



A guide to...

Physiotherapy following your spinal fusion

Patient information

Inpatient Therapy

Watford General Hospital
Hemel Hempstead Hospital
St Albans City Hospital

Fusion surgery

The aim of spinal fusion surgery is to permanently stabilise an area of the spine by 'fusing' two vertebrae together to prevent painful movement. This fusion then prevents any abnormal movement between the vertebrae and alleviates pressure on nerves and as a result can significantly reduce back and leg symptoms.

Although the success of surgery with regards to achieving fusion is excellent, the final outcome varies according to the individuals underlying condition.

Spinal fusion surgery can be performed by a variety of techniques depending upon the condition of the spine that is being treated and the underlying condition.

Fusion is achieved by the use of bone graft between two adjacent vertebrae of the spine. The idea is to make the body behave as if there has been a fracture, so that the two bony surfaces of the vertebrae are joined together with new bone. This fusion is enhanced by the use of metal instrumentation.

There are three main indications for fusion surgery:

1. To treat chronic mechanical spinal pain arising from one or more of the lower spinal segments.
2. To treat spinal abnormalities which in turn allow a deformity to occur and the nerves to become compressed.
3. When symptoms unfortunately persist after previous surgical decompression or discectomy.

The fusion process varies in each patient. In general, the earliest evidence of bone healing is not apparent on x-ray until at least six weeks following surgery. Substantial bone healing usually takes place around three months after surgery. At that time activities may be increased, although bone healing and remodelling may continue for up to a year after surgery.

What can I expect following my fusion?

When you wake up following your operation you will feel bruised in your lower back. We try and minimise this by injecting local anaesthetic around the wound. You will also be given a patient controlled morphine pump (PCA) to help with your pain relief for the first 24-hours after your operation.

Some people come round from the anaesthetic and feel immediate relief of their leg symptoms. Numbness and tingling sensations may take longer to settle though; this may be days, weeks or months. It varies considerably from person to person. Some people may always have an area of numbness that never fully recovers.

Sometimes following surgery your leg pain may still be present, it is not a sign the surgery has failed. Nerves can take a long time to recover. Initially bruising and swelling will be present which will settle, but can also irritate the delicate nerve tissue initially.

However, please do report any ongoing or new leg pain following your surgery to the staff on the ward or our enhanced recovery nurse upon your return home.

How long will I be in hospital?

Day 1 post-op – You will be seen by a physiotherapist with the aim of getting you up on to your feet. You should continue to practice getting up.

Days 2 onwards – Gradually increase your mobility. When resting, it is good to alternate between sitting and lying down. If you place a pillow between your knees then you can lie on your side. You will be discharged home when you are moving around comfortably and safely. Before you go home the nurses will explain how you need to look after your wound (s).

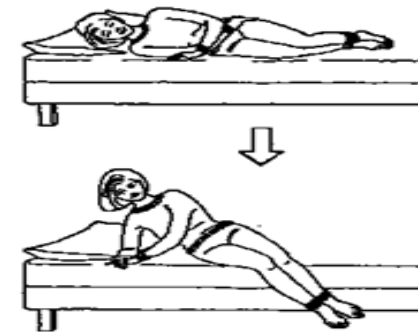
The average length of stay following a lumbar fusion is between 2-3 days; however this is dependent on your previous level of fitness and any medical or post operative complications. If you are motivated you may be able to get home sooner. You will only be discharged when the team is happy.

Physiotherapy introduction

Whilst supervised physiotherapy is important, it should be remembered that physiotherapists can only guide the rehabilitation, they cannot do the exercises for you. Good motivation and mental attitude is a key component to rapid recovery and you have a very important contribution to make to the success of your surgery. The programme for recovery that is outlined below should be regarded as a guideline – patients are individual and each have a different pace and rate of recovery.

Getting in and out of bed:

- Lying on your back with your knees bent
- Reach over with your arm and let your knees lower to the bed
- Lower your legs over the edge of the bed and push your trunk up



Transversus Abdominis (TA)

The transversus abdominis muscle is the deepest of the abdominal muscles and is one of the main stabilisers of the lower back and pelvis. The orientation of the muscle is similar to a corset, whereby it wraps around your lower abdomen and attaches to your lower back. When the muscle contracts it acts like a back brace stabilising your spine and supporting your lower back.

However, we would **not** recommend using a lumbar brace/support or belt. Research has proven this to have a detrimental effect and actually weaken the core muscles.

To activate your TA

- Lying on your back with your knees bent up and feet flat on the bed.
- Slowly draw your belly button down and inwards (away from your belt line).
- Breathe normally. Do not hold your breath.
- Your rib cage should remain relaxed and should not lift up during this process.
- You should be able to feel the muscle contracting.
- Gently hold this muscle at 20 – 30% of a maximum contraction. Do not brace/tense the rest of your body.

Ideally, you should learn to activate your TA muscle during all activities of daily living

Pelvic Floor (PF)

The PF muscles are the muscles located between your legs and run from your pubic bone at the front, to the base of the spine at the back. As their name suggests, they form the floor of the pelvis. They are shaped like a sling holding your pelvic organs (bladder and bowel) in place. The pelvic floor muscles form an integral part of your spinal support musculature and as such, it is important to maintain the strength in these muscles.

To activate your PF

Correct technique is very important when doing PF muscle exercises. You should feel a distinct 'lift and a squeeze' inside your pelvis. The lower abdomen may flatten slightly, but try to keep everything above the belly button relaxed and breathe normally. It is important to remember that this is a "secret exercise", as only the PF muscles should be working; this is an exercise that no one can see you performing!

When learning how to activate the PF men and women often find different teaching methods beneficial:

- Lie on your back with your knees bent up and feet flat on the bed

Women

Squeeze and draw in the muscles around your vagina and back passage together – as if stopping yourself from passing urine and wind at the same time. You should feel the distinct lift and squeeze of your PF, as if closing and zipping up your back and front passages.

Men

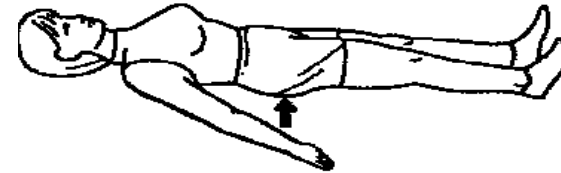
Squeeze and draw in the muscles that control your bladder and back passage together - as if stopping yourself from passing urine and wind at the same time. You should feel the distinct lift and squeeze of your scrotum upwards.

- Breathe normally and gently hold this muscle contraction at 20 – 30% of a maximum contraction. Hold for 5–10 seconds. Repeat 10 times
- Once you have mastered the technique you can also perform in sitting and standing

Post operative exercises

Perform these exercises on your bed, three times a day:

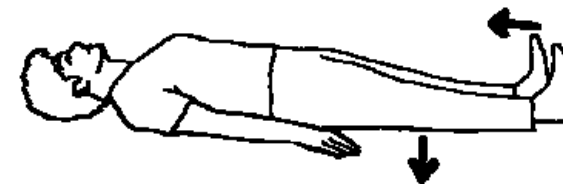
- Lying on your back, squeeze your buttocks firmly together. Hold for 5-10 seconds. Repeat 10 times.



- Lying on your back, engage your pelvic floor (PF) and Transversus abdominis (TA) muscles, bend and straighten your legs alternately. Repeat 10 times.



- Lying on your back, engage your PF and TA muscles, pull your toes towards you and tighten your thigh muscle, straightening your knee. Hold for 5-10 seconds. Repeat 10 times.



Post Operative Advice

For the first 6 weeks, whilst the initial post operative pain settles and the spinal fusion begins to heal, it is advised to be careful with some activities. A cautious approach is advised and a gradual increase in activities is recommended, whilst respecting post operative soreness, neural sensitivity and patient's previous level of fitness.

Sitting: Should be gradually built up during activities such as eating or relaxing and should be guided by your symptoms. A **limit** of 20 minutes at any one time is sensible for the first few days. Once this is comfortable it can be gradually increased. If a long journey is unavoidable (travelling home), you can recline your seat and take a break every 20-30 minutes to mobilise.

Caution: with prolonged standing for the first six weeks.

Walking: is advised and should be increased daily as comfort allows.

Lifting: for the first week should initially be limited to about 1 kg (a half full kettle), then gradually increased.

Avoid heavy lifting greater than 10kg until six months after your Surgery.

Avoid prolonged sitting for six weeks.

Outpatient physiotherapy

Outpatient Physiotherapy will be based at the West Hertfordshire Therapy Unit, Jacketts Field, Abbots Langley where there are options for face-to-face, telephone and video appointments.

Return to work

As appropriate return to work should be planned for 6 plus weeks and it should be phased and / or part time initially, especially if there is a lot of travelling or sitting. If the job involves heavy manual work the aim would be to return by six months with a planned gradual phased return.

Ideally a phased return to work is best

Driving

Please check your car insurance policy.

It is recommended that you avoid driving for four to six weeks post operation, or longer if there is a significant loss of function or sensation in one or both legs/feet. You should be able to sit comfortably in the driving position, drive, turn to look in the mirror and have 100% reaction times for an emergency stop.

Sports

Gentle non contact sports and fitness exercises can start between six to 12 weeks. Gentle fitness exercise, e.g. gym based exercise or swimming, initially backstroke then adding in other strokes as pain allows.

Contact sports should be avoided until six months

Your individual physiotherapist can give you specific guidance and advice on return to your preferred / chosen sport.

**Recovery from this surgery can take up to three months
but will continue up until 18 months**

Further information

Information on who to contact, ie web sites / telephone numbers of other departments / organisations which may be of help.

How to contact us

Inpatient Therapy
Watford General Hospital
West Hertfordshire Hospitals NHS Trust
Watford
Vicarage Road
Hertfordshire
WD18 0HB

Tel: 01923 217 271

If you need this leaflet in another language, large print, Braille or audio version, please call **01923 217 187** or email westherts.pals@nhs.net



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