

## Lumbar Spinal Stenosis

This leaflet aims to give you some information about what Spinal Stenosis is and what you can do to help manage the symptoms you are experiencing.

### What is Spinal Stenosis?

Spinal stenosis refers to pain in the lower back (lumbar spine) and / or legs which starts after a few minutes' walking, and tends to get better very quickly when you sit down.

It is caused by narrowing of the spinal canal. In many cases this is completely symptom free, but can cause symptoms ranging from pain in the back and / or legs, to pins and needles, numbness and muscle weakness in the legs.

### How is Spinal Stenosis diagnosed?

Spinal stenosis is diagnosed from the signs and symptoms you describe. If surgery is being considered then you may undergo an MRI scan (magnetic resonance imaging) to assess the degree of stenosis and help plan your treatment. There is a poor association between pain severity, level of restriction and extent of stenosis seen on an MRI scan. Symptoms can vary considerably from person to person; it is not uncommon that individuals with a severe stenosis experience few symptoms or the other way around.

### *What's wrong with me?*

As you get older, the tissues in your spine change in response to the stresses and strains of normal everyday life. There is a constant process of "wear and repair" that occurs within our joints, which helps them to adapt to the stresses and strains of normal everyday life.

For example, the discs of the spine become thinner and bulge, ligaments thicken, and small bony nodules called osteophytes develop at areas of increased pressure. These changes can lead to a narrowing of the holes in the back that nerves pass through, and in some cases can cause pressure on the nerves. In a very small percentage of people the symptoms may be caused by underlying pathology such as infections or malignancies.

Spinal stenosis is quite a common problem particularly in those over the age of sixty, (however it can affect younger people but more rarely). A reduction in size of the spinal canal is called a 'central canal stenosis', while a narrowing of the smaller side tunnels is called a foraminal stenosis. The symptoms of these two types of stenosis are essentially the same.

### How can this affect me?

Stenosis can affect any part of your spine, and symptoms can occur in the leg or arms depending on the part of the spine that is affected.

### *What are the main symptoms of Spinal Stenosis?*

The symptoms most commonly experienced with spinal stenosis include back pain, buttock and leg pain. You may also experience numbness, weakness or feelings of unsteadiness, which can affect both legs.

Symptoms typically occur with activities such as standing for long periods and walking. This is because these activities cause the spinal canal to narrow. Leg pain caused by walking is called claudication.

Many people say they can walk further if they are able to lean forwards, for example on a shopping trolley. Pain usually gets better with sitting and leaning forwards, this widens the spinal canal giving the nerves more space.

### *How long will it take to get better?*

Research suggests approximately 15% of people with spinal stenosis will improve with time, 70% will stay the same and 15% will experience a worsening of symptoms (usually walking); however this happens slowly with time.

### *What I can do to help myself get better?*

Although spinal stenosis can affect your quality of life, it is not serious or dangerous. Your back is still strong and you should remain as active as possible.

If your symptoms are manageable then it is unlikely that surgery is needed. Most people with spinal stenosis can successfully manage their symptoms with simple less risky treatments, called conservative treatment options.

While it is common that people with back pain will look for someone to get rid of their pain, it is more effective to find a strategy that allows you to be in control and manage your symptoms.

### Conservative treatment options

#### 1. Managing pain

You can take over the counter painkillers such as paracetamol or ibuprofen. Your GP or Pharmacist can provide further guidance on the risks of these and how to use them effectively.

If your symptoms are more severe, then discuss nerve pain modifying drugs (called neuropathic pain medication) with your GP. Examples are gabapentin or pregabalin and amitriptyline. Pain medication is usually most effective when combined with an exercise programme.

#### 2. Pace yourself

Pacing is a strategy to increase activity without increasing your symptoms. Start by establishing a manageable routine, for example:

*At the moment, I can...*

*Walk for* *minutes*

*Stand for* *minutes*

*Lift* *kg / lbs from one table to another*

Once you know what you can do, create a plan to increase it. You may find using a walking stick and planning frequent rests help you to walk further.

Begin by doing less than you do at present (say 80%), but do this more frequently through the day. Increase this gradually every few days to improve your activity tolerance.

### 3. Exercise

Exercising with back pain may seem daunting, but it is one of the most important elements of managing spinal stenosis. Improving your flexibility, strength and overall level of fitness is important in helping you manage your spinal stenosis.

There is no evidence that one type of exercise is better than another, however, you should enjoy what you are doing.

You may find exercises in sitting more comfortable as the spinal canal is bigger when seated, such as cycling on an exercise bike and seated gym machines. Exercises in water may also be more comfortable.

Use the pacing principles to judge how much exercise you should start with, and to increase your exercise over time. It is better to do a few exercises several times a day rather than all at once.

### 4. Lifestyle

Lifestyle can significantly impact upon the amount of pain and physical restrictions a spinal stenosis can cause.

Although it can be difficult to be cheerful or optimistic if you are in pain, it's important to stay positive as this can help you recover faster. Low mood, stress and poor sleep are all known to increase pain by making our nerves more sensitive.

Ensuring that you have a regular sleep pattern, taking steps to reduce stress, such as relaxation and mindfulness can help you to better manage your symptoms.

Carrying excess body weight can increase the pressure on your lower back and contribute to your pain. Even if you have a spinal stenosis, you can still lose weight in the same way everyone else can: by reducing the calories you consume and increasing exercise.

Create a calorie deficit by cutting empty calories from your diet. Reduce the amount of sugar, processed food, saturated fat, fizzy drinks and alcohol you consume. Replace these foods with lean meats, fruit, vegetables, whole grains, nuts and seeds.

### 5. Physiotherapy

Physiotherapists are experts in helping people develop self-management strategies and developing exercise routines for individuals with pain and medical problems.

In a few cases, individuals with spinal stenosis may find hands on physiotherapy treatments reduce their pain in the short-term; however these treatments will not give you a longer term cure.

How long before I see improvement?

It can take several months of exercise, pacing and pain medication before you start to see improvements in your symptoms and function. It is therefore important you perform exercises regularly for this period to see your symptoms improve.

### *How can a clinician help?*

#### **What about scans?**

An MRI scan (magnetic resonance image) may be helpful if pain does not settle or if an intervention like an injection or operation is being considered.

An MRI scan is the gold standard for getting an internal view of the bodies' structure. MRI scans don't involve x-rays and are very safe, although they are quite noisy and some people find them claustrophobic. X-rays only provide limited information about the discs and nerve roots, and are therefore not routinely arranged.

#### **Do I need a scan?**

MRI scans are not normally required in the early stages of spinal stenosis, or if symptoms are not severe as pain will often improve on its own, with time.

MRI scans are very sensitive and will detect almost all serious spine problems such as cancer, infection or pressure on the spinal cord or spinal nerves.

They will also comment on minor abnormalities that are not important, or related to your symptoms. Although these abnormalities can sound concerning, they are nothing to worry about.

#### **Should I be concerned?**

In **very rare cases** spinal stenosis could result in a cluster of symptoms that requires immediate attention. This is termed cauda equina syndrome. Although very rare, it is important to act on these symptoms as an emergency, to avoid permanent symptoms

Cauda equina syndrome is the result of compression of the nerves in the base of your spine that supply the muscles and sensation to your bladder, bowel, genital area and legs, this could cause:

- Loss of feeling or pins and needles between your legs, around your genitals or back passage
- Changes to bladder and bowel function, such as loss of sensation, loss of control or an inability to empty your bladder
- Sexual problems such as loss of vaginal sensation and inability to achieve an erection or ejaculate
- Weakness in the legs affecting walking

If you think you are experiencing any of these symptoms you should attend your nearest A&E department.

#### **What if my symptoms do not improve?**

If your symptoms don't improve with conservative treatment, or severely restrict your quality of life then you may be referred for spinal injections to alleviate your leg pain, or surgery to reduce pressure on the spinal nerves. Surgery will be advised for those individuals who develop progressive leg weakness, or bowel and bladder problems.

### **What does injection or surgery entail?**

If your signs and symptoms match up with your imaging findings, then an injection such as a nerve root block can be very helpful for your leg pain. Injections are low risk procedures that can be repeated, and benefit about 60% of people with nerve pain in the leg, however they are not particularly helpful for back pain.

If symptoms remain unacceptable despite trying conservative measures, then surgery can be considered. This will need to take into account your general health and overall fitness. Surgery is most likely to benefit you if your main complaint is nerve pain, however it is not particularly helpful in standalone back pain. Spinal decompression involves removal of the bone or tissue that is compressing the nerves to give the nerves more room.

### ***Summary: what are the key take home messages?***

- Stenosis is in most cases not serious, and can be managed without surgery
- Usually your symptoms get worse with activities such as walking and are relieved by sitting
- Good days and bad days are normal
- Remain active and try to undertake exercise to improve your fitness
- Although activity maybe painful, you are not harming your back
- If you feel you are not getting any better, discuss your symptoms with your GP