



SPECIALIST ONLINE EXERCISE PROGRAMMES

Move Smart MS - Foot Drop Resource
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**RETHINK
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What is Foot Drop?

Foot drop, or dropped foot, is a symptom of multiple sclerosis caused by weakness in the ankle or disruption in the nerve pathway between the legs and the brain. This disruption means it is difficult to lift the front of the foot to the correct angle during walking, this movement is called dorsiflexion. As a result, the foot hangs down and may catch or drag along the ground and can cause trips and falls.

What causes Foot Drop?

Causes of foot drop in MS

In MS, foot drop is caused by weakness in the ankle or disruption in the nerve pathway to and from the brain, rather than in the nerves within the leg muscles. This results in poor coordination in the leg and ankle which affects gait.

This means the foot cannot be lifted to the correct angle at the right point when taking a step, so that the toes drag or catch along the floor or the foot slaps down.

Other MS symptoms such as numbness or other altered sensations in feet may make it difficult to feel the floor. Muscle weakness or spasms in the leg muscles can also make it more difficult to control the leg and foot.

Symptoms of foot drop may be intermittent, such as during an MS relapse, or they may be persistent.

Non - MS causes of foot drop

While MS is a common cause of foot drop, other causes include Injury to a nerve in your leg or due to other medical conditions for which your physiotherapist or doctor will assess you.

How do you know if you have foot drop?

Symptoms of foot drop

- Difficulty walking - Dragging your foot, tripping over your foot, leg feels very tired when walking.
- Unusual walking pattern - such as lifting your hip up or around on the affected side and/or going up on your toe on the other side.
- Foot can feel floppy - can hang downwards or inwards. Common descriptions include *“foot did not lift up in time” “foot did not do what I wanted it to do”*
- Symptoms are exacerbated by fatigue, heat or stress. They may be eased by a short rest-particularly in mild cases

Please note symptoms may be persistent or may occur intermittently - for example at the end of a long walk.

Self-test for Foot Drop

Foot drop may be caused by weakness in the front of your foot (dorsiflexors), or tightness in the back of your foot (plantarflexors).

Do you have weakness in the front of your foot (dorsiflexors)?

Q: When you pull your foot up towards your head - does each foot go equally high?

Q: When pointing your foot up and down several times - for example 20 times - does one foot get tired more quickly? Or does one foot have worse coordination?

If the answer to either of these questions is yes, you may have foot drop and should be assessed by a physiotherapist.

It is possible that your answers to these questions is no, and that foot drop symptoms only begin when you are fatigued - for example at the end of a walk, or during hot weather.

Do you have tightness in the back of your foot (the plantar flexors)?



Q: Can you get your ankle to at least 90 degrees?

If your answer is no, you should be assessed by a physiotherapist.

When to see a physiotherapist?

See a physiotherapist if you...

- Cannot participate in activities of life that you would like to - e.g., going for a walk, meeting friends sociably, engaging in work activities.
- Have an unusual walking pattern, trip or fall
- Are unable to get your ankle to 90 degrees
- Notice one foot is weaker than the other when lifting your foot upwards

To see a physiotherapist in a private clinic – see ISCP website to find a therapist in your location. [ISCP: Find a Physio](#) Under “common conditions” select “neurological conditions” and then ‘search’.

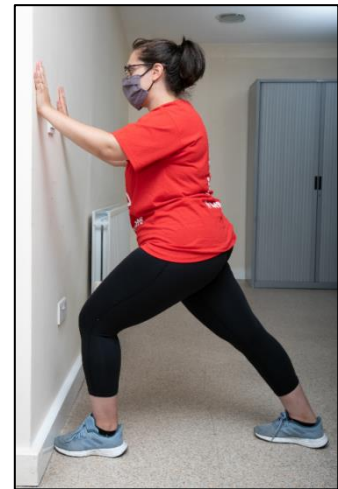
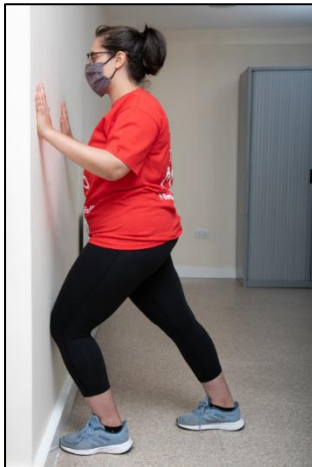
To see a physiotherapist publicly – ask your GP to refer you to primary care physiotherapy (PCCC). If the physiotherapist thinks that you would benefit from input from other professionals such as an occupational therapist or orthotist, they will be able to refer you onwards.

Foot drop treatments

While waiting for your appointment, the following tips that may help manage your foot drop.

Exercises to relieve tightness of the plantar flexors (the muscles in the calf)

- Gastrocnemius stretch in standing - stretching the back leg (Right)



- Soleus stretch in standing - stretching the front leg (Left)

Exercises to strengthen the dorsiflexors (the muscles on the front of the foot)



- Starting with the most basic then progressively getting stronger
 - Gravity eliminated – long sitting (Left)

- Against Gravity – in sitting
- Other exercise ideas: Standing cycle, duck walk, stepping with dorsiflexion exaggerated (Right), clock exercise



The following video shows exercises for foot drop. The exercises start off at the easiest level and progressively get more challenging.

[Foot Drop Treatment \(no narrative\)](#)



[Could using a gait aid or orthotic help you?](#)

You should consider using a gait aid or orthotic if any of the following apply;

You cannot participate in activities that you enjoy

If you cannot participate in activities of life that you would like to, then a gait aid or foot splint can help. For example, if your foot becomes heavy and this stops you meeting friends, shopping, exercising, then a walking aid or orthotic can limit the impact of your symptoms and allow you to complete those activities.

You cannot walk as far as you would like

You may find that by using an orthotic or walking aid you can walk much further or need less frequent rests when walking and thus enjoy your activities more.

You cannot be *moderately* active

Current guidelines recommend people with MS be moderately active for at least 30 minutes twice a week. Moderate levels of activity are described as any activity that gets your heart beating faster and makes you slightly out of breath. People

with MS should also complete strengthening exercises twice a week. If you are not meeting these levels of activity, using a gait aid or orthotic could help you reach this.

You trip or fall

Trips or falls can lead to serious injury. More commonly experiencing a trip or fall can lead to loss of confidence in your ability to walk. This could lead to isolation as it may stop you from participating in activities such as family outings, meals with friends and hobbies.

Correct technique is important when using a gait aid.

These videos will show you the correct technique;

How to use a walking stick: https://youtu.be/kWQ_l6-FwbU

How to use a dictus: <https://youtu.be/fzz1mBd0S0E>

How to use a zimmer frame: <https://youtu.be/Zqhf6uE8bol>

Orthotics

A wide range of products exist- such as a dictus splint, an AFO or FES - some of which can be quite discreet. A physiotherapist, occupational therapist or orthotist can help you decide which is the most suitable device for you. See the infographic on the following page for more detail.

Foot Drop and AFOs

What is foot drop?



- Muscular weakness or nerve damage that makes it difficult to lift the front part of your foot and toes.
- It can be caused by neurological conditions such as multiple sclerosis, Parkinson's disease and stroke.
- Other potential causes of foot drop include diabetes, cerebral palsy and muscle or nerve damage.

Signs you might have foot drop



You may have difficulty lifting the front of your foot off the ground



You may only notice this weakness after walking a long distance

Some advice if you think you have foot drop

- Speak to your physiotherapist. They will provide you with advice and give an assessment if necessary.
- They can advise you about strategies to help strengthen the muscles around your ankle and foot.
- They may also encourage you to use a device to help your drop foot.
- Keep floors clutter free, use non-slip rugs, tidy away any wires and keep all rooms well lit to avoid tripping



Devices to help manage your foot drop



Dictus

- Discreet design for subtle use
- Can be mounted to lace up shoes



Foot up

- Lightweight
- Can be worn with or without shoes
- Available in black and beige



Leaf Spring

- Can be heat moulded to foot for a more precise fit and added support
- Fits within footwear



Functional Electrical Stimulation (FES)

- Stimulates muscle to lift front of foot
- Electrodes used to stimulate nerve
- More expensive option

Consult with your physiotherapist or GP if you think you might have foot drop. Your physiotherapist will advise you on whether you would benefit from one of the devices and how to use them.

Other Treatments for Drop Foot

- **Medication** may help improve walking in people with MS. You should ask your neurologist if medication may be suitable for you.
- **Fatigue management:** As foot drop symptoms can become worse when you are fatigued, it is important to know how to manage your fatigue. Click this link for tips: [Fatigue MS Ireland PDF](https://www.ms-society.ie/sites/default/files/2019-06/MS_Fatigue_01.pdf) (https://www.ms-society.ie/sites/default/files/2019-06/MS_Fatigue_01.pdf)
- **Footwear and clothing** can sometimes worsen foot drop symptoms. Ensure you are wearing well-fitting, comfortable clothes.