

Degenerative lumbosacral stenosis (DLSS)

What is Degenerative lumbosacral stenosis (DLSS) and what are the causes?

Degenerative lumbosacral stenosis (DLSS) is a multifactorial condition in which nerves at the base of the vertebral column (spine) are compressed. The compression can be caused by a bulging intervertebral disc (slipped disc), narrowing of the channels through which the nerves leave the spine (the vertebral foramen) or by a build-up of degenerative soft tissues. The resultant narrowing of the canal itself or the vertebral foramen is referred to as stenosis and causes a compression of the nerves leading to pain and sometimes neurological dysfunction. There are varying factors that can predispose a dog to developing DLSS including breed, patient size, congenital malformations (birth defects) and an instability of the bones of the spine.

Which pets typically get DLSS?

Large breeds of dogs are more commonly affected with lumbosacral stenosis.

What are the signs of DLSS?

The most common clinical sign is lower back pain. Affected animals are reluctant to jump and climb stairs or steep hills, and they may have difficulty rising from a lying position. Groaning or spontaneous yelping may be a feature. It can be very difficult to differentiate lower back pain from hip pain. In more severe cases muscle wastage can be seen and dogs can experience back leg lameness (similar to humans with sciatica), incontinence and reduced tail movement.

How is DLSS diagnosed?

The history and clinical examination are an extremely important part of the diagnosis of DLSS. Dynamic MRI scanning in combination with CT is the best method for investigating DLSS. The MRI gives detailed information about the nerves and other soft tissue and the CT provides excellent 3D detail of the involved bones. Finally, linking the clinical signs to the advanced imaging is key in the diagnosis of DLSS.

What treatment options are available?

Medical management

As in people with lower back pain associated with a 'slipped disc', about 50% of dogs with DLSS can be successfully managed without surgery. One of the key factors is to modify exercise to avoid strenuous activities that involve jumping, climbing, twisting and turning. Initially a period of strict rest will be necessary followed by controlled exercise on the lead. Most affected animals will benefit from receiving pain relieving and anti-inflammatory medications. Especially long-term, physiotherapy can be very useful. In some cases, DLSS can be managed by injecting a long-acting steroid around the compressed spinal nerves. Often this injection needs to be repeated over time and this necessitates a general anaesthetic each time. We do not recommend hydrotherapy for dogs with DLSS.

Surgery

Some patients with DLSS require surgery in order to relieve pain, lameness and other problems such as incontinence. Different surgeries will be performed depending on the exact characteristics of the compression. Sometimes the goal is to remove part of the disc or make the narrow foramen larger or to stabilise the lumbosacral spine with the help of screws or pins that are secured with metal bars or cement.

What is the prognosis?

In medically managed pets, once signs have improved or have resolved, it is often possible to gradually increase exercise and reduce or stop medications. 'Lifestyle' changes may be necessary long-term e.g. reduce or modify activity. As in people, flare-ups are not uncommon, and these may necessitate further periods of medication and restricted exercise. In surgically treated pets, a few days of hospitalisation is typically needed for pain relief. These animals are often subsequently treated in the same way as medically managed pets with strict rest and pain relief. Most respond favourably following appropriate postoperative rehabilitation, although recurrence of symptoms can be a feature in some cases.