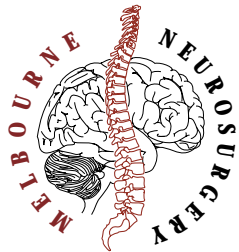


## INFORMATION LEAFLET

## BRACHALGIA



### THE CERVICAL SPINE

The CERVICAL spine (the bones and discs of the neck) is made up of vertebrae and discs. The vertebrae are the blocks of bone that make up the spine, discs act as cushions between them. The vertebra has a ring of bone on the back that is made from the lamina and the pedicle. When all the vertebrae are stacked on top of one another these rings line up to form a tube (CANAL). This contains the spinal cord and the nerves that leave to go into the arm.

### THE DISC

This is the cause of all the trouble. It is made up of two components. An outer capsule (anulus fibrosis) and a soft centre (nucleus pulposus). The capsule (made from lamminated fibres) holds in the soft contents and this allows movement of the vertebrae on one another. It can be likened to a tube of toothpaste only the contents are much thicker and it is like soft rubber.

### WHAT IS BRACHALGIA ?

This is pain that radiates down the arm. It is usually caused by pressure on a nerve in the neck. Each nerve that leaves the spinal cord in the neck leaves through a hole (foramen) between the vertebrae in the cervical spine. When a nerve is compressed it gives a a typical pattern of pain / weakness and numbness. Your doctor can usually tell which nerve by the pattern of symptoms.

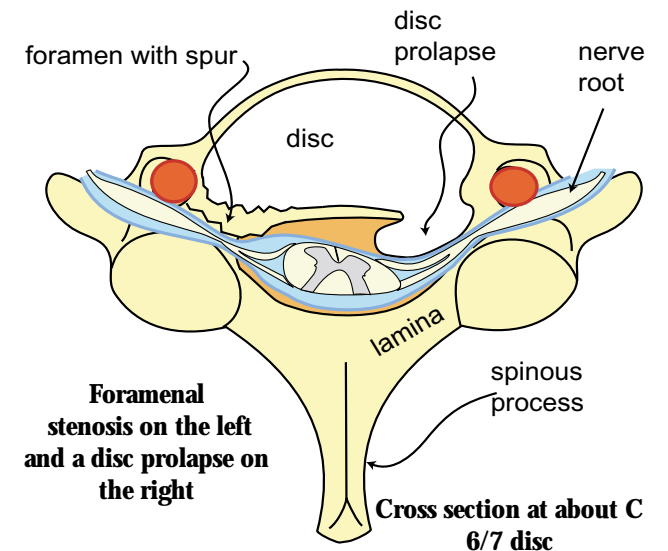
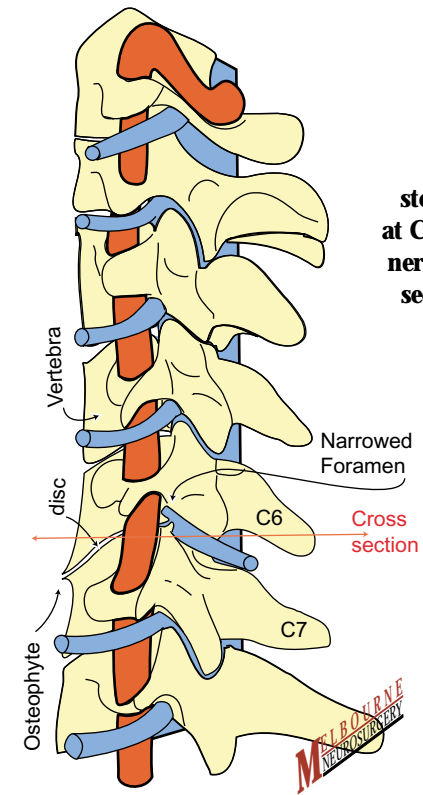
### WHAT CAUSES BRACHALGIA ?

#### DISC PROLAPSE

Either pressure on the nerve inside the spinal canal by a cervical disc prolapse before the nerve enters the foramen. Or by pressure on the nerve by a prolapse inside the foramen.

#### FORAMENAL STENOSIS

The degenerative process in the disc causes bulging of the disc into the foramen. This is combined with the attempt by the vertebrae to fuse by growing spurs (osteophytes) around the disc. At the same time the disc loses height causing the foramen to narrow. The facet joint on the back of the vertebra also enlarges closing off the foramen. This all puts the squeeze on the nerve root.



## WHAT CAN YOU EXPERIENCE ?

For example if it is the seventh cervical nerve root **C7** the pain starts in the neck and back of shoulder. It radiates down along the back of the arm then the side and back of the forearm and into the middle fingers. These may go numb or have tingling in them. The weakness is usually in the wrist and the back of the elbow. The reflex at the back of your elbow may also disappear

## HOW IS THIS DIAGNOSED ?

Your doctor will usually make the diagnosis from the symptoms that you have.

When the possibility is raised that you have BRACHALGIA then you may need to have some tests.

### PLAIN X-RAYS

These are often the first test. These show that the discs have lost height, that there may be spurs (osteophytes) and that the foraminae are narrow.

### CAT SCAN

This is usually next. This is a computerised X -ray of your neck that will show how much the diameter of the canal is reduced and how far out the discs are.

You are referred to a specialist after the CAT scan in most cases and they organise any further investigations.

### M.R.I. (Magnetic Resonance Imaging)

This is the next test. It produces pictures like the CAT scan but they are generated using a magnetic field and not using radiation. This test is not always needed if the CAT scan shows the problem.

### CERVICAL CT MYELOGRAM

This is an older test that involves the injection of contrast into the fluid (C.S.F.) around the spinal cord and nerves and this is followed by a CAT scan. The contrast makes it easier to see what is going on. This is sometimes used if the M.R.I. is of poor quality or if you cannot have an M.R.I.

### The common specialists to be referred to are:

Neurosurgeons  
Neurologists  
Orthopaedic Surgeons  
Rheumatologists

**This is usually for an opinion and for advice and not always for an operation**

## HOW IS THIS TREATED ?

This depends on:

How bad your symptoms are  
What type of symptoms you have  
What the specialist finds when he examines you  
How bad the investigations show your spine to be

### How bad your symptoms are

If your symptoms are not too bad then your specialist may recommend: Analgesia, physiotherapy, anti-inflammatories and some gentle exercise in the hope that you will get better on your own.

### What type of symptoms you have

If you have Brachalgia (with no numbness or weakness) and nothing to find on examination then the above will also be tried. Neck pain is unlikely to be helped with surgery.

### What the specialist finds when he examines you

If there is evidence on examination of some damage to the nerve to the arm then it will depend on how bad this is as to whether you may be offered an operation.

### How bad the investigations show your spine to be

Sometimes the spine is so bad that surgery may actually make things worse and this might be advised against.

## IS SURGERY ALWAYS NEEDED ?

**No** In most cases the symptoms will resolve on their own. If your X-rays show a soft disc prolapse then it usually improves over 6 weeks and may not recur. If the Xrays show that the foramen is narrowed then these symptoms will take longer to improve and may recur. If you have numbness and weakness as well as the pain expect these to improve only after the pain has resolved. The weakness gets better first and the numbness last( it may take in excess of 6 months for the sensation to get better). In some cases the numbness does not improve.

## WHEN IS SURGERY SUGGESTED ?

(Most patients do not get to this point)

If you are not getting better after trying everything.  
If you have severe weakness/numbness.  
If you cannot cope with the Pain.  
If you are getting worse.

## IF YOU NEED SURGERY WHAT WILL IT BE ?

THERE ARE TWO TYPES OF OPERATION

The surgeon decides and it depends on many factors

CERVICAL FORAMINOTOMY +/- DISCECTOMY

This is the partial removal of adjacent lamina and part of the facet joint at the back of the foramen.

ANTERIOR CERVICAL DISCECTOMY AND FUSION

This where the disc prolapse and any spurs are removed from the front and the disc replaced with a bone graft.

## FOR ABOVE PROCEDURES SEE THE RELEVANT PROCEDURE LEAFLET

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