

# Simple clinical tests help differentiate Parkinson's disease from atypical parkinsonism

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Two simple tests conducted during the neurological exam can help clinicians differentiate between early-stage Parkinson's disease (PD) and atypical parkinsonism. By asking patients to perform a tandem gait test and inquiring whether they are still able to ride a bicycle, clinicians can ascertain whether medio-lateral balance is impaired, a defining characteristic of atypical parkinsonism. These findings are published in the *Journal of Parkinson's Disease*.

This issue of the *Journal of Parkinson's Disease* also marks the inauguration of a new feature, "How I examine my patient," which is designed to help improve the clinical skills of physicians, allied health professionals, and other professionals involved in the care of patients with PD and other movement disorders.

The occurrence of a sideways or medio-lateral balance impairment is a "red flag" of atypical parkinsonism conditions, such as multiple system atrophy (MSA), [progressive supranuclear palsy](#), or vascular parkinsonism. As the condition progresses, patients with this deficit often compensate by adopting a wide-based walking pattern, probably reflecting widespread pathologic brain involvement of the cerebellum and brain stem, explains Jorik Nonnekes, MD, of the Radboud University Medical Center, Department of Rehabilitation, Nijmegen, the Netherlands.

In contrast, patients with PD develop a shuffling gait, maintaining a narrow distance between their feet. Because medio-lateral balance is preserved, a PD patient may still be able to ride a bicycle even when walking is difficult.

In the first test, 36 patients with PD and 49 patients with atypical parkinsonism were given a tandem gait test. Patients were instructed to take 10 consecutive steps along an imaginary straight, thin line, toe-to-heel. An abnormal tandem gait was scored if one or more side steps were needed to maintain balance. The researchers found that 18% of patients with atypical parkinsonism were able to perform the tandem gait test without a single side step, compared with 92% of patients with PD. The results were similar for patients with only early disease (

Another study included 45 patients with PD and 64 patients with atypical parkinsonism, all of whom said they previously rode bicycles before the onset of motor symptoms. When asked if they still were able to ride a bicycle, 52% of the atypical parkinsonism [patients](#) said they had stopped cycling compared to 2% of those with PD.

"Both tests are easy to perform in clinical practice and have a good diagnostic accuracy, even early in the course of the disease," says Dr. Nonnekes. He adds that the tests should always be judged in the clinical context and presence of other red flags or supportive features.

In the new "How I examine my patient," feature researchers and clinicians will contribute practical information about how to conduct good neurological examinations. In many cases, the literature and even neurological textbooks do not include practical descriptions of very common clinical tests.

In the first example, "How I examine my patient: The art of neurological examination for Parkinson's disease and atypical parkinsonism," authors

Bastiaan R. Bloem, MD, PhD, Department of Neurology, Radboud University Nijmegen Medical Center, the Netherlands, and Patrik Brundin, MD, PhD, Laboratory of Translational Parkinson's Disease Research, Center for Neurodegenerative Science, Van Andel Research Institute, Grand Rapids, MI, discuss how a well-done examination provides important diagnostic information. They write, "Details about how to perform certain clinical tests can be retrieved from standard neurological textbooks, but many useful clinical tips and tricks have been simply transmitted from teacher to student...such clinical pearls were never laid down in accessible form for a broad readership.

"We hope this new section offers readers a glimpse into the examination room of experienced clinicians who share their clinical pearls," say Dr. Bloem and Dr. Brundin.

Provided by IOS Press

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