

Foot Drop

This leaflet aims to give you information about what a foot drop is and what you can do to help manage the symptoms you are experiencing.

What is a foot drop?

The term foot drop refers to the inability to actively lift your ankle and toes upwards. It is the result of weakness of the muscles in the front of your shin, and is commonly caused by compression of the nerves in your spine, or a nerve injury outside of the spine such as a trauma or neuropathy.

If you have a foot drop which is still painful (i.e. you still experience pain in the leg), then you should see your GP immediately to further discuss the symptoms as time factor in these conditions is important and could make the difference between having this temporarily or permanent. However there is no guarantee that early detection and intervention will result in full resolution of your symptoms.

If you have a foot drop which is no longer painful (i.e. you do no longer experience any pain in the leg) you should see your GP but there is less urgency as the foot drop may permanent rather than temporary.

How is a foot drop Diagnosed?

A foot drop is diagnosed from the signs and symptoms you describe alongside an examination, which may include:

- Movements of the back, leg and foot
- Nerve tests including, sensation, reflexes and muscle power
- Nerve stretching tests
- An MRI scan (see below)

What's wrong with me?

A foot drop is caused when a nerve is unable to transmit messages sent from the brain to your muscles.

This is commonly caused when a disc prolapse touches or presses on nerves that exit the spine. Disc bulges are very common and happen as part of our bodies' normal aging process. Up to 80% of individuals over the age of 60 will have visible signs on an X-ray and MRI. It is also not uncommon to find on MRI scan, that people can have discs touching nerves that cause no symptoms whatsoever.

For others, a foot drop can be caused by peripheral neuropathy such as diabetes or low levels of Vitamin B12 which cause damage to the nerves. Or it can be caused because of a local pressure point along the course of the nerve, affecting how they send messages to the muscles.

How can this affect me?

This means that the muscles at the front of your shin are no longer able to lift your ankle upwards.

What are the main symptoms of a foot drop?

Nerve compression in the spine and peripheral neuropathy can cause a variety of symptoms, which differ from person to person. You may have therefore notice you are scuffing your feet, tripping or wearing out the front of your shoes. These symptoms can start suddenly or gradually develop over time.

As a result, you may have changed the way you walk (your gait). It is common that people with a foot drop lift their leg much higher to prevent their foot dragging on the floor. A foot drop can either occur on its own, or alongside other symptoms, which include:

- Pain and increased sensitivity in the foot or leg
- Pins and needles, and numbness in the foot or leg
- Altered sensations such as trickling water in the leg
- Nerve pain, often described as burning in nature in the leg

How long will it take to get better?

If your foot drop is the result of nerve compression in the spine and you have had it for a relatively short period of time, then surgery may be advised to release the pressure on the nerves. Although there are risks associated with surgery, including nerve damage, many people find their weakness improves quickly with surgery. However, it may take several months before the long term benefit of surgery is known. You will also need to undertake strengthening exercises.

If your foot drop is the result of nerve compression and you have had it for a long period of time, or if you have a peripheral neuropathy then surgery will not benefit to you. In these cases, you will be referred for a splint which helps to hold the foot in position and prevent it from dragging. Improving the management of your diabetes or Vitamin B12 levels can however prevent further deterioration.

What I can do to help myself get better?

Although a foot drop can affect your quality of life, it is not serious or dangerous, and you should remain as active as possible.

While it is common that people with back problems 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.

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 a foot drop may seem daunting, but it is one of the most important elements of managing your problem. Improving your overall level of fitness, balance and particularly the muscle of the shin is important in helping you manage your symptoms. There is no evidence that one type of exercise is better than another, however, you should enjoy what you are doing.

You may initially find exercises that are low impact more comfortable, such as cycling on an exercise bike or exercises in water.

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 restriction a foot drop can cause.

Although it can be difficult to be cheerful or optimistic, 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 nerve root pain, 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.

Smoking causes the release of harmful chemicals into our bodies that slows healing and makes nerves more sensitive to pain. Smoking also increases the level of stress hormones,

which also increases nerve sensitivity. Visit www.smokefreewestsussex.co.uk to find out more about stopping smoking.

5. Physiotherapy

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

How can a clinician help?

What about scans?

An MRI scan (magnetic resonance image) may be helpful if it is suspected that you have nerve compression in your spine. An MRI scan is the gold standard for getting an internal view of the bodies' structure. They 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. MRI scans don't involve x-rays and are very safe, although they are quite noisy and some people find them claustrophobic.

Do I need a scan?

The purpose of an MRI scan will be to determine the extent of nerve compression in your spine, and help decide whether you would benefit from surgery. An MRI scan may be required if:

- It is suspected your foot drop is caused by nerve compression in the spine
- The foot drop has started recently
- You have nerve pain in your leg alongside the foot drop

If it is suspected that your foot drop is caused by nerve compression in the spine, but;

- You have had it for some time, or
- Do not experience pain

Then an MRI scan may not be required. This is because the nerve is unlikely to recover, even if you have surgery to remove the pressure from the nerve.

If it is suspected that you have a peripheral neuropathy as a result of diabetes, or vitamin B12 deficiency then an MRI scan is not required. You may however undergo specific blood tests for these conditions, and in rare cases nerve conduction studies.

Should I be concerned?

In very rare cases a disc prolapse could result in a cluster of symptoms 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.

Summary: what are the key take home messages?

- A foot drop can be caused by a number of different factors
- A painful foot drop should be assessed as soon as possible by a health care professional as this can mean the difference between having this temporarily or permanently.
- The symptoms you have and physical examination determine the weather further investigation and treatment is required
- The symptoms associated with a foot drop can be very varied, and are not related to the size of the disc bulge.
- Stay at work or return back as soon as possible. You will not harm yourself if you experience pain while working. Normal activities will not delay recovery and are important for your recovery.
- Medications and adjustments in lifestyle may help to improve your quality of life while healing occurs.