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For further assistance or to receive this information in a different format, please contact the department which created this leaflet.

PATIENT INFORMATION

Lumbar Spine

Stenosis

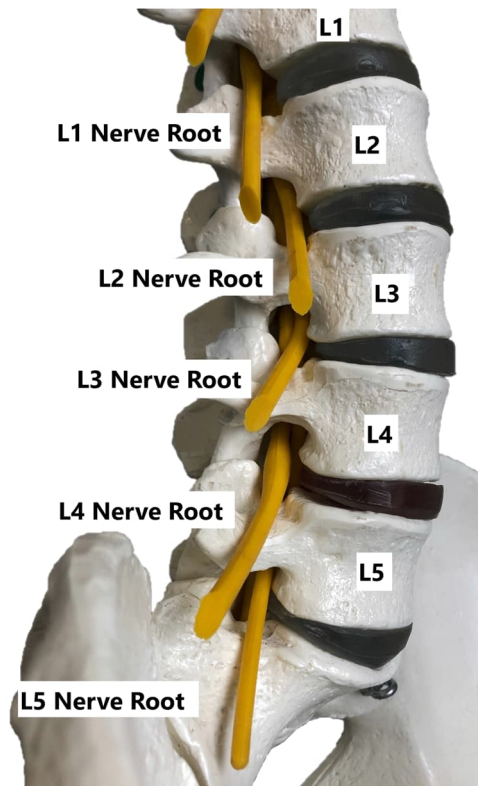


Working with you, for you

A Brief Lower Back Anatomy

The normal lower back (lumbar spine) has 5 bones (vertebrae) and a collection of nerves which branch out in pairs at each level. In between each vertebra there is a disc which acts as a shock absorber and spacer.

The spinal nerves are like electrical wiring, providing signals to areas within the leg. These control sensation and movement but can cause pain when they are affected.



References

Schulte, T. L. *et al.* Lumbar spinal stenosis. *Orthopade.* [German] 35, 675-692 (2006)

Johnsson, K. e., rosén, i. & Udén, A. The natural course of lumbar spinal stenosis. *Clin. Orthop. Relat. Res.* 279, 82-86 (1992).

Useful Websites

www.spinesurgeons.ac.uk

British Association of Spinal Surgeons including useful patient information for common spinal treatments

<https://www.nice.org.uk/guidance/ng59>

NICE Guidelines for assessment and management of low back pain and sciatica in over 16s

<http://videos.torbayandsouthdevon.nhs.uk/radiology>

Radiology TSDFT website

<https://www.torbayandsouthdevon.nhs.uk/services/pain-service/reconnect2life/>

Pain Service Website Reconnect2Life

Surgery

If decompressive surgery is likely to help improve your pain, then you will be put on a list for discussion at a multi-disciplinary team (MDT) meeting. In this meeting your case will be discussed with one of the Orthopaedic Spinal Surgeons from Royal Devon & Exeter Hospital.

In the case of stenosis, decompressive surgery is primarily used to alleviate leg pain. Surgery is not reliably used for improving symptoms of low back pain, numbness or pins and needles. It may help with preventing the progression of weakness.

Although surgery can improve certain symptoms, it can still carry significant risks, and you may wish to discuss this option in more detail.

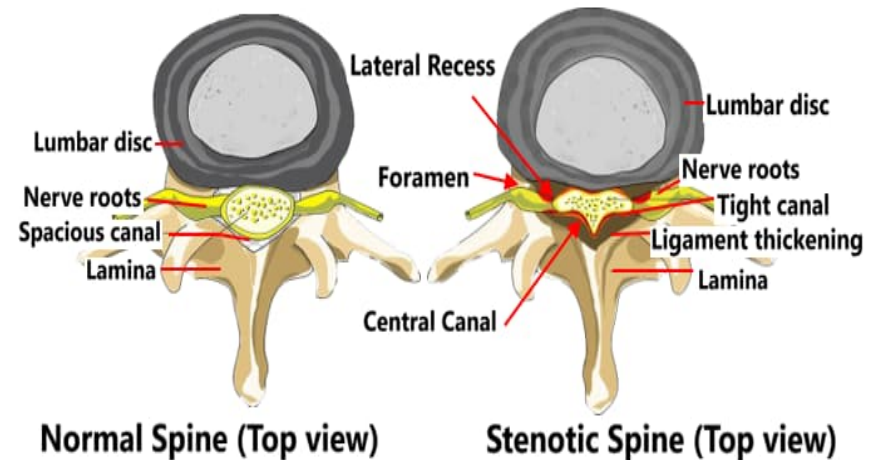
For further information on spinal decompression surgery please see the British Association of Spinal Surgeons (BASS) website: www.spinesurgeons.ac.uk

What is Stenosis?

Stenosis literally means 'narrowing'. There are 3 main types:

- **Central canal stenosis** (within the spinal canal)
- **Lateral recess stenosis** (where the nerve roots descend)
- **Foraminal stenosis** (where the nerves exit through spaces in the spine called 'foramen')

The pain in the affected leg can be also referred to as 'neurogenic claudication'.



What causes Stenosis?

Common age-related changes such as:

- thickening of ligaments
- bony/joint enlargement
- disc degenerative change

What are the main symptoms of stenosis?

Stenosis has a slightly different presentation to 'typical' sciatica. It normally develops with a slow, steady onset. It is often aggravated by standing upright and walking; then eased with sitting, lying down or bending forwards.

Common leg symptoms include:

- Pain
- Pins & needles
- Numbness
- Muscle Weakness

Nerve pain normally spreads below the knee in the affected limb. Back pain may or may not be present.

Lateral recess and foraminal stenosis symptoms are more likely to cause single leg symptoms. Canal stenosis may cause vague, global or widespread symptoms, sometimes in both legs.

How can this affect me?

You may have difficulty standing for any length of time and your walking distance may be limited due to pain. Queueing and window shopping can be affected. You may find yourself leaning on a trolley, bending forwards during shopping or stopping often to sit down during long walks.

You may also experience altered sensation and/or the feeling of your legs feeling weak or giving way. People often describe the sensation of their legs 'turning to jelly'.

Non-Surgical Treatment

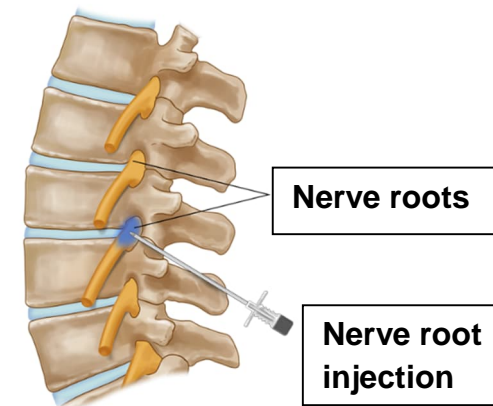
Injections are mainly done for diagnostic reasons in order to help the decision as to whether surgery would be beneficial and to confirm a target.

Nerve root injections or 'nerve root blocks' may be used to reduce pain in a particular area if you have singular lower limb pain. They are not beneficial for symptoms of weakness or altered sensation. The injection can reduce pain and inflammation around the nerve root. It may take some time to have an effect. However, these effects are likely to be temporary.

The injection consists of a corticosteroid and local anaesthetic. **You may be asked to lay on your front or side for the injection.**

For online videos and further information about MRI scans and targeted injections, please go to:

<http://videos.torbayandsouthdevon.nhs.uk/radiology>



Investigation

MRI is a type of scan which uses magnetic resonance imaging (MRI) to create detailed pictures of your spine.

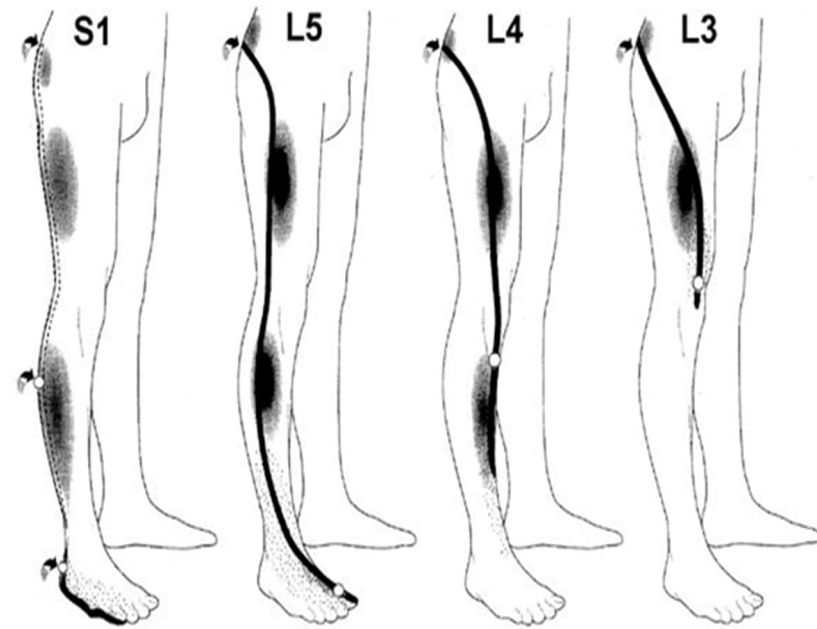
MRI scans are mainly used to confirm a clinical diagnosis such as pain arising from a nerve root. Once a level is identified which corresponds to your symptoms, this can help to guide treatment.

X rays and CT scans are not **routinely** used to investigate spinal conditions. They are primarily used in the presence of trauma or complex surgical planning.



MRI Scanner

Common Patterns of Spinal Nerve Leg Pain



Dark line = acute pain (in S1 leg pain this would be from the buttock, back of thigh, to the calf and heel)
Shaded area = aching pain
Dotted area = pins and needles or numbness

How is Stenosis Diagnosed?

A stenosis is diagnosed **predominantly** from **history taking** and the **signs and symptoms** you describe, alongside an examination which is likely to include:

- Observation
- Movements of the back
- Nerve tests including, sensation, reflexes and muscle power
- Nerve stretching tests
- Co-ordination and balance testing

It is common to have an entirely normal clinical examination with this diagnosis.



What is the outlook?

Spinal stenosis can be self-managed through the use of pacing, activity-modification and walking aids to improve distance and general activity.

If your pain is more severe, you can speak to your GP about specific nerve pain relief medication.

Studies suggest that over the course of 5 years approximately, 70% of patients with untreated stenosis will remain the same 15% can improve and 15% get slightly worse ^{1,2}.

Definitive treatment is likely to be a surgical approach to decompress the affected structures in the spine such as the nerve roots or the spinal cord. If symptoms significantly impact upon quality of life, this may be a choice you would wish to consider.

For further information, speak to your Physiotherapist or Specialist Spinal Orthopaedic Physiotherapist about your symptoms.