Improving Balance with Golf as a Mindful Exercise Activity in Older Adults

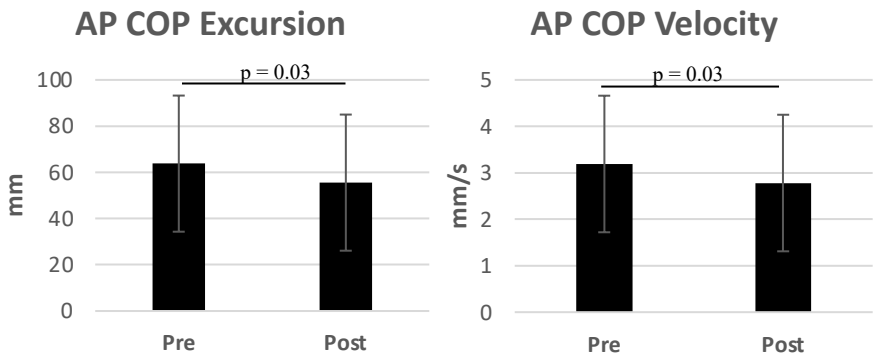
Moore J, Kanwar K, Lee H, Hawkes R, & Salem G
University of Southern California

Background

Aging is associated with decreased balance and increased fall risk. Golf is a mindful, multimodal recreational activity requiring continuous concentration, distance and score calculations, shot planning, and awareness of other players' activities. It also includes both static and dynamic balance challenges. The purpose of this study was to investigate changes in performance on a tandem, static balance task following a 10-week golf program for older adults novel to golf.

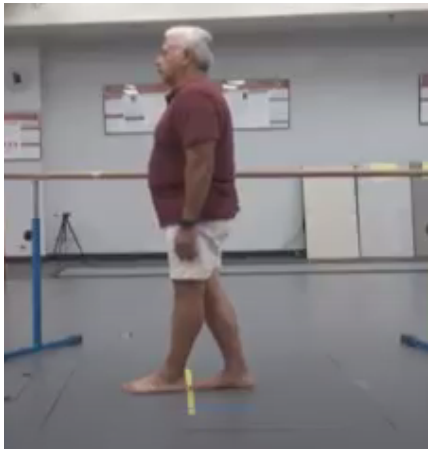
Methods

Fifteen healthy, older adults (69.5±6.0y) without previous golf experience were enrolled in a golf program with balance testing before and after the intervention. Center of pressure (COP) distance, excursion, velocity, and range were measured in the mediolateral (ML) and anterior-posterior (AP) directions using an AMTI force plate. Paired t tests were run to determine significance. Results are presented as mean ± SD and Cohen's d effect sizes were calculated.



Results

Participants completed 283/300 sessions (94%) and there were no adverse events or drop-outs related to the golf program. There were significant decreases (p=0.03) in AP COP excursion and velocity with moderate effect size (d=0.65). There were no significant changes in any measure of COP in the ML direction.



Conclusions

Golf includes multiple aspects of fitness that not only include physical, but also cognitive, social, and outdoor facets that make it a multimodal, mindful activity for older adults. It provides a safe and enjoyable form of exercise for older adults as seen by the high adherence to the program. This study has shown that golf provides the necessary demand to improve performance on a tandem, static balance task with the purpose of standing as still as possible. These improvements are important when considering fall risk for older adults. Future work should continue investigating golf as a feasible multicomponent, mindful exercise activity for older adults and expand participant recruitment in various populations, such as those with diabetes, cancer, or obesity.

Acknowledgements

This study was funded by the Royal and Ancient golf association.