace, atlantoaxial transarticular screw fixation, sublaminar wiring at C1, facet screw fixation) (List separately in addition to code for primary procedure)
22841	Internal spinal fixation by wiring of spinous processes (List separately in addition to code for primary procedure)
22842	Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 3 to 6 vertebral segments (List separately in addition to code for primary procedure)
22843	Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 7 to 12 vertebral segments (List separately in addition to code for primary procedure)
22844	Posterior segmental instrumentation (e.g., pedicle fixation, dual rods with multiple hooks and sublaminar wires); 13 or more vertebral segments (List separately in addition to code for primary procedure)
22845	Anterior instrumentation; 2 to 3 vertebral segments (List separately in addition to code for primary procedure)
22846	Anterior instrumentation; 4 to 7 vertebral segments (List separately in addition to code for primary procedure)
22847	Anterior instrumentation; 8 or more vertebral segments (List separately in addition to code for primary procedure)
22848	Pelvic fixation (attachment of caudal end of instrumentation to pelvic bony structures) other than sacrum (List separately in addition to code for primary procedure)
22849	Reinsertion of spinal fixation device
22850	Removal of posterior nonsegmental instrumentation (e.g., Harrington rod)
22852	Removal of posterior segmental instrumentation
22853	Insertion of interbody biomechanical device(s) (eg, synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges), when performed, to intervertebral disc space in conjunction with interbody arthrodesis, each interspace (List separately in addition to code for primary procedure)
22854	Insertion of intervertebral biomechanical device(s) (eg, synthetic cage, mesh) with integral anterior instrumentation for device anchoring (e.g., screws, flanges), when performed, to vertebral corpectomy(ies) (vertebral body resection, partial or complete) defect, in conjunction with interbody arthrodesis, each contiguous defect (List separately in addition to code for primary procedure)
22855	Removal of anterior instrumentation
22899	Unlisted procedure, spine
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

CPT Code	Description
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
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 (e.g., 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 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 [e.g., wire, suture, mini-plates], when performed)

CPT Code	Description
63052	Laminectomy, facetectomy, or foraminotomy (unilateral or bilateral with decompression of spinal cord, cauda equina and/or nerve root[s] [e.g., 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] [e.g., spinal or lateral recess stenosis]), during posterior interbody arthrodesis, lumbar; each additional segment (List separately in addition to code for primary procedure)
63055	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (eg, herniated intervertebral disc), single segment; thoracic
63056	Transpedicular approach with decompression of spinal cord, equina and/or nerve root(s) (eg, 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) (eg, 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), (eg, herniated intervertebral disc), thoracic; single segment
63066	Costovertebral approach with decompression of spinal cord or nerve root(s), (eg, 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 osteophyctomy; cervical, single interspace
63076	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophyctomy; 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 osteophyctomy; thoracic, single interspace
63078	Discectomy, anterior, with decompression of spinal cord and/or nerve root(s), including osteophyctomy; thoracic, each additional interspace (List separately in addition to code for primary procedure)
63081	Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, single segment
63082	Vertebral corpectomy (vertebral body resection), partial or complete, anterior approach with decompression of spinal cord and/or nerve root(s); cervical, each additional segment (List separately in addition to code for primary procedure)
63085	Vertebral corpectomy (vertebral body resection), partial or complete, transthoracic approach with decompression of spinal cord and/or nerve root(s); thoracic, single segment
63086	Vertebral corpectomy (vertebral body resection), partial or complete, transthoracic approach with decompression of spinal cord and/or nerve root(s); thoracic, each additional segment (List separately in addition to code for primary procedure)
63087	Vertebral corpectomy (vertebral body resection), partial or complete, combined thoracolumbar approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic or lumbar; single segment
63088	Vertebral corpectomy (vertebral body resection), partial or complete, combined thoracolumbar approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic or lumbar; each additional segment (List separately in addition to code for primary procedure)
63090	Vertebral corpectomy (vertebral body resection), partial or complete, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic, lumbar, or sacral; single segment

CPT Code	Description
63091	Vertebral corpectomy (vertebral body resection), partial or complete, transperitoneal or retroperitoneal approach with decompression of spinal cord, cauda equina or nerve root(s), lower thoracic, lumbar, or sacral; each additional segment (List separately in addition to code for primary procedure)
63101	Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (e.g., for tumor or retropulsed bone fragments); thoracic, single segment
63102	Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (e.g., for tumor or retropulsed bone fragments); lumbar, single segment
63103	Vertebral corpectomy (vertebral body resection), partial or complete, lateral extracavitary approach with decompression of spinal cord and/or nerve root(s) (e.g., for tumor or retropulsed bone fragments); thoracic or lumbar, each additional segment (List separately in addition to code for primary procedure)
63170	Laminectomy with myelotomy (e.g., 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
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
63275	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, cervical
63277	Laminectomy for biopsy/excision of intraspinal neoplasm; extradural, lumbar
63280	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, cervical
63282	Laminectomy for biopsy/excision of intraspinal neoplasm; intradural, extramedullary, lumbar
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
63300	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, cervical
63301	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, thoracic by transthoracic approach
63302	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, thoracic by thoracolumbar approach

CPT Code	Description
63303	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; extradural, lumbar or sacral by transperitoneal or retroperitoneal approach
63304	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, cervical
63305	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, thoracic by transthoracic approach
63306	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, thoracic by thoracolumbar approach
63307	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; intradural, lumbar or sacral by transperitoneal or retroperitoneal approach
63308	Vertebral corpectomy (vertebral body resection), partial or complete, for excision of intraspinal lesion, single segment; each additional segment (List separately in addition to codes for single segment)

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## Description of Services

Lumbar spinal stenosis (LSS) is a narrowing of the spinal canal that compresses the neural elements in the lower back. It may be caused by trauma, tumor, infection, or congenital defects but is predominately caused by degenerative changes in the intervertebral discs and the ligaments and bone structures of the spine. These changes typically begin with a breakdown of the discs with consequent collapse of disc space, which leads to disc bulge and herniation, and transference of weight to the facet joints. This in turn leads to cartilage erosion and compensatory growth of new bone (bone spurs) over the facet joints as well as thickening of ligaments around the facet joints to help support the vertebrae. Surgery may be performed if symptoms do not respond adequately to nonsurgical approaches and continue to cause poor quality of life (AANS, 2014; AAOS, 2013).

First-line treatments for symptomatic lumbar spinal stenosis include rest, NSAIDs, muscle relaxants, corset use, physical therapy, and lumbar epidural steroid injections. For persons with moderate to severe symptoms, surgical decompression with or without spinal fusion and discectomy may be indicated but are associated with serious complications and high operative risk, particularly for elderly patients. The effectiveness of nonsurgical treatments, the extent of pain, and patient preferences may all factor into the decision to have surgery (National Institute of Arthritis and Musculoskeletal and Skin Diseases [NIAMS], 2016).

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.

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.



## Dynamic Stabilization Systems

Due to the lack of data from well-designed, long-term, randomized controlled clinical trials, current evidence is insufficient to permit conclusions about whether any beneficial effect from dynamic stabilization provides a significant advantage over conventional fusion techniques. The published evidence is not robust; a majority of the studies are retrospective or prospective case series and lack controls. In addition, the complication rates and reoperation rates for dynamic stabilization compared with conventional fusion are unknown.

In 2022, Pinter et al. conducted an interim analysis on the one-year safety profile and clinical and radiographic outcomes of 153 participants randomized to the investigational arm of the FDA investigational device exemption (IDE) clinical trial for the Total Posterior Spine System (TOPS™) (Premia Spine USA, Norwalk, CT) device. Among the participants, 145 devices were implanted at L4-5 and 8 at L3-4. 105 participants had reached the one year follow up and are included in the results. The safety profile showed 11 total complications and included new neurological deficits, dural tears infection, seroma, hematoma as well as retained drains, misplaced pedicle screws and screw loosening. Nine of these required a total of 13 reoperations. Patient reported outcome measures (PROMs) showed sustained improvement from 6 weeks to 12 months in ODI scores, as well as the mean VAS scores for low back and leg pain. Zurich Claudication Questionnaire (ZCQ) symptom scores also improved. Radiographic parameters included global lordosis, disc height at the index level, and disc angle and spondylolisthesis at the index level and the levels above and below the index level and was evaluated in 90 of the participants. Static radiographic parameters demonstrated increased index disc angle and disc height with a reduction in the magnitude of spondylolisthesis. Comparison of dynamic radiographic parameters showed increased flexion/extension ROM and translation. This analysis reports the early outcomes using a device with FDA IDE. Further information on this ongoing clinical trial can be found at: <https://www.clinicaltrials.gov/ct2/show/NCT03012776?term=Total+Posterior+Spine+System&draw=2&rank=1>

Pham et al. (2016) conducted a review of the literature to explore complications associated with the Dynesys stabilization system. The researchers evaluated 21 studies which included a total of 1166 subjects with a mean age of 55.5 years and a mean follow-up period of 33.7 months. The data demonstrated a surgical-site infection rate of 4.3%, a pedicle screw loosening rate of 11.7%, a pedicle screw fracture rate of 1.6%, and an adjacent-segment disease (ASD) rate of 7.0%. Of studies reporting surgical revision rates, 11.3% of subjects required reoperation. Of subjects who developed ASD, 40.6% required a reoperation for treatment. The authors concluded that the Dynesys stabilization system has a similar complication rate compared with lumbar fusion studies and has a slightly lower incidence of ASD.

## Clinical Practice Guidelines

### North American Spine Society (NASS)

A 2014 (revised in 2019) NASS coverage policy recommendation, entitled *Interspinous Fixation with Fusion* which addresses “flexible fusion,” which is defined as dynamic stabilization without arthrodesis for the treatment of degenerative lumbar spondylolisthesis. Due to the paucity of literature addressing the outcomes of these procedures, the workgroup was unable to make a recommendation. For future research, the workgroup recommended development of a large multicenter registry database, as well as prospective studies, with long-term follow-up comparing flexible fusion to medical or interventional treatment of this condition.

## Isolated Facet Fusion

Evidence is limited to small, uncontrolled trials with lack of blinding or long-term follow-up. Randomized, controlled trials comparing these allograft materials to standardized autograft materials are needed to determine long-term efficacy and impact on health outcomes. No studies were found that discussed facet fusion when done alone without an accompanying decompressive procedure. The current published evidence is insufficient to determine whether isolated facet arthroplasty is as effective or as safe as spinal fusion, which is the current standard for surgical treatment of degenerative disc disease.

Gavaskar and Achimuthu (2010) conducted a prospective study of 30 patients with low-grade degenerative spondylolisthesis of the lumbar and lumbosacral spine who underwent facet fusion using 2 cortical screws and local cancellous bone grafts. Visual analog scale and Oswestry disability assessment were used to measure outcomes which showed significant improvement at 1-year follow-up. The authors found that patients with degenerative spondylolisthesis with lower grade slips and normal anterior

structures represent an ideal indication for facet fusion. The study is limited by short term follow-up, subjective outcomes and lack of comparison to other treatment modalities.

### **Laminectomy for Surgical Exposure**

Sun et al. (2019) evaluated the safety and efficacy of laminoplasty versus laminectomy in the treatment of spinal cord tumors (SCTs). 16 studies addressing SCTs with at least 6 months follow-up were found and analyzed. The authors concluded that laminoplasty might be a better and safer procedure for treatment of SCTs, however more well-designed studies with larger samples sizes are needed to further evaluate this conclusion.

Chen (2019) identified six patients diagnosed with congenital sacral myelomeningocele. The case series presented 4 patients with repaired myelomeningocele who experienced retethered spinal cord and progressive dural ectasia; 1 patient with lipomyelomeningocele who had previously undergone detethering surgery and duraplasty; and 1 patient with a newly diagnosed symptomatic Tarlov cyst. Although these cases have different underlying diseases, they all share a similar feature of expansile CSF accumulation in the sacral area. All 6 patients subsequently underwent sacral laminoplasty with titanium mesh. Limitations included low number of participants, lack of control group and short follow-up.

Mendenhall et al. (2019) performed a retrospective review of 361 patients with complex spine surgery. The authors examined the literature for spinal instrumentation techniques that have been utilized on the pediatric population; the indications for these procedures were divided into four categories: degenerative, congenital, trauma and tumor. Ages of the patients consisted of those 3 months old to 21 years. The surgical procedures performed included those at the craniocervical junction, subaxial cervical spine, thoracic spine, thoracolumbar junction, lumbar spine, sacrum and pelvis. The types of spinal instrumentation included (but not limited to) occipital screws, translaminar screws, cervical lateral mass screws, and pedicle screws. The authors noted that a major difference between adolescent and adult spine surgery is the potential continued growth, and this growth factor must be factored into the decision making for fusion. The author's review of these procedures and instrumentation provides benchmarks and outcomes for comparison on the techniques performed.

### **Multiple Serial/Staged Spine Procedures**

There is insufficient evidence of efficacy to support dividing spine decompression procedures into serial, multiple, or staged sessions when one session can address all sites.

### **Total Facet Arthroplasty**

The evidence is insufficient to permit conclusions about the benefits and safety of facet arthroplasty. The current published clinical trial evidence is limited to data from a single, small, short term case series published in 2007 by McAfee. While this preliminary data demonstrated feasibility and provided some direction for future clinical trials, this pilot study does not permit conclusions due to methodological limitations such as non-random allocation of treatment, short-term follow-up (12 months), small number of patients, and a lack of an appropriate comparison group. The remaining published studies are limited to ex vivo biomechanical studies on cadaver 3 spines. Conclusions from these studies cannot be used to determine the outcomes of device implantation in living human subjects.

## **U.S. Food and Drug Administration (FDA)**

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

### **Spinal Fusion Devices**

Products used for spinal fusion and decompression devices are extensive. Refer to the following website for more information and search by product name in device name section: <http://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfPMN/pmn.cfm>. (Accessed October 25, 2022)

### **Facet Arthroplasty**

No facet arthroplasty devices have been approved by the U.S. Food and Drug Administration (FDA) at this time.

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## Policy History/Revision Information

Date	Summary of Changes
07/01/2023	<p><b>Title Change/Template Update</b></p> <ul style="list-style-type: none"> <li>Relocated and reformatted content previously included in the Medical Policy titled <i>Surgical Treatment for Spine Pain (for Pennsylvania Only)</i></li> </ul> <p><b>Coverage Rationale</b></p> <ul style="list-style-type: none"> <li>Revised language to indicate:               <ul style="list-style-type: none"> <li>Spinal procedures for the treatment of spine pain are proven and medically necessary in certain circumstances; for medical necessity clinical coverage criteria, refer to the InterQual® CP: Procedures:                   <ul style="list-style-type: none"> <li>Decompression +/- Fusion, Cervical</li> <li>Decompression +/- Fusion, Lumbar</li> <li>Decompression +/- Fusion, Thoracic</li> <li>Fusion, Cervical Spine</li> <li>Fusion, Lumbar Spine</li> <li>Fusion, Thoracic Spine</li> </ul> </li> </ul> </li> </ul>

Date	Summary of Changes
	<ul style="list-style-type: none"> <li>○ Laminectomy procedures to provide surgical exposure to treat lesions within the spinal canal are proven and medically necessary</li> <li>○ The following are unproven and not medically necessary due to insufficient evidence of efficacy: <ul style="list-style-type: none"> <li>▪ Isolated facet fusion, with or without instrumentation</li> <li>▪ Dynamic Stabilization systems for the treatment of degenerative spondylolisthesis</li> <li>▪ Total facet joint arthroplasty</li> <li>▪ Dividing treatment of symptomatic, multi-site spinal pathology via anterior or posterior approach into serial, multiple, or staged sessions when one session can address all sites</li> </ul> </li> </ul> <p><b>Definitions</b></p> <ul style="list-style-type: none"> <li>● Removed definition of: <ul style="list-style-type: none"> <li>○ Anterior Lumbar Spine Surgery</li> <li>○ Arthrodesis</li> <li>○ Axial Lumbar Interbody Fusion (AxiaLIF)</li> <li>○ Conservative Therapy</li> <li>○ Corpectomy</li> <li>○ Direct Lateral Interbody Fusion (DLIF)</li> <li>○ Disabling Symptoms</li> <li>○ Facet Syndrome</li> <li>○ Image-Guided Minimally Invasive Lumbar Decompression (mild<sup>®</sup>)</li> <li>○ Interlaminar Lumbar Instrumented Fusion (ILIF)</li> <li>○ Interlaminar Stabilization Device</li> <li>○ Interspinous Process Decompression (IPD)</li> <li>○ Laparoscopic Anterior Lumbar Interbody Fusion (LALIF)</li> <li>○ Neurogenic Claudication (also known as pseudoclaudication)</li> <li>○ Percutaneous or Endoscopic Lumbar Fusion</li> <li>○ Posterior Lumbar Spine Surgery</li> <li>○ Progressive</li> <li>○ Radicular Pain</li> <li>○ Sacroplasty</li> <li>○ Spinal Stabilization</li> <li>○ Spondylolisthesis</li> <li>○ Spondylolysis</li> <li>○ Total Facet Joint Arthroplasty</li> <li>○ Transforaminal Lumbar Interbody Fusion (TLIF)</li> <li>○ Unremitting</li> <li>○ X-STOP Interspinous Process Decompression (IPD) System</li> </ul> </li> <li>● Updated definition of “Isolated Facet Fusion”</li> </ul> <p><b>Applicable Codes</b></p> <ul style="list-style-type: none"> <li>● Added CPT code 0719T</li> <li>● Removed CPT codes 0200T, 0201T, 0274T, 0275T, 20930, 20931, 22100, 22101, 22102, 22103, 22110, 22112, 22114, 22116, 22206, 22207, 22208, 22210, 22212, 22214, 22216, 22220, 22222, 22224, 22226, 22586, 22818, 22819, 22859, 22867, 22868, 22869, 22870, 63011, and 63268</li> <li>● Revised description for CPT codes 22612 and 22634</li> <li>● Removed coding notations</li> </ul> <p><b>Supporting Information</b></p> <ul style="list-style-type: none"> <li>● Updated <i>Description of Services</i>, <i>Clinical Evidence</i>, and <i>References</i> sections to reflect the most current information</li> <li>● Archived previous policy version CS115PA.Y</li> </ul>

## Instructions for Use

This Medical Policy provides assistance in interpreting UnitedHealthcare standard benefit plans. When deciding coverage, the federal, state or contractual requirements for benefit plan coverage must be referenced as the terms of the federal, state or

contractual requirements for benefit plan coverage may differ from the standard benefit plan. In the event of a conflict, the federal, state or contractual requirements for benefit plan coverage govern. Before using this policy, please check the federal, state or contractual requirements for benefit plan coverage. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Medical Policy is provided for informational purposes. It does not constitute medical advice.

UnitedHealthcare may also use tools developed by third parties, such as the InterQual<sup>®</sup> criteria, to assist us in administering health benefits. The UnitedHealthcare Medical Policies are intended to be used in connection with the independent professional medical judgment of a qualified health care provider and do not constitute the practice of medicine or medical advice.