

Parkinson's Disease

Current Awareness Bulletin

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Jason Ovens
Library & Knowledge Service Manager

Title: Exercise for People in Early- or Mid- Stage Parkinson Disease: A 16-Month Randomized Controlled Trial.

Citation: Physical Therapy, 01 November 2012, vol./is. 92/11(1395-1410), 00319023

Author(s): Schenkman, Margaret, Hall, Deborah A., Barón, Anna E., Schwartz, Robert S., Mettler, Pamela, Kohrt, Wendy M.

Abstract: Background. Exercise confers short-term benefits for individuals with Parkinson disease (PD). Objective. The purpose of the study was to compare short- and long-term responses among 2 supervised exercise programs and a home-based control exercise program. Design. The 16-month randomized controlled exercise intervention investigated 3 exercise approaches: flexibility/balance/function exercise (FBF), supervised aerobic exercise (AE), and home-based exercise (control). Setting. This study was conducted in outpatient clinics. Patients. The participants were 121 individuals with PD (Hoehn & Yahr stages 1-3). Interventions. The FBF program (individualized spinal and extremity flexibility exercises followed by group balance/functional training) was supervised by a physical therapist. The AE program (using a treadmill, bike, or elliptical trainer) was supervised by an exercise trainer. Supervision was provided 3 days per week for 4 months, and then monthly (16 months total). The control group participants exercised at home using the National Parkinson Foundation Fitness Counts program, with 1 supervised, clinic-based group session per month. Measurements. Outcomes, obtained by blinded assessors, were determined at 4, 10, and 16 months. The primary outcome measures were overall physical function (Continuous Scale-Physical Functional Performance [CS-PFP]), balance (Functional Reach Test [FRT]), and walking economy (oxygen uptake [mL/kg/min]). Secondary outcome measures were symptom severity (Unified Parkinson's Disease Rating Scale [UPDRS] activities of daily living [ADL] and motor subscales) and quality of life (39-item Parkinson's Disease Quality of Life Scale [PDQ-39D]- Results. Of the 121 participants, 86.8%, 82.6%, and 79.3% completed 4, 10, and 16 months, respectively, of the intervention. At 4 months, improvement in CS-PFP scores was greater in the FBF group than in the control group (mean difference=4.3, 95% confidence interval [CI] = 1.2 to 7.3) and the AE group (mean difference = 3.1, 95% CI=0.0 to 6.2). Balance was not different among groups at any time point. Walking economy improved in the AE group compared with the FBF group at 4 months (mean difference = -1.2, 95% CI=-1.9 to -0.5), 10 months (mean difference=-1.2, 95% CI=-1.9 to -0.5), and 16 months (mean difference=-1.7, 95% CI = - 2.5 to -1.0). The only secondary outcome that showed significant differences was UPDRS ADL subscale scores: the FBF group performed better than the control group at 4 months (mean difference = - 1.47, 95% CI=-2.79 to -0.15) and 16 months (mean difference=-1.95, 95% CI=-3.84 to -0.08). Limitations. Absence of a non-exercise control group was a limitation of the study. Conclusions. Findings demonstrated overall functional benefits at 4 months in the FBF group and improved walking economy (up to 16 months) in the AE group.

Full Text:

Available in *fulltext* from *Physical Therapy* at [EBSCOhost](#)

Available in *fulltext* from *Physical Therapy* at [ProQuest](#)

Title: What Does the Cochrane Collaboration Say about Rehabilitation for Individuals with Parkinson Disease?

Citation: Physiotherapy Canada, 01 October 2012, vol./is. 64/4(427-427), 03000508

Title: Health-Related Quality of Life of Australians with Parkinson Disease: A Comparison with International Studies.

Citation: Physiotherapy Canada, 01 October 2012, vol./is. 64/4(338-346), 03000508

Author(s): Soh, Sze-Ee, McGinley, Jennifer L., Watts, Jennifer J., Iansek, Robert, Morris, Meg E.

Abstract: Purpose: This study describes the health-related quality of life (HRQOL) of Australians living with Parkinson disease (PD) and compares the findings to international reports. Methods: The Parkinson's Disease Questionnaire-39 (PDQ-39) was used to measure HRQOL in 210 individuals with PD living in Australia. In parallel, a tailored literature search identified previous studies on HROQL in people with PD. A quantitative meta-analysis with a random-effects model was used to compare the HRQOL of individuals with PD living in Australia and other countries. Results : The mean PDQ-39 summary index (SI) score for this sample of Australians with PD was 20.9 (SD 12.7). Ratings for the dimension of social support and stigma were significantly lower than ratings for bodily discomfort, mobility, activities of daily living, cognition, and emotional well-being. Comparing the Australian and international PD samples revealed a significant heterogeneity in overall HRQOL ($I^2 = 97\%$). The mean PDQ-39 SI scores for Australians were lower, indicating better HRQOL relative to samples from other countries. Conclusions: This Australian sample with PD perceived their HRQOL as poor, although it was less severely compromised than that of international samples. While further research is required, these findings can inform the clinical decision-making processes of physiotherapists.

Title: Literature review: management of constipation in people with Parkinson's disease.

Citation: Australian & New Zealand Continence Journal, 01 December 2012, vol./is. 18/4(110-118), 14480131

Author(s): Wuong, Sie

Abstract: Constipation is a common non-motor complaint among people diagnosed with Parkinson's disease (PD) and it has a significant effect on quality of life. Numerous studies show that more than 50% of people in this patient group suffered from moderate to severe constipation. The causes of constipation for these people are multifactorial and include autonomic nervous dysfunction leading to slow transit constipation, defaecatory disorder, decreased mobility, reduced fluid intake, and medication side effects. This literature review assesses the available evidence for the effective management of constipation in people diagnosed with PD, including: conservative, pharmacological, invasive and non-invasive treatment, as well as surgical management. Most of the studies for managing constipation in people diagnosed with PD are small, open-label trials; however, we found two randomised controlled studies using pharmacological intervention that showed the

effectiveness of the use of the osmotic laxative macrogol and one on the 5-HT₄ receptor agonist tegaserod, the latter which is found to have significant cardiovascular side effects. Currently, the best evidence exists, from a small randomised control study, for the use of the iso-osmotic laxative, macrogol.

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Title: What are the issues facing Parkinson's disease patients at ten years of disease and beyond?: Data from the NPF-QII study

Citation: Parkinsonism and Related Disorders, December 2012, vol./is. 18/SUPPL. 3(S10-S14), 1353-8020;1873-5126 (December 2012)

Author(s): Hassan A., Wu S.S., Schmidt P., Malaty I.A., Dai Y.F., Miyasaki J.M., Okun M.S.

Abstract: Background: Parkinson's disease (PD) is the second most common neurodegenerative syndrome, classically characterized by levodopa-responsive motor features accompanied by non-motor mood, cognitive, sensory and autonomic issues. Over time, disease burden slowly accumulates resulting in diminished health status. Many clinicians consider the 10 year disease duration mark as significant, however the clinical status and health-related quality of life of patients reaching this milestone have not been well documented. Methods: A cross-sectional study was performed on PD patients with ≥ 10 years disease duration (PD-10) (n = 1835) included in the multicenter National Parkinson's Foundation Quality Improvement Initiative (NPF-QII). Demographic, clinical and health-related quality of life data was analyzed. Results: PD-10 patients (62.2% male) had a mean age of 67.8 years (+/-9.5) with a mean age of PD onset of 52.7 years (+/-10.6), and median disease duration 14.3 years (interquartile range 11.5-18.1). Many were minimally disabled with Hoehn and Yahr stage 1 or 2 (44.0%) or experiencing postural instability (HY stage 3, 40.3%). Most (88.2%) were able to stand unaided, but falls were common (54.8%). Almost all were living at home (93.1%) with a family member as a regular caregiver (83.8%). PD-10 patients had an average of 1.9 (+/-1.4) co-morbidities, with arthritis (48.9%) and heart problems (31.7%) most commonly encountered. The majority (86.7%) took at least 2 medications: levodopa (95.7%), dopamine agonists (45.6%) and antidepressants (37.3%) were most commonly recorded. Most PD-10 patients were not currently utilizing physical, occupational or speech therapy, although two-thirds reported engaging in physical activity. Deep brain stimulation was documented in 22.4%. Overall the mean health-related quality of life and caregiver burden was impaired in all domains. Conclusions: Our data on PD patients with at least 10 years disease duration confirmed the younger age of onset of PD, but not the higher proportion of females or rest tremor, or the lower proportion of Caucasians seen in other aged PD cohorts. PD-10 patients had increased disease burden, increased caregiver burden, and impaired health-related quality of life. Although subjects mostly remained independently mobile, balance could be impaired with frequent falls identified. The prevalence of PD-10 patients living at home (93%) was very high in our sample which was drawn from specialty clinics, compared to prior studies reporting up to 27% PD patients institutionalized at 10 years duration. Thus policies to improve in-home support and caregiver support will be crucial in efforts aimed at maintaining patients in a home setting. 2012 Elsevier Ltd.

Title: Occupational therapy survey of people living with Parkinson's disease

Citation: European Journal of Neurology, September 2012, vol./is. 19/(663), 1351-5101 (September 2012)

Author(s): Jansa J., Aragon A., Lundgren Nillson A.

Abstract: Introduction: Occupational Therapy (OT) services for people with Parkinson's disease (Parkinson's) differ across Europe and the globe. OT is often reported as being most commonly required in the intermediate and later disease stages. We conducted this survey to ask people with Parkinson's to tell their views about OT. Method: Study design: a prospective survey was undertaken to explore opinions and experiences of OT. Participants: People with Parkinson's living in Norway, Slovenia, Sweden and UK were invited to participate. Questionnaire: A bespoke, anonymous, web-based questionnaire was developed using the checklists for Reporting Results of Internet Surveys framework. The resulting 34 questions were divided into 4 categories (Demographic data, Clinical data, Impact of Parkinson's and Experiences of OT). Procedure: The questionnaire was developed in English and then translated into 3 other languages, published on the European Parkinson's Disease Association website and promoted through its member organizations in the 4 respective countries. Analysis was performed using descriptive statistics. Results: The 230 respondents reported many of the typical demographic and clinical characteristics of Parkinson's populations. The need for help in daily activities encompassing self-care, productivity and leisure were commonly reported. Approximately half the respondents (54%) reported having experienced OT since their diagnosis. The reported content, location, frequency and duration of OT interventions varied between the 4 countries. Respondents who had received OT, frequently indicated willingness to recommend it to others. Conclusion: In this sample, differences in OT services for people with Parkinson's were reported. OT services received were acknowledged as being a valuable intervention.

Title: Executive dysfunction correlates to activities of daily living in Parkinson's disease dementia

Citation: European Journal of Neurology, September 2012, vol./is. 19/(529), 1351-5101 (September 2012)

Author(s): Gregoric Kramberger M., Smrdu M., Jansa J., Jensterle J., Zupancic Kriznar N., Trost M., Pirtosek Z.

Abstract: Introduction: Executive dysfunction is well documented already in the non-dementia stage of Parkinson's disease (PD). However, uncertainties remain regarding the impact of these deficits on other areas of cognitive functioning and daily performance. Screening measures for PD may be insensitive for activities of daily living (ADL) impairments. The Assessment of Motor and Process Skills (AMPS) is an observational assessment used by occupational therapists to measure ADL motor and ADL process skill performance within ADL. Objective: To assess the relationship between the measures of executive functions and ADL in mild Parkinson's disease dementia (PDD). Methods: Different scores of neuropsychological tests on attention and executive functions were compared with AMPS scores, for 17 subjects with mild PDD according to Mini Mental Stage Examination. Performance was assessed by rating the quality of the effort, efficiency, safety, and independence of 16 ADL motor (AMPS-m) and 20 ADL process

(AMPS-p) skill items. AMPS-p score assesses the ability to perform reasonably selected activity in a logical sequence, while applying appropriate tools. Results: Spearman coefficient demonstrated significant correlations between AMPS-p and Stroop interference effect, D-KEFS trail making number-letter switching ($p < 0.000$) and D-KEFS tower total number of errors $p < 0.003$. AMPS-m score significantly correlated with Stroop speed for naming colours ($p < 0.012$). Conclusions: AMPS-p score is significantly correlated to cognitive flexibility, simultaneous processing and ability of inhibition. These results show relevance of systematic evaluation of ADL in mild PDD and provide a basis for cognitive intervention strategies.

Sources Used

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