BMJ Best Practice

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Spinal stenosis

Spinal stenosis is the narrowing of the holes that run through the centre of the bones in the spine. This narrowing can put pressure on the nerves that run through the spine, causing pain and problems with movement.

Spinal stenosis happens as we get older and our bones are less strong than they used to be. There is no cure, but there are treatments that can help with the symptoms.

You can use our information to talk with your doctor about the best treatments for you.

What is spinal stenosis?

The human spine (also called the **backbone** or **spinal column**) is not just one bone. It's a column of bones called **vertebrae**, which run from the neck down to the pelvis.

Each separate bone (or vertebra) has a hole running through it. Together these holes form a channel for a rope of **nerves** to pass through, a bit like a bundle of internet cables.

These nerves carry messages from the brain to other parts of the body, allowing us to move, and to feel sensations such as pain, heat, and cold.

Spinal stenosis can happen as we age. What happens is that:

- the bones in the spine get weaker
- normal downward pressure from the weight of our upper body causes the vertebrae to flatten
- this flattening makes the vertebrae wider, so that the holes that run through them get narrower
- this narrowing can put pressure on the nerves that run through the holes, causing **pain** in the lower back and the legs.

In people with spinal stenosis, symptoms usually start between the ages of 50 and 70 years. Other things that might make someone more likely to have spinal stenosis as they get older include:

smoking

- a previous back injury
- having had spine surgery
- a hormone problem called **acromegaly**, which causes excessive bone growth in childhood, and
- a type of dwarfism called **achondroplasia**.

It's hard to say how common spinal stenosis is. This is because back pain is common. And the symptoms are easily confused with those of other back problems, such as a **slipped disc** (the medical name is **disc herniation**).

What are the symptoms?

Not everyone with spinal stenosis will have all the same symptoms. But common symptoms can include:

- back pain, especially when being active or moving around
- leg pain when walking
- a stooped posture when walking
- numbness or partial loss of feeling in the legs. This loss of feeling is called paraesthesia
- pain that radiates down the leg.

If you see your doctor with symptoms like these, they will examine you and ask you very specific questions about your symptoms, to try to pinpoint what is causing them.

This is because small differences in symptoms can point to different causes. For example, people with spinal stenosis tend to have leg pain when walking, but not when cycling - because there is no downward pressure on the leg while cycling.

Your doctor might also suggest that you have a **scan**. This might not be able to show if you have spinal stenosis. But it can help to find or rule out other problems.

What treatments are available?

The aims of treatment for spinal stenosis are to:

- relieve your pain as much as possible
- · help you to walk and move around more easily
- make your spine as stable as possible, and
- treat or prevent any problems caused by pressure on the nerves in your spine, such as numbness or loss of feeling.

Temporary rest

The first treatment that your doctor might suggest is simply giving your back a rest for a few days, until your pain settles down.

Spinal stenosis

But this does **not** mean bed rest. Too much bed rest can make back problems worse. So your doctor will suggest that you take a break from movements that involve:

- bending
- lifting, and
- twisting.

Medications

Your doctor will probably also suggest that you start treatment with medications that help to reduce inflammation (swelling).

By reducing swelling in your spinal column, this helps reduce the pressure on your nerves that is causing your symptoms.

The first drugs your doctor will suggest will probably be **non-steroidal anti-inflammatory drugs (NSAIDs)**. You might have heard of some of these, such as ibuprofen and naproxen.

If these drugs don't help your symptoms enough, your doctor might suggest a course of stronger anti-inflammatories called **corticosteroids**. But these drugs can have serious side effects in some people, so your doctor will probably only prescribe them for a short time.

NSAIDs and corticosteroids can cause stomach problems. So your doctor should prescribe medication to protect your stomach, especially if you take both medications together.

If your symptoms are very severe, your doctor might suggest that you have a **shot** of corticosteroids near to your spine.

Things you can do for yourself

There are things you can do to help relieve your symptoms apart from taking medications. You can talk with your doctor about what might help you in particular. It might include things such as:

- changing the activities that you do where possible, to avoid the ones that cause you pain, and to get the most out of the ones you can do
- using physical aids, such as walkers
- having physical therapy. Your doctor might be able to help arrange this for you
- getting as much exercise as you can. You can talk to your doctor about what types of exercise are suitable for you
- seeking advice from a specialist, such as an osteopath. Your doctor can advise you about how this might help
- having massage and heat treatments, and
- a spinal brace or corset for a short time.

Surgery

Many people find that medications help to relieve their symptoms fairly quickly. But if you find that they don't help much, your doctor might suggest surgery.

This operation involves a surgeon widening the gaps that the nerves pass through, by removing excess tissue and bone.

Spine surgery is a major operation and, like all types of surgery, there are risks. For example:

- surgery for spinal stenosis is helpful for many people, but some people find that it doesn't make much difference. For some people, surgery can actually make their symptoms worse
- this type of operation tends to be more helpful for people whose main symptom is leg pain rather than back pain
- the benefits of this type of surgery don't last forever. Most people find that their symptoms start to get worse again about four years after surgery, and that after eight years they are the same as before they had surgery.

Your doctor should discuss all the possible pros and cons of surgery with you. They might also give you some material to read, or direct you to online video information, to help you decide whether surgery is the right option for you.

What to expect in the future

Many people find that their symptoms improve with medication. If you're doing well it's still a good idea to see your doctor once or twice a year, just so they can make sure you're getting the best possible treatment.

If you're not doing as well as you hoped, you might want to talk to your doctor about surgery.

Whatever treatment you have, it's important to remember that spinal stenosis is a complaint that comes with getting older. This means that it's not going to go away completely, even if treatments help.

But you can help yourself by keeping as mobile as possible. Exercising and being as active as you can help to stop your bones and muscles from weakening further.

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