

to Practice at Home

FlintRehab 生 Tools to spark recovery

Individuals with foot drop know that recovery is a process, and ankle movement can be one of the most difficult functions to recover. Foot drop exercises can help you regain dorsiflexion (the ability to lift the front of your foot up towards your shin), and with so many exercises to choose from, it's important to experiment until you find the ones that works best for you. Here, we provide 10 exercises you can add to your home therapy routine. And as always—Flint Rehab is here to support and guide you along the way. Let's get moving.

### 1 Passive Ankle Dorsiflexion

This exercise is accessible to everyone, even those with no existing movement in their ankle. "Passive" exercise involves moving your ankle through the movement with you hands.



Start this passive foot drop exercise with your affected leg still crossed over your other leg. Then, use your non-affected arm to move your foot into dorsiflexion. This is the exact movement that people with foot drop struggle with, so this exercise is a perfect starting point.

Starting with an open palm,
This is a passive movement, which
is a great starting point for anyone
struggling with extremely limited
mobility. It will also help reduce
the chances of your foot and ankle
muscles becoming stiff from lack
of movement.



#### 2. Ankle Adduction/Abduction

This exercise helps with mobility in a different plane to help improve mobility and range-of-motion in your ankle. It can be done passively or actively.



For another great passive foot drop exercise, cross your affected leg over your other leg. Then, use your non-affected hand to move the toe part of your foot up and down.

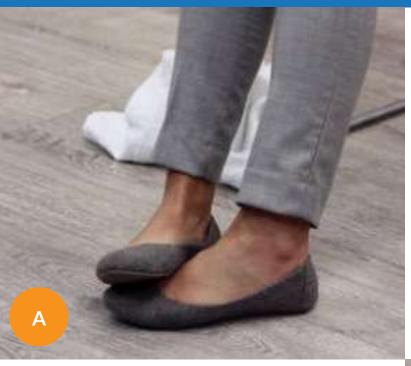
Focus on initiating all the movement from your ankle.

Passive exercises are great for patients with severely limited mobility. If you already have some movement, then add some challenge by doing the exercise without assistance from your hand (i.e. "active exercise").



#### 3. Assisted Toe Raises

Toe raises are the most difficult movement to perform with foot drop. If you have difficulty with this movement — that's okay! Fortunately, this is another passive exercise that you can use to help spark neuroplasticity and rewire the brain.



Start by placing your affected foot on top of your non-affected foot. Then, use your non-affected foot to lift your foot up. Use slow, intentional movements to help stimulate the brain.

Lift your foot up and down during this exercise a total of 10 times or more. If you are still unsure about the difference between passive and active exercise, read this article:

<u>Understanding Active vs Passive</u> <u>Exercises During Rehabilitation</u>



# 4. Toe Raise "Negatives"

A "negative" exercise involves emphasizing the eccentric part of a movement. With the previous Toe Raise exercise, the eccentric part of the movement is lowering your foot back down. During this exercise, we will emphasize only the eccentric part of the movement.



Start by lifting your affected foot up into a flexed position (toes towards your shin), just like in the Toe Raise exercise. But this time, instead of dropping your foot back down quickly, try to lower your foot as slowly as you can.

This move is more advanced, because it does require some control of your foot. Try doing this a total of 10 times before moving onto the next foot drop exercise.



# Side note: The best way to see results? Neuroplasticity

Neuroplasticity is how your brain rewires itself and heals after a neurological injury like stroke. When there's damage in the brain, neuroplasticity allows your brain to rewire new connections around the damage.

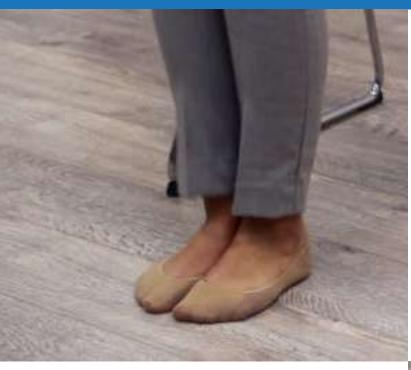
If stroke damaged the motor cortex of your brain, for example, then you may have impaired foot, ankle, and leg movement, resulting in foot drop. In order to regain ankle movement, you can engage neuroplasticity to rewire your brain! Which begs the question, how can you engage neuroplasticity?

The answer is **repetitive practice**. By doing the same motions again and again, you're strengthening the new neural connections and ingraining them in your brain. The stronger those connections become, the stronger your foot and ankle become. Repetitive practice is the fastest way to recover from foot drop.

We hope you take these foot drop exercises and practice them consistently. That is the best way to rewire the brain and see results!

#### 5. Heel Raises

This is a more advanced foot drop exercise that requires active movement.



To perform heel raises, start with your feet flat on the ground. Then, point your toes and lift your heels off the ground. Repeat 10 times.

This active foot drop exercise is the opposite of toe raises. Although this may not feel like it's helping with foot drop, it will help train the surrounding muscles.



#### 6. Ankle Eversion

This is a more advanced foot drop exercise that requires active movement.



For this active foot drop exercise, place your affected foot flat on the ground.
Then, lift the outside edge of your foot and toes up, then relax back down.

Focus on initiating the movement from your foot and ankle and try to avoid making the movement with your leg. Repeat 10 times.



#### 7. Hip Adduction and Abduction

Although this exercise targets the leg, it's also helpful for foot drop because increased tone (stiffness) in the leg can also affect the foot.



Start this lower limb exercise in a seated position. Then, kick your affected leg inward toward your midline (hip adduction). Then, kick your affected leg outward (hip abduction), like you're kicking a ball to the side.

Repeat back and forth. This exercise helps with foot drop because improving mobility in the leg has a trickle-down effect into the feet.



## 8. Hip Rotation

This is the last drop exercise before we dive into other treatments you can try. This is a gross motor exercise for the legs.



In a seated position, start with a towel underneath your affected foot. Then, use your arm to assist your affected leg and slide your leg and toes towards your midline (internal rotation). Then, push your leg and slide your leg and toes outwards (external rotation).

These last two foot drop exercises target the legs, which can be helpful for patients with severe foot drop when it's coupled with other lower limb impairments.



#### **Other Foot Drop Treatments**

Rehab exercises are the bread and butter of foot drop treatment. But there's more than you can do to speed up your results.



#### 1. Passive Exercise

Passive exercise is a great foot drop treatment for anyone that has zero mobility in their foot. It involves assisting your foot through the movement. This helps improve blood flow and activate neuroplasticity, which helps recovery from foot drop after neurological injury like stroke.

#### 2. Electrical Stimulation

Electrical stimulation involves applying gentle electrical currents to the affected muscles. It has been shown to help improve foot drop in stroke patients, and it produces the best results in conjunction with rehab exercise. Work with a physical therapist to learn where to place the electrodes.



#### 3. At-Home Rehab Exercise Equipment

If you struggle with staying motivated to do foot drop exercises at home, you can try interactive rehab equipment like Flint Rehab's <u>FitMi home therapy</u>. The device turns these written exercises into an interactive experience that helps you see faster results.





"With the FitMi, I am having great fun and I have noticed real-world results as well. I drive one-footed now rather than two-footed because I can target the gas pedal and the brake with my right foot. I can target the cruise control set button with my right hand. These accomplishments are due to the exercises and feedback of the FitMi."

-Ronald

"Overall, the FitMi is quite motivating. My daughter has managed over 10000 repetitions which would not have happened with traditional exercise. There has been improvement in the strength and motion of her arm and wrist which gives her hope for future hand usage. She also works on foot exercises as she is determined to walk."

-Glenys



# 4. Ankle Foot Orthotics

Ankle foot orthotics offer support to the foot so that it doesn't drag on the floor, which helps improve your safety. Be careful not to become too dependent on them, otherwise you may neglect your foot and lower leg muscles and foot drop can worsen.

We recommend using an AFO to improve your safety and reduce the risk of falling and also practice your foot drop exercises from the safety of home on a daily basis. That way, you're protecting yourself and also addressing the root cause of foot drop.





Many of our readers enjoy using both our <u>Flex AFO</u> and <u>FitMi home</u> therapy system together. Flex AFO is a special foot drop brace that goes on the outside of your shoe, which is far more comfortable than other inshoe braces. Then, FitMi targets your foot mobility to help improve foot drop over the long-run.