

# The Effect of IMT on the Symptoms of Parkinson's Disease

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## THESIS

Sixty hours of treatment with Integrative Manual Therapy (IMT) will considerably decrease signs and symptoms in people with Parkinson's disease (PD), including a decrease in tremors, an alleviation of pain, a speeding up of gait and improvements in respiration, facial expression, speech and mood.

## OBJECTIVE

To show that IMT will improve the symptoms and function in people with PD. The purpose of this study is to contribute to the understanding of the effects of manual therapy on neurological conditions. This dissertation specifically examines the effect of IMT in PD.

## METHODS and TREATMENT

Single-Subject Research Design Case Study. The neurologist's evaluations were a month apart while the physical therapy assessments took place on the day before and the day after the two week treatment protocol. The participant also completed 6 questionnaires.

In this case study 60 hours of IMT took place over a two week period (five hours each day on 12 days). Nutritional and self-care recommendations were made after the post testing.

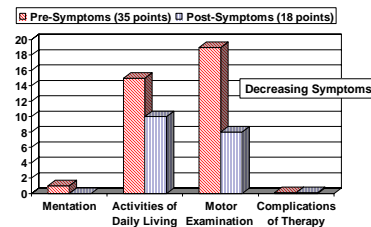
### In the Up and Go Test

**On March 2 the client walked three times with time scores of 10 seconds, 9 seconds, 10 seconds. He took 12 steps, 12 steps, 13 steps. On March 17, 2006 he took 9 seconds and 9 seconds. His strides were faster, longer and smoother with 10 steps and 11 steps on the two repetitions.**

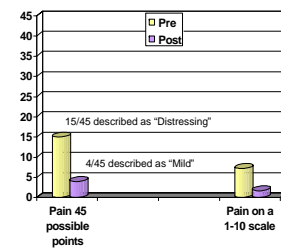
## RESULTS

The 62 year old man diagnosed four years ago with PD made improvements in virtually all assessed categories. Notable gains include a 48.6% improvement in total UPDRS scores. Schwab and England scores changed from 70% to 80% of normal function. The Up & Go Test and 10 Meter Walk showed improvements in walking speed and stride length. Lung capacity readings (a spirometer measurement) improved from 2800 cc to 3300 cc. The PDQ-39 questionnaire showed a 67% improvement in symptoms. The Medical Symptoms Questionnaire (MSQ) score improved 51.3%. The McGill Pain Questionnaire showed a 73.3% decrease in pain, primarily back and hip pain.

### Unified Parkinson's Disease Rating Scale (UPDRS)



### McGill Pain Questionnaire



Test / Outcome Measured	Pre-Treatment Feb 27, 2006	Post-Treatment March 31, 2006	Improvements
UPDRS (motor, mentation, Activities of daily living) Total Score	35	18	48.6%
UPDRS ADL Score	15	10	33.3%
UPDRS Motor Score	19	8	57.8%
Hoehn and Yahr stage	2	2	No change
Schwab and England ADL Percentage	70	80	12.5%

## DISCUSSION and CONCLUSIONS

The results show important changes in function, pain, and general well-being. This is significant given the expected 3.1% annual increase in the UPDRS motor scores and a 3.2% decline in Hoehn and Yahr staging levels. This case study did not have a blinded control but results were compared to predictors of outcome in the medical literature. Even without a control, these findings are substantial enough to suggest further research into how IMT can be incorporated into treatment plans. This is the first evidence-based study on the effects of Integrative Manual Therapy in Parkinson's disease. The improvements should serve as a stimulus to therapists to use IMT as a way to improve the client's quality of life. IMT is not a common component of rehabilitation programs, but is one that deserves more attention.

## BIBLIOGRAPHY

- Burnham, K. (2006). "The Effect of Integrative Manual Therapy on the Symptoms of Parkinson's Disease." PhD Dissertation August 2006.
- Burnham, K. (2005). "Validity of Questionnaires in Evidence Based Research: The Assessment of Client's with Parkinson's Disease." Journal of Soft Tissue Manipulation Vol. 12 No. 2. Winter: from www.oma.com/ found at www.centerimt.com/News/page%201.pdf
- Burnham, K. (2007). "Parkinson's Disease and Complementary and Alternative Medicine (CAM)." [http://parkinsons-disease.suite101.com/article.cfm/parkinsons\\_disease\\_and\\_cam](http://parkinsons-disease.suite101.com/article.cfm/parkinsons_disease_and_cam)
- Burnham, K. (2005). "A way to consider Integrative Manual Therapy." Health & Recovery, The Newsletter About IMT - The Science of Whole Body Health(1)
- Chevrier, E., V. Fraix, et al. (2006). "Is there a role for physiotherapy during deep brain stimulation surgery in patients with Parkinson's disease?" Eur J Neurol 13(5): 496-8.
- Deane, K. H. O., C. Ellis-Hill, et al. (2006). "Parkinson's and OT Cochrane review abstract and plain language summary." The Cochrane Database of Systematic Reviews(2).
- Lunn, L. (2005). "The use of Integrative Manual Therapy to improve muscle function in clients with SCL." Journal of Integrative Manual Therapy Fall(1).
- Rodrigues de Paula, F., L. F. Teixeira-Salmela, et al. (2006). "Impact of an exercise program on physical, emotional, and social aspects of quality of life of individuals with Parkinson's disease." Mov Disord.
- Schmitz-Hübsch, T., D. Pyfer, et al. (2006). "Qigong exercise for the symptoms of PD: a randomized, controlled pilot study." Mov Disord 21(4): 543-8.
- Schrag, A., Y. Ben-Shlomo, et al. (2002). "How valid is the clinical diagnosis of PD in the community?" J Neurol Neurosurg Psychiatry 73(5): 529-34.
- Schrag, A., C. Sampaio, et al. (2006). "Minimal clinically important change on the unified Parkinson's disease rating scale." Mov Disord.
- Svircev, A., L. H. Craig, et al. (2005). "A pilot study examining the effects of neuromuscular therapy on patients with Parkinson's disease." J Am Osteopath Asso 105(1) 26.
- Tinazzi, M., C. Del Vesco, et al. (2006). "Pain and motor complications in Parkinson's disease." J Neurol Neurosurg Psychiatry.

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