

Information for patients and carers

Cervical Spine Surgery

A decorative graphic at the bottom of the page consisting of three overlapping, wavy bands of blue. The top band is a light blue, the middle is a medium blue, and the bottom is a dark blue.

This booklet explains the spinal surgery you are going to have. It discusses the operation and the benefits and risks of the surgery. You will be given an additional booklet 'Recovery after Cervical Spine Surgery' which also tells you what to expect during your recovery.

You and your surgeon will have discussed this operation and decided that it is your best option. This is usually because treatment that does not involve surgery - such as pain relief, physiotherapy and injections- has not helped.

The operation will be explained to you in detail by the clinician who listed you for surgery. The surgeon will make sure that you are fully informed before you sign the consent form agreeing to surgery.

Please let us know if you feel you do not fully understand the risks and benefits of surgery. You should also let us know if you are unsure whether to continue with surgery. Please contact the surgeon's secretary and ask for an appointment to discuss the surgery further.

You should also have been informed of alternative methods of treatment.

Why do I need spinal surgery?

Degeneration

This is a common reason for having spinal surgery. It is wear and tear of your spine that causes one or more of your spinal nerves to become trapped.

Symptoms of a trapped spinal nerve include:

- Pain in the arm or arms
- Weakness in the arms or hands
- Pins and needles
- Numbness

Spinal stenosis

The space for the nerves in your spine becomes narrow. This 'traps' your nerves as they leave the spine.

Disc prolapse

You have discs between each of the vertebrae (spinal bones). These act as shock absorbers when you move around and carry things. These discs can wear as you get older. Weaker discs may also run in families. When discs prolapse, they bulge out and can trap the nerves in your spine.

Usually, treatment that does not involve surgery improves your symptoms until the disc prolapse improves. These treatments may include painkillers, physiotherapy and injections.

Most people get better with time, surgery can speed up recovery and improve your quality of life.

We will offer you surgery only if you try non-operative forms of treatment repeatedly and it does not work.

Myelopathy

Myelopathy is a condition where you have pressure on the spinal cord. It can be caused by degeneration, spinal stenosis or a disc prolapse. This can cause symptoms such as weakness of grip and dropping things, altered gait (walking pattern), clumsiness with the hands. Surgery is offered

in these cases to prevent symptoms becoming worse and you may not get any improvement in your symptoms.

Other less common reasons for surgery include fractures, tumour and deformity of the spine.

What are my surgical options?

A spinal clinician will have discussed the options with you; including surgery, (this may have included the no treatment option). Your spinal surgeon will have recommended that you may benefit from one of the surgical options. We have outlined some of the common operations below. This leaflet will help you to make a decision regarding which option you prefer.

Surgery is usually performed under a general anaesthetic. You may be given a separate leaflet at your pre-operative assessment that explains anaesthetics.

Anterior cervical decompression and fusion (ACDF)

This involves surgery through the front (anterior) of the neck. Part or the entire disc and sometimes some bone is removed to free the spinal cord and/or nerves. A spacer (cage) with bone graft and sometimes a plate is inserted to fuse the spine (stop it moving).

Cervical disc replacement

This involves surgery through the front (anterior) of the neck. The disc is removed to free the nerves and replaced with a metal and plastic device which allows movement in the disc space.

Posterior decompression and fusion

This involves removing bone at the back of your spine to make more room for your trapped spinal nerves. This may be needed if you have had surgery before to the front of the spine. Rarer cases sometimes need surgery from the front and back for fractures, deformity and pressure on the spinal cord. Following this operation, you may need to wear a brace (neck support) for six to twelve weeks.

Are there any alternatives to surgery?

Yes. Many treatments are available including management of your pain with painkillers, injections or physiotherapy.

What are the risks of spinal surgery?

There are risks in having any type of surgery, especially procedures involving general anaesthetic.

Anaesthetic risks

Problems may include: cardiac arrest, blindness, death, breathing difficulties, allergies to the drugs used, heart attack and stroke. Skin breakdown and nerve damage is a risk due to remaining in a fixed position for longer procedures. Swallowing difficulties and voice impairment can also be associated with the use of anaesthetic breathing tubes.

Bleeding

Bleeding from the veins and arteries around your nerves is one of the more common risks. Blood loss is usually low and very rarely, you may need a blood transfusion. There is a rare risk of major blood loss if the major neck artery (carotid artery) is damaged. This could cause death if not repaired.

Blood clot

Having surgery puts you at risk of having a Deep Vein Thrombosis (DVT) a blood clot in the leg veins. There is also a risk of Pulmonary Embolism (PE) a blood clot in the lungs. To prevent blood clots, you may be asked to wear elastic compression stockings. A mechanical pump may be used whilst you are in bed and you may need injections or medication to prevent blood clots after your operation. You may be given a leaflet about blood clots before your surgery.

It is recommended that everyone keeps moving after surgery to reduce the risk of blood clots. Make sure you drink (non-alcoholic) liquids regularly to keep hydrated.

Infection

At the time of the operation, you may be given antibiotics to reduce the risk of infection, some patients may need further antibiotics after the procedure. These are usually given by a drip.

The rate of infection is about 1%; this may be higher in patients with underlying conditions such as diabetes.

There is a risk of infection with any surgery, but we take many precautions to keep that risk to a minimum.

If you develop infection post-operatively this may be dealt with by your GP with antibiotic tablets. In severe cases you may need to be admitted to hospital for treatment with antibiotics through a drip or may even need further surgery to clean the wound.

Specific risks of cervical spine surgery

Nerve damage

If a nerve is damaged you may have pain, weakness and sensation changes such as numbness in the arm(s). This can be as bad or worse than before the surgery. This occurs in 1% or less of patients.

Dural tear

The layers around the spinal cord and nerves (Dura) can be damaged resulting in a leak of fluid (cerebrospinal fluid). This happens in 5% of patients. If it happens it can cause severe headaches. You will need to stay in bed flat for 2-5 days. This complication is more likely to occur in patients who have had previous spinal surgery.

Bladder, bowel and problems with sexual function

Bladder problems may include incontinence or retention (not being able to pass water). Bowel problems may include constipation or incontinence. Bowel and bladder problems are usually temporary but on rare occasions can be permanent.

Very rarely impotence (problems getting or maintaining an erection) may also occur.

Need for further surgery in the future

You may develop problems with the same disc, develop arthritis in the joints, or have problems with other discs.

Approximately 5% of patients need further surgery within the first year and 10% of patients will need further surgery in the 10 years following surgery.

Paralysis or death

Serious complications such as paralysis or death are a rare occurrence which may happen in less than 1 in 1000 cases.

No improvement or a worsening of current symptoms

No improvement in the amount of arm or neck pain. A small number of patients find that their symptoms are worse following surgery. For patients with Myelopathy (spinal cord compression) surgery is performed to prevent symptoms getting worse and so they are unlikely to experience any improvement.

Implant failure

There is a small risk that metalwork and implants can fail or break. If this happens you may need further surgery to repair this.

If you have had a bone graft, this may not take which may weaken the fusion and cause breakage. You may need surgery to correct this.

Anterior (from the front) surgery

You may experience difficulty swallowing; this is usually temporary but can be permanent in a small number of cases.

Damage to the laryngeal nerve (the nerve that controls the vocal cords) may occur; this would lead to changes in the voice which are usually temporary but can be permanent.

Horner's syndrome is caused by damage to the facial nerves and can cause a drooping eyelid, difficulty focusing and voice changes. This may be permanent.

Factors which may affect spinal fusion and your recovery

There are a number of factors that can negatively impact on a solid fusion following surgery, including:

- Smoking
- Diabetes or chronic illnesses
- Obesity
- Malnutrition
- Osteoporosis
- Post-surgery activities
- Long-term (chronic) steroid use

Of all these risk factors, the one that can affect fusion rate the most is smoking. Nicotine has been shown to inhibit the ability of the bone-growing cells in the body to grow bone.

If you smoke we would advise you to stop smoking to improve your chances of a good recovery. If you need help to stop smoking we can refer you to the smoking cessation service or you can discuss this with your GP. Ideally you should stop smoking or using nicotine containing products 6 weeks prior to your surgery and also for at least 3 months after your surgery.

It is important to remember

Most of our patients benefit from having surgery. If we think you are a 'borderline' case, your clinician will discuss your reduced chances of success with you.

So please remember; the risks of spinal surgery can be very serious. However, for the vast majority of our patients they are very low.

You will be given the opportunity to discuss this as part of the consenting process. Once you are satisfied you will sign the consent form and agree to go ahead with surgery.

What are the benefits?

The benefits can include reducing your pain and discomfort, as well as preventing your symptoms from becoming worse.

Following cervical spine surgery:

- 85% of people have considerable improvement in symptoms
- 10% show an improvement but have some persisting symptoms
- 5% are not helped at all and in some cases may be worse than before surgery

For patients with myelopathy the aim of surgery is to prevent the symptoms becoming worse. In these cases you are unlikely to notice an improvement.

Consent

We must by law, obtain your consent to carry out any operation and some other procedures beforehand.

Clinicians will explain risks, benefits and alternatives before they ask you to sign a consent form.

If you are unsure or unhappy about any aspect of the treatment proposed, please ask to speak with a senior clinician again.

What happens before the operation?

Pre-operative assessment

When you have agreed that you wish to go ahead with an operation, you will be contacted to attend a pre-operative assessment. This assessment makes sure that you have had all the investigations you need and that you are fit for surgery. This may include, blood tests, x-rays and ECG (heart reading), to check that you are fit.

The results from some of these tests are only valid for 3 months and may need to be repeated nearer to the time of the operation, if appropriate.

It is important that you inform us of any changes to your health between your pre-operative assessment and surgery.

Please bring a current list of any medication you are taking to your pre-operative assessment. This includes any supplements, vitamins or inhalers.

If necessary you may be referred to an anaesthetist for further assessment of your fitness for surgery.

You will not be entered onto the waiting list until you are fit for surgery.

You may be sent to the specialist education clinic 1-8 weeks before your surgery. A nurse and occupational therapist will assess you and explain what happens during your operation and hospital stay. They will also explain what to expect and give you advice regarding what you can and can't do after the surgery.

If further investigations are needed at this time they will be arranged.

The nurse will also talk to you about going home after your surgery. We will help you decide whether you need more help in your home after the surgery.

What happens when you are in hospital?

Day of admission

Your admission letter will explain what time to come into hospital and which ward to go to.

You must not eat or drink anything for a while before your surgery. We will tell you when to stop eating and drinking at home.

You will usually meet your surgeon and anaesthetist before going into surgery and will be given the opportunity to ask any questions you may have.

Medications

Please bring a supply of any regular medications that you take with you. These will be locked in a locker by the side of your bed and given to you at the right times.

A pharmacist visits each of our wards every day. They will go through your medications with you and answer any questions you have about them.

Valuables

Please do not bring valuables, jewellery or large sums of money into hospital. The hospital cannot accept responsibility for lost items.

Getting ready for surgery

Before you go to the operating theatre, we will ask you to change into a hospital gown. You will be asked to remove all jewellery (except wedding rings which can be taped over), nail varnish, false nails and make-up. Your nurse will accompany you to the theatre reception. You will then be taken into the anaesthetic room where you will be given an anaesthetic. This will be a general anaesthetic.

What happens after the operation?

When you wake up you will be in the theatre recovery area. You may be wearing an oxygen mask. We will take this off once you are fully awake. You may also have an intravenous line (IV or drip) in your arm. This gives you fluid as you will not have drunk anything for several hours. We will take this out once you are drinking well.

Occasionally, some patients may need a catheter (tube to drain urine) inserted in theatre.

Usually, you can eat and drink when you are fully awake. We advise you to start with a light meal.

The nurses will observe you closely when you return to the ward. They will make sure that any pain you have is well controlled. If you have any other symptoms such as nausea (feeling sick) your nurse will help you with this.

Getting Moving

We aim to get you moving around on your own as soon as possible. The physiotherapist or nurse will come to see you and help you to get out of bed and start walking. They may go through some simple exercises with you and practise using the stairs if this is needed.

All of this will improve your confidence to get up and about again once you get home.

How long will I have to stay in hospital?

This depends on the type of surgery you have had. You may be able to go home the same day or the day after. We will normally discharge you from hospital within one to five days.

You will not be discharged until all members of the team who treated you are sure you are well enough.

What is the best way to look after myself at home?

You will probably feel a little anxious about managing at home after your operation. The advice we give here should help you. If there is anything we have not covered in this booklet, please ask before you go home.

You will need to take things easy for several weeks after the operation. You will be advised to take time off work. It can take at least six to twelve weeks (and some patients may take even longer) to heal properly. We recommend that you follow the advice we give you carefully.

How do I care for my wound?

When will I have my stitches taken out?

If you have stitches or clips, these will be taken out ten to fourteen days after your operation. The practice nurse at your GP surgery will do this for you. Please make an appointment for this to be done once you are at home. Please inform the ward staff if you feel you are unable to attend the GP surgery. They may be able to arrange for the district nurse to visit you.

How soon can I shower?

Keep your wound clean and dry. You can shower as normal, but you may need to change your dressing after each shower for the first week. We will give you a supply of dressings before you go home.

How long will my wound take to heal?

Wound healing goes through several stages. You might feel tingling, numbness or some itching around the wound. The scar might feel a little lumpy as the new tissue forms and it might also feel tight. These are all normal. Do not be tempted to pull off any scabs as this is a protective layer and removing it will delay healing.

These are some of the signs of infection. Contact your GP, the ward or the emergency department if you develop any of these:

- **The wound becomes more painful, swollen or hot**
- **You have expanding redness around the wound**
- **You notice any yellow or green discharge from the wound or the wound discharge becomes cloudy**
- **You feel unwell, have a raised temperature (fever/shivering)**

Will I see my surgeon again after I am discharged home?

A follow up appointment will be sent to you after you are discharged from hospital, this will be with one of the spinal team. Your appointment will be between 6 and 12 weeks after your operation, dependent upon your surgeon's instructions. This follow up appointment may be a telephone appointment.

A summary of your care will be sent to your GP after your operation.

What medication will I be given to take home?

Please make sure you bring a supply of your regular medication into hospital, this needs to be in the original packaging from the pharmacy. You need to make sure that you have enough medication to last for your stay in hospital and that you will have a supply once you return home.

If you need any new medication this will be supplied before you leave hospital.

You should take regular pain relief initially to allow you to be as active as possible. Reduce these as your pain levels begin to improve.

Where can I get a fitness for work certificate?

The hospital can provide you with a certificate for your hospital stay. Please ask the nursing staff or ward clerk. You will have to ask your GP for any further certificates.

Who can I contact with queries or concerns?

If you have any medical problems, contact your GP first. They will contact the medical team at Preston or Chorley if necessary.

Contact details

Should you require further advice or information please contact:

Orthopaedic Spinal Team

Patient Experience Co-ordinator: 01772 522307

Patient Experience Co-ordinator: 01772 522943

Patient Experience Co-ordinator: 01772 521391

Patient Experience Co-ordinator: 01772 522310

Royal Preston Hospital

Ward 14: 01772 522474

Ward 16: 01772 522990

Chorley Hospital

Leyland Ward: 01257 245742

Rawcliffe Ward: 01257 245748

The Patient Advice and Liaison Service (PALS)

PALS offer support, information and assistance to patients, relatives and visitors. They can also provide help and advice if you have a concern or complaint that staff have not been able to resolve for you.

Telephone: 01772 522972 Email: PALS@LTHTR.nhs.uk

Care provided by students

At Lancashire Teaching Hospitals our students get practical experience by treating patients.

Please tell your doctor or nurse if you do not want students to be involved in your care. Your treatment will not be affected by your decision.

Sources of further information

www.lancsteachinghospitals.nhs.uk

www.nhs.uk

www.patient.co.uk

www.accessable.co.uk

Support groups and organisations

www.eurospine.org European Spinal Surgeons website, information on spinal conditions and surgery.

www.spinesurgeons.ac.uk **British Association of Spinal Surgeons**

Advice and information on spinal conditions and surgery.

www.dartmouth.edu/sport-trial/patients.htm **SPORT Trial**

Research based information and treatment calculator for spinal decompression and discectomy.

www.backcare.org.uk **Back care**

Information about back pain and how to manage it.

Helpline: 0845 130 2704.

www.brainandspine.org.uk **Brain and Spine Foundation** Advice and support for people with brain and spine conditions.

Helpline: 0808 808 1000.

www.basiccharity.org.uk **Brain and Spinal Injury Centre (BASIC)**

Helpline: 0870 750 0000.

www.outsiders.org.uk **Outsider's Sex and disability advice.**

Helpline: 07770 884 985.

www.sauk.org.uk **Scoliosis Association (SAUK)** Advice, support and information about scoliosis and other spinal conditions.

Helpline: 020 8964 1166.

www.spinal.co.uk **Spinal Injuries Association (SIA)**

Helpline: 0800 980 0501.

www.gov.uk/dvla-medical-enquiries **More information and advice**

Drivers Medical Enquiries - DVLA

Drivers Medical Group

Swansea

SA99 1TU

Telephone: 0300 790 6806 (car drivers and motorcyclists)

Telephone: 0300 790 6807 (bus, coach and lorry drivers).

Benefit Enquiry Line

Freephone: 0800 882 200

Textphone: 0800 243 355

Lancashire Teaching Hospitals NHS Foundation Trust is not responsible for the content of external internet sites.

All our patient information leaflets are available on our website for patients to access and download:

www.lancsteachinghospitals.nhs.uk/patient-information-leaflets

Lancashire Teaching Hospitals is a smoke-free site. Smoking is not permitted anywhere on any of our premises, either inside or outside the buildings. Our staff will ask you about your smoking status when you come to hospital and will offer you support and advice about stopping smoking this will include Nicotine Replacement Therapy to help manage your symptoms of withdrawal and the opportunity to speak to a nurse or advisor from the specialist Tobacco and Alcohol Care Team.

If you want to stop smoking, you can also contact Smokefree Lancashire on Freephone **08081962638**

Please ask a member of staff if you would like help in understanding this information.

This information can be made available in large print, audio, Braille and in other languages.

Department: Orthopaedics

Division: Surgery

Production date: November 2023

Review date: November 2026

JR 1069 Part 1 V1