



**Veterinary Emergency  
+ Referral Center**  
of Hawaii

**Ettinger: Textbook of  
Veterinary Internal Medicine, 7th Edition  
Lumbosacral Stenosis  
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**What is lumbosacral stenosis?**

Lumbosacral stenosis, otherwise known as cauda equina syndrome, is a compression of the nerve roots in the lower part of the spine. As the spinal cord progresses down the lumbar spine, it turns into numerous nerve roots, called the cauda equina. At the junction of the last lumbar vertebrae and the sacrum, compression of these nerve roots leads to cauda equine syndrome.

This syndrome is most commonly seen in large-breed, older dogs. Although German Shepherd dogs are predisposed to this disease, any breed of dog may be affected.

**What are the signs of lumbosacral stenosis?**

Dogs with lumbosacral stenosis may feel pain in the lower back and not want to jump or climb stairs. Lumbosacral stenosis is often confused with arthritis of the hips as the signs may appear similar.

Depending on the severity of compression, nerve impairment may be present as well. This could lead to weakness or falling on the hind legs. Occasionally, dogs may have a tingling sensation in their tail or hind legs, which may cause self-mutilation. In severe cases of nerve compression, fecal or urinary incontinence may be present.

**What tests are needed?**

Initially, radiographs of the lumbar spine are taken to look for any evidence of trauma, cancer, or infection. Bony bridging underneath the vertebrae, called spondylosis, is a normal aging change not indicative of lumbosacral disease. Since compression of the nerve roots cannot be visualized on x-rays, an MRI must be performed to truly diagnose this condition. The MRI may show evidence of a bulging or herniated disk causing compression or it may show evidence of narrowing of the spinal canal due to fibrous tissue build-up from instability of the vertebrae.

**What treatment is needed?**

Initial treatment consists of medical management. Either a steroid or a non-steroid anti-inflammatory medication may be prescribed in order to decrease the swelling of the nerve roots. Additionally, a muscle relaxant or pain reliever may be used. The most important aspect of conservative treatment includes exercise restriction. Although the anti-inflammatory medication will help to relieve pain, exercise restriction is necessary to alleviate the clinical signs.

If after rest and anti-inflammatory medication your dog remains painful, or appears to be deteriorating, surgery may be necessary. Once a bulging disk is confirmed with MRI, a dorsal laminectomy surgery may be performed. This is a surgery where the roof of the vertebrae as well

as the disk material is removed in order to relieve the compression on the nerve roots. If instability of the vertebrae is suspected, fusion of the last lumbar vertebrae to the sacrum may be necessary as well.

After surgery, your dog should have the activity restricted for 4-6 weeks. Recovery of hind leg function is often slow and gradual over several weeks to months. However, pain relief usually occurs quickly, within the first week, after surgery.

Many dogs with back pain only will respond favorably to medical management.

**What is the prognosis?**

Prognosis for dogs with back pain and weakness of the hind legs is excellent after decompression surgery. If urinary incontinence or other nerve deficits exist prior to surgery, the prognosis is more guarded.