

# Higher education level, greater disability associated with treatment timing in Parkinson's disease

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Individuals who have higher levels of education and who are more impaired by Parkinson's disease appear to require treatment for their symptoms earlier than do other patients, according to a report posted online today that will appear in the September print issue of *Archives of Neurology*.

"Parkinson's disease is a chronic progressive neurodegenerative disease that leads to significant morbidity, disability and increased likelihood of institutionalization," the authors write as background information in the article. "In view of the potential for short-term and long-term drug complications, symptomatic treatment is customarily delayed in Parkinson's disease until the severity of motor symptoms results in functional impairment. Therefore, the initiation of symptomatic treatment is considered an early indicator of disease progression in Parkinson's disease and is used as an important benchmark in clinical trials."

Sotirios A. Parashos, M.D., Ph.D., of the Struthers Parkinson's Center, Golden Valley, Minn., and colleagues in the NET-PD Investigators group analyzed data from 413 patients with early, untreated Parkinson's disease who participated in two double-blind trials of experimental drugs. "Site investigators used their clinical judgment to determine when participants had reached a level of dysfunction sufficient to require symptomatic therapy in any one of three areas: ambulation [walking], activities of

daily living or occupational status," the authors write.

After 12 months, the researchers assessed all the treatment groups to identify which patients had started taking medication for their symptoms—including levodopa or dopamine agonists, treatments that regulate the amount of the [neurotransmitter dopamine](#). At this time, 200 of the 413 participants (48.5 percent) had started symptomatic treatment. Those who had higher levels of impairment and disability at the beginning of the study, as measured by several Parkinson's disease scales, were more likely to progress quickly.

Higher education levels were also independently associated with an earlier need for symptomatic treatment. "A possible explanation is that higher education may be associated with greater occupational demands and an increased need for symptomatic control," the authors write. "However, one might expect that occupations placing higher demands on physical abilities (usually associated with lower education levels) would be associated with a more pressing need for symptomatic control. An alternate possibility is that patients with higher education are likely to be better advocates for their health care needs and play a more active role in medical decision-making."

"Emotional, psychiatric and quality of life factors at baseline played a smaller role in determining need for symptomatic treatment and did not enter the final model when baseline impairment, disability and education were taken into account," they conclude. "The impact of the patient's education level on clinical management is an unexpected finding and merits further investigation."

[More information:](#) *Arch Neurol*.

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