

# Individuals with Peripheral Artery Disease Alter Spatiotemporal Gait Parameters When Walking With Pain versus Without Pain

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## INTRODUCTION

Peripheral artery disease (PAD) is primarily characterized by atherosclerosis in the arteries of the lower legs causing claudication in the form of debilitating pain during walking [1]. Past research has shown individuals with PAD display differences in spatiotemporal gait parameters compared to healthy controls and when walking with and without pain [2,3]. The aim of this study was to further investigate spatiotemporal gait adaptation in patients with PAD from the time they begin walking with no pain to walking in maximal pain.

## METHODS

Four patients with PAD (height:  $1.76 \pm 0.062$  m; weight:  $83.01 \pm 15.06$  kg; age:  $61.5 \pm 11.6$  years) walked on a treadmill at a self-selected speed for a maximum of three minutes or until they felt claudication pain. After the subject indicated claudication had occurred, subjects walked in pain until they could no longer continue. The first five steps, the first five steps following initial onset of pain, and the last five steps from the pain condition were identified and used for analysis.

## RESULTS AND DISCUSSION

Changes in cadence, stride length, step length, swing time, and stride time indicate patients with PAD modify spatiotemporal gait parameters between walking with and without pain.

## CONCLUSIONS

The results of this abstract indicate patients with PAD initially alter spatiotemporal gait parameters between walking with and without pain, but minimal changes occur while walking in maximal pain. The trends from this abstract support that of Gardner et al., but more subjects need to be analyzed to confirm these results [3].

## REFERENCES

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