

# LUMBAR SPONDYLOSIS

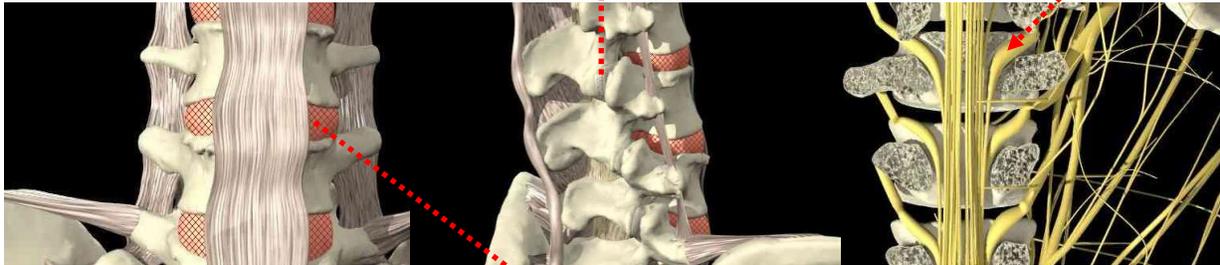
## What is Lumbar spondylosis?

It is the progressive, age-related degenerative changes at the lumbar spine. The degenerative process involves the disc and two facet 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.

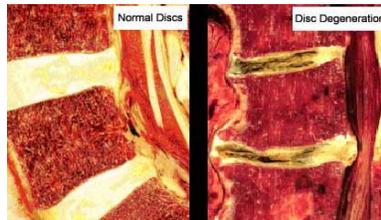
**Facet Joint:**  
Small stabilising joints located between and behind adjacent vertebrae become worn

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



This leads to bulging, protrusion and later fragmentation of the disc material. Sometimes the disc may become fibrous, which lessens 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 lumbar spondylosis?

In mild cases, there may not be any signs or symptoms. *Stiffness* is a frequent accompaniment and worse early mornings and post-activity. *Deformity* is usually part of the initial problem, although not the main complaint. Commonly there is loss of the normal curve in the low back (lordosis), leading to a ‘flat-back’ or ‘stooped forward’ posture. This is also aggravated by the presence of spinal canal stenosis (narrowing).

The growth of osteophytes and resulting stenosis can lead to “neurological features” due to compression on nerves. 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 nerve pain (shooting/ lancinating) 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, lumbar discs and facet 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 spasm 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.

**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.

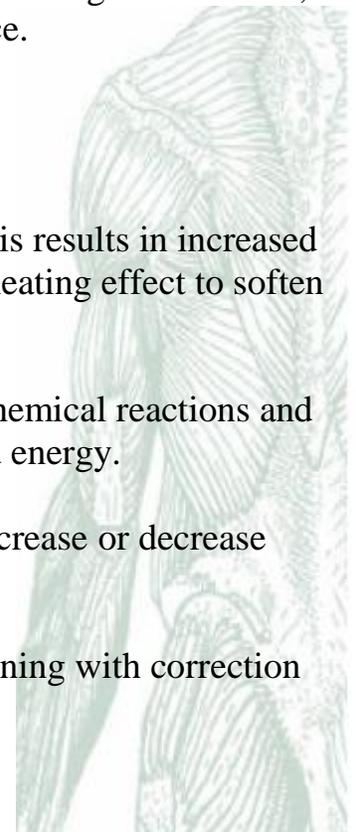
### Other treatments that could be used:

**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.

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

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

**Lumbar supports**- **MAY** provide some benefit but should only be used under the guidance of your therapist

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

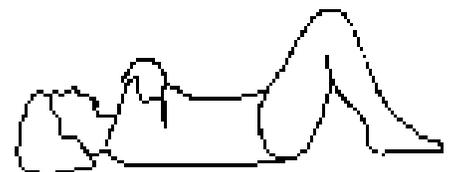


**Starting Position:** Lie flat on your stomach on a mat with your hands in a press up position

**Action:** Push up slowly keeping your hips firmly down and stay in this position for about 5 seconds making sure that you relax your low back completely. Repeat 10 times and do 3-6 times daily

**Starting Position:** Lie on your back on a table or firm surface. Both knees bent feet flat on the surface.

**Action:** Cross your arms over your chest. Turn your head (trunk) to the right as you turn both knees to the left. Allow your knees to relax and go down without forcing. Bring knees back up, head to centre, reverse directions. Repeat 10 times and do 3-6 times daily





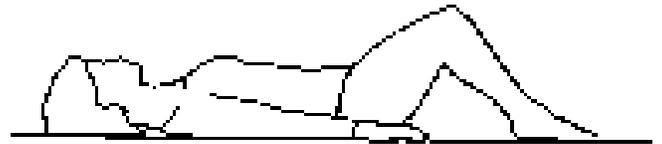
**Starting Position:** Lie on your back on a firm surface. Knees bent and feet flat on the table. Flatten your back to the floor by pulling your abdominal muscles up and in.



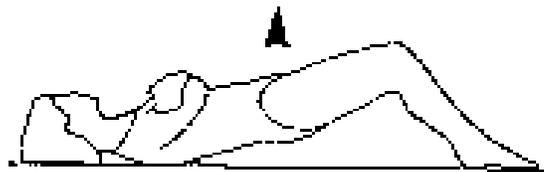
**Action:** Bring one knee toward your chest. Hold this position for 30 seconds. Lower your leg to the starting position. Then repeat on opposite knee.

**Starting Position:** Lie on your back on a table or firm surface. Your feet are flat on the surface and the knees are bent.

**Action:** Push the small of your back into the floor by pulling the lower abdominal muscles up and in. Hold your back flat while breathing easily in and out. Hold for five seconds. Do not hold breath.



**Starting Position:** Lie on your back on a table or flat surface. Your feet are flat on the surface and your knees are bent. Keep your legs together. Cross your arms over your chest.



**Action:** Tilt your pelvis and push your low back to the floor as in the previous exercise, then slowly lift your buttocks off the floor as far as possible without straining. Maintain this position for 5 seconds. Lower your buttocks to the floor.

**Starting Position:** Kneel down on the floor in the "all-four's" position. Keep your head straight so that the gaze of your eyes is toward the floor.

**Action:** Slowly allow your trunk to sag as far as you can so that your back is arched. Do not pull it down but let it relax as you lift your face towards the ceiling. Then round your back up at the waist as far as you can by contracting your lower abdominal muscles as you lower the top of your head toward the floor. All motion should be initiated from your lower back.



### 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 an epidural injection may be appropriate and in very extreme cases surgery is a possible option. These options can be discussed with your therapist if appropriate.

