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Can a turning-focused rehabilitation program improve functional mobility in people with Parkinson's disease?

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Keywords

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Abstract

Background/Aim:

People with Parkinson's disease (PD) are five times more likely to experience a fall than those without PD and many falls are associated with turning. Currently, physical therapy does not focus on improving turns specifically. Because of this, we wanted to explore if a novel and comprehensive turning-focused rehabilitation program (TURN-IT) that addresses underlying constraints such as axial rigidity could improve functional mobility for those with PD. In this study, we test two functional mobility tasks (bed mobility and walking with turning tasks) before and after rehabilitation.

Methods:

We are enrolling people ages 55-85 with PD who currently experience falls into the TURN-IT intervention where they attend 18 sessions of the individualized, progressive exercise intervention. TURN-IT participants are asked to complete two timed tasks before and after rehabilitation: 1) timed bed mobility - how long it takes to move from a seated position to a supine position and back to a seated position and 2) the timed up-and-go (TUG) test - how long it takes to rise from a seated position, walk three meters, turn and return to a seated position.

Results:

Twelve participants have been enrolled in the TURN-IT intervention. Of those twelve, five were early terminated and seven completed the intervention. On average, participants improved their bed mobility timing by 7% (a change of 4.23 seconds) but their TUG score only improved by 1% (a change of 0.78 seconds).

Conclusions:

Decreased times for bed mobility may indicate improvements in axial rigidity while minimal improvement in TUG timing could be due to more cautious turning behaviors.