

**Diabetic foot ulcer risk associated with foot position type.**

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**Introduction:** The objective of this study was to identify the foot position which was associated with patients with diabetic neuropathy and history of ulceration on the forefoot. **Methods:** A cross-sectional study, between January 2012 and February 2014, was performed at the Diabetic Foot Unit of the University Complutense of Madrid. 142 patients with diabetic neuropathy were consecutively evaluated (N=258 feet). Adult patients with forefoot ulcer history healed recently were included. Patients were excluded with the following criteria: individuals with diabetic neuropathic osteoarthropathy; previous amputation in the evaluated feet; rheumatoid arthritis; other causes of neuropathy different from Diabetes *mellitus*; and those who did not have an autonomic gait. Patients with ischemia and those with history of revascularization were also excluded. Peripheral sensory neuropathy was diagnosed in those patients who did not feel either the Semmes-Weinstein 5.07/10 g monofilament or the biothesiometer. One experimented podiatrist assessed the weightbearing static foot position of the patients by using the foot posture index (FPI-6). A total FPI-6 score between 0 and +5 indicates a neutral foot, a score of above +6 indicates a pronated foot, or highly pronated foot, and a score between -1 and -12 indicates a supinated foot or highly supinated foot. A Chi<sup>2</sup> test was applied for evaluating the association between the type of foot and the history of ulcer. P < 0.05 was considered to be statistically significant for a confidence interval of 95%. **Results:** A total of 104 feet (40.3%) had history of ulceration on forefoot. Of the total sample (N=258), FPI-6 was supinated in 114 (39.7%), neutral in 112 (39.0%) and pronated in 61 (21.3%) feet. 32.1% (n=34) of total supinated feet, 40.6% (n=41) of total neutral feet and 56.9% (n=29) of total pronated feet had been ulcerated previously. Pronated feet showed higher risk of ulceration (p= 0.007; IC [1.245-4.323]; OR 2.32); supinated feet showed lower risk of ulceration (p= 0.024; IC [0.330-0.928]; OR 0.55) and neutral feet were not associated with history of ulceration (p= 0.941; IC [0.613-1.697]). **Conclusions.** The foot position has been showed as a risk factor of ulceration in the forefoot in patients with diabetic neuropathy. Pronated feet was the foot position which had the highest risk of ulceration and supinated feet was those which had lowest risk.