

Lumbar spinal stenosis

What you're feeling

Lumbar spinal stenosis is a narrowing of the spaces in your lower spine. This narrowing presses on the nerves that travel down your legs. Symptoms usually creep up slowly, over months or years, rather than arriving suddenly.

The typical pattern is called neurogenic claudication. That means leg pain, numbness or weakness that starts when you walk or stand, and eases when you sit down or bend forward. Relief can take up to 20 minutes of rest. Many people notice they can walk further uphill than on flat ground, because leaning into the slope takes pressure off the nerves. The same reason explains a few everyday workarounds. Riding a bike is often easier than walking, because you lean forward. So is pushing a shopping trolley, which puts your spine in that same bent position.

It is worth knowing the difference between this and poor circulation in the legs, which can feel similar. Circulation problems usually cause pain in the upper calf, ease after about 5 minutes of standing still, and get worse walking uphill or on a stationary bike. Stenosis pain behaves the opposite way: it improves when you bend forward or sit.

Day to day, the limit is usually walking distance. You might find yourself stopping mid-shop, needing a seat at the shops, or planning your day around where you can rest. Standing in one spot, such as waiting in a queue, can be harder than walking. Symptoms may be worse after activity or after long periods on your feet.

Some people also have low back ache, and the pain and limitation can wear you down emotionally, particularly for women living with ongoing pain.

One more thing worth knowing: many people your age have narrowing visible on scans without any symptoms at all. More than 20% of people over 60 show signs of stenosis on MRI without feeling anything. So the scan picture and how you actually feel do not always match, and your symptoms are what guide treatment.

What's actually happening

Your spine has a tunnel running through its middle, and the nerves that travel down to your legs pass through it. In stenosis, that tunnel slowly gets crowded from several directions at once.

The trouble usually starts with the discs, the cushions between your vertebrae that work a bit like shock absorbers. As they wear out, they lose height, and that changes how the small joints behind them carry load. Those joints and nearby ligaments then thicken and stiffen, and the ligament down the back of the tunnel, which should stay soft and stretchy, becomes less pliable with age. All of that extra tissue takes up room the nerves used to have. The narrowing happens so slowly that the nerves usually adjust to it, which is why many people have few nerve symptoms even when the change is well advanced.

This crowding is most common at the two lowest moving segments of the spine, L3-L4 and L4-L5. Some people are also born with a narrower tunnel than others, and wear-and-tear arthritis of the spine is the most common cause overall.

The position of your spine changes how much room the nerves have. When you arch backwards, the tunnel narrows further and the thickened ligament buckles into it. When you bend forward, the tunnel opens up again. That is exactly why standing and walking bring your symptoms on, and why sitting or leaning forward, as you read about above, eases them.

The pressure and irritation inside the narrowed tunnel, along with reduced blood supply to the nerves, is what produces the leg pain and heaviness you feel. Where the nerve leaves the spine through a side channel, swelling within the nerve itself can add to the pain.

Left alone, the outlook is often steady rather than downhill. Symptoms improve in 30% to 50% of people, and around 15% get worse over time.

What we can do about it

For most people, we start with non-operative care. Rest helps, but only for up to 2 days. Pain relief with anti-inflammatory medicine or paracetamol can settle things down. A trunk-stabilising exercise program, the kind that strengthens the muscles supporting your spine, combined with good general fitness, is the core of conservative care. Structured education and exercise therapy can improve how you feel day to day. Physiotherapy and exercise may help control the walking-related leg symptoms in some people. We usually suggest giving this a fair trial, because waiting before surgery has not been shown to make surgery work any less well. Traction has no proven benefit here, so we do not rely on it.

Medication can help with flare-ups, though long-term benefit from drug treatment is limited. Cortisone injections into the space around the nerves can relieve leg pain for a limited time, but they do not change how well you function day to day, and no study has shown they work in the long term. Adding cortisone to a numbing injection in that space did not improve pain or function at 12 months compared with the numbing medicine alone.

Surgery comes into the picture when pain keeps building despite a genuine trial of conservative care, or when there is progressive weakness or problems with bowel and bladder control. The main operation is a decompression, which means removing bone and thickened tissue to give the nerves more room. Some people need a fusion as well, where the spine is stabilised if too much bone must be removed or if there is a slip, a curve, or instability already present. Scans on their own are never a reason to operate; your symptoms and how

much your life is limited are what count. We will talk through the options with you and decide together what suits your spine and your goals.

What to expect

For most people, spinal stenosis is managed well without surgery. An initial course of non-operative care is recommended for most people, and delaying surgery presents little danger for most individuals. Conservative management can control or prevent symptoms from getting worse. If you decide against surgery, you can expect your symptoms to persist rather than disappear.

If you do go ahead with surgery, the outlook is generally steady rather than dramatic. People with moderate stenosis who had decompression surgery had less pain and disability than those managed without surgery. This benefit also holds for people aged eighty or older. Surgical treatment provides value over the long term, and fusion combined with decompression sustained improvement in pain and function at mid-term follow-up. Adding fusion to decompression did not improve outcomes at 2 years for people with stenosis alone, so fusion is reserved for specific situations.

Recovery is not a straight line, and results vary between people. Some things work against a better result. Long-standing leg numbness before surgery is linked to poorer outcomes at 2 years. People with severe narrowing tend to fare less well than those with mild or moderate narrowing. The more previous spine operations you have had, the poorer the expected outcome. Other health conditions you live with also raise the chance of complications after surgery.

Surgery itself carries some risks worth knowing about. Decompression alone can sometimes lead to new spinal deformity or instability. Fusion that extends down to the sacrum, the bone at the base of the spine, takes longer, carries a higher complication rate, a higher revision rate, and a higher chance of the fusion not healing. Some people develop late-onset low back pain or leg pain years later and need further surgery. Your surgeon will talk through these risks with you before any decision is made.

If you also have hip or knee arthritis and go on to have a hip or knee replacement, stenosis does not change how well the new joint holds up, though your function and satisfaction may be a little lower than for someone without stenosis.

When to see someone

See your GP if leg pain, numbness or weakness keeps coming back when you walk or stand, and eases when you sit or lean forward. Ask for a specialist review if these symptoms are limiting how far you can walk or how you live your day to day life, or if they keep getting worse despite rest, exercise and pain relief. Go to an emergency department if you develop new weakness in your legs or feet, or new problems with bowel or bladder control, as these need urgent assessment. Also seek help promptly if pain becomes severe and constant, or if numbness spreads quickly down your legs. Bring a list of your symptoms and what makes them better or worse, as this pattern is often the most useful clue to the diagnosis.