



## Fluoxetine does not impair motor function in patients with Parkinson's disease: correlation between mood and motor functions with plasma concentrations of fluoxetine/norfluoxetine

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### Abstract

**Background:** Selective serotonin reuptake inhibitors are the most commonly chosen antidepressants in patients with Parkinson's disease (PD).

**Objective:** The aim of our study was to assess the influence of fluoxetine (Flu) on motor functions in patients with PD.

**Methods:** In this prospective, controlled, open-label study, 18 patients with PD and mild depression ( $10 \leq \text{HDRS} \leq 23$ .) without dementia ( $25 \leq \text{MMSE}$ ) were treated with Flu. Both single and repeated dose effects of Flu were assessed on days 1-50. Plasma concentrations of Flu and norfluoxetine (NORFlu) were correlated with the results of selected motor function performance scores (UPDRS-motor score, FTT and PPT). Severity of PD, depression and dementia were evaluated using standard tests (HY, ADL, HDRS, MMSE).

**Results:** Steady-state for Flu/NORFlu was reached after 18 days of treatment. Such a plateau correlated with significant improvements in both scores of depression and Parkinson's disability (HDRS, UPDRS and ADL, respectively). In addition, FTT and PPT scores also increased until day 18, with further slight fluctuations around the plateau. Optimal motor performances correlated with Flu concentrations of approx. 60-110 microg/L.

**Conclusion:** In conclusion, Flu (20 mg/day) significantly reduced depression in PD patients while it did not impair their motor performances. Because substantial placebo effects may arise in studies of PD and depression, large, prospective, randomized, placebo-controlled clinical trials are warranted.



### Biography

Dzoljic Eleonora has completed her PhD from Erasmus University Rotterdam, The Netherlands, at 1998. She is the professor of neurology at Neurology Clinic, Clinical Center of Serbia, at Faculty of Medicine University of Belgrade, Serbia. She has over 50 publications that have been cited over 330 times, and her publication H-index is 11.

### Publications

1. Environmental factors and Parkinson's disease: a case-control study in Belgrade, Serbia
2. A survey of female students with migraine: what is the influence of family history and lifestyle?
3. New and potent inhibitors of nitric oxide synthase reduce motor activity in mice
4. Infections as a risk factor for Parkinson's disease: a case-control study.
5. Prevalence of menstrually related migraine and nonmigraine primary headache in female students of Belgrade University

[2<sup>nd</sup> International Conference on Parkinson's, Huntington's & Movement Disorders](#) | Amsterdam, Netherlands, July 17-18, 2020

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