Entitlement Eligibility Guideline

Lumbar Spine Conditions

Date created: 31 March 2025

ICD-11 **codes:** FA8Z, FA80.9, FA81.Z, FA84.Z, ME84.2, ME84.20, ME84.2Y, ME84.2Z, ME86.2, ME86.21, ME86.22, ME86.2Y, ME86.2Z, NB53.5, 8B93.Y

VAC medical codes:

01413	Lumbar disc disease, osteoarthritis lumbar spine, spondylosis lumbar spine, prolapsed herniated intervetebral disc lumbar spine, lumbar facet joint syndrome, osteoarthritis facet joints
72450	Chronic mechanical low back pain, chronic mechanical lumbar pain/strain

Definition

For the purposes of this entitlement eligibility guideline (EEG), the following conditions are included:

- **Degenerative conditions of the lumbar spine** include:
    - degenerative disc disease of the lumbar spine
    - lumbar disc disease includes, but is not limited to:
        - intervertebral disc prolapse of the lumbar spine
        - intervertebral disc herniation of the lumbar spine.
    - osteoarthritis/osteoarthrosis (OA) of the lumbar spine includes, but is not limited to:
        - osteoarthritis of the lumbar spine
        - osteoarthritis of the facet joints of the lumbar spine
        - lumbar facet syndrome
        - lumbar spondylosis.

    Note: The terms osteoarthritis and osteoarthrosis are used interchangeably in the medical community. For the purposes of this EEG, these terms are considered synonymous and will be hereinafter called OA.

- **Soft tissue conditions of the lumbar spine** include, but are not limited to:
    - chronic mechanical lumbar back pain
    - chronic mechanical low back pain
    - chronic lumbar sprain
    - chronic lumbar strain
    - chronic myofascial pain of the lumbar region.

Note: Cauda equina syndrome is **not** included in entitlement and assessment of lumbar spine conditions and requires a separate consequential entitlement decision.

Diagnostic standard

A diagnosis from a qualified physician, nurse practitioner or physician assistant (within their scope of practice) is required.

A careful history and physical examination are essential components in the diagnostic evaluation of lumbar spine conditions. Low back pain is often not a single disorder and can be caused by multiple pathophysiologic mechanisms affecting the region of the lower spine and surrounding structures. The cause of chronic low back pain can often be differentiated based on a patient's history, physical exam, and imaging.

The initial evaluation of low back pain should include screening questions about symptoms that point to a progressive or unstable cause for pain such as cancer, infection, trauma, and neurologic compromise. Among patients who present with low back pain, less than 1% will have a serious systemic etiology.

The history should include location, duration, and severity of pain as well as details of any prior back pain. The presence of additional red flag symptoms (such as weight loss, fever, sweats, history of malignancy, neurologic symptoms, bowel or bladder symptoms) are also evaluated to assess the need for imaging and further evaluation.

Diagnostic imaging abnormalities are common, especially with age, and can be difficult to correlate with symptoms. The main imaging methods to evaluate back pain are magnetic resonance imaging (MRI), computerized tomography (CT), and plain radiographs (X-ray).

Imaging is reserved for patients with severe or progressive neurologic deficits or when serious underlying conditions are suspected. Supporting documentation should be as comprehensive as possible.

Note: Lumbar disc disease and OA of the lumbar spine are clinical diagnoses. Diagnostic imaging may be helpful but is not required to establish the diagnosis, and the diagnosis cannot be made based on imaging studies alone. Radiographic findings of degenerative changes at the time of the onset of symptoms do not indicate a pre-existing clinical condition of lumbar disc disease or OA of the lumbar spine.

Anatomy and physiology

The spinal region consists of soft tissues, bony elements, intervertebral discs, and nerve tissue.

Soft tissues of the lumbar spinal region

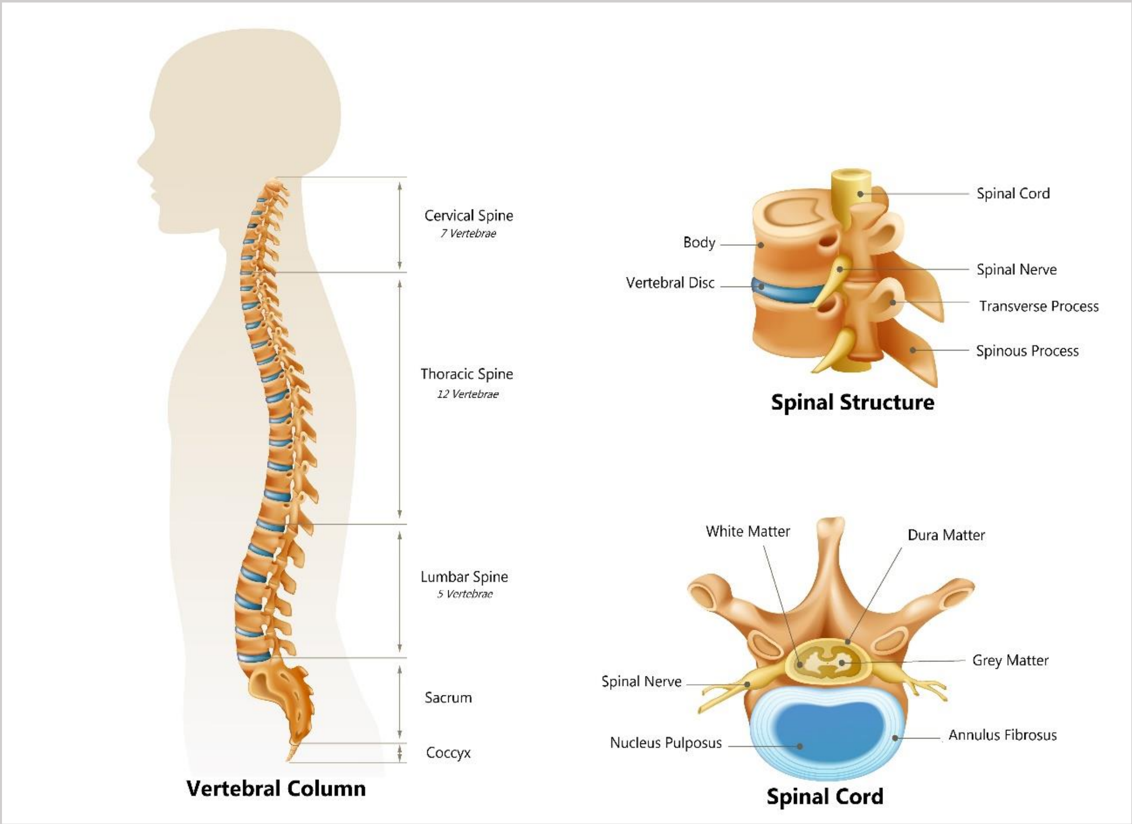
The soft tissues of the lumbar spine include the muscles, tendons, and ligaments.

There are many layers of muscles in the lumbar spinal region controlling the movement of the low back. Each muscle is attached to a bone with a tendon. A ligament connects bones and stabilizes joints.

The bony elements of the lumbar spine

The spine is composed of 33 individual bones called vertebrae (Figure 1: Human vertebrae anatomy). Each vertebra resembles a building block. The vertebrae are stacked to form a column down the spine, with an intervertebral disc between each vertebra. The spine is also referred to as the spinal column or vertebral column.

Figure 1: Human vertebrae anatomy



The human spine is composed of five main regions, listed from top to bottom: the cervical spine (7 vertebrae), thoracic spine (12 vertebrae), lumbar spine (5 vertebrae), sacrum (5 fused vertebrae), and the coccyx (3–5 fused vertebrae). Vertebrae mainly consist of semi-circles of bone (vertebral body) separated by intervertebral discs. These discs have a tough outer layer (annulus fibrosus) and a gel-like inner core (nucleus pulposus). Each vertebra features projections for muscle attachment. Transverse processes are lateral projections that serve as attachment points for the back muscles, while spinous processes are posterior projections felt through the skin of the spine. The inside of the spinal cord contains white matter (transmits signals); grey matter (processes information); dura mater (outer membrane); and spinal nerves (attaches spinal cord to the body). Source: Veterans Affairs Canada (2024).

The vertebral column is divided into five sections: cervical, thoracic, lumbar, sacral and coccygeal. The lumbar region, often called the “low back”, is composed of five lumbar vertebrae referred to as L1 through L5.

The vertebral bodies change shape and size down the vertebral column, but most share a basic structure. Attached to the body is the neural arch which is a semicircle of bone extending posteriorly from the vertebral body. This arch has a large central opening, or canal. This spinal canal is the opening through which the spinal cord passes as it travels from the brain down the spine. On each side of the neural arch is a notch, the neural foramina where a spinal nerve on each side travels from the spinal cord out through the neural foramina and into the body.

On each side of the neural arch is a small synovial joint called the facet joint. The facet joints guide and limit the movement of a vertebra while also resisting rotation and protecting the neighboring vertebrae from strain.

Intervertebral discs

The intervertebral discs lay between the bodies of adjacent vertebrae above and below. These discs serve as cushions between the vertebrae. The discs consist of a tough outer fibrous ring, which surrounds a soft, gel-like center. The area where the disc attaches to the bony vertebra is the vertebral end plate. Intervertebral discs are typically named for the vertebra above and the vertebra below. For example, the intervertebral disc between the third lumbar vertebrae, L3, and the fourth lumbar vertebra, L4, is called the L3-L4 disc.

Nerve tissue of the lumbar spinal region

The spinal cord is a large bundle of nerves carrying information between the brain and the rest of the body providing sensation to the skin, controlling muscle movement, and regulating the function of body organs, such as the heart or bladder. The spinal cord continues down the spinal column to the level of the first or second lumbar vertebrae. The spinal cord usually ends at the level of the disc between L1 and L2. Below the spinal cord, the spinal nerves travel through the spinal canal and exit at the lumbar vertebrae. The appearance of the spinal nerves in the spinal canal of the lumbar region is named the cauda equina.

Information is carried between the brain and body, and leaves the spinal cord via the spinal nerves. Two spinal nerves exit, one right and one left, below each vertebra. The lumbar spinal nerves are designated by the vertebra above. For example, the spinal nerve which exists below the first lumbar vertebrae, L1, is termed the L1 spinal nerve. The part of the nerve exiting the spinal canal is the spinal nerve root. The spinal nerves are delicate structures and can be injured from compression or stretching.

Spinal nerves travel to specific destinations. The area of skin innervated by a single spinal nerve is a dermatome. The muscle, or group of muscles, innervated by a single spinal nerve is a myotome. For example, the spinal nerve which exits below the right side of the fourth lumbar vertebra, spinal nerve L4, travels to the muscles which straighten the right knee and to the skin to provide sensation to the middle of the right lower leg. The L4 spinal nerve on the left side serves the same areas on the left side of the body.

OA is caused by the breakdown of cartilage in joints and can occur in almost any joint in the body. When OA affects the spine, it is known as spondylosis. Spondylosis is a degenerative disorder that can cause loss of normal spinal structure and function. Lumbar OA (spondylosis) can involve the intervertebral discs and facet joints, leading to disc degeneration and bone spurs (osteophytes) which can pinch the nerves near the discs or spurs.

As spondylosis worsens, progressive narrowing caused by osteophytes can limit the spaces in the spine pressuring the spinal cord and/or nerve roots (spinal stenosis). This compression can impair function and cause pain and/or numbness.

The slippage of one vertebra over another is called degenerative spondylolisthesis and is caused by OA of the facet joints.

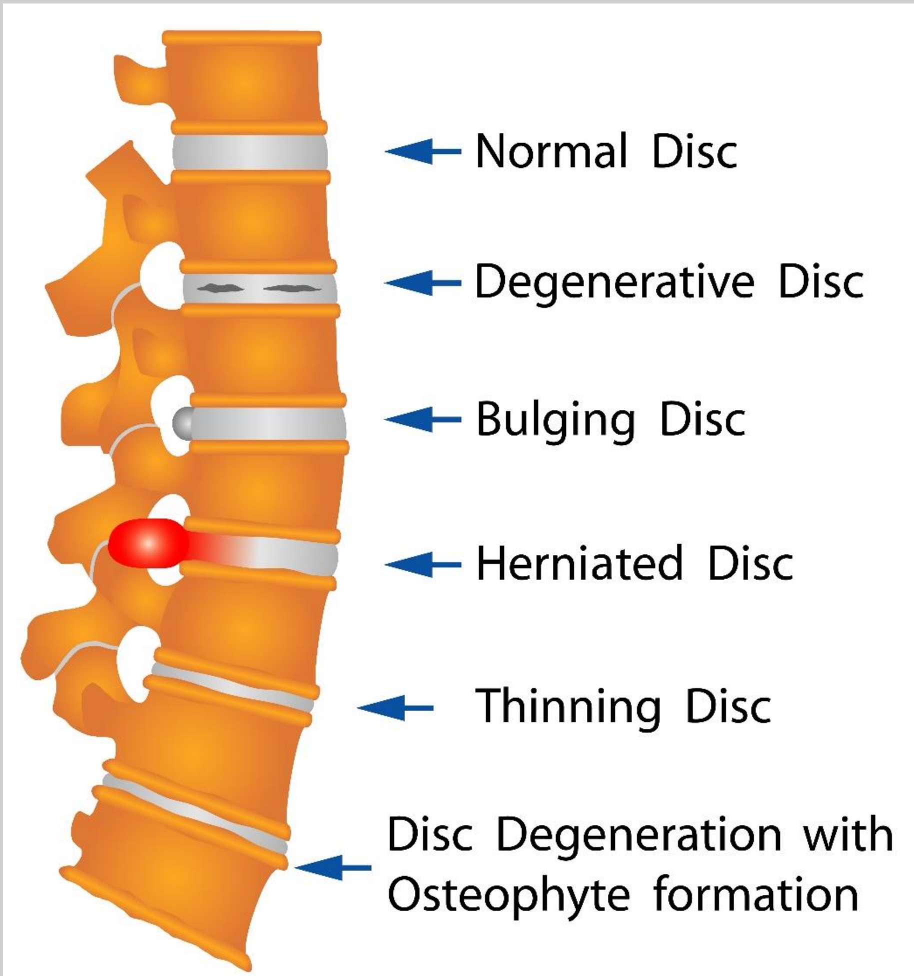
Degenerative conditions of the lumbar spine

Clinical features of degenerative conditions of the lumbar spine

In the earliest stage of lumbar disc degeneration, cracks develop in the outer circumferential portion of the disc (annulus fibrosus). The cracks extend from the nucleus pulposus (Figure 1: Human vertebrae anatomy) and travel into, but not completely through, the annulus fibrosus. This is known as an internal disc disruption and can cause back pain. The pain is usually chronic and can radiate to the buttocks and posterior thigh. Positions and activities that increase the pressure in the disc, such as sitting or flexion of the spine, can increase the symptoms.

Relatively minor trauma can lead to a complete tear of the annulus fibrosus and herniation of the disc (Figure 2: Lumbar disc degeneration). In many cases, there is no history of clinically significant trauma preceding the onset of disc herniation.

Figure 2: Lumbar disc degeneration



Close-up of the lumbar spine showing the five most common disc issues: a degenerative disc with surface cracks; a bulging disc with outward protrusion; a herniated disc pressing toward the spinal canal; a thinning disc with eroded outer layers; and disc degeneration with osteophyte (bone spur) formation. Source: Veterans Affairs Canada (2024).

In later stages of disc degeneration, the crack(s) can go completely through the annulus fibrosus. The nucleus pulposus may herniate through the crack(s). This is referred to as a herniated or ruptured disc. A herniated disc can cause pain by pressing on the nearby soft tissues or nerves. The resulting symptoms from the compressed spinal nerve are called radiculopathy.

A herniated disc can also intrude into the spinal canal and compress the end of the spinal cord, the conus medullaris in the upper lumbar region or the cauda equina in the lower lumbar region. More than 95% of disc herniations of the lumbar spine occur at the L4-L5 or L5-S1 level.

The signs and symptoms of radiculopathy can include:

- sensory change, such as tingling, known as paresthesia, to the skin in the dermatome (the area of skin innervated by the nerve)
- sensory loss, to the skin in the dermatome
- weakness in the myotome (the muscles innervated by the spinal nerve)
- diminished, or absent, reflex which is controlled by the spinal nerve
- pain felt along the path of the spinal nerve (radicular pain).

OA is a degenerative joint disease of the synovial joints. The facet joints of the lumbar spine are synovial joints and are a common site for the development of OA. Facet joint OA most commonly affects the facet joints of the fourth lumbar vertebra (L4) and the fifth lumbar vertebra (L5).

Osteophytes, commonly referred to as bone spurs, can develop when joints attempt to repair and remodel after injuries and overloading. The osteophytes contribute to enlarged joints and can crowd nearby structures. The enlargement of the joint and presence of osteophytes can cause narrowing of the neural foramina and compression of the spinal nerve root.

There is a range of symptoms with spinal OA, including low back stiffness, pain in the hip, buttocks, or groin. Cramping leg pain typically ending above the knee may be present. The pain may be worse after waking or after periods of inactivity. Pain may be increased with extension of the spine and be relieved by flexion of the spine or lying down.

If the enlarged joints result in spinal nerve root compression, the relevant symptoms of radiculopathy may be present. In the lumbar region, spinal stenosis can compress the end of the spinal cord, the conus medullaris, or the cauda equina. Spinal stenosis (a narrowing of the spinal canal) most commonly affects the L4-L5 level and can occur from ruptured intervertebral discs, enlarged facet joints, osteophytes and/or enlarged ligaments crowding the bony spinal canal.

Spinal stenosis can be congenital or acquired. Congenital spinal stenosis is present at birth as a normal variant in the population or due to a congenital condition. Acquired spinal stenosis is caused by OA of the lumbar spine, which can also be referred to as lumbar spondylosis.

The most common symptom of spinal stenosis is low back pain radiating down both legs below the knees. Typically, the pain is described as a heaviness, weakness, cramping, burning, or numbness in both legs. Symptoms may be more severe in one leg but typically both legs are affected. Symptoms can also worsen with standing for a prolonged time or extension of the lumbar spine. The symptoms can be improved by bending forward, sitting, or resting.

Female biological sex, non-commissioned personnel, and age have been identified as significant risk factors of the development of lumbar disc disease within the Veteran population. Increased risk has also been identified in military helicopter pilots. Incidence of OA of the lumbar spine is higher in female military members, non-commissioned members, and those members serving in the army. Rates of OA of the lumbar spine have been found to be higher among service members in armour/motor transport and in health care compared to other military occupation groups.

Entitlement considerations for degenerative conditions of the lumbar spine

Section A: Causes and/or aggravation of degenerative conditions of the lumbar spine

For Veterans Affairs Canada (VAC) entitlement purposes, the following factors are accepted to cause or aggravate the degenerative conditions of the lumbar spine, and may be considered along with the evidence to assist in establishing a relationship to service. The factors have been determined based on a review of up-to-date scientific and medical literature, as well as evidence-based medical best practices. Factors other than those listed may be considered, however consultation with a disability consultant or medical advisor is recommended.

The timelines cited below are for guidance purposes. Each case should be adjudicated on the evidence provided and its own merits.

Factors for degenerative conditions of the lumbar spine

1. Having experienced **trauma** to the lumbar spine at least six months before, and within 20 years of the clinical onset or aggravation of degenerative conditions of the lumbar spine at the level of, or adjacent to, the area of injury.

2. Having a **service period lasting 10 full time equivalent (FTE) years or more** involving rigorous service activities, tactical training, and maintenance of physical fitness, where the clinical onset or aggravation of degenerative conditions of the lumbar spine has occurred within 25 years of release from service.

Note: VAC accepts the development of the degenerative conditions of the lumbar spine having a **service period of at least five FTE years** for:

- an anatomically abnormal lumbar spine; or
- female biological sex; or
- evidence of lumbar spine symptoms documented during service.

An anatomically abnormal lumbar spine means a lumbar spine that is affected by underlying muscle weakness or imbalances, neurologic abnormalities, or anatomic variations such as spondylolisthesis of the lumbar spine.

In the case of gender affirming care, consultation with a disability consultant and/or a medical advisor is recommended.

3. Having a non-viral **infection of the lumbar disc or joint** at the time of clinical onset or aggravation of degenerative conditions of the lumbar spine.

4. Having one of the following **preexisting conditions** for at least six months before the clinical onset or aggravation of degenerative conditions of the lumbar spine:

    - inflammatory joint disease
        - ankylosing spondylitis
        - arthritis associated with inflammatory bowel disease
        - psoriatic arthritis
        - reactive arthritis
        - rheumatoid arthritis
    - joint deformity
        - deformity of a joint of a vertebra
        - deformity of a vertebra
        - scoliosis
        - spondylolisthesis
    - spinal fusion immediately above, or below, the affected joint
    - uncorrected permanent leg length Inequality (LLI), as outlined in the LLI Discussion Paper.

5. Inability to obtain **appropriate clinical management** for degenerative conditions of the lumbar spine.

Section B: Medical conditions which are to be included in entitlement/assessment of degenerative conditions of the lumbar spine

Section B provides a list of diagnosed medical conditions which are considered for VAC purposes to be included in the entitlement and assessment of degenerative conditions of the lumbar spine.

- Lumbar disc disease
    - Degenerative disc disease of the lumbar spine
    - Intervertebral disc prolapse of the lumbar spine
    - Intervertebral disc herniation of the lumbar spine
- Osteoarthritis of the lumbar spine
- Osteoarthritis of the facet joints of the lumbar spine
- Lumbar facet syndrome
- Lumbar spondylosis
- Lumbar spinal stenosis
- Lumbar spondylolysis
- Lumbar spondylolisthesis
- Chronic mechanical low back pain
- Chronic lumbar sprain
- Chronic lumbar strain
- Chronic myofascial pain of the lumbar region
- Diffuse idiopathic skeletal hyperostosis (DISH) of the lumbar spine
- Piriformis syndrome

Section C: Common medical conditions which may result, in whole or in part, from degenerative conditions of the lumbar spine and/or their treatment

Section C is a list of conditions which can be caused or aggravated by degenerative conditions of the lumbar spine and/or their treatment. Conditions listed in Section C are not included in the entitlement and assessment of degenerative conditions of the lumbar spine. A consequential entitlement decision may be considered where the individual merits and the medical evidence of the case support a consequential relationship.

Conditions other than those listed in Section C may be considered; consultation with a disability consultant or medical advisor is recommended.

- Cauda equina syndrome

Soft tissue conditions of the lumbar spine

For the purposes of this EEG, the following conditions are included:

- chronic mechanical lumbar back pain
- chronic mechanical low back pain
- chronic lumbar sprain
- chronic lumbar strain
- chronic myofascial pain of the lumbar region.

Clinical features of soft tissue conditions of the lumbar spine

The majority of low back pain is categorized as non-specific low back pain. This is because the structural causes of pain are difficult to identify and characterize. Non-specific low back pain means the pain or discomfort persists in the absence of an underlying condition that can be reliably identified. Soft tissue causes, also known as musculoligamentous causes, contribute to non-specific chronic low back pain.

Chronic lumbar sprain is the stretching or tearing of a low back ligament(s). Chronic lumbar strain is the stretching or tearing of a low back muscle(s) and/or tendon(s). Both chronic lumbar sprain and strain present with identical signs and symptoms, including discomfort, pain, tenderness, tightness, or stiffness of the lumbar area and/or decreased range of motion of the lumbar spine.

Chronic myofascial pain of the lumbar region may present with the same signs and symptoms as chronic lumbar sprains and strains and/or with typical patterns of radiating pain from trigger points. Trigger points are sensitive areas in muscles or fasciae that become painful when compressed.

Chronic mechanical lumbar back pain and chronic mechanical low back pain include pain originating from the structural elements of the lumbar spine. These structural elements being the vertebrae, joints of the spinal column, intervertebral discs, ligaments, muscles, and/or tendons.

The clinical features of chronic mechanical lumbar back pain and chronic mechanical low back pain are dependent on the structure(s) affected by an injury and/or a disease process. This can lead to a variety of clinical presentations.

Chronic mechanical lumbar back pain and chronic mechanical low back pain, which primarily affect the soft tissues of the low back, will have signs and symptoms similar to lumbar sprain, lumbar strain, or myofascial pain of the lumbar region.

Chronic mechanical lumbar back pain and chronic mechanical low back pain which affect the structural elements of the back will have signs and symptoms similar to lumbar spondylosis.

Risk factors for soft tissue conditions in military personnel include g-force exposure in pilots and aircrew, extreme shock and vibration exposure, heavy combat load requirements, and falls incurred during airborne, air assault, and urban dismounted ground operations. Female biological sex and non-commissioned members are also risk factors for low back pain.

Entitlement considerations for soft tissue conditions of the lumbar spine

Section A: Causes and/or aggravation of soft tissue conditions of the lumbar spine

For Veterans Affairs Canada (VAC)entitlement purposes, the following factors are accepted to cause or aggravate the soft tissue conditions of the lumbar spine, and may be considered along with the evidence to assist in establishing a relationship to service. The factors have been determined based on a review of up-to-date scientific and medical literature, as well as evidence-based medical best practices. Factors other than those listed may be considered, however consultation with a disability consultant or medical advisor is recommended.

The timelines cited below are for guidance purposes. Each case should be adjudicated on the evidence provided and its own merits.

Factors for soft tissue conditions of the lumbar spine

1. Experiencing a **physical force** applied to or through the affected lumbar spine joint, at the time of the clinical onset or aggravation of the soft tissue condition of the lumbar spine.

2. Experiencing **forceful stretching or overuse** of a muscle or tendon in the lumbar spine at the time of clinical onset or aggravation of soft tissue conditions of the lumbar spine.

3. Having **uncorrected** **leg length inequality (LLI)** with a LLI of 1.5 cm or greater at the time of clinical onset or aggravation of soft tissue conditions of the lumbar spine where LLI is present for several months prior to development of the condition.

4. Inability to obtain **appropriate clinical management** for soft tissue conditions of the lumbar spine.

Section B: Medical conditions which are to be included in the entitlement/assessment of soft tissue conditions of the lumbar spine

Section B provides a list of diagnosed medical conditions which are considered for VAC purposes to be included in the entitlement and assessment of soft tissue conditions of the lumbar spine.

- Lumbar disc disease
  - Degenerative disc disease of the lumbar spine
  - Intervertebral disc prolapse of the lumbar spine
  - Intervertebral disc herniation of the lumbar spine
- Osteoarthritis of the lumbar spine
- Osteoarthritis of the facet joints of the lumbar spine
- Lumbar facet syndrome
- Lumbar spondylosis
- Lumbar spinal stenosis
- Lumbar spondylolysis
- Lumbar spondylolisthesis
- Chronic mechanical lumbar back pain
- Chronic mechanical low back pain
- Chronic lumbar sprain
- Chronic lumbar strain
- Chronic myofascial pain of the lumbar region
- Diffuse idiopathic skeletal hyperostosis (DISH) of the lumbar spine
- Piriformis syndrome

Section C: Common medical conditions which may result, in whole or in part, from soft tissue conditions of the lumbar spine and/or their treatment

No consequential medical conditions were identified at the time of the publication of this EEG. If the merits of the case and medical evidence indicate that a possible consequential relationship may exist, consultation with a disability consultant or medical advisor is recommended.

Links

Related VAC guidance and policy:

- Ankylosing Spondylitis – Entitlement Eligibility Guidelines
- Leg Length Inequality (LLI) – Discussion Paper
- Rheumatoid Arthritis – Entitlement Eligibility Guidelines
- Spondylolisthesis and Spondylolysis – Entitlement Eligibility Guidelines
- Pain and Suffering Compensation - Policies
- Royal Canadian Mounted Police Disability Pension Claims - Policies
- Dual Entitlement – Disability Benefits - Policies
- Establishing the Existence of a Disability - Policies
- Disability Benefits in Respect of Peacetime Military Service – The Compensation Principle - Policies
- Disability Benefits in Respect of Wartime and Special Duty Service – The Insurance Principle - Policies
- Disability Resulting from a Non-Service Related Injury or Disease - Policies
- Consequential Disability - Policies
- Benefit of Doubt -Policies

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