Foot drop

Foot drop is a muscular weakness or paralysis that makes it difficult to lift the front part of your foot and toes.

It's also sometimes called drop foot. It can cause you to drag your foot on the ground when you walk.

Foot drop is a sign of an underlying problem rather than a condition itself.

The problem could be muscular, caused by nerve damage in the leg, or the result of a brain or spinal injury.

Foot drop usually only affects 1 foot, but it can affect both feet depending on the cause. It can be temporary or permanent.

Causes of foot drop

Foot drop is the result of weakness or paralysis of the muscles that lift the front part of your foot.

The cause of this can be many underlying problems.

Peripheral nerve problems or neuropathy

The cause of foot drop is often compression (squashing) of the nerve that controls the muscles that lift the foot.

Sometimes nerves around the knee or lower spine can become trapped.

The nerves in the leg can also get injured or damaged during hip replacement or knee replacement surgery.

The cause of foot drop can sometimes be nerve damage linked to diabetes, known as neuropathy.

Inherited conditions that cause peripheral nerve damage and muscle weakness may also lead to foot drop, for example, Charcot-Marie-Tooth disease.

Muscle weakness

Muscular dystrophy is a group of inherited conditions that cause gradual muscle weakness. They can sometimes lead to foot drop.

Other muscle wasting conditions can also cause foot drop. For example, spinal muscular atrophy or motor neurone disease.

Brain and spinal cord disorders

Conditions that affect the brain or spinal cord can cause foot drop.

These include:

- stroke
- cerebral palsy
- multiple sclerosis

Diagnosing foot drop

Foot drop is often diagnosed during a physical examination. Your GP will look at the way you walk and examine your leg muscles.

You may need to have imaging tests, such as an x-ray, ultrasound scan or CT scan.

You may need nerve conduction tests to help find where the affected nerve is damaged.

Sometimes you'll have an electromyography at the same time. This is where your doctor inserts electrodes into the muscle fibres to record their electrical activity.

Managing foot drop

If you have foot drop, you'll find it difficult to lift the front part of your foot off the ground.

You'll often scuff your toes along the ground. This increases your risk of falls. You may lift your foot higher than usual when walking to prevent this.

Recovery depends on the cause of foot drop and how long you have had it. In some cases, it can be permanent.

You can make small changes in your home to help prevent falls. These include removing clutter and using non-slip rugs and mats.

You can also do things to help stabilise your foot and improve your walking ability.

These could include:

- wearing an ankle-foot brace or splint to hold your foot in a normal position
- physiotherapy to strengthen your foot, ankle and lower leg muscles
- electrical nerve stimulation – in some cases it can help lift the foot
- surgery

Ankle-foot brace or splint

You can wear an ankle-foot brace or splint on the lower part of the leg to help control the ankle and foot.

It holds your foot and ankle in a straightened position to improve your walking.

If your GP thinks a brace or splint will help, they'll refer you for an assessment with an orthotist. An orthotist is a specialist who measures and prescribes braces and splints.

Your footwear will need to fit around the brace or splint.

Wear shoes with laces or adjustable fastenings. They're easy to adjust around the brace or splint. Shoes with a removable inlay are also useful because they provide extra room.

You can wear a close-fitting sock between your skin and the brace to help prevent rubbing.

Avoid wearing high-heeled shoes.

If you need a brace or splint, you must break it in slowly. When it's broken in, wear it as much as possible while walking. It'll help you walk better and keep you stable.

Electrical nerve stimulation

In some cases, an electrical stimulation device can help improve walking ability. It can help you walk faster, with less effort and more confidence.

An electrical stimulation device is a control box with batteries and electrode patches.

You put the electrode patches on your skin. One near the nerve supplying the muscle and the other over the centre of the muscle.

Leads connect the electrodes to the control box. This is about the size of a pack of cards. You can wear it on a belt, on a cuff around your leg or keep it in a pocket.

The device produces electrical impulses that stimulate the nerves to contract (shorten) the affected muscles.

The device is triggered by a sensor in the shoe. It activates every time your heel leaves the ground as you walk.

If your GP or consultant thinks you'll benefit from using an electrical stimulation device, they'll refer you to an orthopaedic foot and ankle surgeon.

After an assessment, the surgeon may refer you to a specialist unit to try the device and check that it's suitable for you.

For long-term use, you may have an operation to implant the electrodes under your skin. You'll have the procedure under general anaesthetic. Your surgeon places the electrodes over the affected nerve.

Electrical stimulation can treat people with foot drop caused by damage to the brain or spinal cord.

This is only an option when:

- the person understands what's involved and agrees to the treatment

- the results of the procedure are closely monitored

Surgery

Surgery may be an option in severe or long-term cases of foot drop with permanent movement loss from muscle paralysis.

The procedure usually involves moving a tendon from the stronger leg muscles to the muscle that usually pulls your ankle upwards.

Another type of surgery involves fusing the foot or ankle bones to help stabilise the ankle.

Speak to your GP or specialist if you're thinking about having surgery for foot drop.

They'll give you information about the procedures and discuss the benefits and risks.

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