

# Why Parkinson's disease patients aren't walking tall

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Many of the symptoms of Parkinson disease can be alleviated with drugs that target dopamine, a chemical in the brain that is involved in nerve cell communication and therefore known as a neurotransmitter.

However, such drugs do not improve the gait disorders and falls that commonly affect individuals with severe and advanced forms of Parkinson disease. Understanding which [nerve cells](#) in the [brain](#) are involved in these symptoms of Parkinson disease might provide researchers with new therapeutic targets.

In this context, a team of researchers, led by Chantal François and Etienne Hirsch, at Université Pierre et Marie Curie — Paris 6, France, has now determined that the presence of gait disorders in patients with Parkinson disease and in aged monkeys with Parkinson-like disease was associated with loss of nerve cells that produce the [neurotransmitter](#) acetylcholine in a region of the [brain](#) known as the pedunculopontine nucleus (PPN). Consistent with this, disrupting these nerve cells induced gait and postural deficits in monkeys.

The authors therefore suggest that targeting acetylcholine-producing nerve cells in the PPN might provide a way to alleviate the gait disorders and falls experienced by individuals with Parkinson disease.

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