National Hospital for Neurology and Neurosurgery

Anterior cervical discectomy
Department of Neurosurgery
If you would like this document in another language or format, or require the services of an interpreter please contact the Pre-operative Assessment Centre. We will do our best to meet your needs.

Contents

What does anterior cervical discectomy mean? 3
How can anterior cervical discectomy help? 4
What are the risks of anterior cervical discectomy? 5
What will happen if I choose not to have anterior cervical discectomy? 7
What alternatives are available? 7
Asking for your consent 8
How should I prepare for anterior cervical discectomy? 9
What happens during anterior cervical discectomy? 10
What should I expect after surgery? 11
Where can I get more information? 15
References 15
Contact details 16
Where to find us 17
This booklet has been written by the Department of Neurosurgery at The National Hospital for Neurology and Neurosurgery. The aim of the booklet is to provide general information about the procedure called anterior cervical discectomy. Your neurosurgeon will discuss your particular procedure with you in detail. It is intended for use by patients (or their families or carers) referred to our service and who may be offered this procedure. It is not intended to replace discussion with your consultant. If you have any questions please do not hesitate to contact a member of the team caring for you. They will be pleased to answer them for you.

**What does anterior cervical discectomy mean?**

Anterior cervical discectomy is a surgical procedure. It is performed to relieve pressure on the spinal cord or nerve root. Anterior refers to the approach used which is through the front of the neck.

There are seven bones (called vertebrae) in the neck and these are separated by soft spongy discs. This disc makes the spine flexible and acts as a shock-absorber. Sometimes, part of the disc slips out (protrudes) and compresses a nerve root. This can cause pain, tingling and numbness and or
weakness in the upper limbs. If the disc compresses the spinal cord, it can cause weakness in your arms and legs, difficulty walking or problems with passing urine.

Sometimes ‘wear and tear’ can lead to bony outgrowths on the vertebrae, causing pressure on the nerve roots or spinal cord. These are called ‘degenerative changes’ and are present in most people.

When the disc is removed it can be replaced by a cage (fusion) or disc replacement.

**How can anterior cervical discectomy help?**

Anterior cervical discectomy can help prevent further clinical progression. In addition your arm pain or weakness may improve.

Also, decompressing the spinal cord will prevent the symptoms in your arms and legs (called ‘myelopathy’) from progressing or getting worse. This may improve your mobility and hand dexterity.
What are the risks of anterior cervical discectomy?

All operations carry some risks and we will speak to you about all the risks as well as the benefits of an anterior cervical discectomy. The procedure is performed under a general anaesthetic and your anaesthetist will talk to you about the risks of general anaesthesia.

Female patients must tell their anaesthetist and surgeon if they are or could be pregnant. Anaesthetic drugs and x-rays used during the procedure can be harmful to unborn babies.

Problems that may happen straight away

- There is a risk of damage to the oesophagus (gullet) and the nerves of the voice box, resulting in difficulty swallowing and a hoarse voice. The symptoms may last up to a week after the operation but in two to five percent of patients there is permanent damage.

- There is a small risk of damage to the spinal cord, nerve roots or both. This can result in a loss of power (strength and movement) and sensation (feeling). Less than one percent of people will experience a worsening of symptoms.

- Leakage of the fluid (cerebrospinal fluid or CSF) which surrounds the spinal cord may also occur in a small proportion of cases, but this is uncommon.
Problems that may happen later

- Infection may develop in the skin or deeper in the spine, but is uncommon with this type of surgery. We minimise this risk by giving a dose of an antibiotic at the start of the anaesthetic.

- Your symptoms may recur at a later date, often due to degeneration or deterioration of the vertebrae above or below the site of the operation. If the operated level is fused the risk of this is approximately 20 to 25 percent within the ten years following the operation. In this event further surgery might be required.

- Bone healing (fusion) across the space where the disc was removed may not happen, resulting in neck pain and further symptoms. This may require further treatment.

Problems that are rare, but serious

- There is a less than one percent risk of major vascular (blood vessel) injury resulting in severe bleeding in the neck or a stroke. Such an event may require an urgent operation to remove a blood clot.

- Very rarely (in less than one percent of cases) the spinal cord can be permanently damaged resulting in severe neurological deficit (paralysis of limbs) or risk to life.
What will happen if I choose not to have anterior cervical discectomy?

If you have compression of the nerve roots, there is a chance that your arm pain may get better by itself. However, the longer the symptoms persist, the less likely this becomes. If you have compression of the spinal cord, your symptoms are likely to become worse. This can result in severe neurological deficit or problems controlling your bladder and bowels.

What alternatives are available?

Your surgeon will discuss all alternative treatments and their risks and benefits with you. Alternative treatments include:

- Nerve root injections for pain (radiculopathy). These are day-case procedures and may offer temporary relief of symptoms. There is a risk of nerve damage. These injections will not improve the symptoms of spinal cord compression.
- ‘Watch and wait’. There is a risk that neurological problem could progress or symptoms worsen over time.
- Pain relief medicines prescribed by a GP may also help with symptoms.
Physiotherapy. Physiotherapists provide advice about exercise and posture. Referral can be made by your GP.

Surgical alternatives include cervical foraminotomy (nerve root decompression) and cervical laminectomy (spinal cord decompression). Both these procedures use a posterior (back) approach.

**Asking for your consent**

We want to involve you in all the decisions about your care and treatment. If you decide to go ahead with treatment, by law we must ask for your consent and will ask you to sign a consent form. This confirms that you agree to have the procedure and understand what it involves. Staff will explain all the benefits, risks and alternatives before they ask you to sign a consent form. If you are unsure about any aspect of your proposed treatment, please don’t hesitate to speak with a senior member of staff again.
How should I prepare for anterior cervical discectomy?

You will be seen in the Pre-operative Assessment Centre up to six weeks before surgery. A doctor and nurse will see you, and can answer any questions you may have. They will ask you about all the medicines you are currently taking and it is advisable to bring a list of your medicines to clinic with you as well as any letters about your medical conditions. Some medicines may need to be stopped before surgery. Do not stop any medicines you are currently taking unless you are advised to do so by the clinic doctor or nurse.

You will be asked to fast for at least six hours before surgery. Your anaesthetist will tell you what times you should not eat and drink after; they will also talk to you about the anaesthetic and appropriate pain control.

Usually patients are admitted on the morning of their operation. Your admission letter will tell you what time you should arrive at the hospital and where you should go.

You should expect to be in hospital for approximately three days. It is important to plan ahead. Before coming in to hospital think about how you will return home, how you will manage at home and what help you may require.
What happens during anterior cervical discectomy?

Before surgery, the nurse will complete a pre-operative checklist and give you a gown and anti-embolic (elastic) stockings to wear. A surgeon will mark your operation site on your skin with a pen and a member of the operating team will confirm your details. This is a safety check to confirm your identity and the operation you are having.

Once the anaesthetic is started and you are ‘asleep’ you will be moved to the operating theatre.

The surgeon will make a small incision (cut) in the skin on the front of the neck. The oesophagus and trachea (windpipe) are gently moved out of the way and the neck muscles carefully separated down to the front of the spine. X-rays are taken to confirm the correct position.

A microscope is then used to guide the surgeon in removing the disc until the outer covering of the spinal cord is visible and the nerve root is decompressed.

There are two ways commonly used to fix the gap left by the disc. The first is to insert a spacer device filled with bone chips or artificial bone graft. This is called a fusion. Sometimes a metal plate is also fixed over the front of the spine for stability.
The second is by inserting a joint replacement – called an arthroplasty or disc replacement. Your surgeon will discuss these options with you beforehand including the risks and benefits of each.

The wound is closed with either metal clips, a dissolvable stitch or adhesive strips. You will be told which method of wound closure has been used and if and when they need to be removed. Your GP can remove your stitches or clips.

At the end of the operation a wound drain may be placed under the skin to drain any blood and allow the wound to heal. The drain is a thin plastic tube secured to your skin by a stitch and attached to a plastic bottle. You can walk around with the drain in. The drain will be removed after one or two days.

The operation usually takes two to three hours. You will stay in the recovery ward after surgery where you can be observed closely until you are ready to return to a ward.
What should I expect after surgery?

Your consultant or a member of their team will provide you with specific instructions and information; the following are general guides only.

- Unless you feel sick, you can start to eat and drink gradually as you feel able. If you do feel sick, we can give you medicines to relieve this. You may find you have some mild difficulty swallowing for a few days.

- You will be sat up and out of bed as soon as possible on the ward and walked to the toilet. A nurse or nursing assistant will help you until you feel steady enough to walk on your own. You will gradually increase your activity as you are able and we may ask a physiotherapist to see you.

- You will be given regular pain relieving medicine. Please tell your nurse if this is not effective so we can give more or have you reviewed by the doctor. Good pain relief is important to your recovery.

- X-rays are taken the day after surgery.

- Most people feel the improvement in their arm pain immediately after the operation. Others may find it takes a few weeks before they feel the benefits.

- Before going home, your surgical team will advise you how
to care for your wound. It is important to know how to care for your wound so please do not hesitate to ask any questions you may have.

- It is normal to feel a little tired for a couple of weeks after an operation. Try to do gentle activity regularly rather than too much at once. We would normally recommend three to six weeks off work depending on the nature of your work. If you have a manual job you may need to take several months off. Please discuss this with your surgeon before you leave hospital. You should avoid lifting heavy objects during this time.

- You can start driving again when you feel comfortable and confident enough to operate a vehicle safely and perform an emergency stop. This is usually four to six weeks after surgery. You need to be able to turn your head comfortably to check behind you and be able to reverse. Contact the DVLA and your insurance company for further information.

We will make a follow up appointment between one and three months after your operation. We will tell you the date and time of your appointment either at the time of discharge or you will be notified by a letter in the post.

It is important to attend this appointment so we can check on your progress.
Your nurse will give you a card with contact details if you have any concerns or questions after going home.

If you have any concerns about your wound such as redness, discharge (leaking of blood or fluid), pain or if you redevelop any symptoms please seek medical advice straight away. You can contact the spinal nurse specialist during working hours, your GP or go to your local Accident and Emergency Department.
Where can I get more information?
You may find the following websites helpful:
www.brainandspine.org.uk
www.uclh.nhs.uk/nhnn
www.patient.co.uk

UCL Hospitals cannot accept responsibility for information provided by other organisations.

References
How to contact us

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Where to find us
Space for notes and questions