

Sciatica

Introduction

Sciatica is the name given to any sort of pain that is caused by irritation or compression of the sciatic nerve.

The sciatic nerve is the longest nerve in your body. It runs from the back of your pelvis, through your buttocks, and all the way down both legs, ending at your feet.

When something compresses or irritates the sciatic nerve, it can cause a pain that radiates out from your lower back and travels down your leg to your calf. Sciatic pain can range from being mild to very painful.

Causes of sciatica

A slipped disc is the most common identified cause of sciatica, but in some cases there is no obvious cause.

Less common causes include spinal stenosis (narrowing of the nerve passages in the spine), injury, infection or a growth in the spine.

When to see your DOCTOR

Most people find their sciatic pain goes away naturally within a few days or weeks. However, see your DOCTOR if:

you experience any other symptoms together with your back and leg pain, such as weight loss or loss of bladder or bowel control

you experience increasingly more pain and discomfort

your pain is too severe to manage with self-help measures

In these cases, your DOCTOR should check whether there is a more serious problem causing your pain.

Treating sciatica

Most cases of short-term (known as acute) sciatica will pass without the need for treatment. A combination of things you can do at home, such as taking over-the-counter painkillers, exercise and hot or cold packs can usually relieve the symptoms.

For persistent sciatica (known as chronic), you may be advised to try a structured exercise programme under the supervision of a physiotherapist. In very rare cases, surgery may be needed to control the symptoms.

Preventing sciatica

There are some steps you can take to minimise your risk of a slipped disc or back injury that could lead to sciatica. This includes:

- better posture and lifting techniques at work
- stretching before and after exercise
- simple, regular exercises to improve flexibility

Symptoms of sciatica

Sciatic pain can range from being mild to very painful and may last just a few days or for months. If it lasts for more than six weeks, it is considered to be persistent (chronic) sciatica.

Sciatica is different to general back pain. The pain of sciatica hardly affects the back at all but radiates out from the lower back, down the buttocks and into one or both of the legs, right down to the calf.

The pain often gets worse over time and may also be made worse by:

- sneezing, coughing or laughing (impulse pain)
- standing or sitting for a long period of time
- bending backwards

Other symptoms

If you have sciatica, you may also experience the following symptoms around your legs and feet:

- numbness
- tingling
- muscle weakness
- loss of tendon reflexes

When to seek emergency help

Seek immediate medical help by calling for an ambulance if you experience the following symptoms:

numbness in your bottom, lower back and leg

loss of bladder and/or bowel control

feeling of weakness in your leg and foot

These symptoms may be signs of a rare condition known as cauda equina syndrome.

Causes of sciatica

Sciatica is caused by irritation or damage to the sciatic nerve. A slipped (or herniated) disc is the most common identified cause of sciatica.

Slipped (or herniated) disc

Your spine is made up of vertebrae, discs and nerves. Vertebrae are the blocks of bone that make up the structure of your spine and protect the nerves.

The vertebrae are supported and cushioned by discs. The discs are made from a tough, fibrous case that contains a softer gel-like substance. A slipped disc occurs when the outer part of the disc ruptures (splits), allowing the gel inside to bulge and protrude outwards between the vertebrae. When this presses against the sciatic nerve, it can cause sciatica.

As a person gets older the discs start to become harder, tougher and more brittle. Repeated strain on the back means there is a greater chance of a hardened disc splitting and rupturing.

Spinal stenosis

Spinal stenosis is the narrowing of nerve passages in the spine. It occurs when the bones, ligaments or discs of the spine squash the nerves of the spine (usually the sciatic nerve) causing pain, usually in the lower back and legs. It mainly affects people in their late middle age and older.

Causes of spinal stenosis include:

age-related changes in the spine

changes in the ligaments of the spine

diseases of the bone, such as Paget's disease

Other causes

Less commonly, sciatica may be caused by:

infection

injury

a growth within the spine, such as a tumour

Cauda equina syndrome

Cauda equina syndrome is a rare but serious condition that can cause sciatica. The cauda equina is the bundle of nerves that lead out from the end of the spinal cord. Cauda equina syndrome occurs when these nerves are compressed and damaged.

It can eventually lead to paralysis if left untreated.

One of the warning signs of cauda equina syndrome is suddenly losing control of your bladder or bowels. If this happens, see a doctor immediately.

Diagnosing sciatica

If the symptoms of sciatica are mild and last no longer than six weeks, a medical diagnosis is not usually needed. This is because mild, short-term (acute) sciatica is normally not a cause for concern and will improve without treatment. However, if your symptoms are severe or the condition continues for more than six weeks, see your DOCTOR to rule out any serious conditions that could be causing your sciatica.

Straight leg raise test

Your DOCTOR should be able to confirm that the pain is being caused by the sciatic nerve using the passive straight leg raise test.

This test involves lying flat on your back with your legs straight. The DOCTOR will ask you to raise one leg and they will then raise your foot up. If this causes pain or makes your pain worse, it is usually an indication that your pain is being caused by the sciatic nerve.

Warning signs

Your DOCTOR will also ask you questions about your medical history and individual circumstances. They are looking for warning signs that your sciatica is caused by a serious condition, such as cauda equina, an infection of the spine, or cancer.

DOCTORS refer to these warning signs as 'red flags'.

Red flags that suggest cauda equina syndrome are:

numbness in your bottom, lower back and leg

loss of bladder and/or bowel control

feeling of weakness in your leg and foot

Red flags that suggest cancer or infection are:

you are over 50 years of age and have never had any previous back pain

you have a history of cancer

you have symptoms of fever, chills or unexplained weight loss

you have had a recent bacterial infection, such as a urinary tract infection (UTI)

you inject illegal drugs, such as heroin or cocaine (a leading risk factor for spinal infections)

you have a condition that weakens your immune system, such as HIV

you have a structural deformity of the spine

If you have one or more red flags, your DOCTOR will probably recommend that you have further tests. If you have any red flags that suggest cauda equina, they will make sure you are admitted to hospital immediately.

Further tests

Depending on your symptoms, your DOCTOR may feel it is necessary to have further tests These may include:

a blood test to rule out infections

an X-ray

imaging tests such as a computerised tomography (CT) scan or a magnetic resonance imaging (MRI) scan

MRI scans use strong magnetic waves to build up a detailed picture of the inside of your body. An MRI scan should be able to detect any problems with the nerves and structure of your spine.

Treating sciatica

Most cases of acute sciatica can be treated at home with painkillers. Chronic sciatica usually requires a combination of self-help techniques and medical treatment.

Treating short-term sciatica

Painkillers

Over-the-counter (OTC) painkillers are usually effective in relieving pain. Painkillers known as non-steroidal anti-inflammatory drugs (NSAIDs), such as ibuprofen, are thought to work best.

NSAIDs may not be suitable if you have asthma, high blood pressure, liver disease, heart disease or a history of stomach and digestive disorders. In these circumstances, paracetamol is likely to be a more suitable painkiller for you. Your DOCTOR or pharmacist will be able to advise you.

If OTC painkillers are not effective in relieving your pain, your DOCTOR may prescribe a mild opiate-based painkiller, such as codeine, or if your symptoms are very severe, a muscle relaxant such as diazepam.

Diazepam has the potential to be habit-forming, so your DOCTOR will not usually prescribe more than a seven-day course of the medication.

Exercise

If you have sciatica, it is important for you to remain as physically active as possible. While bed rest may provide some temporary pain relief, prolonged bed rest may be unnecessary. Recommended exercises include walking and gentle stretching exercises.

If you have had to take time off work due to sciatica, you should aim to return to work as soon as possible.

Compression packs

Many people find that using either hot or cold compression packs helps to reduce pain. You can make your own cold compression pack by wrapping a pack of frozen peas in a towel. Hot compression packs are usually available from larger pharmacies. You may find it effective to use one type of pack followed by the other.

Treating persistent sciatica

Persistent (chronic) sciatica usually requires a combination of self-help techniques and medical treatment. Treatment options are outlined below.

Painkillers

The long-term use of NSAIDs as a method of controlling pain is not usually recommended because they can cause problems with your stomach and digestive system, such as ulcers or internal bleeding.

If you need pain relief over a long time, the painkillers listed below may be used:
paracetamol

codeine (paracetamol is often prescribed in combination with codeine)

a tricyclic antidepressant, such as amitriptyline
gabapentin for neuropathic pain (where nerves are thought to be inflamed), or,
in capsules, a similar drug called pregabalin

Amitriptyline was originally designed to treat depression but doctors have now found it is also useful for treating nerve pain.

Gabapentin was originally designed to prevent seizures in people with epilepsy. However, like amitriptyline, it has been found to be useful for treating nerve pain.

Do not suddenly stop taking gabapentin as you may experience withdrawal symptoms such as anxiety, insomnia, nausea, pain and sweating. If you want to stop taking gabapentin or no longer need to take it, your DOCTOR will arrange for your dose to be slowly reduced over the course of a week so you do not experience withdrawal symptoms.

Injection of a corticosteroid

If other methods of pain relief have not worked, your DOCTOR may refer you to a specialist for an epidural steroid injection. This delivers strong anti-inflammatory medication directly to the inflamed area around the nerves of your spine. This should release the pressure on your sciatic nerve and reduce your pain.

Exercise and physiotherapy

You should also try to remain as physically active as possible with persistent sciatica because this will reduce the severity of your symptoms. It is also recommended that you continue to work or return to work as soon as possible.

Regular exercise will help to strengthen the muscles that support your back. Exercise also stimulates the production of endorphins, which are natural painkilling chemicals.

Your DOCTOR may recommend a suitable exercise plan for you or refer you to a physiotherapist. A physiotherapist can teach you a range of exercises that strengthen the muscles that support your back and improve the flexibility of your spine. They can also teach you how to improve your posture and reduce any future strain on your back.

Cognitive behavioural therapy (CBT)

Some studies have shown that cognitive behavioural therapy (CBT) can help in the management of chronic pain that is caused by sciatica.

CBT is based on the principle that the way we feel is partly dependent on the way we think about things. Research has shown that people who train themselves to react differently to their pain, by using relaxation techniques and maintaining a positive attitude, show a decrease in the levels of pain that they experience.

They are also more likely to remain active and take exercise, further reducing the severity of their symptoms.

Surgery

Surgery may be an option to treat cases of chronic sciatica when:
there is an identifiable cause, such as a slipped or herniated disc
the symptoms have not responded to other forms of treatment
the symptoms are getting progressively worse

The type of surgery that will be recommended for you will depend on the cause of your sciatica. Some surgical options include:

discectomy – where the part of the herniated disc pressing on your nerve is removed (this is the most common type of surgery required)

fusion surgery – if a vertebra has slipped out of place, it may be possible to fuse it into place using a bone graft supported by metal rods

laminectomy – a procedure often used to treat spinal stenosis, this removes or trims the arch of a vertebra to relieve the pressure on the nerves

Many people have a positive result from surgery, but as with all surgical procedures, spinal surgery carries some risks. There is a risk of infection and of the surgery failing, and a low risk that your spinal nerves will be damaged during surgery. This could result in muscle weakness.

Before opting for spinal surgery, your surgeon will discuss the relative risks and benefits with you.

Read about [lumbar decompressive surgery](#) for more information on spinal surgery.

Preventing sciatica

Weight

Being overweight can put extra strain and pressure on your back.

Therefore, maintaining a healthy weight will help to ease the pressure.

Use the healthy weight calculator to find out whether you are a healthy weight for your height.

Although it is not always possible to prevent sciatica, there are several things you can do to help prevent a slipped disc or other back injuries that could lead to sciatica.

Lifting and handling

One of the biggest causes of back injury, particularly at work, is people lifting or handling objects incorrectly. Learning and following the correct method for lifting and handling objects can help prevent sciatica.

Think before you lift – can you manage the lift? Are there any handling aids you can use?

Start in a good position – your feet should be apart with one leg slightly forward to maintain balance. When lifting, let your legs take the strain – bend your back, knees and hips slightly but do not stoop or squat. Tighten your stomach muscles. Do not straighten your legs before lifting as you may strain your back on the way up.

Keep the load close to your waist – keep the load as close to your body for as long as possible with the heaviest end nearest to you.

Avoid twisting your back or leaning sideways – especially when your back is bent. Your shoulders should be level and facing in the same direction as your hips. Turning by moving your feet is better than lifting and twisting at the same time.

Keep your head up – once you have the load secure look ahead, not down at the load.

Know your limits – there is a big difference between what you can lift and what you can safely lift. If in doubt, get help.

Push, do not pull – if you have to move a heavy object across the floor, it is better to push it rather than pull it.

Distribute the weight evenly – if you are carrying shopping bags or luggage, try to distribute the weight evenly on both sides of your body.

Posture

How you sit, stand and lie down can have an important effect on your back. The following tips should help you maintain a good posture.

Standing

Stand upright, with your head facing forward and your back straight. Balance your weight evenly on both feet and keep your legs straight.

Sitting

You should be able sit upright with support in the small of your back. Your knees and hips should be level and your feet should be flat on the floor (use a footstool if necessary). Some people find it useful to use a small cushion or rolled-up towel to support the small of the back.

If you use a keyboard, make sure that your forearms are horizontal and your elbows are at right angles.

Driving

Make sure that your lower back is properly supported. Correctly positioning your wing mirrors will prevent you from having to twist around. Foot controls should be squarely in front of your feet. If driving long distances, take regular breaks so that you can stretch your legs.

Sleeping

Your mattress should be firm enough to support your body while supporting the weight of your shoulders and buttocks, keeping your spine straight. If your mattress is too soft, place a firm board – ideally 2cm thick – on top of the base of your bed and under the mattress. Support your head with a pillow, but make sure that your neck is not forced up at a steep angle.

Exercise

Exercise is both an excellent way of preventing back pain and reducing any back pain you might have. However, if you have chronic back pain (pain that has lasted more than three months), consult your DOCTOR before starting any exercise programme.

Exercises such as walking or swimming strengthen the muscles that support your back without putting any strain on it or subjecting it to a sudden jolt.

Activities such as yoga or pilates can improve the flexibility and the strength of your back muscles. It is important that you carry out these activities under the guidance of a properly qualified instructor.

There are also a number of simple exercises you can do in your own home to help prevent or relieve back pain.

Wall slides – stand with your back against a wall with your feet shoulder-width apart. Slide down into a crouch so that your knees are bent to about 90 degrees. Count to five, then slide back up the wall. Repeat five times.

Leg raises – lie flat on your back on the floor. Lift each heel in turn just off the floor while keeping your legs straight. Repeat five times.

Bottom lifts – lie flat on your back on the floor. Bend your knees so that your feet are flat on the floor. Then lift your bottom in the air by tightening your stomach muscles while keeping your back straight. Repeat five times.

At first, do these exercises once or twice a day, then gradually increase to six times a day, as your back allows.

These exercises are also useful for 'warming up' your back. Many people injure their back when doing everyday chores at home or work, such as lifting, gardening or using a vacuum cleaner. 'Warming up' your back before you start these chores can help to prevent injury.