

Paper Category:	Physical Activity and Exercise
Paper Title: (Arial Font; 14 Pt Size)	In home intervention improves Muscle Mass and Bone Density in people with Parkinson's Disease
Abstract Body: (Arial Font; 12Pt Size)	<ul style="list-style-type: none"> • Background • Objectives • Method • Results • Discussions and Conclusions
<p>(Maximum word limit - 300 words)</p> <p>Background Evidence shows that People with Parkinson's Disease (PwPD) have an increased incidence of sarcopenia and frailty compared to community dwelling elderly. PwPD often will transition to a sedentary lifestyle due to increasing difficulties with gait and balance. Decreasing sedentary time (ST) may be a valuable strategy for the prevention of sarcopenia and frailty in PwPD. Replacing sitting with standing is a promising tool to achieve this goal. We have developed a sit-stand desk system that enhances the benefits of standing by adding weight shifting and stepping. This desk is placed at home and can easily be incorporated into many activities of daily living (ADL).</p> <p>Objectives To examine the effects of using our in-home sit-stand desk on muscle mass (MM) and Bone Mineral Density (BMD) in PwPD in a randomized controlled pilot study.</p> <p>Method 14 PwPD were randomized in this study: 6 received a desk at home and 8 were in the control group. A DXA scan was used to measure BMD and lean MM after 16 weeks of using the standing desk for a minimum of 2 hours/day 5 days/week.</p> <p>Results After 16 weeks of using the desk, compared to the control group, the intervention group showed a trend towards increased MM in the lower extremities and trunk as well as an increased BMD ($p < 0.2$). The desk was used on average 2.2 hours/week. No adverse events were reported.</p> <p>Discussions and Conclusions While promoting physical activity is standard in the management of PD and frailty, there is emerging evidence that decreasing sedentarism is an effective strategy as well. Replacing sitting with standing is an example of this strategy. This in-home intervention is easily accessible, integrated in ADL, and well tolerated. This novel intervention could decrease ST, improve MM and BMD, thus mitigating the risk for frailty in PwPD.</p>	

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In home intervention improves Muscle Mass and Bone Density in people with Parkinson's Disease

Background

Evidence shows that People with Parkinson's Disease (PwPD) have an increased incidence of sarcopenia and frailty compared to community dwelling elderly. PwPD often will transition to a sedentary lifestyle due to increasing difficulties with gait and balance. Decreasing sedentary time (ST) may be a valuable strategy for the prevention of sarcopenia and frailty in PwPD. Replacing sitting with standing is a promising tool to achieve this goal. We have developed a sit-stand desk system that enhances the benefits of standing by adding weight shifting and stepping. This desk is placed at home and can easily be incorporated into many activities of daily living (ADL).

Objectives

To examine the effects of using our in home sit-stand desk on muscle mass (MM) and Bone Mineral Density (BMD) in PwPD in a randomized controlled pilot study.

Method

14 PwPD were randomized in this study: 6 received a desk at home and 8 were in the control group. A DXA scan was used to measure BMD and lean MM after 16 weeks of using the standing desk for a minimum of 2 hours/day 5 days/week.

Results

After 16 weeks of using our desk, compared to the control group, the intervention group showed a trend towards increased MM in the lower extremities and trunk as well as an increased BMD ($p < 0.2$). The desk was used on average 2.2 hours/week. No adverse events were reported.

Discussions and Conclusions

While promoting physical activity is standard in the management of PD and frailty, there is emerging evidence that decreasing sedentarism is an effective strategy as well. Replacing sitting with standing is an example of this strategy. This in-home intervention is easily accessible, integrated in ADL, and well tolerated. This novel intervention could decrease ST, improve MM and BMD, thus mitigating the risk for frailty in PwPD.