

Patient information from BMJ

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Spinal cord compression: what are the treatment options?

Spinal cord compression happens when there is too much pressure on the bundle of nerves in the middle of your spine (backbone). This pressure can build up over time because of a long-term condition, or it can happen suddenly, usually because of an injury.

The pressure can sometimes be relieved with treatment. But often there is more serious, permanent damage, which can affect your ability to do many things, including walking.

What treatments work?

The spinal cord is a long bundle of nerve fibers that connect the brain to other parts of the body. It sits in a fluid-filled sac, and runs through the middle of the bones in your spine (the vertebrae). The bones help protect the delicate nerve fibers.

Spinal cord compression happens when pressure on the nerves stops them from working properly or stops blood from getting to the nerves.

This damage can be sudden (what doctors call **acute**) or can happen gradually because of a long-term condition (doctors call long-term conditions **chronic**).

For more background information, see our leaflet: *Spinal cord compression: what is it?*

The aims of treatment for spinal cord compression are to:

- prevent the damage to your spinal cord from getting worse
- relieve pain and other symptoms, and
- help you to be able to move as much as possible.

If you have severe symptoms you should ideally be treated at a specialist trauma center with staff who are experienced in treating spinal cord compression.

Treatments for acute (sudden) spinal cord compression

The main treatment for spinal cord compression is surgery to relieve the pressure on the nerves, restore the blood flow, and repair any damaged tissue.

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Successful surgery can relieve pressure on the nerves in the spinal column so that they can work properly again. But sometimes the nerves have been too badly damaged to recover.

In some people this means that they do not recover some of their movement: for example, some people might have numbness or weakness in some limbs, or not be able to move some or all of their limbs. Some people are paralyzed, either below the waist, or from the neck down.

Whether you need surgery or not, you will probably need some medications. These might include medications to:

- reduce swelling around the spinal cord, and
- increase your blood pressure if it has fallen too low. This can happen in people with spinal cord compression.

Many people need to have a soft plastic tube called a catheter inserted to help them empty their bladder.

If your symptoms are caused by **cauda equina** you will need to have surgery on your lower back to reduce the pressure on your spinal column. If your symptoms affect your bladder, it's a sign of a serious injury, and you will need to have surgery as soon as possible.

If the pressure on your spinal column is caused by an **abscess** (an infection) on the spine, you will need surgery to drain the abscess. This should relieve the pressure on the nerves in your spine. You will then need to take antibiotics for several months to make sure the infection is gone.

Treatment for a **tumor** on the spine is usually aimed at making you as comfortable as possible. It is not usually possible to cure the cancer that caused the tumor.

This is because tumors on the spine tend to be caused by another type of cancer that has spread to the spine. At this point, the cancer has probably spread to the point where it cannot be cured.

You might still be able to have surgery to remove the tumor on your spine, and medications to reduce swelling. Some people can also have radiation therapy to help kill the cancer cells.

What will happen?

The damage from spinal cord compression varies a great deal:

- In some people, the pressure on the nerves can be relieved with no lasting effects.
- Other people have symptoms that come and go. They might need to do special rehabilitation exercises and avoid some activities, but they don't need surgery.
- Some people have badly damaged nerves that can't be repaired, leaving them with long-term problems ranging from numbness to paralysis.

The outlook often depends on what caused the injury to your spine.

And it's not always possible for doctors to give a clear answer right away about how much someone might recover. It can take time to understand the extent of the damage, and how much someone is likely to improve.

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Many people will need to do rehabilitation, possibly for the rest of their lives. This will probably involve stretching and muscle exercises. Your doctor or physical therapist will help you to learn an exercise program that is right for you.

For some people, serious spinal nerve damage means that they can't go to the bathroom in the way they used to. So they need to learn how to use things like catheters and special bags that collect urine and feces.

If you need this type of help, your medical team will help you to learn how to use the techniques and equipment you need.

A serious spinal injury is life changing. And it can be hugely difficult to deal with emotionally - especially without help.

Your medical team will, of course, be very supportive. But your doctor should also be able to arrange for you to speak to someone about how you feel, and about coping with the changes in your life.

He or she might also be able to help you find a group of people with similar experiences in your area or online. For example several charities offer counseling and practical support for people with serious spinal injuries.

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