The Royal Wolverhampton
NHS Trust

Lumbar Spinal Decompression

Orthopaedics

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

- **Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available**
- **If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111**
- **Keep the environment clean and tidy**
- **Let's work together to keep infections out of our hospitals and care homes.**

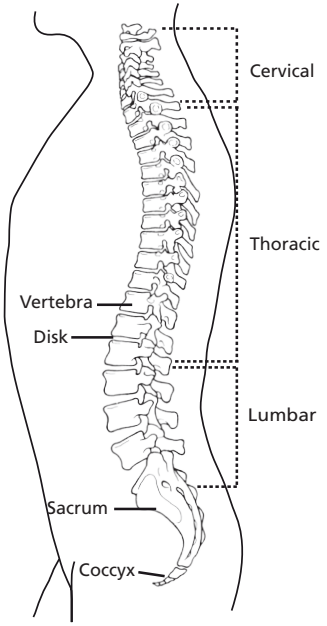
The purpose of this leaflet

This leaflet is for patients who are considering elective Lumbar Spinal Decompression surgery.

Before you agree to any treatment it is advisable to obtain information about your condition. This means knowing what the problem is, the treatments available, the risks and any alternatives. This leaflet should help you to make a decision alongside discussion with your Doctor. Do mention any particular worries that you have and ask for more information at any time.

What is the spine?

The spine is also known as the back bone. It is made up of a number of bones called vertebrae. Between each vertebra is a disc. The disc acts as a shock absorber to let the spine bend and twist easily. The spinal cord is a large nerve which runs through the spine; through the spinal canal. It relays nerve impulses [messages] from the brain to all parts of the body.



Side view of the spine

What is the problem?

You have a problem called spinal stenosis. This is a condition where the spinal canal, through which the nerves run, has narrowed. Spinal stenosis can occur in one part (or level) in the spine. It can also occur in more than one level at the same time.

What causes spinal stenosis?

It is usually caused by wear and tear changes in the lower back which cause the ligaments and joints to thicken. The nerves then become irritated leading to symptoms such as pain, heaviness, numbness, tingling and weakness in the leg/s. These symptoms are usually worse when standing or walking. In some people the symptoms are intermittent [can come and go] but in others the symptoms can get worse over time.

What is a Lumbar Spinal Decompression?

This operation is performed on the lumbar (or lower part of the spine). More room for the nerves is made by removing the excess ligament or bone that is pressing on the nerves. This operation is also known as a Laminectomy or Nerve Root Decompression.

Consent

We must seek your consent for any procedure or treatment beforehand. Your doctor will explain the risks, benefits, and alternatives where relevant before they ask for your consent. If you are unsure about any aspect of the procedure or treatment proposed, please do not hesitate to ask for more information.

What are the benefits of having this surgery?

The operation should relieve the pain, heaviness and weakness that you have in your leg/s. Lumbar decompression for stenosis has an 80-90% chance of success[1]. A small proportion of people notice an improvement in their symptoms soon after the operation. In general, most people notice an improvement gradually over many months.

However, please be aware that this operation is not performed to treat low back pain.

What are the alternatives to surgery?

- If your symptoms are not severe you could be referred to a Physiotherapist who can teach you exercises to help manage your pain
- Pain killers and anti-inflammatory drugs can help the pain
- Your Doctor may offer you an injection into your back. This injection is usually a mixture of anti-inflammatories and steroids and can help to relieve pain

What are the risks of surgery?

Continuing symptoms
It is possible that your symptoms may not improve; you may still feel continued pain or numbness[2].

New symptoms
In a small minority of patients the nerve roots can be damaged during surgery. This can lead to new lower limb pain, numbness, tingling and weakness which was not present before the operation. However, such damage to the nerve that is being decompressed is less than 1%[3].

Infection
Infection can occur including abscess formation. This occurs in around 1% of all decompressions[4]. This may require treatment with antibiotics.

Infection control is taken very seriously in hospital. All staff, patients and visitors are encouraged to wash their hands frequently. Hand wash gels are available on the wards for this purpose; please encourage anyone visiting you or staff making direct contact with you to wash their hands or use the hand gel.

Dural Leak
There is a chance of injury to the covering of the nerves during surgery. This is called Dural Leak and happens in up to five per 100 operations. It is not dangerous in itself but it does mean that you have to lie flat in bed for about three days after your operation until the leak seals and is watertight. You will therefore be in hospital longer if this occurs.

Nerve scars
After the operation scar tissue develops around the nerves and can cause symptoms of pain, heaviness, numbness, tingling and weakness in the leg/s. The risk of this happening is around 5 in 100.

Further stenosis / operations
Stenosis can re-occur at the same level or can develop in other parts of the spine. This can again lead to symptoms of pain, heaviness, numbness, tingling or weakness in the leg/s .The risk of this happening is around 5 in 100. Occasionally, potential instability of the spine can occur as a result of bone or ligament removal, requiring consideration of a further operation to stabilise the spine with metal screws / rods.

Damage to the nerves supplying the bladder, bowel or lower limb paralysis
This is rare. Around 1 per 1000 operations can cause permanent damage to the nerves supplying the bladder and bowel or paralysis of the lower limbs.

Heart attack, stroke or chest infection
Any major operation puts a strain on your heart, brain, lungs and immune system. A small number of patients can have a serious problem such as a heart attack, stroke or chest infection soon afterwards. This is more likely to happen if you already have heart or lung problems. Less than 1 in 200 patients will have life threatening events such as anaesthetic problems, blood infections or heart attacks[4].

A blood clot or thrombosis
You have around a 1 in 100 chance of developing a blood clot in one of the veins in your legs following surgery. This is called a Deep Vein Thrombosis (DVT). Occasionally the clot can then pass into the lungs and block the circulation.

This is called a Pulmonary Embolism (PE). This can be fatal in less than 1 in 500 patients[4].

In order to reduce the likelihood of these clots developing you may be given injections to help keep your blood thin and also be supplied with foot pumps to improve circulation.

Complications due to positioning during the operation

These might include pressure problems, skin and nerve injuries. Eye complications including blindness is a very rare complication from being positioned prone (face down) during surgery. Special gel mattresses and operating tables are used to minimise these risks.

How do I decide which treatment is best for me?

The choice about which treatment is best for you will be made together with your Doctor. This will be based on the risks and benefits of the treatment and your individual circumstances.

What would happen if I decided not to have any treatment?

If you do not have an operation your pain is likely to continue and may get worse over time. If you have weakness or numbness this may also get worse.

What happens if I decide to have the operation?

You will be asked to attend the pre-assessment clinic to check your general health prior to your operation. You will be given information about coming into hospital.

What should I do before the operation?

- If you smoke, try to stop smoking prior to your admission to hospital. There is no smoking in the hospital buildings and grounds
- All herbal or complementary remedies to be stopped two weeks before your operation. St John's wort must be stopped three weeks before your operation
- For 72 hours prior to your admission, avoid alcoholic drinks and drink 3 – 4 litres of non-alcoholic drinks every day, for example, water
- Fasting instructions will be on the admission letter. Nothing to eat or drink includes water, sweets, chocolate and chewing gum. You need to follow these instructions or you will not be able to have your operation as planned

- You are admitted on the day of your operation. Please have a bath or shower in the morning. Do not apply make-up, nail varnish, creams or deodorant

What will happen before the operation?

- You will receive a letter with the details of your admission
- You will see a doctor on the ward. They will explain the operation and ask you to confirm the sign on the consent form for your operation
- You will see the anaesthetist who will explain the anaesthetic and post-operative pain relief. You can ask any questions you may have. The operation is carried out under general anaesthetic
- You will be given your anaesthetic in the anaesthetic room

What happens during the operation?

This operation is done under general anaesthetic. This means that you will be given drugs to keep you asleep during the surgery.

Once asleep you might have a urinary catheter placed into your bladder. This is a thin, flexible tube which drains urine out of your bladder.

A cut which is several inches long is made in your lower back. The length of the incision depends on how many levels of the spine require surgery. Through this incision the bone and soft ligaments that are pressing on the nerves are removed.

This creates more room for the nerves. The wound is then closed with stitches. A dressing is applied to cover the wound. The operation takes about one hour for surgery to one level of the spine. If more than one level requires surgery this will take longer.

What happens after the operation?

When you leave the operating theatre you will go to the recovery area until you are fully awake. You will then be transferred to a ward. If you have been admitted to the Appleby Suite you will be transferred to a different ward.

You will have a tube called a drip in your hand or arm. This helps to replace fluids and prevent dehydration. The drip is usually needed for the first few hours and then it is removed.

You will have an oxygen mask over your mouth. This helps your recovery from the anaesthetic.

Will it be painful?

You will be given regular medication to keep you comfortable. If you are still uncomfortable a different pain medication will be offered to you. Alternatively, you may want to control your pain using a machine that gives a dose of painkillers through the drip in your arm when you press a button. This machine is called PCA - Patient Controlled Analgesia. Within the next couple of days you should be able to control your pain by taking tablets.

When can I start walking and sitting in a chair?

You will start walking the day after your surgery. A member of the physiotherapy team will give you advice about the exercises that you need to do and how to mobilise safely.

You may need walking aids such as walking sticks or crutches to help. A member of the physiotherapy team will advise you about which walking aid is suitable for you.

You can sit in a chair as soon as you feel comfortable to do so. Initially however, you will find lying or standing much more comfortable than sitting. Over time you will find that gradually you are able to sit comfortably for longer periods of time.

When will the urinary catheter be removed?

Usually within one to two days after your operation. A Nurse will remove the catheter. First of all the water is removed from the small balloon that holds the catheter in the bladder. Then the tube can be gently removed. This should not be painful although you may feel a little discomfort.

How long will I be in hospital for?

Most patients will be in hospital for between two to four nights. By the time you are ready to go home you must be able to walk safely including walking up and down the stairs.

How should I care for the wound and dressing?

When you go home the wound will be covered in a dressing; it is important that this dressing is kept clean and dry. The stitches underneath will dissolve over time and do not need to be removed. After two weeks the dressing can be removed. You may need someone, such as a member of your family to remove it for you.

When can I use the bath or shower?

Since the dressing must be kept dry for the first two weeks we advise the following;

- For the first two weeks you should have a 'strip wash' at a wash basin
- Depending on how you feel, a cubicle shower or bath can be used after two weeks. However, it is advisable to make sure that initially you are not alone in your home just in case you need assistance

When do I return to the hospital?

You will be given an appointment to return to the hospital at around six weeks after your operation.

When can I return to work?

Most patients can return to work after around six weeks. However, it does depend on the type of work that you do. Your Doctor can offer advice about when to return to work.

What exercises should I do?

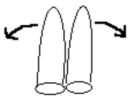
The following exercises are suggested by the orthopaedic physiotherapy staff. You should aim to repeat them 3 – 5 times a day. If you are unsure about any of these exercises please speak to your Physiotherapist.

Lying on your back with your knees bent.

Tighten your internal deep stomach muscles a small amount. You should feel this deep in your pelvis (you should not be able to see your muscles move). Aim to hold the small contraction for Five seconds and build up to 20 seconds. Continue to breathe normally in a relaxed way throughout.

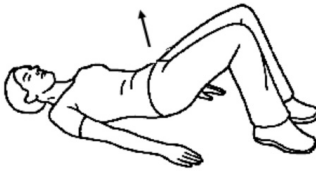
Repeat 5 -10 times.

Lying on your back with your knees bent. Keeping your knees together, roll knees gently from side to side.



Repeat 5 – 10 times.

Lying on your back with knees bent.



Squeeze your buttocks together, curl your tailbone up and lift your bottom off the floor. Only lift your bottom up as far as you are able to control the movement. Slowly return to the starting position.

Repeat 5 – 10 times.

Lying on your back with one leg bent and one leg straight (or both legs bent if this is more comfortable).

Try to flatten your lower back against the bed. You will feel a stretch in your lower back. Reverse the movement and bring the pelvis forward to allow a small curve. At no point should your bottom lift off the floor.

Repeat 5 – 10 times.

Advice

- Do your exercises gently. Do not push yourself too hard, you should gradually increase the number of repetitions. Remember, you may not have exercised for a while due to your back pain
- Gradually build up the amount of time you spend walking and sitting. Keeping mobile will speed up your recovery
- In sitting try to ensure that you do not sit with your legs curled under the chair as this can increase the tension on the nerves in your back, and may contribute to leg symptoms
- During the day try not to maintain one posture (for example, sitting or standing) for more than 30 minutes. Ensure that you change position or walk around to prevent your back from becoming stiff

When should I contact the hospital?

You should contact the hospital for advice if you experience any of the following:

- Bleeding or oozing which soaks through the dressing
- Severe pain that is not relieved by painkillers
- Pain, tenderness and swelling in the calf of either leg; this could be a Deep Vein Thrombosis
- If you have any other problems that you feel may be related to your operation

Please contact the ward that you have been discharged from.

Contact Numbers

New Cross Hospital
Main Hospital Switchboard – 01902 307999

Waiting List Co-ordinator – 01902 694092
Mon – Fri, 9:00am – 4:30pm

Orthopaedic / Fracture Clinic – 01902 695380
Mon – Fri, 8:30am – 5:00pm

Pre-admission Clinic – 01902 695587
Mon – Fri, 8:00am – 4:00pm

Appleby Suite – 01902 695588

Ward A5 – 01902 695005

Ward A6 – 01902 695006

Beynon Short Stay Unit – 01902 694049

Do's and do nots

Make sure that you do:

- Continue with your exercises
- Take regular short walks and keep active
- Remember that your symptoms may not settle immediately

Do not

- Do lifting and twisting movements of the spine and excessive bending particularly for the first six weeks
- Drive until you have checked at your hospital appointment
- Go on long journeys for more than 30 minutes without stopping to take a short walk, particularly in the first 6 weeks

Glossary of terms:

Abscess: A collection of pus as a result of infection.

Joint: The junction between two or more bones.

Ligament: A band of tough tissue that joins bone to bone.

Nerve Roots: The beginning of a nerve as it leaves the spinal cord.

References:

1. Patel, NR, accessed June 2008. Clinical Conditions [online]. Available from http://www.nitinpatelspinalsurgery.com/clinicalconditions.html.
2. Ramsay Health Care UK, accessed June 2008. Lumbar Spine Decompression [online]. Available from http://www.ramsayhealth.co.uk/treatments_and_services/a_to_z_of_treatments.
3. Johnson, J, accessed June 2008. Consent for Spinal Decompression/Discectomy/Microdiscectomy [online]. Available from www.londonbacks.com.
4. Dumas, 2002. Spinal Decompression. Your operation for your trapped nerves. Dumas Ltd 2003.
5. British Association of Spine Surgeons www.spinesurgeons.ac.uk

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。

Designed & Produced by the Department of Clinical Illustration,
New Cross Hospital, Wolverhampton, WV10 0QP Tel: 01902 695377.

Review Date 02/07/2028 Date Produced 2008 WCA_1733_24.07.25_V_5