

Early results on preservation of motor performance in a community-based exercise program

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Objective

To present updated results of performance assessments of participants in physical activity programs at a dedicated community center for people with Parkinson's disease. Background: Numerous studies in the past 15 years have demonstrated the value of physical activity for Parkinson's disease (PD) but data confirming the long-term value of such recommendations are lacking. InMotion, a nonprofit in the Cleveland area, offers classes with certified instructors in a variety of physical activities free of charge.

Methods

Participants all carried a diagnosis of PD and were able to complete gait and balance assessments independently. Enrollment was otherwise unselected. Motor performance assessments were conducted at baseline and after 6 and 12 months. Assessments included a 2-minute walking test, 60-second sit-to-stand and lateral hurdle stepping tests, and 30-second bilateral single-leg, single-arm clean-and-press and rotational body turn tests. Participants also completed extended Timed-Up-and-Go (ETUG) test trials in alternate directions. We also assessed quality of life with a self-reporting instrument, the PDQ-39, at 6-month intervals. Mean figures of all data endpoints were derived. Statistical significance was determined using a paired t test.

Results

Enrollment in the program is ongoing. 163 subjects have had initial motor assessments; 63 have been reassessed at 6 months, and 36 again at 1 year. In this report, we present the results from the 36 participants who have completed all 3 assessments. All motor tests showed stability of improvement from baseline to 6 and 12 months. All but the single-leg stance showed stability or improvement from 6 to 12 months.

Conclusions

Motor performance in this cohort was stable or improved over a 12-month period, as measured by mobility and balance tests and the PDQ-39. We cannot claim an intervention effect because we could not control for other contributory factors such as changes in medication and outside levels of physical activity. However, given the progressive nature of PD, our results suggest we may be contributing to stabilization of the clinical course of these participants. Our results support the practice of recommending physical activity as a therapeutic measure for persons with PD.