CG APPROVED

Patient information and discharge advice for Cervical Spine fractures (adults)

Major Trauma Centre Collaborative Cheshire and Mersey Network

NHS Liverpool University Hospitals NHS Foundation Trust

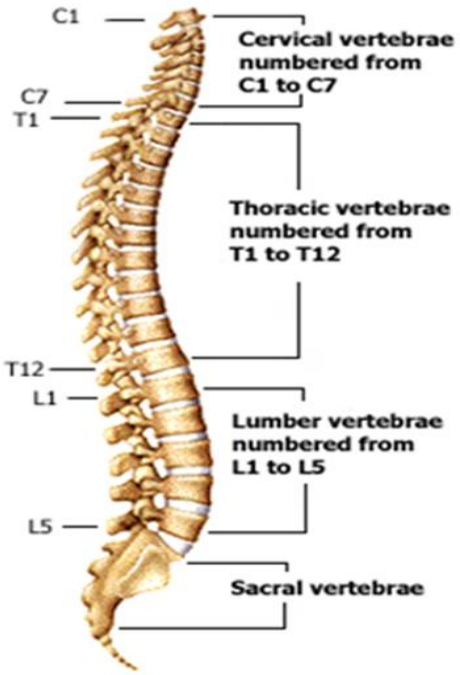
Major Trauma Services

Aintree Site
Lower Lane, L9 7AL **Tel:** 0151-525-5980
Royal Site
Prescot Street, L7 8XP
Broadgreen Site
Thomas Drive, L14 3LB
Royal & Broadgreen Tel: 0151-706-2000

This leaflet has been designed to help give you information about your condition. It is an overview for patients who have sustained a fracture (break) to the bones in the cervical spine (neck area). This is a general guide and individual requirements may vary.

The Spinal Column

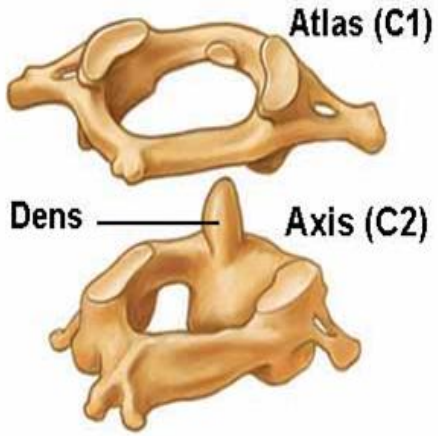
The spinal column is made up of bones that are all stacked up on top of each other, with soft cushions of discs in between each of the bones that act as shock absorbers. The cervical spine bones are the smallest and bones get larger as you go down the spine with the bones at the lower back being the largest to help support the weight of the body. The bones each form a circle, which encases the spinal cord and nerves and provides protection for these.



(Diagram showing a side view of the spine)

(Diagram showing the position of bones in cervical spine/ neck)

The top 2 bones of the cervical spine C1 (Atlas) and C2 (Axis) are different to any other bone in the spinal column, the first is a ring of bone (C1), and the second (C2) is a ring that includes a peg (Dens) that is an upward projection of bone on the ring, the peg sits inside the first ring and together they allow you to rotate your head around



(Diagram of first 2 bones C1 and C2)

The Spinal Cord

The spinal cord comes down from the brain starting at the level of the first cervical bone in the neck and finishes at the level of lumbar vertebrae 1 and beyond this it fans out into a big bundle of nerve fibres, known as the cauda equina nerve roots.

The spinal cord runs through the centre of the spinal column in the hole in the middle of the spinal bones. The nerves in the cervical area are responsible for the feeling and movement in your arms but, information from the brain to the whole body and, from the body back to the brain, passes through the spinal cord in the cervical area.

The spinal cord acts in a similar way to the internet highway passing millions of pieces of information from the brain to the body and back again for example, movement in the body, where you limbs are in space, what they feel like etc.

Fractures

A fracture (break to the bone) can occur for several reasons but usually as a result of some force to the body, for example in a road traffic accident, fall, sport injury etc.
There are 2 categories of fractures that can occur: - Stable or Unstable.

Stable Fractures

These are fractures where the bone has been broken/damaged but because of the way this has happened the majority of the structure is still intact and therefore it is highly unlikely to move with normal movement.

These fractures are usually managed conservatively (without an operation) and sometimes require you to wear a collar or special brace to help support the structure whilst the bones heal, in the same way you would need to wear a plaster cast for a broken arm of leg.

You will be monitored with x rays or scans at regular intervals; usually you will be sent appointments to be seen in the outpatient clinic.

If you need to wear a collar or special brace then this will be fitted and explained to you before you are discharged home and you will need to continue to wear the collar/ special brace as you have been instructed and until you are seen in clinic and instructed that it is safe to discontinue wearing it.

Unstable Fractures

In an unstable fracture the damage to the bones means that the bone has moved and/or it has the potential to move further and cause problems with the spinal cord or nerves if it is not stabilised.

Usually unstable fractures need an operation to fix the bones in position and stop the movement. Instrumentation in the form of screws, rods and plates are usually inserted to act as scaffolding to support the bones whilst they heal. These are usually left in place and not removed even once the fracture has healed.

Surgery can be performed from the front of your neck or from the back of your neck and a decision will be made based upon your specific fracture.

If an operation is needed then this will all be explained to you by your medical team and you will have the opportunity to ask questions.

Neurological Problems

When you have sustained your injury this may have caused some damage to the spinal cord or spinal nerves, this can be because of pieces of bone causing pressure to the nerves, the way your injury occurred because of the force, or swelling as a result of the trauma to the spine.

This may have caused you some problems with the movement or feeling in your body. Injuries in the neck resulting in spinal cord or spinal nerve damage can cause problems throughout the whole body or just some parts of the body.

This can result in weakness of your limbs, changes to how your body feels, difficulty with your bladder and bowel function and the most severe form spinal cord and nerve damage is paralysis.

Usually this occurs in an unstable fracture which may need an operation to remove anything causing pressure to the spinal cord or nerves, to try and improve any weakness or changes to the feeling in your body. Sometimes surgery needs to be delayed slightly to allow any swelling to settle down.

Operating whilst there is swelling and irritation to the structure can increase the injury to the nerves that already exists because of the trauma of the accident.

The decision to perform an operation is taken when the risks of any damage to the nerves/spinal cord are balanced against the risk of the swelling and surgery. This is a decision the consultant/medical team will explain to you and discuss with you.

Each individual patient has a plan of treatment that is specific to their injury and it will all be discussed with you.

With any kind of fracture it is usual for you to be kept flat and still in bed until your injury has been assessed, all scan s and x rays have been done and a plan of care which is individual to you has been made and discussed with you. Keeping you lying flat and still is to prevent any possible further movement of the fracture.

Discharge

It is normal to experience some pain and altered sensation to your body (pins and needles, tingling, cramps, muscle spasms or odd feelings like water is running on your skin or something is crawling on your skin) as the spinal cord, nerves and structure recover from your injury.

Full spinal cord and nerve root recovery can take 12-18 months to manifest itself, so it can take spinal cord and nerves this long to see what degree of recovery they make.

You will be sent an outpatient appointment to be seen in clinic at The Walton Centre by a consultant or a Spinal nurse specialist. This appointment will be sent in the post to you and it important that you attend this appointment.

What Can You Do?

- Remain off work/college/university until you are advised by your medical team that you can return
- Although we want you to be mobile, normal day-day activity is acceptable, but we ask that you refrain from physical activity, including sport or gym work until you are advised by your medical team it is safe to do so
- You can only drive when you can drive the car safely this includes having a full range or movement and being able to perform an emergency stop.

Pain Relief

You will receive pain killers whilst you are in hospital and you will also be prescribed a 10 day supply to take home with you on your discharge.

A discharge summary will be sent to your GP practice so for further medication please contact your GP practice to arrange this.

What Should You Look Out For?

Although complications are uncommon there are some symptoms that you could experience that mean you should be checked over urgently, to ensure everything is healing well:-

Mild to moderate pain is to be expected because of the force of the trauma you have sustained and any surgery that has been performed. Should you experience severe pain which is not relived by your pain killers then you should phone for advice or return to the hospital.

Any change in the power to your arms or legs, reduction in the sensation to your arms and legs, problems with your bladder or bowel function you should speak to your nurse specialist or attend your local A+E department. If you fall and injure yourself you should attend your local A+E department.

Contact Details

If you have any queries you can contact the following –

If you were on the major trauma ward at Aintree contact:

Major Trauma Nurse Co-ordinators:
0151 529 2551 (please leave your name, date of birth, brief issue and contact number)

Major Trauma Ward:
0151 529 6255

For brace problems contact:
0151 529 2531 (09.00-17.00, Mon-Fri)

If you have been discharged from The Walton Centre –

Spinal Nurses:
0151 529 8853

Caton Ward:
0151 529 5628

If you require a special edition of this leaflet

This leaflet is available in large print, Braille, on audio tape or disk and in other languages on request. Please contact:

Tel No: 0151 529 2906

Email: interpretationandtranslation @liverpoolft.nhs.uk