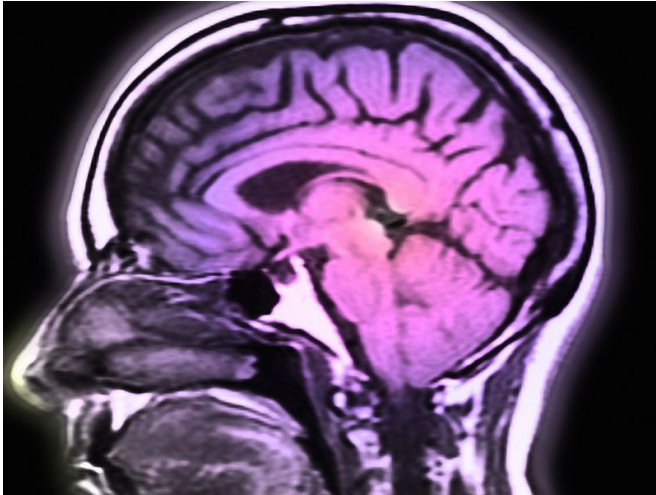


# Bicycling 'overloads' movement networks with Parkinson's

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freezing.

"Abnormal ~18 Hz oscillations are implicated in the pathophysiology of [freezing of gait](#), and suppressing them may form a key strategy in developing potential therapies," the authors write.

Several authors disclosed financial ties to the medical device industry.

**More information:** [Abstract](#)  
[Full Text \(subscription or payment may be required\)](#)

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(HealthDay)—Bicycling suppresses abnormal beta synchrony in the Parkinsonian basal ganglia, according to a study published online Sept. 11 in the *Annals of Neurology*.

Lena Storzer, Ph.D., from Heinrich Heine University Düsseldorf in Germany, and colleagues compared bicycling and walking in Parkinson's disease [patients](#) (five patients with and eight patients without freezing of gait) with electrodes implanted in the subthalamic nuclei for [deep brain stimulation](#). Low (13 to 22 Hz) and high (23 to 35 Hz) beta power changes were analyzed in 13 patients (57.5 years; four female).

The researchers found that in patients without freezing of gait, both bicycling and walking led to a suppression of subthalamic beta power (13 to 35 Hz), and this suppression was stronger for bicycling. For those with freezing of the gait, a similar pattern was observed, in general. However, a movement-induced, narrowband power increase around 18 Hz was evident even in the absence of

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