

# New explanation for cognitive problems of Parkinson's patients

November 28 2012, by Bill Hathaway

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The hallmark of Parkinson's Disease is the uncertain gait and movement caused by the destructions of neurons producing the neurotransmitter dopamine.

However, Parkinson's patients also display cognitive problems such as difficulty assessing an interval of time—for instance, differentiating between an eight-second span and one of 20 seconds.

A new Yale University study shows that a depletion of a class of

dopamine-producing neurons is also the cause of this deficit and it occurs in the [prefrontal cortex](#) associated with higher cognitive functions—not just as areas of the brain associated with movement.

The findings published in the journal [Proceedings of the National Academy of Sciences](#) may help explain other cognitive problems associated in late stage Parkinson's.

**More information:** [www.pnas.org/content/early/2012/11/27/1211258109.abstract](http://www.pnas.org/content/early/2012/11/27/1211258109.abstract)

Provided by Yale University

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