



Spinal Stenosis

Spinal stenosis is a term used to describe a narrowing of the spinal canal. The narrowing may not cause any symptoms. However, the narrowing may progress to cause squeezing (compression) of the spinal nerves. Spinal stenosis can cause back pain and/or leg pain. Most often it occurs when you walk. Weakness of the legs may make you feel unsteady. This may affect both legs or just one leg.

Spinal stenosis can often be treated by simple measures such as medicines for pain relief, keeping as active as you can and losing weight if you are overweight. Sometimes surgery is needed if simple measures are not successful.

Very occasionally, some patient's with spinal stenosis may develop Cauda Equina Syndrome. This is a very serious complication and if you develop any of the following warning signs, you must seek emergency medical help immediately.

You may not develop all of the following signs and they could develop in any order

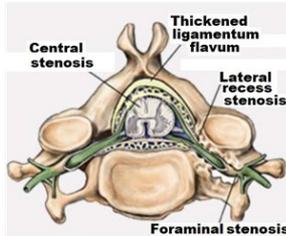
- Loss of feeling / pins and needles between your inner thighs or genitals or numbness in or around your back passage
- Altered sensation when wiping yourself with toilet paper
- Increasing difficulty when trying to urinate
- Increasing difficulty in stopping or controlling the flow of urine
- Loss of feeling when you urinate or empty your bowels
- Recent leaking of urine or needing to use pads
- Not knowing if your bladder is full or empty
- Inability to stop a bowel movement or leaking
- Recent changes in either sexual function or loss of sensation in genitals during sexual intercourse

If any of these warning signs develop following the onset of your back pain, you should attend your nearest Accident and Emergency Department.

If you suddenly develop leg weakness, a floppy foot or difficulty walking seek immediate medical assistance.

Understanding the back

The spine is made up of many bones called vertebrae. These are roughly circular and between each vertebra is a disc. The discs are made of strong rubber-like tissue which allows the spine to be fairly flexible. A disc has a stronger fibrous outer part and a softer middle part called the nucleus pulposus. The spinal cord, which contains the nerves that travel from the brain to the rest of the body, is protected by the spine. Nerves from the spinal cord exit the spine between the vertebrae to relay messages to and from various parts of the body.



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Spinal stenosis causes

Usually, as part of the normal ageing process, degenerative changes occur in the spine, especially in the lower back and neck.

Sometimes this causes partial compression (stenosis) of the nerve tunnel within the spine.

This is called central stenosis. Sometimes there is a constriction to the smaller side tunnels with the spine. This is called foraminal stenosis.

How common is spinal stenosis?

Spinal stenosis is common, especially in older people. However, it can also rarely affect younger people.

Spinal stenosis most often affects the lower (lumbar) spine. The next most commonly affected part of the spine is the cervical spine in the neck. Stenosis of the spine at the back of your chest (thoracic spine) is much less common.

Spinal stenosis symptoms

Spinal stenosis can cause back pain and leg pain. Most often it occurs when you walk. Weakness of the legs can develop and may make you feel unsteady. This may affect both legs or just one leg.

Usually spinal stenosis prevents you from walking beyond a certain distance. You then have to stop because of increasing pain and numbness in one or both of your legs. The symptoms can also occur when standing. Usually the symptoms reduce if you sit down or lean forwards. There is often no pain when you are resting.

Walking typically aggravates the leg symptoms more than the back pain, although this can vary. The back pain caused by spinal stenosis may or may not increase with walking.

What tests are used to diagnose spinal stenosis?

A clinical diagnosis of spinal stenosis may be made based on the history of the signs and symptoms you have experienced, along with physical assessment findings.

If your physiotherapist thinks that you may have spinal stenosis, and your walking distance has significantly reduced due to leg pain, or your normal daily routine has had to change significantly, then an MRI scan may be arranged to confirm the diagnosis.

What is the treatment for spinal stenosis?

How you can help to improve your own symptoms

- Exercises to help flex (bend) your spine can be helpful to relieve your leg pain.
- Maintain activity as much as you can. Try to gradually increase the distance you walk if you can. People often find they are able to cycle without an increase in their pain.
- Keep your legs and back strong with exercises advised by your physiotherapist
- Try and lose weight if you are overweight.
- Pain relief. Using over-the-counter medication such as paracetamol or ibuprofen may be sufficient. Other medicines prescribed by your doctor can be used if over-the-counter medicines do not provide enough pain relief. Some medicines can be used specifically to help the nerve pain in your legs - for example, amitriptyline, gabapentin or pregabalin.

Other available treatments

Surgery: if symptoms still do not improve then one option is surgery. The most commonly used operation is called a decompression.

The bone that is compressing the nerves is removed so that the nerves have more room. The two bones (vertebrae) may also be fused together (this is called spinal fusion).

There is very limited evidence for surgery to treat spinal stenosis. The success of surgery for spinal stenosis is variable. Although the symptoms may improve just after the operation, the medium-term and long-term results can be disappointing.

What is the outcome (prognosis)?

The outcome is very variable and, without treatment, the symptoms can worsen gradually. Although treatments for spinal stenosis are often effective at reducing symptoms, the symptoms don't usually completely resolve.

Because of this it is very important to keep as active as you can, strengthen your muscles around your legs and back and keep your weight at a healthy level to ensure the best possible outcome.

Exercises

You may find the following exercises useful to try, to help you manage your back and/or leg pain and keep your back and legs strong.

Exercises to flex (bend) your back

Try the following exercises which all help to flex your back, but in different positions. You do not need to do all of them. Try 2-3 that you think will be easier to do.

[Video](#)

Option 1



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Lying on your back with knees bent and arms by your side.

Tighten your stomach muscles and press the small of your back against the floor letting your bottom rise. Hold 5 secs. - relax.

Repeat 5 times.

[Video](#)

Option 2



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Lying with your knees bent and feet on the floor. Lift your knees towards your chest.

Place your hands behind both knees and draw them towards your chest. Hold 20 secs.

Repeat 5 times.

[Video](#)

Option 3



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Crawling position.

Arch your spine upwards while letting your head relax between your arms.

Repeat 5 times.

[Video](#)

Option 4



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Sit with your feet firmly on the floor.

Round your back and bend forward, keeping your neck and shoulders relaxed.

Repeat 5 times.

[Video](#)



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Option 5

Stand.

Round your back and bend forward, keeping your head and shoulders relaxed.

Repeat 3 - 5 times.

[Video](#)



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Option 6

Crawling position.

Let your arms slide along the floor as far as possible. Push your bottom back and down and the chest towards the floor. Breathe out while doing the exercise.

Hold 20-30 seconds

Strengthening exercises

[Video](#)



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Option 1

Stand behind a chair and support yourself with both hands.

Slowly bend your hips and knees, trying to push your bottom back. Your knees should be above your toes. Do not let your knees turn in or out during the movement.

Repeat 5 - 10 times.

[Video](#)



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Option 2

Sit with your hands on your waist.

Stand up by tightening your buttock muscles and then slowly sit down.

Repeat 5 - 10 times.

[Video](#)



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Option 3

Stand leaning with your back against a wall and your feet about 20 cm from the wall.

Slowly slide down the wall until your hips and knees are at right angles. Return to starting position.

Repeat 5 - 10 times.

[Video](#)



Option 4

Lying on your back with knees bent.

Squeeze your buttocks together and lift your bottom off the floor.
Return to starting position.

Repeat 5 - 10 times.

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Further reading & references

Information in this leaflet is based on: <https://patient.info/bones-joints-muscles/back-and-spine-pain/spinal-stenosis>

For further information

Please email ghnt.newcastlegatesheadtims@nhs.net, ring on **0191 2138800** or visit our website at: www.tims.nhs.uk which provides online guidance and support on managing your musculoskeletal (MSK) condition effectively.

The NHS website also provides trusted online information and guidance on all aspects of health and healthcare to help you manage your condition and/or inform your choices about your health: www.nhs.uk.

Useful links

The Patient Advice and Liaison Service (PALS) can offer on-the-spot advice and information about the NHS. You can contact them on freephone **0800 032 02 02** or e-mail northoftynepals@nhct.nhs.uk.



Tyneside Integrated Musculoskeletal Service

TIMS is a partnership between Newcastle upon Tyne Hospitals NHS Foundation Trust and Gateshead Health NHS Foundation Trust

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