CERVICAL SPONDYLOSIS

What is Cervical Spondylosis?

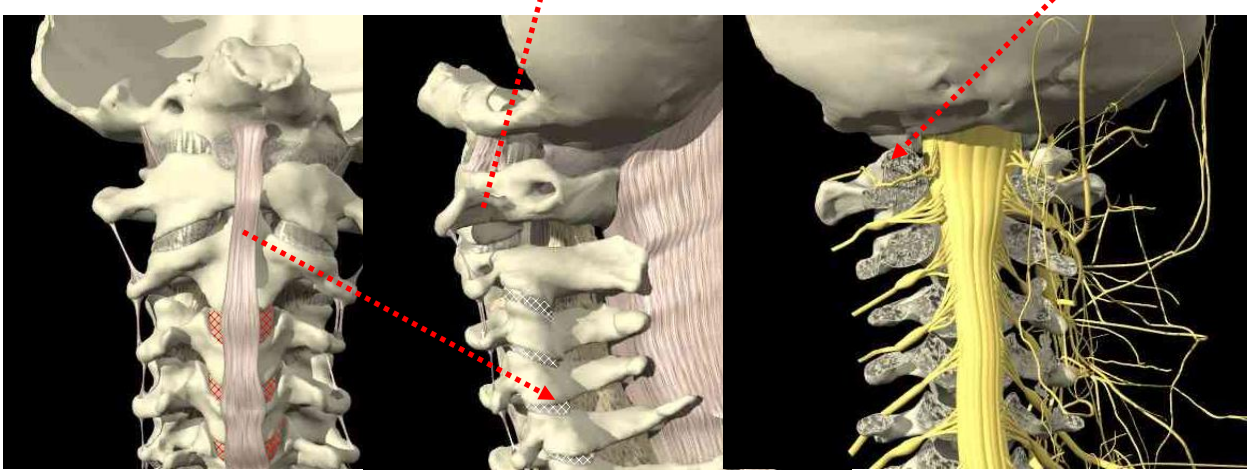
Cervical spondylosis is a cause of neck pain. It tends to develop after the age of 30, and becomes more common with increasing age. The underlying cause is the progressive, age-related degeneration ('wear & tear') of the spine. To an extent, we all develop a degree of degeneration in the spine as we become older. However, cervical spondylosis is a term used if the degree of degeneration is more severe, and causes more symptoms, than is expected for a given age.

The degenerative process involves the disc, two facet and uncovertebral joints, with changes to all bony (structural) and soft-tissues around the spinal canal. The most common changes are illustrated below:

The capsule around the joint may degenerate and become fibrotic.

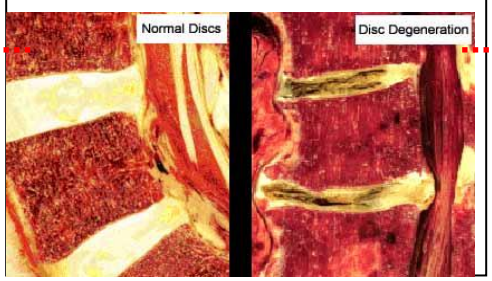
Facet Joint:
Small stabilising joints located between and behind adjacent vertebrae

Small bony outgrowths at the joint (osteophytes) contribute to a narrowing (stenosis) of the **nerve**



This leads to bulging, protrusion and later fragmentation of the disc material. Sometimes the disc may become fibrous, which will lessen the risk of prolapse.

Disc Degeneration:



Disc material stretches and displaces causing stress at ligamentous attachments, leading to the formation of osteophytes. Thickening, stiffening and buckling of the ligaments can also occur.

What are the symptoms of Cervical Spondylosis?

In mild cases, there may not be any signs or symptoms and when present can vary from mild to severe. Some symptoms include:

- *Pain* in the neck may spread to the base of the skull and shoulders. Movement of the neck may make the pain worse.
- *Stiffness* is a frequent accompaniment and worse early mornings and post-activity.
- *Headaches* from time to time. The headaches often start at the back of the head just above the neck and travel over the top to the forehead.
- *Deformity* may also be a problem, although not the main complaint. Commonly there is an increase in the normal curve of the neck (cervical lordosis), leading to a 'chin-poking' posture.
- "*Neurological features*" result from nerve compression due to the growth of osteophytes and narrowing of the spinal canal. The severity of these features will depend on the site, degree and duration of nerve compression. Symptoms gradually progress as the disease progresses.
- They vary from intermittent "shooting" pain into the hand, to altered sensation and weakness of muscles. The milder symptoms are more common, and may be intermittent or related to certain activities or positions.

What will Physiotherapy consist of?

As a result of spondylosis, cervical discs and joints become inflamed and the muscles, which run parallel to the spine, contract or go into spasm as a protective mechanism. It is therefore important for your therapist to relax these muscles and reduce the inflammation within your spine. Your therapist will also need to address any "abnormal" changes in posture within the spine as a result of degeneration. This can be achieved with:

Massage encompassing a variety of techniques and is given with sufficient pressure through the superficial tissue to reach the deep lying structures. It is used to increase blood flow, decrease swelling, reduce muscle spasm and promote normal tissue repair.

Trigger Point Release involves applying sustained pressure to palpable areas of muscle tension along the neck and shoulder. The aim is to release the small "knots" of muscle tension and pain by hold the pressure for 30-50 seconds.

Mobilisation is a manual technique where the joint and soft tissues are gently moved by the physiotherapist to restore normal range, lubricate joint surfaces, and relieve pain.

Manipulation is a high speed, short movement thrust given at the end of available range. It can be used in select cases to break down adhesions, remove a blockage within a joint and restore full painless movement. A click or noise may be experienced during this treatment.

Ultrasonic Therapy transmits sound waves through the tissues stimulating the body's chemical reactions and therefore healing process, just as shaking a test tube in the laboratory speeds up a chemical reaction. It reduces tissue spasm, accelerates the healing process and results in pain relief.

Interferential Therapy introduces a small electrical current into the tissues and can be used at varying frequencies for differing treatment effects. E.g. pain relief, muscle or nerve stimulation, promoting blood flow and reducing swelling/inflammation.

Exercise Programmes encompassing a wide range of techniques to stretch and strengthen muscles, lengthen tissues, improve postural alignment, develop co-ordination and balance.

Other treatments that could be used:

Short Wave Diathermy emits electromagnetic waves deep into the tissues. This results in increased blood flow to the area to promote healing, gives pain relief and can produce a heating effect to soften the tissues in preparation for mobilisation/manipulation.

Laser Therapy emits beams of light into the tissues of the body, stimulating chemical reactions and having a similar effect to ultrasound though using light energy instead of sound energy.

Acupuncture is an oriental technique of introducing needles into the skin to increase or decrease energy flow to promote pain relief and healing.

Podiatry an analysis of the foot mechanics and structure during walking or running with correction as appropriate.

What can you do to help your condition?

Analgesia / Anti-inflammatory medication– In consultation with your GP or Pharmacist these types of medication may provide significant pain relief.

Heat Packs- The application of a hot pack to the lower back may be beneficial in helping the muscles to relax, promote blood flow to the area and provide pain relief

Posture – Good posture enables the muscles of the spine to act as a supporting structure and decreases the strain on the joints of the spine. Try not to stoop when you sit at a desk.

Ergonomics - Ensure that all your seating is encouraging you to attain good posture and your mattress is supporting your spine adequately.

A firm supporting pillow - seems to help some people when sleeping but may aggravate others.

In the past, some people have been informed to rest during a "flare up" of neck pain. It is now known that if you rest and immobilise your joints for too long, it will cause the neck to "stiffen up" which may exacerbate the symptoms. It is recommended to keep moving regularly whilst paying attention to good posture.

Exercise/ Postural Programme - Comply with the prescribed programme. Your physiotherapist will instruct you as to which of the following exercises to begin with, when to add the others, as well as how to progress the exercises.

N.B. Exercises may cause discomfort but should not cause pain so please consult with your therapist if you have any concerns.

1.

Rotations

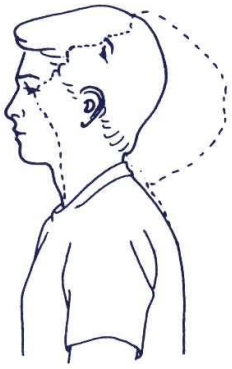
2.a

Side flexion

2.b

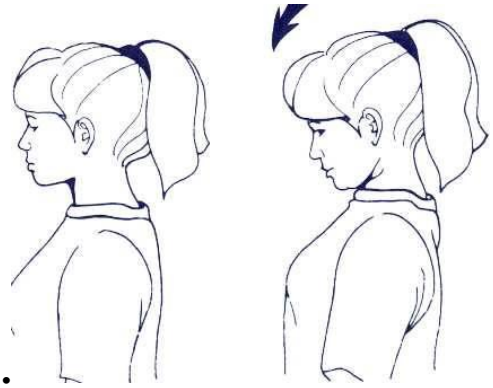
Side flexion with assistance

3.



Extension

4.

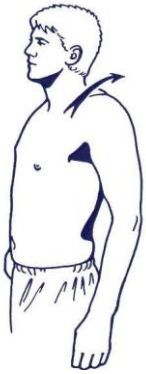


Flexion

5.

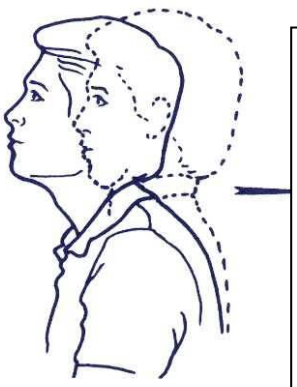
Exercises 1 -5 take the head as far as possible in the desired direction without pain, hold this position for 20-30 secs during this period the pain should ease and you should keep taking the head gradually further. Repeat on opposite side if appropriate and perform two to three times daily.

Combined stretch



Shoulder Circles

Slowly rotate the shoulders in a clockwise direction ten times making as big a circle as possible and then repeat anti-clockwise. Do this exercise two to three times per day.



Retractions

Slowly pull the head backward as if pulling away from a bad smell, hold this position for approximately 5 seconds and repeat ten times. Do this exercise at least three times per day.

What if physiotherapy does not help or resolve my condition? It is very rare that physiotherapy does not give great benefit or help you to manage your symptoms effectively. In these cases a cortisone injection may be appropriate and in very extreme cases surgery is a possible option. These options can be discussed with your therapist if appropriate.