

Lower extremity peripheral artery disease (PAD) is a cardiovascular condition caused by narrowed or blocked arteries supplying blood to the legs. Leg pain and myopathy significantly impair gait from the first step. Using AFO may assist the gait and prolong the distance patients with PAD can walk. This study aimed to investigate the effect of AFO on the gait biomechanics of patients with PAD. Fourteen Participants walked over the force platforms with and without an AFO and kinetics and kinematics were combined to quantify torques and powers of the hip, knee, and ankle joints. Our data demonstrate that use of an AFO by PAD patients can increase power absorption in ankle and hip while reducing power generation in hip. Use of an AFO produces potential benefits with respect to biomechanical improvements in gait, with some of the values approaching those found in healthy individuals. These findings are beneficial for further studies of devices designed to improve the gait of PAD patients.