

# Parkinson's Disease

# Current Awareness

# Bulletin

**February 2015**

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**Jason Ovens**  
**Head of Library & Knowledge Services**

**Title: A survey of Parkinson's disease patients: Most bothersome symptoms and coping preferences**

**Citation:** Journal of Parkinson's Disease, 2014, vol./is. 4/4(717-723), 1877-7171;1877-718X (2014)

**Author(s):** Uebelacker L.A., Epstein-Lubow G., Lewis T., Broughton M.K., Friedman J.H.

**Abstract:** Background: Treatment for Parkinson's disease (PD) is symptomatic. Health professionals must therefore understand which of the many motor and non-motor problems that patients experience are the most troublesome, and what types of assistance patients believe would best help them cope with these problems. Objective: To identify and understand potential issues of importance to patients with Parkinson's Disease. Methods: We conducted surveys with 75 patients with PD in a Movement Disorders Program. We asked about: the two most bothersome PD-related problems, methods for coping with these problems, what motor and non-motor PD-related problems patients needed the most help with, and what a comprehensive assistance program for PD patients and caregivers should include. We used qualitative data analysis techniques to summarize responses. Results: The most bothersome problems cited were: tremors, lack of mobility, pain, imbalance, lack of energy/fatigue, having to give up previously enjoyed activities, dysarthria, and anxiety or depression. Frequently cited ways to cope with different types of problems included medications, physical activity, instrumental or practical support, and emotional support. When asked specifically about which non-motor problems elicited the most need for help, respondents most commonly mentioned depression and anxiety, 'nothing,' or cognitive problems. Participants suggested that a comprehensive assistance program for people with PD and their caregivers should include education, physical activity, and emotional support. Conclusions: Results from this survey highlight the diversity of patient experiences with PD, and the importance of strategies for coping with both motor and non-motor symptoms associated with Parkinson's Disease (in addition to medications).

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**Title: Priority setting partnership to identify the top 10 research priorities for the management of parkinson's disease**

**Citation:** BMJ Open, January 2015, vol./is. 4/12, 2044-6055 (01 Jan 2015)

**Author(s):** Deane K.H.O., Flaherty H., Daley D.J., Pascoe R., Penhale B., Clarke C.E., Sackley C., Storey S.

**Abstract:** Objectives: This priority setting partnership was commissioned by Parkinson's UK to encourage people with direct and personal experience of the condition to work together to identify and prioritise the top 10 evidential uncertainties that impact on everyday clinical practice for the management of Parkinson's disease (PD). Setting: The UK. Participants: Anyone with experience of PD including: people with Parkinson's (PwP), carers, family and friends, healthcare and social care professionals. Non-clinical researchers and employees of pharmaceutical or medical devices companies were excluded. 1000 participants (60% PwP) provided ideas on research uncertainties, 475 (72% PwP) initially prioritised them and 27 (37% PwP) stakeholders agreed a final top 10. Methods: Using a modified nominal group technique, participants were surveyed to identify what issues for the management of PD needed research. Unique research questions unanswered by current evidence were identified and participants were asked to identify their top 10 research priorities from this list. The top 26 uncertainties were presented to a consensus meeting with key stakeholders to agree the top 10 research priorities. Results: 1000 participants provided 4100 responses, which contained 94 unique unanswered research questions that were initially prioritised by 475 participants. A consensus meeting with 27 stakeholders agreed the top 10 research priorities. The overarching research aspiration was an effective cure for PD. The top 10 research priorities for PD management included the need to address motor symptoms (balance and falls,

and fine motor control), non-motor symptoms (sleep and urinary dysfunction), mental health issues (stress and anxiety, dementia and mild cognitive impairments), side effects of medications (dyskinesia) and the need to develop interventions specific to the phenotypes of PD and better monitoring methods. Conclusions: These research priorities identify crucial gaps in the existing evidence to address everyday practicalities in the management of the complexities of PD.

**Full Text:**

Available from *Highwire Press* in [BMJ Open](#)

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**Title: A Meta-Analysis on the Efficacy of Tai Chi in Patients with Parkinson's Disease between 2008 and 2014.**

**Citation:** Evidence-Based Complementary & Alternative Medicine: eCAM, 2015, vol./is. 2015/(593263), 1741-427X;1741-427X (2015)

**Author(s):** Zhou J, Yin T, Gao Q, Yang XC

**Abstract:** Objective. The purpose of this systematic review is to evaluate the evidence on the effect of Tai Chi for Parkinson's disease (PD). Methods. Six electronic databases up to June 2014 were searched. The methodological quality was assessed with PEDro scale. Standardised mean difference and 95% confidence intervals of random-effects model were calculated. Results. Nine studies were included in our review. The aggregated results are in favor of Tai Chi on improving motor function ( $P = 0.002$ ) and balance ( $P < 0.00001$ ) in patients with PD. However, there is no sufficient evidence to support or refute the value of Tai Chi on improving gait velocity ( $P = 0.11$ ), stride length ( $P = 0.21$ ), or quality of life ( $P = 0.40$ ). And there is no valid evidence in follow-up effects of Tai Chi for PD. Conclusion. The current results suggest that Tai Chi can significantly improve the motor function and balance in patients with PD, but there is indeed not enough evidence to conclude that Tai Chi is effective for PD because of the small treatment effect, methodological flaws of eligible studies, and insufficient follow-up. Consequently, high-quality studies with long follow-up are warranted to confirm current beneficial findings.

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**Title: Advanced age, cardiovascular risk burden, and timed up and go test performance in Parkinson disease.**

**Citation:** Journals of Gerontology Series A: Biological Sciences & Medical Sciences, 01 December 2014, vol./is. 69/12(1569-1575), 10795006

**Author(s):** Kotagal, Vikas, Albin, Roger L, Müller, Martijn L T M, Koeppe, Robert A, Studenski, Stephanie, Frey, Kirk A, Bohnen, Nicolaas I

**Abstract:** BACKGROUND: Cardiovascular comorbidities are a known risk factor for impaired mobility in elderly individuals. Motor impairments in Parkinson disease are conventionally ascribed to nigrostriatal dopaminergic denervation although progressive gait and balance impairments become more common with aging and often show limited response to dopaminergic replacement therapies. METHODS: We explored the association between elevated cardiovascular risk factors and performance on the Timed Up and Go test in cross-sectional of Parkinson disease subjects ( $n = 83$ ). Cardiovascular risk factor status was estimated using the Framingham General Cardiovascular Disease risk-scoring algorithm in order to dichotomize the cohort into those with and without elevated modifiable cardiovascular risk compared with normative scores for age and gender. All subjects underwent clinical and neuroimaging evaluations including a 3-m Timed Up and Go test, [(11)C]dihydrotetrabenazine positron emission tomography imaging to estimate nigrostriatal dopamine terminal loss, and an magnetic resonance imaging assessment of leukoaraiosis. A similar analysis was performed in 49 healthy controls. RESULTS: After adjusting for disease duration, leukoaraiosis, and nigrostriatal dopaminergic denervation, Parkinson disease

subjects with elevated Framingham risk scores (n = 61) displayed slower Timed Up and Go test performance ([beta] = 1.86, t = 2.41, p = .018) compared with subjects with normal range Framingham risk scores (n = 22). When age  $\geq 65$  was added to the model in a post hoc analysis, the strength of effect seen with older age ([beta] = 1.51, t = 2.44, p = .017) was similar to that of elevated Framingham risk scoring ([beta] = 1.87, t = 2.51, p = .014). In a multivariable regression model studying the healthy control population, advanced age (t = 2.15, p = .037) was a significant predictor of Timed Up and Go speed though striatal [(11)C]dihydrotetrabenazine (t = -1.30, p = .19) and elevated Framingham risk scores (t = 1.32, p = .19) were not. **CONCLUSIONS:** Modifiable cardiovascular risk factors and older age may independently exacerbate balance-related disability in Parkinson disease and may exert additive or synergistic pathological effects. The pathophysiology of these impairments cannot be explained completely by nigrostriatal dopaminergic denervation or leukoaraiosis burden and may relate to systemic factors seen with accelerated aging.

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**Title:** Disorders of the oral cavity in Parkinson's disease and parkinsonian syndromes.

**Citation:** Parkinsons Disease, 2015, vol./is. 2015/(379482), 2090-8083;2042-0080 (2015)

**Author(s):** Zlotnik Y, Balash Y, Korczyn AD, Giladi N, Gurevich T

**Language:** English

**Abstract:** Awareness of nonmotor symptoms of Parkinson's disease is growing during the last decade. Among these, oral cavity disorders are, although prevalent, often neglected by the patients, their caregivers, and physicians. Some of these disorders include increased prevalence of caries and periodontal disease, sialorrhea and drooling, xerostomia, orofacial pain, bruxism, and taste impairment. Though many of these disorders are not fully understood yet and relatively few controlled trials have been published regarding their treatment, physicians should be aware of the body of evidence that does exist on these topics. This paper reviews current knowledge regarding the epidemiology, pathophysiology, and treatment options of disorders of the oral cavity in Parkinson's disease patients.

**Full Text:**

Available from *National Library of Medicine* in [Parkinson's Disease](#)

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**Title:** Comparing the Fullerton Advanced Balance Scale With the Mini-BESTest and Berg Balance Scale to Assess Postural Control in Patients With Parkinson Disease.

**Citation:** Archives of Physical Medicine & Rehabilitation, 01 February 2015, vol./is. 96/2(218-225), 00039993

**Author(s):** Schlenstedt, Christian, Brombacher, Stephanie, Hartwigsen, Gesa, Weisser, Burkhard, Möller, Bettina, Deuschl, Günther

**Abstract:** Objectives To validate the Fullerton Advanced Balance (FAB) Scale for patients with idiopathic Parkinson disease (PD); and to compare the FAB Scale with the Mini-Balance Evaluation Systems Test (Mini-BESTest) and Berg Balance Scale (BBS). Design Observational study to assess concurrent validity, test-retest, and interrater reliability of the FAB Scale in patients with PD and to compare the distribution of the scale with the Mini-BESTest and BBS. Setting University hospital in an urban community. Participants Patients with idiopathic PD (N=85; Hoehn and Yahr stages 1–4). Interventions Not applicable. Main Outcome Measures FAB Scale, Mini-BESTest, BBS, timed Up and Go test, Unified Parkinson's Disease Rating Scale, and visual analog

scale. Results Interrater (3 raters) and test-retest (3±1d) reliability were high for all scales (ICCs≥.95). The FAB Scale was highly correlated with the Mini-BESTest (Spearman  $\rho$ =.87) and timed Up and Go test item of the Mini-BESTest (Spearman  $\rho$ =.83). In contrast with the BBS, the FAB Scale and Mini-BESTest have only minimal ceiling effects. The FAB Scale demonstrated the most symmetric distribution when compared with the Mini-BESTest and BBS (skewness: FAB scale:  $-0.54$ ; Mini-BESTest:  $-1.07$ ; BBS:  $-2.14$ ). Conclusions The FAB Scale is a valid and reliable tool to assess postural control in patients with PD. No ceiling effect was noted for the FAB Scale. Although the items of the FAB Scale are more detailed when compared with the Mini-BESTest, interrater and test-retest reliability were excellent. The scale is a promising tool to detect small changes of the postural control system in individuals with PD.

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**Title: Effect of virtual reality dance exercise on the balance, activities of daily living, and depressive disorder status of Parkinson's disease patients.**

**Citation:** Journal of Physical Therapy Science, 01 January 2015, vol./is. 27/1(145-147), 09155287  
**Author(s):** Nam-Yong Lee, Dong-Kyu Lee, Hyun-Seung Song

**Abstract:** [Purpose] In this study, we examined the effects of virtual reality dance exercise on the balance, activities of daily living and depressive disorder status of Parkinson's disease patients. [Subjects] Twenty patients were assigned either the experimental group (n = 10) or the control group (n = 10). All participants received 30 minutes of neurodevelopment treatment and 15 minutes of functional electrical stimulation 5 times per week for 6 weeks. The experimental group additionally performed 30 minutes of dance exercise. Balance, activities of daily living, and depressive disorder status were assessed before and after the 6-week treatment period using the Berg balance scale, the Modified Barthel Index, and the Beck Depression Inventory. The paired t-test was used to detect differences before and after treatment, and the independent t-test was used to detect differences between the treatment groups. [Results] The values for balance, activities of daily living, and depressive disorder status significantly differed between before and after treatment in the experimental group, and significantly differed between the experimental group and control group. [Conclusion] Virtual reality dance exercise has a positive effect on balance, activities of daily living, and depressive disorder status of Parkinson's disease patients.

#### **Sources Used**

The following databases are searched on a regular basis in the development of this bulletin: Amed, British Nursing Index, Cinahl, Medline

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