

Common dementia drug found to improve Parkinson's symptoms

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Immunohistochemistry for alpha-synuclein showing positive staining (brown) of an intraneural Lewy-body in the Substantia nigra in Parkinson's disease. Credit: Wikipedia

Scientists have discovered that a commonly prescribed dementia drug

could hold the key to helping prevent debilitating falls for people with Parkinson's.

The research, published today in *The Lancet Neurology* (1), shows people with Parkinson's who were given the oral drug rivastigmine were 45% less likely to fall and were considerably steadier when walking, compared to those on the placebo.

Parkinson's affects 127,000 people in the UK and approximately seven million worldwide. 70% of people with Parkinson's will fall at least once a year, with over a third experiencing falls repeatedly, resulting in fractures, broken bones and hospital admissions (2).

Parkinson's UK Research Fellow Dr Emily Henderson and principal researcher on the study, based at the University of Bristol, said:

"With the degeneration of dopamine producing nerve cells, people with Parkinson's often have issues with unsteadiness when walking. As part of the condition, they also have lower levels of acetylcholine, a chemical which helps us to concentrate - making it extremely difficult to pay attention to walking.

"We already know that rivastigmine works to treat dementia by preventing the breakdown of acetylcholine, however our study shows for the first time that it can also improve regularity of walking, speed, and balance. This is a real breakthrough in reducing the risk of falls for people with Parkinson's."

Dr Henderson and her team at the University of Bristol studied 130 people with Parkinson's who had fallen in the past year. Half the group were given rivastigmine capsules and the other half a placebo for an eight month period.

Dr Arthur Roach, Director of Research at Parkinson's UK, which funded the study said:

"People affected by Parkinson's, their carers, and health and social care professionals have said that preventing falls and improving balance is the biggest unmet need for people living with the condition, other than finding a cure.

"Things that may be simple to us, such as walking upstairs or getting up in the middle of the night to get a glass of water, or go to the toilet, are much harder and more dangerous when you could easily fall. You risk breaking bones and then needing an emergency hospital admission.

"This trial shows that there may be drugs already available, being used for other purposes, that can be tested to help treat Parkinson's. This takes us a step closer to improving the quality of life and finding better treatments for people with Parkinson's."

Caroline Maxwell from Northamptonshire, a participant on the study, who was diagnosed with Parkinson's 13 years ago said:

"A few years ago, I had a bad fall while carrying my sewing machine across the room, leaving me in hospital for a week and really denting my confidence.

"I'm at the stage where I would walk much better with a replacement joint, but because I fall so frequently my surgeon is reluctant to operate. Falling on my replacement hip would put in an even worse situation than what I'm in now.

"By potentially finding a treatment that helps to prevent falls, I'd be able to get a replacement hip and have the confidence to go shopping on my own, without having to constantly rely on the goodness of strangers to

pick me up when I fell."

More information: 1. Rivastigmine for gait stability in patients with Parkinson's disease (ReSPonD): a randomised, double-blind, placebo-controlled, phase 2 trial. Henderson E J et al. *Lancet Neurology*. January 2016. [dx.doi.org/10.1016/S1474-4422\(15\)00389-0](https://doi.org/10.1016/S1474-4422(15)00389-0)

2. Recurrent Falls in Parkinson 's disease: A Systematic Review. Allen N E et al. *Parkinson's Disease*. 2013

3. Priority setting partnership to identify the top 10 research priorities for the management of Parkinson's disease. Deane, K H O et al. *BMJ Open*. December 2014. [DOI: 10.1136/bmjopen-2014-006434](https://doi.org/10.1136/bmjopen-2014-006434)

Provided by Parkinson's UK

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