

Mr Paul S. D'Urso

MBBS(Hons), PhD, FRACS

Neurosurgeon

Provider N°: 081161DY

Epworth Centre
Suite 6.1 32 Erin Street
Richmond 3121
Tel: 03 9421 5844
Fax: 03 9421 4186
AH: 03 9483 4040
eMail: paul@pauldurso.com
Web: www.pauldurso.com

Laminectomy for lumbar canal stenosis

What is lumbar canal stenosis?

Lumbar canal stenosis is a condition in which the channel running through the lower part of the spine (lumbar canal) becomes excessively narrowed (stenosis). This is mainly due to degenerative wear-and-tear over many years, causing a thickening of the various bones, joints and ligaments that form the spinal canal. Degenerative changes are normal in adult life, but they are more likely to cause the symptoms of lumbar canal stenosis in a person who inherits a smaller than average canal at birth.

The narrowing usually affects one or two vertebrae, and on occasions can involve up to five "levels" in the lumbar spine.

What are the symptoms of lumbar canal stenosis?

The usual symptoms are a combination of back pain and symptoms in the legs. The symptoms in the legs denote pressure on the spinal nerves as they pass through the point(s) of narrowing in the lumbar spine. Either sciatica (sharp pains shooting down the back of one or both legs), or claudication (heavy dull aching with pins and needles in the feet and legs brought on by standing or walking) are the symptoms usually experienced in the legs with this complaint. The diagnosis is often made with CT scans of the lumbar spine. Where these suggest the diagnosis but are not entirely conclusive, either an MRI scan or a myelogram will clarify the diagnosis.

What is an MRI scan?

This is a simple and safe test, similar in many ways to a CT scan. The scans are produced using a technique known as magnetic resonance imaging, and no radiation is involved. There is no need for admission to hospital. People with heart pacemakers cannot have the test. There is usually no need for any injections, but people prone to claustrophobia may find the examination somewhat stressful, and should report any anxiety at the time of the test.

What is a myelogram?

This is an X-ray examination done in hospital, usually involving an overnight stay. A radiologist (specialist doctor) injects a small quantity of dye into the spinal fluid of the lower back, after which x-rays and CT scans are performed. The dye outlines the spinal canal, clearly revealing any areas of stenosis (narrowing). It is usually a simple and safe test, but on occasions it can be difficult to pass the needle through the degenerative spine, and headaches occur after the test in about 20% of people. The headaches can be severe, though they are rarely dangerous and usually pass in a day or two.

Why do I need surgery?

The main reasons for recommending surgery are to relieve the symptoms in the legs and to preserve the ability to walk. It is not customary to perform a laminectomy for the relief of back pain. In other words, surgery is performed on the back but is for the legs.

What is actually done in the operation?

A laminectomy is a spinal operation in which the spinal canal is opened. Because the laminectomy is done at those points where narrowing has been identified, the opening of the spinal canal will automatically relieve the pressure caused by the narrowing. Except in unusual and particular circumstances, laminectomy does not weaken the structural stability of the spine. The surgery is performed using a variety of fine tools, but much of the job is nowadays performed with a very sophisticated and delicate drill, where the bone is gradually whittled away bit by bit. The average operation takes about 2 hours. If more levels than usual are involved, or if the patient is large, then the time taken is longer.

What about risks and complications?

The risk of serious complications is low and the risk of death is remote. The risk of less serious complications is somewhat higher. Complications are of two types, general and specific. General complications are those that can occur with any operation, while specific complications are those relating to laminectomy for lumbar canal stenosis.

General complications are in general related to age and to underlying disease. A person aged 75 years with diabetes and a history of heart attack is at greater risk of complications than a 40 year old with perfect health. General complications include stroke, heart attack, bleeding in the wound postoperatively, blood clots in the legs (which can travel to the lungs or heart) and infection. Specific complications include damage to one or more of the nerves travelling through the spinal canal. This could cause permanent numbness or weakness in the legs or feet (or to some part of one or other leg), and on rare occasions could affect control of bladder or bowel.

Serious complications are rare. You should not be unduly concerned with the risk of serious complications. However, failure of the surgery to meet expectations (without anything going wrong) is a more likely possibility. This means that despite the best efforts of the patient and the surgeon, the symptoms do not respond to surgery, as one would normally expect. This is very disappointing but does occur in up to 10 percent of cases. Reasons for this are not always obvious.

How long will I be in hospital?

If a myelogram is needed, the usual stay would be about 10 days. If no myelogram is required, then allow about 8 days.

What can I expect after the operation?

There will be some pain in the area of the wound itself, as well as some shooting pains in the legs in the first few days. There will be an intravenous drip inserted during the operation, and through this strong pain relief will be given for the first 48 hours or so. After that, tablets will be used, along with occasional injections as required. It will be difficult to roll over in bed for the first few days, and during this time you will depend heavily on the nursing staff. The first standing out of bed usually occurs 24 hours after surgery, though can be attempted sooner. After a few days, most people are able to get in and out of bed

unassisted and to take walks around the ward quite comfortably. Bowel actions usually do not occur until the fourth or fifth day after surgery - this is quite normal and should not cause any concern.

Will I need physiotherapy?

Most patients are seen by a physiotherapist during their stay in hospital, mainly to ensure that the simple movements like getting out of bed are done correctly. There is usually no physiotherapy during the first six weeks or so after discharge from hospital, and only a minority of people will need on-going physiotherapy after that.

What about when I get home?

The most important aspect of the first six weeks after surgery is rest. Just as concrete needs time to dry and harden, so too does the wound need time to heal, internally as well as externally. This takes at least six weeks. Undue bending and lifting during this time must be avoided. Sitting should be minimised to essentials, such as toilet and eating. Driving is generally considered inadvisable in the early weeks, even as a passenger. The best plan is to schedule two good walks of about 15 mins each per day, and to spend most of the remaining time resting. Swimming is an excellent exercise after spinal surgery, but should not begin until after you have attended your General Practitioner. Your first review appointment is usually six weeks after surgery.

It is hard to predict how long it will take for recovery to be completed. In most cases, the symptoms due to the stenosis will have eased within six weeks, but you should not regard this as a deadline - some people take much longer than this to get benefit from surgery.

Will I need rehabilitation?

Not every one needs formal rehabilitation. However, if there are going to be problems coping alone at home, for example, then a week or two in a rehabilitation hospital can be time very well spent. Also, if there is significant incapacity prior to surgery, or there are complicating medical factors that may slow the recovery process, then rehabilitation is advisable. Most people over 70 years of age would need some rehabilitation in hospital. Most people under 60 years can go straight to their own homes.

If your back problem is the result of an injury at work, then you will require a rehabilitation program. The type of program needed will depend on the nature of your work, the size of the workplace, the duration of symptoms and on the details of the surgery itself.

Rehabilitation may involve input from a number of sources, such as your family doctor, your employer or rehabilitation service providers, whether they be as an inpatient or outpatient.



Paul D'Urso
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