Claudication due to peripheral artery disease (PAD) causes patients to walk less and slower, lose independence in daily living activities, and be sedentary compared to their healthy counterparts. Clinical evaluations have historically used limited measures to understand how PAD affects function. Previous research assessments were limited in their ability to decipher the mechanisms contributing to walking impairment. Biomechanics tools provide a precise assessment of walking impairment and enabled the study of the associated mechanisms. Our previous work evaluated the efficacy of available treatments in improving walking ability. We identified a prominent and consistent deficit of the posterior calf muscles, the ankle plantarflexors, to generate healthy ankle torque and power during walking. Our work now focuses on using an ankle-foot orthosis to offset ankle plantarflexor torque and power and decrease blood flow demand and muscular stress during walking.

ABOUT DR. DR. MYERS

Sara Myers is Assistant Vice Chancellor for Research and Creative Activity and Associate Professor in the Department of Biomechanics. Her background is in Exercise Science (BS 2004, MS 2007) from the University of Nebraska at Omaha and Biomechanics (2011) from the University of Nebraska Medical Center. Her research focuses on improving walking performance and quality of life for patients with peripheral artery disease.