

Persistent ocular tremors appear to be associated with Parkinson's disease

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Persistent ocular tremors that prevent eye stability during fixation appear to be common among patients with Parkinson disease (PD) suggesting that precise oculomotor testing could provide an early physiological biomarker for diagnosing PD, according to a report published Online First by *Archives of Neurology*.

"Although a number of studies describe various oculomotor abnormalities in subjects with PD, conflicts about the specific deficits remain," writes George T. Gitchel, M.S., of the Southeast Parkinson's Disease Research, Education, and Clinical Center, Hunter Holmes McGuire Veterans Affairs [Medical](#) Center, Richmond, Va., and colleagues.

The authors compared oculomotor function between 112 [patients](#) with Parkinson disease and 60 age-matched controls during fixation and while tracking a randomly displaced target on a PC monitor.

"The major finding of the present study was that using modern eye movement tracking, oscillatory fixation instability was universally seen in a large cohort of 112 patients with PD," the authors write. "The fact that this behavior was universally observed in every tested patient with PD, including unmedicated patients, suggests that ocular tremor is a function of the disease process and not induced by medication."

The authors found that all 112 patients with PD showed persistent ocular instability while fixating on a target, compared with only two of the 60

control patients. Additionally, the authors found no differences in oculomotor parameters between medicated and unmedicated patients with PD.

"All patients with PD exhibited persistent ocular tremor that prevented stability during fixation," the authors conclude. "The pervasiveness and specificity of this feature suggest that modern, precise oculomotor testing could provide a valuable early physiological [biomarker](#) for diagnosing PD."

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