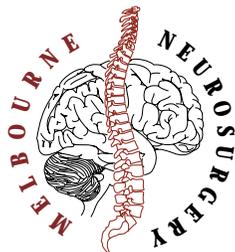


INFORMATION LEAFLET

LUMBAR CANAL STENOSIS



THE LUMBAR SPINE

The LUMBAR spine (the bones and discs of the low back) is made up of vertebrae and discs. The vertebrae are the blocks of bone that make up the spine, discs act as cushions between them. The vertebra has a ring of bone on the back that is made from the lamina and the pedicle. When all the vertebrae are stacked on top of one another these rings line up to form a tube (CANAL). This contains all the nerves that go to the legs.

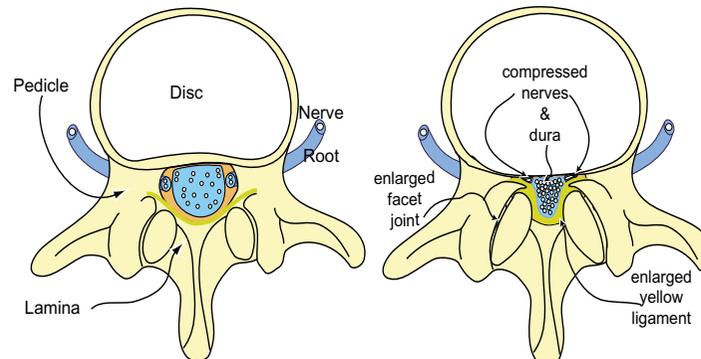
WHAT HAPPENS TO CAUSE STENOSIS

As your spine gets older it starts to degenerate. The discs start to lose height as the material in them dries out and shrinks. They then bulge out the back into the canal. With the degeneration of the discs the stability between the vertebrae starts to decrease. This causes strain on little joints on the back of the spine called FACET JOINTS. The body attempts to reduce the instability by trying to fuse around the bad disc.

It does this by;

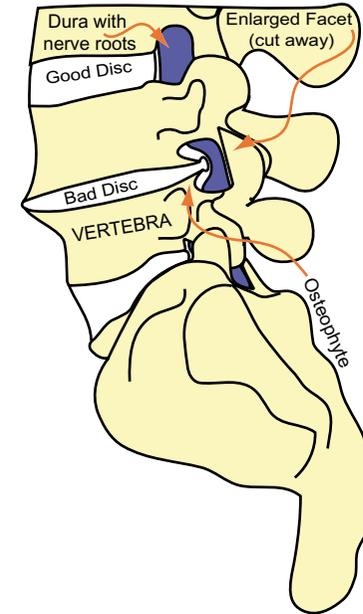
- (i) the vertebrae trying to grow bone around the disc, this forms a spur(osteophyte),
- (ii) the facet joints enlarge and the edges try to fuse together.

The osteophyte, the bulging disc and the enlarged facets all encroach into the canal to narrow it and hence producing stenosis.



NORMAL CROSS SECTION

LUMBAR CANAL STENOSIS



SPINE
SIDE VIEW

It shows the osteophyte and a disc bulge pushing into the dura (the dura is a sheath around the nerves from the spinal cord)

HOW CAN THIS AFFECT YOU ?

There are three types of symptoms.

Low Back Pain

This is non specific and is usually more a part of the degenerative process that is going on. The instability from the degenerative disc probably contributes to this.

Sciatica

There is compression of the nerves in the back that normally travel down to the leg. This may produce pain along the length of the nerve in the leg. The nerve in the leg is the sciatic nerve and hence the term sciatica for the pain.

Claudication.

This occurs usually when you walk but can occur with sitting for long periods. This is when your legs become heavy or weak and your feet start to go numb. Sometimes you get cramps in your calves.

HOW IS THIS DIAGNOSED ?

Your doctor will usually make the diagnosis from the symptoms that you have. There can be similar symptoms with a blockage in the arteries in the legs and that is often excluded with studies of your arteries.

When the possibility is raised that you have Lumbar Canal Stenosis then you will need to have some tests.

PLAIN X-RAYS

These are often the first test. These show that the discs have lost height, that there may be spurs (osteophytes) and that the spine may no longer be straight. It might show that one of your Vertebrae is slipping off another (spondylo - listhesis).

CAT SCAN

This is usually next. This is a computerised X ray of your back that will show how much the diameter of the canal is reduced and how far out the discs are.

M.R.I. (Magnetic Resonance Imaging)

This is the next test. It produces pictures like the CAT scan but they are generated using a magnetic field and not using radiation. This test is not always needed if the CAT scan shows the problem.

LUMBAR CT MYELOGRAM

This is an older test that involves the injection of contrast into the fluid (C.S.F) around the lumbar nerves and this is followed by a CAT scan. The contrast makes it easier to see what is going on. This is sometimes used if the M.R.I. is of poor quality or if you cannot have an M.R.I.

You are referred to a specialist after the CAT scan in most cases and they organise any further investigations.

The common specialists to be referred to are:

- Neurosurgeons
- Neurologists
- Orthopaedic Surgeons
- Rheumatologists

HOW IS THIS TREATED ?

This depends on:

- How bad your symptoms are
- What type of symptoms you have
- What the specialist finds when he examines you
- How bad the investigations show your spine to be

How bad your symptoms are

If your symptoms are not too bad and there is nothing to find when you are examined to show serious damage then your specialist may recommend physiotherapy, some anti-inflammatories and some gentle exercise in the hope that you will get better on your own.

What type of symptoms you have

If you have sciatica and nothing to find on examination then the above will also be tried. Back pain is unlikely to be helped with surgery.

What the specialist finds when he examines you

If there is evidence on examination of some damage to the nerves to the legs then it will depend on how bad this is as to whether you may be offered an operation.

How bad the investigations show your spine to be

Sometimes the spine is so bad that surgery may actually make things worse and this might be advised against.

IS SURGERY ALWAYS NEEDED ?

No

It is important to remember that some of the symptoms such as sciatica may improve but that the symptoms of claudication are less likely to improve and that they will usually progress.

Sometimes the Spinal Stenosis can get so severe as to completely stop the function in all the nerves in the canal. This produces loss of power in the legs with complete numbness and the loss of function of the bowel and bladder (Cauda Equina Syndrome). This is an emergency and you must go to Hospital immediately because the longer it is like this the less the chance of it getting better with surgery.

IF YOU NEED SURGERY WHAT WILL IT BE ?

THERE ARE THREE TYPES OF OPERATION

The surgeon decides and it depends on many factors

LUMBAR LAMINECTOMY

This is the removal of one or more complete lamina

LUMBAR MICROLAMINECTOMY

This is the partial removal of one or more lamina

LUMBAR FUSION

This is combined with a laminectomy and usually is because there is an abnormality of the facets so that partial removal of these when the laminectomy is performed will cause the back to fail. A spondylolisthesis usually requires a fusion.

FOR ABOVE PROCEDURES SEE THE RELEVANT PROCEDURE LEAFLET

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