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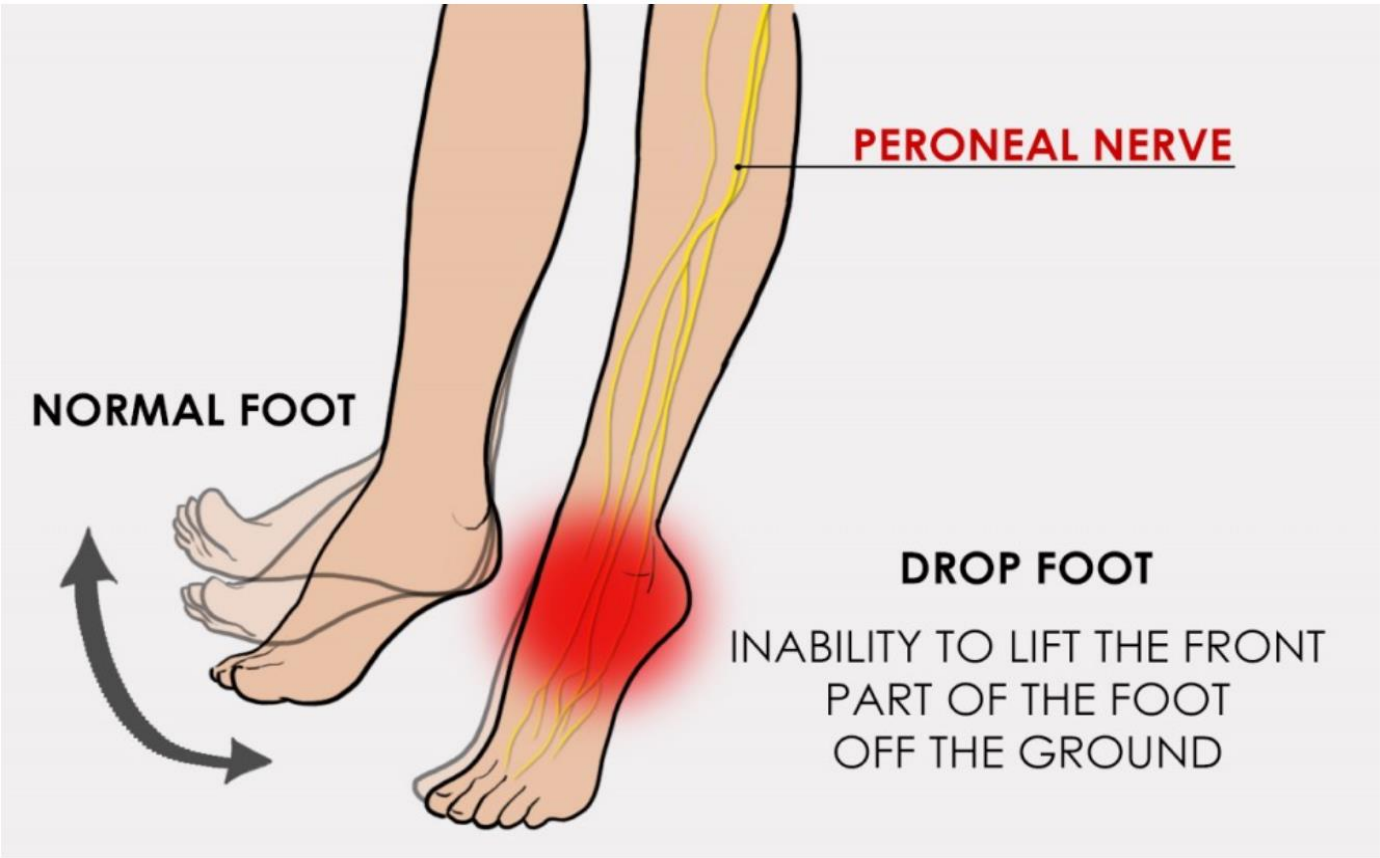
A Quick Overview of Drop Foot



What is drop foot?

Drop foot is the common term to describe the difficulty a patient may experience in lifting and bringing the hind foot forward during the toe-off phase of gait. As a result, the distal phalanges end up dragging or scraping the ground as the motion occurs. This has been linked with muscle weakness in ankle dorsiflexors and other contributing muscles: tibialis anterior, fibularis tertius, extensor digitorum longus and extensor

hallucis longus. Patients experiencing this drag usually develop a habit of lifting their thigh into a more flexed position than normal to compensate.

Causes of drop foot

Importantly, drop foot may also be a sign of a more urgent neurological, muscular or anatomical injury or disorder. The most common cause of these is the compression of the peroneal nerve that runs along the anterior and lateral portions of the fibula and tibia respectively. This compression essentially affects the muscles of the lower leg and may be a cause of hip or knee replacement surgery.

Less commonly, drop foot may also be a result of a “pinched nerve” in the spine, muscular dystrophy, polio, Charcot-Marie-Tooth disease, ALS, MS, stroke (Mayo Clinic 2017), tumors or cysts that apply pressure to the region (Berkit et al. 2018) or even significant weight loss (Evans et al. 2013). Some researchers have discovered more less common causes to drop foot, i.e. gunshot wounds (Nath et al. 2017).

How many cases of drop foot occur per year?
Because drop foot is a symptom of so many disorders, tracking the number of cases is difficult using the World Health Organization’s ICD coding M21.37 (ICD-10) is difficult but currently in progress at the time of this article’s publication. According to a 20 year study of MS in the UK, there has been a 2.4% increase per year (MacKenzie et al. 2014) and approximately 31% of MS cases possess a difficulty with walking, with some causation linked to drop foot (Taylor et al. 2016). The Gale Encyclopedia of Neurological Disorders states that drop foot is more common in males (approx. ratio m:f; 2.8:1), mid-aged athletes and those with surgical nerve damage (3-13%). I myself have treated 15 patients who experienced varied degrees of drop foot in 2018. However as of 2004, no clinical trials of drop foot were produced, though the National Institute of Neurological Disorders and Stroke has shown support into the subject (Gale Group 2004).

Treatment for drop foot
This ailment may be a temporary result from prolonged kneeling or leg crossing, but can also be permanent. Common diagnosis tests include visual observation of the altered behavior of the thigh and foot during phases of gait and analyses of blood for diabetes, alcoholism, toxin, fasting blood sugar, hemoglobin determination and quantities of nitrogen and creatinine. Along with physical therapists, a special AFO brace is the best solution to provide normal range of motion. Surgery, by relieving pressure, repairing a muscle or lengthening/replacing the achilles tendon, can only benefit a patient if drop foot has been diagnosed correctly as a muscular or nerve difficulty.

ICD diagnosis codes for drop foot

ICD-10:

M21.371 – drop foot, right foot

M21.372 – drop foot, left foot

ICD-9:

736.79 – drop foot

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Kevin B. Rosenbloom, founder, and president of Kevin Orthopedic, is a renowned certified pedorthist and sports biomechanist practicing in Santa Monica, CA. With his continuing research on the historical development of foot and ankle pathologies, comparative evolution of lower extremities and the modern environmental impacts on ambulation, he provides advanced biomechanical solutions for his patients and clients.