

Ability to ride a bike can aid differential diagnosis of Parkinson's disease in any setting

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In a new study published today in the *Journal of Parkinson's Disease*, Japanese researchers report that the ability to ride a bike can differentiate between atypical parkinsonism and Parkinson's disease, regardless of the environment or situations for bicycling.

Atypical parkinsonisms are disorders that look similar to Parkinson's disease, but respond differently to treatments. The "bicycle sign" can help clinicians differentiate between the two. [Patients](#) with atypical parkinsonism lose their ability to cycle during the early phase of the illness, while patients with Parkinson's disease continue to ride well. Actual environments or situations for biking differ from one country to another, raising the question of whether the "bicycle sign" could be universally applicable. Hideto Miwa and Tomoyoshi Kondo, of the Department of Neurology at Wakayama Medical University, in Wakayama, Japan, set out to determine if the "bicycle sign" would be reliable in Japan, where the roads are hilly, narrow, and crowded with automobiles.

The study found that 88.9% of Japanese patients with atypical parkinsonism had ceased bicycling during the few years around the onset of their illness, as compared with only 9.8% of the patients with Parkinson's disease. In fact, the prevalence of the "bicycle sign" may be much higher in Japan than in The [Netherlands](#) (51.5%), which is known as one of the world's most bicycle-friendly countries. This may be

because the tough bicycle environment in Japan makes it more difficult for atypical parkinsonism patients to bike.

"Although bicycling [cultures](#) may differ between countries, it is possible that the 'bicycle sign' could contribute to earlier and better differential diagnosis of parkinsonism during the diagnostic interview. When we see patients with parkinsonism without a [definitive diagnosis](#), it is a simple thing to ask the question, 'Can you still ride a [bicycle](#)?' " commented Dr. Miwa.

More information: The article is "Bicycle Sign for Differential Diagnosis of Parkinsonism: Is It of Use in a Hilly Country Like Japan?" by Hideto Miwa and Tomoyoshi Kondo, *Journal of Parkinson's Disease*. 1(2). [DOI 10.3233/JPD-2011-11039](https://doi.org/10.3233/JPD-2011-11039)

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