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# Leg Pain linked to the Lower Back (Sciatica)

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Lower Back Pain (LBP) is extremely common, and most of us (around 80%) will suffer from it at some point in our life. Many people with LBP also experience pain travelling into other areas, typically into the buttock or leg and sometimes this causes pins and needles or numbness. Most back and/or leg pain does not have a serious cause and can come on for no reason and whilst it can be very distressing does not necessarily require emergency medical attention.

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**However a rare but serious complication of back/leg pain called Cauda Equina Syndrome requires emergency medical attention if it develops. Please take the time to read the warning signs below:**

You may not develop all of the following signs and they could develop in any order

- Loss of feeling / pins and needles between your inner thighs or genitals or numbness in or around your back passage
- Altered sensation when wiping yourself with toilet paper
- Increasing difficulty when trying to urinate
- Increasing difficulty in stopping or controlling the flow of urine
- Loss of feeling when you urinate or empty your bowels
- Recent leaking of urine or needing to use pads
- Not knowing if your bladder is full or empty
- Inability to stop a bowel movement or leaking
- Recent changes in either sexual function or loss of sensation in genitals during sexual intercourse

**If any of these warning signs develop following the onset of your back pain, you should attend your nearest Accident and Emergency Department.**

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In addition to this, if you have none of the above symptoms but you feel there is:

- **significant noticeable weakness of your leg causing you to trip/fall,**
- **you have difficulty walking because your legs are weak or feel stiff or uncoordinated**
- **you develop a floppy foot**

then you should seek urgent medical attention.

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Finally, if you have recently developed back and/or leg pain and:

- **have a history of Cancer**
- **feel generally unwell such as developed a fever or night sweats**
- **are losing weight for no clear reason**

You should discuss your symptoms with your GP

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## **What is 'Referred Pain'?**

As previously mentioned, many people with LBP also experience pain travelling into other areas, typically into the buttock or leg. This is called 'referred' pain, as although it feels like a problem in the hip or leg, the problem is often higher up in the back. A lot of the time this is simply due to inflammation or sensitivity of some of the joints, muscles or discs in the back. It typically feels like an ache or occasional sharp pains and is often confused with Sciatica, but actually has nothing to do with the nerves at all. Referred pain is simply due to the way our bodies are wired up and is not a sign of anything serious and often clears up as the back problem improves.

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## **What is Sciatica?**

Occasionally, the nerves that leave the spine and travel into the leg (Sciatic Nerve) can become irritated or 'pinched' by swelling/inflammation or a disc problem. If this happens it can also result in pain into the leg which can be quite severe, particularly early on. We call this 'Nerve Root Pain', 'Radicular Pain' or more commonly 'Sciatica'. Sciatica affects anywhere between 15 and 40% of us in our life.

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## **What are the Symptoms?**

Pain from the Sciatic nerve typically travels below the knee into the calf or foot and is often described as shooting, burning or electric in nature although people describe many different sensations. Often with Sciatica, the leg pain is much worse than the back pain, and some people don't experience any back pain at all leading to some confusion about where it is coming from. Many people also experience unusual feelings like pins and needles or some numbness in parts of the leg. Certain muscles of the leg can feel weak depending on which nerve in the back is sore.

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## **Why does the leg feel Tingly, numb or weak?**

Nerves are a bit like the wiring system in the body. They tell the muscles in the leg what to do and they also pass sensation messages from the leg to the brain. If there is a problem with the nerve, these messages can be interrupted or aren't as clear leading to strange sensations in the skin or weakness in the muscles that each nerve supplies. As nerves recover these sensations often improve and weakness recovers although this is slow and can take months.

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## **What are the Common Causes?**

Swelling or inflammation from structures near the nerves can cause them to be irritated or even compressed. One of the commonest structures involved are the intervertebral discs of the spine. As we age these dry out and start to flatten, causing them to swell or thicken around the edges (disc bulge). This happens to all of us to varying amounts although we usually aren't aware of it as it often doesn't cause symptoms as the body adapts.

However, in some people this can be enough to irritate the nerve making it unhealthy or sensitive resulting in symptoms.

Less commonly people can experience a sudden injury to the disc (Disc prolapse or herniation) causing acute inflammation. In this instance the inner nucleus (thick substance like jelly) of the disc can leak out compressing or irritating the nerve. When this happens it can be acutely painful and very distressing. However the body still has an excellent capacity to heal this and many acute disc prolapses resolve over time.

Other causes of sciatica include ageing changes in some of the other structures of the spine including the bones and ligaments, which narrow the canal that the nerves pass through. This is called Stenosis (see the information leaflet about stenosis on the TIMS website) and usually affects the older population.

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## How Can I help myself?

Most sciatic nerve problems improve with time, but there are things that can be done to help this along as much as possible:

**Getting adequate pain control**, particularly early on as it has been shown that excessive or uncontrolled pain in the early stages can sometimes lead to a poorer outcome or slower recovery.

**Getting appropriate sleep** – sleep is when our body recovers and heals. Pain often interferes with the sleep cycle. Appropriate pain control can help, as well as considering factors such as avoiding caffeine late at night, getting sufficient activity through the day to make you tired and avoiding napping through the day. A small firm cushion between the knees when sleeping on the side, or several firm pillows propping up the knees when lying on the back, may ease symptoms

**Trying to remain active** wherever possible. It is well known now that avoiding activity because of pain or spending long periods sitting or lying appear to hinder rather than help in the long term. Nerves get their blood flow through movement so remaining active can aid recovery and help manage symptoms.

**Trying some exercises** to keep your back and nerve tissue moving. Movements of the back help to keep the joints mobile and stop them from stiffening up. They also show the body that movement is safe, which can influence how much it will protect or create pain. There are some exercises at the end of this leaflet that can be helpful in regaining mobility when you develop a back problem and they can sometimes help with short term pain relief. As a rule, don't do anything that causes excessive pain, but don't be frightened of it either, you may have to accept some discomfort when you are trying to keep active and do the exercises.

**Relaxation/stress management** techniques – the more we learn about pain, the more we realise the impact that low mood, fear and anxiety/worries can have on symptoms. Pain and uncertainty around the cause can lead to some of these emotions/feelings, which in turn can contribute to more distress and pain worsening. Understanding and recognising this in yourself can be important and strategies such as Mindfulness or Relaxation techniques can sometimes help.

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## What Other Treatments are available?

Despite improvements in symptoms in most people, there are some situations where things don't improve to a manageable level, or there are signs that the nerve has been quite badly injured. In these cases an MRI may help to determine if there is a clear structural reason for this and this can lead onto more invasive treatments:

1. **Injection Therapy:** Steroid injections targeting the nerve, or the space around the nerve in the spine, are sometimes used to help confirm the diagnosis prior to surgery when severe leg pain isn't improving. They can offer short term pain relief in some people but are rarely a long term solution. They are only used in select cases and usually only if all conservative measures have been tried. These are done via the spinal doctors in a hospital setting.

2. **Surgery:** Surgical treatments for sciatica are only considered in specific circumstances when either there is significant weakness of muscles or symptoms are severe, debilitating and resistant to all other treatments. It is worth recognising however that while surgery may improve the pain in the short term, in the long term (more than 1 year after surgery) people who undergo surgery for pain have very similar outcomes to those that don't.

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## **I've had leg pains for a long time but nothing seems to help!**

Unfortunately, whilst many sciatic nerve problems improve with time or treatment, there is a proportion of people whose symptoms don't go away all together or continue to come and go on a regular basis. We use the term 'persistent' or 'chronic' pain when things don't resolve as expected. If pain is very severe and there are clear explanations for this on an MRI scan, this is when seeing a specialist to discuss treatments such as injections and surgery may be appropriate.

However, MRI scans often don't tell us the whole picture and even after having these treatments some people still suffer with pain. Others may find that their scan doesn't show anything that a surgeon can treat which can again be very confusing. However we know that pain is complicated, and nerves can remain sore and sensitive long after discs or other tissues have healed. In these situations it is important to focus more on ways to try and manage or live with pain, and physiotherapy can offer some further guidance and support if and when this happens.

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## **When to Seek Help?**

As most leg pains associated with the back tend to improve with time, it isn't always necessary to seek medical attention, particularly in the first few months. Remaining active, keeping pain under control with medication and addressing lifestyle factors such as weight, sufficient sleep and managing stress can really influence your outcome and aid recovery.

However, if either:

- You feel your pain is too severe and unmanageable
- There is a significant impact on your sleep that isn't being helped with medication
- You feel your symptoms are progressively worsening despite trying the exercises and advice
- Symptoms have persisted for more than 6-8 weeks without any signs of improvement despite trying the exercises enclosed

then call TIMS to arrange an appointment.

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The following exercises can be useful to help maintain or improve your overall mobility as well as the mobility of your back which can aid recovery. You may also find some of the exercises useful for helping to relieve pain in the short term.

You don't have to do all of them, find the ones you feel most comfortable doing or which seem to help you the most and stick with those.

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[Video](#)



Lying with your knees bent and feet on the floor. Lift your knees towards your chest.

Place your hands behind both knees and draw them towards your chest. Hold  20  secs.

Repeat  5  times.

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[Video](#)



Crawling position.

Let your arms slide along the floor as far as possible. Push your bottom back and down and the chest towards the floor. Breathe out while you go down.

Hold 20-30 seconds staying relaxed and trying not to hold your breath

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[Video](#)



Knees to Sides

Lie on your back with knees bent.

In a controlled manner move your knees from side to side. Go only as far as you can without moving your shoulders too much. Try and stay relaxed with slow controlled breathing throughout.

Repeat 10 - 15 times.

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[Video](#)



Lying on your back with knees bent.

Squeeze your buttocks together and lift your bottom off the floor. Return to starting position.

Repeat  5  -  10  times.

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## Video



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Knee Extension in Sitting. This can be helpful to get the nerve in your leg moving and promote circulation

Sit up straight on a sturdy chair, so that your feet are supported on the floor.

Bend your ankle and straighten your knee slowly using your front thigh muscles until you feel a gentle pull in your leg. In a controlled manner, return to the starting position.

Repeat this slowly up and down without pausing for around 1 minute.

Repeat 2 times.

## Video



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### Squat

Stand tall with feet slightly wider than hip-width apart. Toes pointing forward or turned a few degrees outwards. Keep your chest up and your spine and neck in a neutral position.

Squat down by sitting back and bring your arms forward. Push back up through the heels, chest up, and straighten your hips. You can hold onto a chair or worktop in front of you for balance

Note:

- Keep your hips, knees and toes aligned if you can
- Keep your weight evenly on your whole foot.

Repeat 10 times.

## Video



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Stand holding onto a table or kitchen work top if you need to for balance.

March in place for 30 - 60 secs, trying to get your knees high up and level with your hips if you can.

## Video



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Going for a walk every day, and seeing if you can gradually increase the distance/time as the days or weeks go by, can be really helpful.

Start small if you need to and set a daily goal to try and go a little further each time

## Further reading & references

Information in this leaflet is based on: <https://cks.nice.org.uk/sciatica-lumbar-radiculopathy>

## For further information

Please email [ghnt.newcastlegatesheadtims@nhs.net](mailto:ghnt.newcastlegatesheadtims@nhs.net), ring on **0191 2138800** or visit our website at: [www.tims.nhs.uk](http://www.tims.nhs.uk) which provides online guidance and support on managing your musculoskeletal (MSK) condition effectively.

The NHS website also provides trusted online information and guidance on all aspects of health and healthcare to help you manage your condition and/or inform your choices about your health: [www.nhs.uk](http://www.nhs.uk).

## Useful links

The Patient Advice and Liaison Service (PALS) can offer on-the-spot advice and information about the NHS. You can contact them on freephone **0800 032 02 02** or e-mail [northoftynepals@nhct.nhs.uk](mailto:northoftynepals@nhct.nhs.uk).



### **Tyneside Integrated Musculoskeletal Service**

TIMS is a partnership between Newcastle upon Tyne Hospitals NHS Foundation Trust and Gateshead Health NHS Foundation Trust

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