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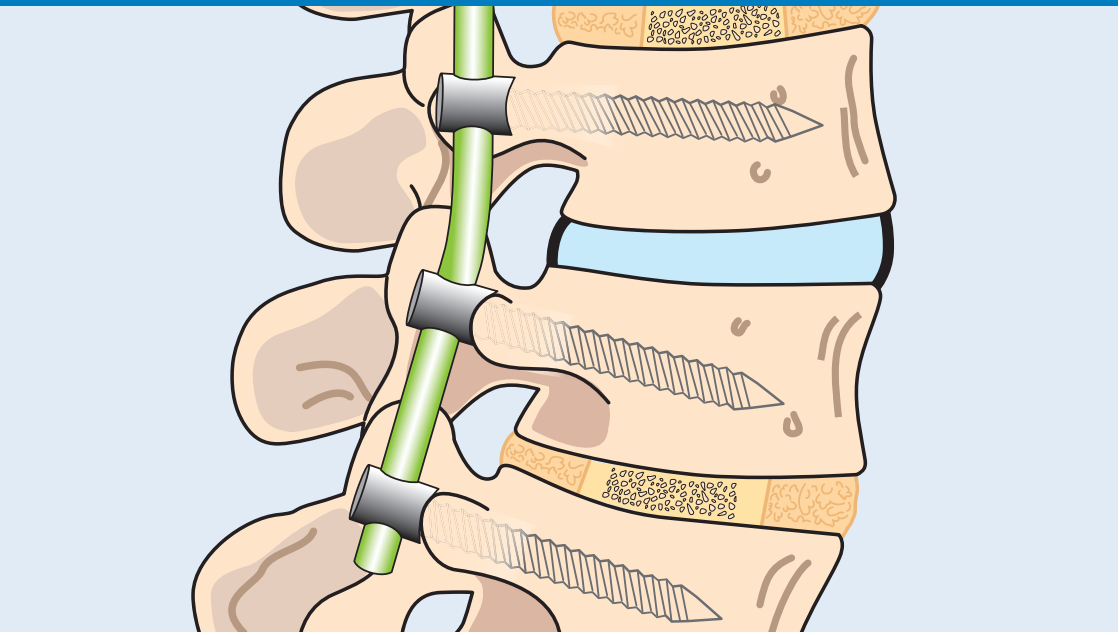
Physiotherapy advice
Multi-level spinal instrumentation



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The Information Standard Certified Member

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Introduction

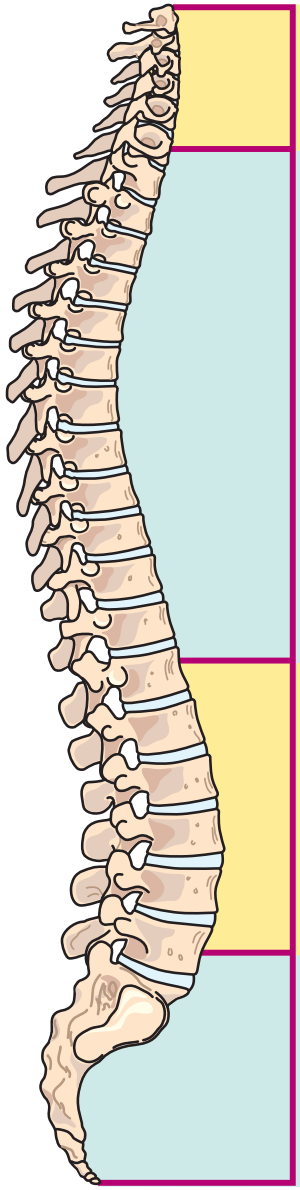
This advice booklet will describe some of the basic ways you can manage your back post operatively.

The spine is made up of 33 small bones, called vertebra, stacked on top of each other in an 'S' shape. Not all spines are the same 'S' shape but they are usually curved at the neck and lowest part of the back.

This shape should be kept in mind when you move to maintain the natural curves in your back whatever you are doing. Each of the vertebrae has a disc in between them which acts like a shock absorber (see diagram on page 3).

Spinal nerves pass between each vertebra next to the disc and travel to the arms and legs. These nerves allow us to move our muscles and feel things in different parts of our body. The muscles in the back support the vertebrae and the discs.

The lumbar region of the spine bears the most weight of the body. It is capable of bending and twisting more than any other part. This can lead to excess wear and tear and is therefore more prone to degeneration.



Cervical:
refers to neck vertebrae

Thoracic:
refers to vertebrae from the bottom of the neck to the lumbar region

Lumbar:
refers to vertebrae in the lowest section of the spine

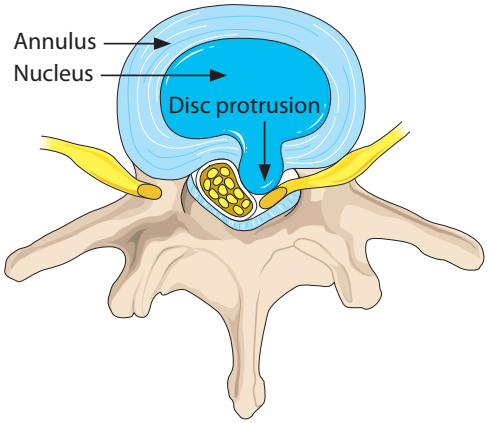
Beneath the lumbar spine there are another 5 vertebrae fused together forming the sacrum with the coccyx (or tail bone) underneath

What is a disc?

Discs are tough yet flexible and allow the spine to bend and twist.

Discs have a central part filled with a rubbery substance called the nucleus.

The outside wall is called the annulus which is made from tough and flexible fibres.

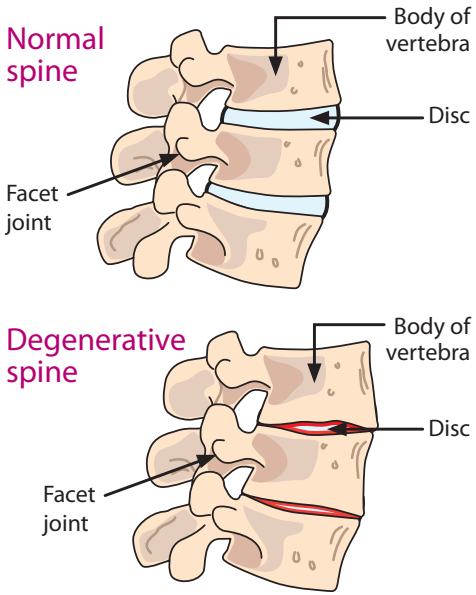


What has happened to my disc and spine?

Disc degeneration

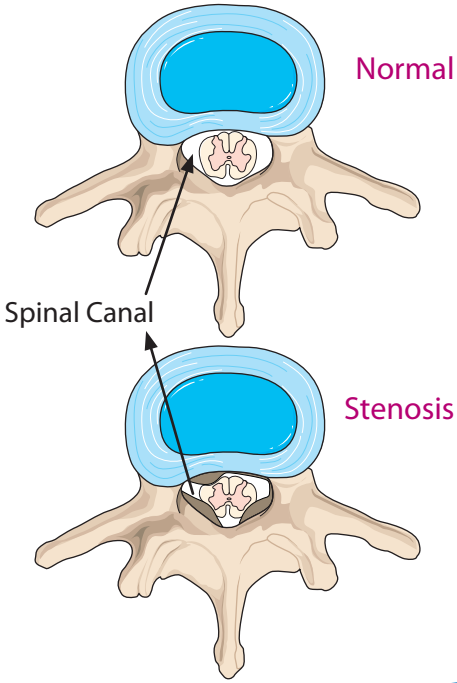
Disc degeneration is due to the aging process. Cracks can occur in the annulus and the nucleus dehydrates.

Continuous mechanical strain on the disc causes fragments of degenerate disc material to be pushed through the crack, creating a hole in the annulus. This is sometimes referred to as a prolapsed disc.



Stenosis

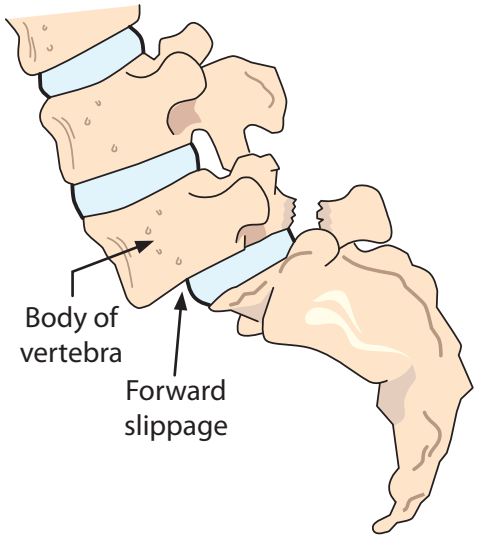
Spinal stenosis is when the spinal canal, through which the spinal cord runs, is too narrow and the spinal cord / nerves become compressed in the narrowed space. This can be due to congenital narrowing or degenerative changes. This causes the spinal nerves in the back to be irritated or trapped. This can also be due to extra bony growths (osteophytes) pressing on nerves.



Spondylolisthesis

This is a forward slip of one of the bones of the spinal column on another. This can occur due to a developmental condition, degeneration changes or trauma.

It can cause narrowing of the spinal canal in which the spinal cord runs and as a result can put pressure on the nerves.



The aims of the operation are:

1. **Improve the alignment of your spine by correcting any deformity - e.g. a forward or sideways slip of the vertebra**
2. **Free any trapped nerves**
3. **Remove the pain source - the degenerate and inflamed disc**
4. **Fuse the disc- by packing the space between the vertebra with a cage containing graft. This encourages new bone growth which will eventually fuse the vertebra together**

What happens during surgery?

Spinal fusion is a surgical technique to stabilise the vertebra and the disc between the vertebrae.

Spinal fusion surgery is designed to create solid bone between the adjoining vertebrae thus eliminating any movement between the bones.

Metal implants are attached to the spine and then connected to rods.

The metalwork is used to hold the spine in the correct position until the spinal segments fuse together.

Bone grafts are placed along the length of the corrected spine.

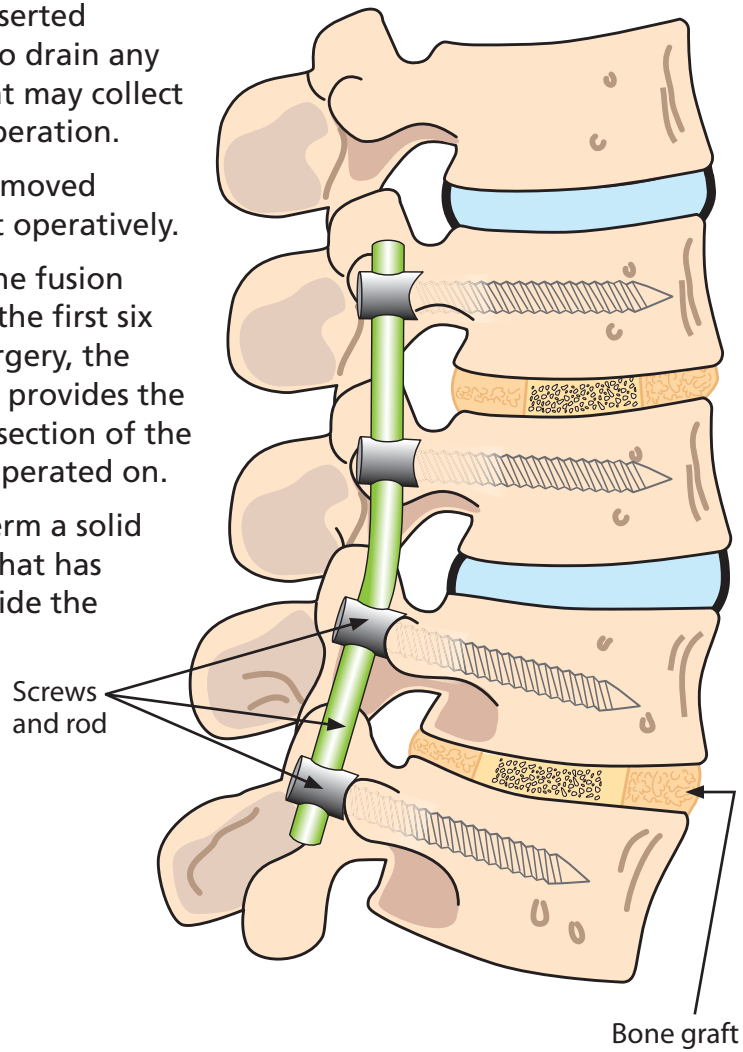
The bone graft does not form a fusion at the time of the surgery. Instead, the bone graft provides the foundation and environment to allow the body to grow new bone and fuse a section of the spine together.

Drains will be inserted during surgery to drain any excess blood that may collect following the operation.

Drains will be removed 24-48 hours post operatively.

At the time of the fusion surgery and for the first six months after surgery, the instrumentation provides the stability for the section of the spine that was operated on.

Over the long term a solid fusion of bone that has healed will provide the stability.



Possible complications:

- **No improvement in your back or leg pain** (or worse pain).
- **Infection** - signs of infection may be discharge from the wound or any swelling, redness or heat from the wound.
- **Nerve damage** - this is damage to the nerves in your back which can result in altered sensations to your legs, pins and needles, weakness including foot drop, loss of control to your bowel or bladder. These changes can be temporary or permanent.
- **Bleeding or haematoma** - collection of blood.
- **Dural tears or leaks** - this is when the membrane covering the spinal cord (the dura) is damaged during surgery. This may lead to nausea and headaches after surgery. It is usually treated with bed rest but occasionally may require more surgery.
- **Non-union** - this is when the bone does not fuse as planned. This is only determined when reviewed in clinic as the development of the bony bridge between the vertebrae occurs over weeks and months. The risk is higher for patients who smoke, are obese or have been treated with radiation for cancer. It is important that you stop smoking prior to your surgery. Smoking and the use of nicotine containing products has shown to be detrimental to the healing of the bone and therefore can affect the fusion of the spine.

We recommend you have a BMI of less than 30 prior to surgery.

After spinal fixation surgery it takes about three months for the vertebrae to begin to fuse, although 1-2 years are required before fusion is complete.

What to expect after the surgery

You may experience discomfort in your back and hips as a consequence of spending time in one position during your operation. This should resolve over time, usually within 3-6 months.

It is normal to be in some discomfort post op but let the nurses know if your pain stops you from doing normal activities such as eating, sleeping, walking and going to the toilet.

Following the surgery you will be assessed by a Physiotherapist and referred to an Occupational Therapist. A nurse and physiotherapist will assist you to get out of bed and walk to the bathroom.

The nursing staff will monitor your wound; you are advised not to shower for the first 10 days until the wound dressing is removed.

You will receive your post op clinic appointments through the post following your discharge.

If you experience any of the following symptoms following your surgery and after discharge home, you should seek medical advice.

- Numbness around your back passage or genital region
- New onset of bladder or bowel incontinence
- New numbness, pins and needles or weakness in your legs

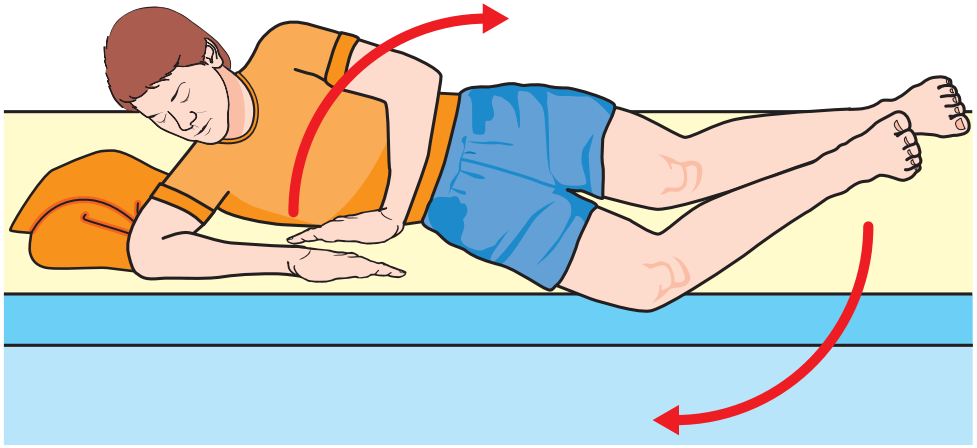
We advise that for the six months following your surgery you should avoid excessive bending, lifting and twisting and use a common sense approach during activity.

It is advised that you should not lift anything heavier than a full kettle of water.

Getting in and out of bed

When getting out of bed, roll onto your side with your knees bent and slide your feet over the edge of the bed.

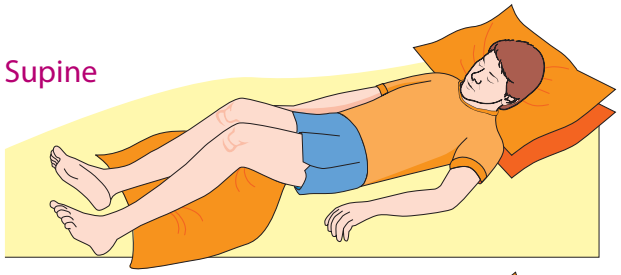
Whilst doing this use your arms to help push the top part of your body into a sitting position as your legs lower to the floor (see diagram).



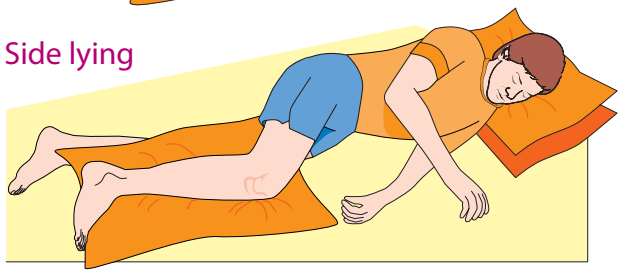
There are 2 basic sleeping positions which may be helpful if you are experiencing back pain.

It may be more comfortable to sleep on your side.

Supine



Side lying



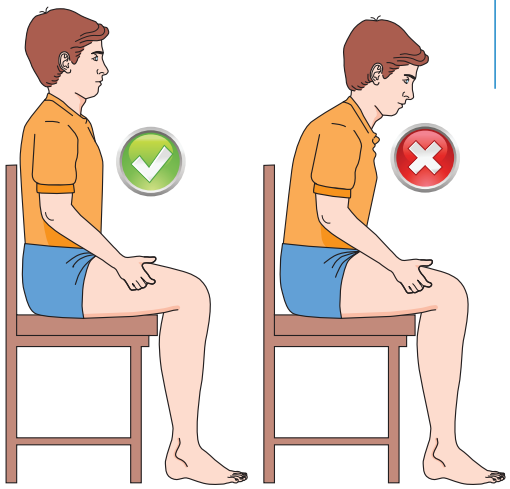
Posture

Good posture is very important as it helps to reduce the strain on your joints and ligaments in your spine.

You should try to avoid a slouched posture or slumped position when sitting.

You should sit well supported in a chair with a pillow or rolled up towel in the lowest part of your back to support the natural curves in your spine.

You should avoid sitting on furniture that is low, this is to avoid over bending and over stretching after your surgery.



A heights form will be provided to you by the Occupational Therapist. This will provide us with the heights of your furniture at home to ensure it is not too low. They will also measure the length of your leg from behind your knee to the floor.

Once this information has been gained it may be highlighted that you require some adapted equipment at home to support daily transfers on and off your furniture such as your toilet, chair or bed.

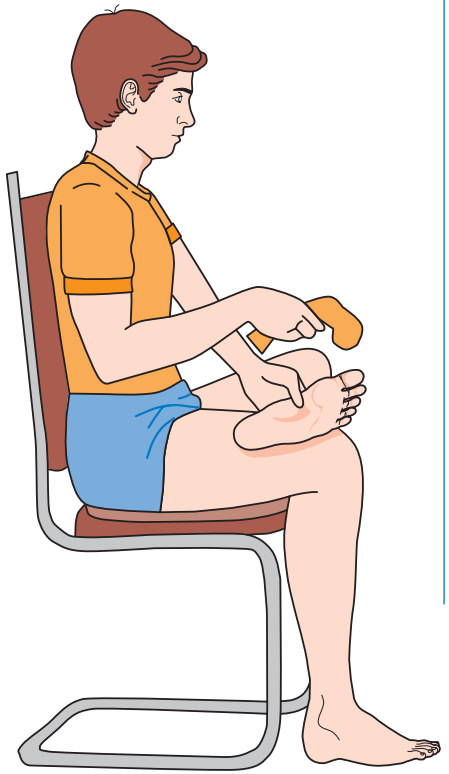
You should avoid prolonged periods of sitting. Changing your posture and taking frequent walks will help keep your muscles working, prevent stiffness and promote your recovery.

For the first three months of you recovery, *you should sit for no longer than thirty minute periods.* It is advised that you get up, stand and have a walk.

Personal care

To avoid over bending when washing and dressing below your knees, you should bring your foot up and rest it on your knee (see diagram).

If you are unable to do this, long handled aids such as a shoe horn, a long handled sponge or a helping hand grabber may be privately purchased.



The Occupational Therapist will be able to provide advice regarding these aids as required.

If you have access to a shower cubicle this should be utilised. If you have a shower over the bath, you should take care when stepping over the bath to access this and remember to maintain a good posture.

We recommend the use of a bath mat so you do not slip.

Sitting in a bath should be avoided due to the risk of over bending and over stretching.

If you do not have access to a shower cubicle, having a strip wash at the sink is recommended during your recovery.

If you feel you may struggle with bath transfers a referral to your community occupational therapist may be required.

Domestic activities

The precautions you will need to take following your surgery will require you to change the way you carry out everyday tasks for a period of **six months**.

You should only carry items that you would comfortably be able to carry with one hand, and should do this holding the item close to your body.

As a general rule, carry nothing heavier than a kettle filled with water.

You should refrain from undertaking any strenuous domestic activities of daily living until you have seen your consultant.

Vacuuming, washing windows, carrying shopping etc should be avoided.

You can engage in light household activities such as dusting, washing and ironing, although may require pacing of the activity and taking regular rests.

Aim to store frequently used items at waist height to avoid over bending and overstretching.

A common sense approach is recommended, remembering no heavy lifting, correct lifting posture for lighter tasks and pacing of activities.

Therapy staff can advise on the correct technique to avoid over bending, overstretching and heavy lifting as required.

- Stand close to the item you are lifting
- Bend at your knees keeping your back straight

Going home

If adapted equipment has been recommended by the Occupational Therapist to support you at home, in some instances this will require to be in place before you are discharged home.

NO HEAVY LIFTING FOR SIX MONTHS

NO DRIVING FOR THREE MONTHS

Traveling / driving

If you have recently had spinal fixation surgery you can restart **driving after 3 months** dependent on your symptoms.

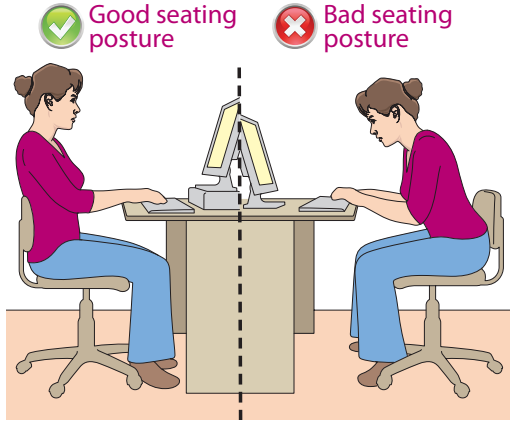
You must feel you can control the car, are able to turn your head to view your blind spot effectively and manage an emergency stop with no pain.

You may travel in a car but for the first **three months** make sure you don't travel for longer than half an hour before getting out and having a walk around to relieve any stiffness.

Return to work

You can return to work between 6 weeks to six months dependant on whether you feel able to manage your job role; remembering heavy lifting must be avoided for the first six months. Your Doctor or Physiotherapist may be able to advise you further.

The nursing staff can provide a sick note when you leave hospital and your G.P can provide any further sick notes. It may be useful to speak to your employer / occupational health about your absence, potential for a graded return and for any changes / work based assessments.



Return to exercise / leisure

Everyone wants to know how soon they can start doing things. Timescales can be helpful, but everyone is different and will recover at a different rate after an operation.

A common sense approach is best. Being mobile as soon as possible improves your circulation and will help with the healing process.

Activity and exercises should not increase any back pain or symptoms. If you have concerns regarding worsening back pain or weakness contact your GP, Complex spinal specialist nurse or surgeons secretary.

You will not be given specific exercises post operatively because your spine needs time to heal.

You may or may not require additional physiotherapy on discharge. This will be dependent on your needs. Any physiotherapy after discharge will be provided locally to where you live.

Regular daily walks are a good way to increase your general fitness and activity level.

Walk for as long as is comfortable. If your discomfort increases too much, your back is telling you to take a short rest, and then carry on.

Make a note of how far you walked and try and improve next time.

Make sure you take your painkillers at regular intervals; this will help keep you mobile.

continued next page

You may return to sex when your back is comfortable. At first choose a position based on comfort.

You may return to the gym after six months starting with light cardiovascular exercise such as treadmill walking, static supported bike and cross trainer.

Keep all exercises low resistance and no inclines. No running or rowing. No weighted exercises for six months.

Any classes must be low impact and started after the six month period.

Pilates type exercise classes can be beneficial following the six month post-operative period.

Road cycling can be re-commenced after six months.

You can commence swimming at six months utilising any stroke but avoiding prolonged breast stroke. Stop after each or every few lengths to give your back a change of position.

Returning to vigorous hobbies, recreation or sport will need to be discussed with your surgeon at your clinic appointment.

You may or may not be able to return to impact sports / hobbies for 12 months.

Useful addresses

Back Care

National charity providing information, support, promoting good practice

0845 130 2704

www.backcare.org.uk

NHS Direct

www.nhsdirect.nhs.uk

NHS 111 Service

when its less urgent than 999

111

Arthritis Research UK

St. Mary's Court
St. Mary's Gate, Chesterfield
Derbyshire, S41 7TD

+44 (0) 300 790 0400

www.arthritisresearchuk.org/

Disabled Living Centre

Disabled Living,
Burrows House,
10 Priestley Road,
Wardley Industrial Estate,
Worsley, Manchester, M28 2LY

0161 607 8200

www.disabledliving.co.uk

The Care Team

6 Allen Road
Urmston, Manchester, M41 9ND

0161 746 7566

www.thecareteam.co.uk

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Urdu
اگرآپ کواس ترجمانی کی ضرورت ہے تو مہربانی کرکےفون کریں۔

Arabic
اذا كنتم بحاجة الى تفسير او ترجمة هذا الرجاء الاتصال

Chinese
如果需要翻译，请拨打电话

Farsi
اگر به ترجمه این نیاز دارید ، لطفآ تلفن کنید

0161 206 0224

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