Royal Devon and Exeter NHS
NHS Foundation Trust

Patient Information

Lumbar Spine Segmental Decompression

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Introduction

You have been scheduled for an operation called a segmental decompression. This is a procedure that is performed in the low back with the aim of improving the space for the nerves (nerve roots) within the lumbar spine. The aim of the surgery is to improve leg pain caused by a reduction in the space for the nerves at the bottom part of the back - a condition known as spinal stenosis.

Reason for surgery

Usually, patients undergoing this operation have severe leg pain affecting one or both legs and it will be significantly interfering with your ability to walk. This is not an operation for the relief of back pain although some patients do find that their back pain is improved after this operation. The operation is usually reserved for patients who have severe symptoms that are markedly reducing their walking ability to perhaps less than 200 yards. On occasions, patients may have weakness in the leg muscles and this would be another reason for consideration of surgery. However, please remember many patients have some reduction in their walking tolerance because of leg pain and do not require an operation.

What happens

The nerves in the base of the spine sit in a tube called the spinal canal (see arrow in figure 1).

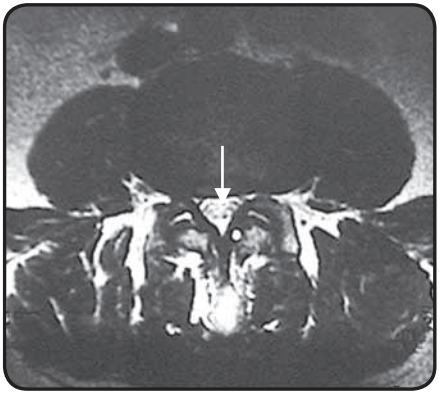
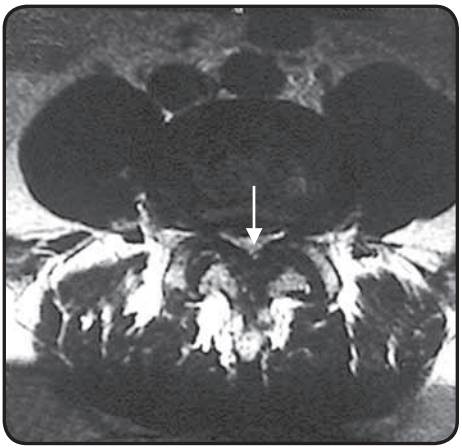


Figure 1



In spinal stenosis, this space becomes narrowed and as a result, there is less space for the nerves (see arrow in figure 2).

Figure 2

The operation enlarges the space for the nerves. The condition often affects more than one segmental level (joint) of the spine. The surgery may therefore be done at several levels of the spine.

Segmental decompression with fusion

On occasions, some patients need to have a spinal fusion procedure performed at the time of their segmental decompression. This is at the discretion of the surgeon if he feels that improving the space for the nerves could lessen the structural stability of the low back. He may therefore choose to combine your operation with a fusion so as to ensure the strength of your back is not adversely affected. For further information re fusion please see fusion pamphlet.

Rewards of surgery

Unfortunately, no operation is guaranteed to relieve you of your symptoms. It is however broadly accepted that approximately 70% of patients who undergo this operation have significant improvement in their leg pain and improvement in walking ability. Pain is the main symptom that one can predictably improve.

If you suffer from tingling in the legs, this may be improved. Symptoms such as numbness, weakness and heaviness are far less predictable and may or may not improve as a result of this operation.

Risks of surgery

All operations come with some small degree of risk. Risks of the segmental decompression operation include:

The risks of a general anaesthetic

General anaesthetics have some risks, which may be increased if you have chronic medical conditions, but in general they are as follows:

- **Common temporary side-effects** (risk of 1 in 10 to 1 in 100) include bruising or pain in the area of injections, blurred vision and sickness. These can usually be treated and pass off quickly.
- **Infrequent complications** (risk of 1 in 100 to 1 in 10,000) include temporary breathing difficulties, muscle pains, headaches, damage to teeth, lip or tongue, sore throat and temporary problems with speaking.
- **Extremely rare and serious complications** (risk of less than 1 in 10,000). These include severe allergic reactions and death, brain damage, kidney and liver failure, lung damage, permanent nerve or blood vessel damage, eye injury, and damage to the voice box. These are very rare and may depend on whether you have other serious medical conditions.

Wound infection

Superficial wound infection can usually be successfully treated with anti-biotics. Deep wound infection is rare. Usually, this will be treated with anti-biotics. If this treatment fails, further surgery may be required to clean away any infected material.

Blood clots

Deep vein thrombosis is a possible problem, but is uncommon. If you are at particular risk then special precautions will be taken to reduce the risk. Moving your legs and feet as soon as you can after the operation and walking about early, all help to stop thrombosis occurring. A blood clot in the leg, which in very rare circumstances could pass to the chest is life threatening.

Nerve injury

During surgery, the nerve has to be moved to one side and this sometimes can result in the patients reporting more tingling in the leg, more numbness in the leg or in rare circumstances, weakness in the leg. These are usually temporary problems that should resolve. Patients are often extremely concerned that they could end up paralysed after surgery on the spine. This is an extremely rare event but cannot be 100% guaranteed against. This includes the potential to permanently and irreversibly damage the nerves that control the strength and sensation in the legs and also that control your bladder, bowel and sexual function.

Nerve coating

There is a small risk of injury to the protective coating around the nerves, which may require repairing at the time of injury, and does not usually result in any long-term problems although it may delay

your initial recovery. Persistent leakage of the fluid (CSF) around the nerves can occur. If this happens, it may require further surgery.

Risks in the elderly

Patients undergoing this operation are usually elderly and in particular if they have other medical problems, the risks of an operation may be slightly higher.

Other risks

- Failure of symptoms to resolve despite technically successful surgery.
- A small risk of worsening of symptoms.

Recurrent stenosis

As the underlying cause of the spinal canal narrowing is a wear and tear process, there is potential for recurrence of the same problem at the operated level or at the other levels of the spine. Usually this will not occur for many years after surgery.

Recovery

You will usually be in hospital for 1 or 2 days. You will be up and walking approximately 24 hours after the operation although this will depend on how you feel at that time. Provided you were able to walk before the operation, then there should be no difficulties in your walking afterwards. Some patients with severe spinal stenosis have great difficultly walking before their surgery and thus their post-operative recovery period may be longer. If decompression surgery is performed at multiple levels of the spine, your hospital stay may be slightly longer.

We would normally anticipate you going home in a car but being driven by a family member or friend. We would recommend a shower rather than a bath for the first 4 weeks after surgery. After this time, we would expect a gradual return to normal activity. Your sex life can resume 4 weeks after surgery.

Return to driving

A return to driving depends upon different factors including comfort, that you have come off painkillers that have a sedative effect, and that you have good control of the muscles in your legs.

Summary

Patients undergoing segmental decompression usually have a diagnosis of spinal stenosis. This results in pains in the legs when walking – when other causes have been excluded. Many people have this condition and are unaware of it. Many people have this condition and have no symptoms. In some cases however, patients have severe leg pain on walking and are unable to function normally because of this.

If the MRI scan appearances of your lower back confirm severe spinal stenosis, you may be suitable for an operation to improve the space of the nerves with the aim of relieving your leg pain. With the vast majority of people this is a successful procedure. There are some small but significant risks that are possible. A joint decision must be taken between you and your surgeon to see whether an operation is indicated in your case.

This information can be offered in other formats on request, including a language other than English and Braille.

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