

“Foot Drop” Patient Education

A foot drop is the inability to elevate the ankle and toes from a “toe down” position to a “toe up” position, or the inability to bring the ankle up to a neutral position.

It is caused by weakness or dysfunction of the muscles at the front of the leg (anterior compartment muscles) commonly due to nerve compression related to spinal problems.

A drop foot may also occur secondary to a nerve injury (ex. at the level of the knee) or a compartment syndrome – a condition in which the lower leg muscles get damaged from an injury.

Patients with a drop foot will walk with a “high steppage gait” (similar to the way a horse walks). This gait pattern occurs because patients with a foot drop need to lift their leg substantially higher in order for the foot (which is in a downward resting position) to “clear” the ground.

Treatment

Treatment of a foot drop initially depends on the underlying cause and may include:

- **Ankle Foot Orthoses (AFO) bracing**
AFO bracing is commonly used to treat a foot drop. This brace keeps the ankle up in a neutral position essentially partially replacing the function of the lost anterior muscle compartments.

An AFO also serves to keep the ankle under relatively constant stretch and thereby may minimize the potential for the ankle to fall into an equinus position (ankle pointing downwards).

Various types of AFO's are available and is prescribed according to the function it needs to fulfill- examples of these include:

- Otto Bock Walk-On
- Swedish AFO's
- Allard Blue Rocker
- Custom Made AFO's

Patients with a foot drop will often be able to walk with a much more normal gait pattern when they are wearing an AFO. In cases in which the nerve or muscle damage is temporary, the AFO brace can possibly be reduced or eliminated once sufficient muscle function returns. However, in some cases the brace will be needed permanently unless muscle tendon transfer surgery is performed.

- ***Daily [calf stretching](#) to maintain ankle motion***

With loss of the muscle function in the anterior compartment there is a tendency for the calf muscle to steadily pull the ankle into an equinus position (pointing down). This can be difficult to prevent over time because of the natural muscle imbalance. However, a regular program of daily calf stretching can be very helpful. For this reason daily calf stretching in an attempt to maintain ankle dorsiflexion is often recommended as a part of the treatment plan for patients who have a drop foot.