

# Physical Activity During Mindful Exercise Activity in Healthy Older Adults: Golf



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## Background

Golf is a multimodal activity that may be utilized to improve physical and psychosocial health in numerous populations. In golf, mindfulness is a key to performance as well as a result of being in an outdoor ‘green’ environment while interacting with other players. Uniquely, golf has a number of exercise intensity and volume modulators, including pace and mode of play, course profile, distance per hole and the number of holes played. Each modulator alters the quantity of physical activity during golf play, with which health benefits could be attributed, to various degrees. The purpose of this study was to quantify the physical activity that accrued during golf play in a novel golf training intervention for healthy older adults.

## Methods

Fifteen healthy, older adults (novel to golf) enrolled in a 10-week golf training program with physical and cognitive testing before and after the program. In week-10, participants completed a 9-hole round of golf. Physical activity data were captured by on-course observations and commercial IMUs (Fitbit Surges, Fitbit, Inc., USA). Group averages and standard deviations are reported.

## Results

The time taken for 9 holes of golf was  $88 \pm 9.09$  minutes. The distance walked was  $1.79 \pm 0.37$  miles and the total steps taken was  $4100 \pm 968.09$ . Total number of golf swings taken was  $41 \pm 9.94$  and total putting strokes made was  $29 \pm 7$ . Number of times bend & pick up occurred was  $24 \pm 8$ .

<b>Time taken for 9 holes of golf (minutes)</b>	$88 \pm 9.09$
<b>Distance walked (miles)</b>	$1.785 \pm 0.37$
<b>Total steps taken</b>	$4100 \pm 968.09$
<b>Total swings taken (practice + actual)</b>	$41 \pm 9.94$
<b>Total putting strokes made</b>	$29 \pm 7$
<b>Number of times forward bending occurred</b>	$24 \pm 8$

Table 1. Physical activity accrued during 9-holes of golf play.

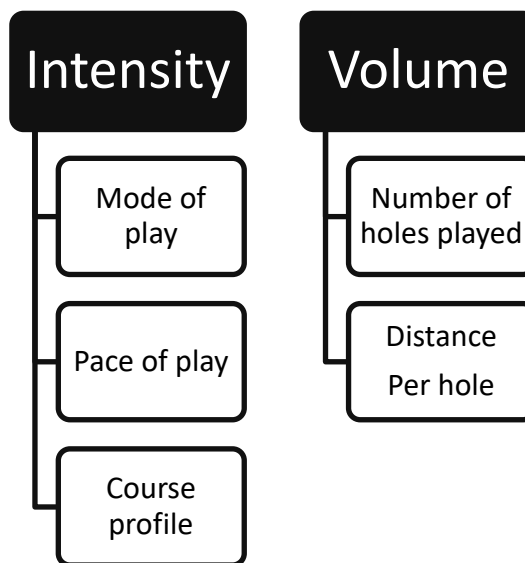


Figure 1. Theoretical physical activity modulators of golf play.

## Conclusions

Health benefits observed after the 10-week golf training intervention are partially attributed to the physical activity accrued during golf play. Quantification of physical activity can guide the design of golf training programs with lowest effective dose in different populations.



Figure 2. Golf Play. This figure was captured while a group of participants were playing golf on Monterey Park Golf Course (Monterey Park, CA).

## Key Points

- Golf is a multimodal and mindful activity
- Physical activity accrued during golf play is highly modifiable to suit the needs of the population
- Golf should be considered when designing holistic activity programs for various populations

## Acknowledgements

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