

Common diabetes drugs may prevent Parkinson's

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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

Elevated risk of Parkinson's disease among people with type 2 diabetes

appears to be reduced by some medications used to treat their diabetes, finds a new study led by UCL researchers.

The researchers are testing one of the drugs, called exenatide, as a potential Parkinson's treatment in an upcoming clinical trial, and the new findings, published in *Brain*, lend support to repurposing [diabetes](#) medications for people with Parkinson's.

The research team, funded by The Cure Parkinson's Trust, examined patient records from 100,288 people with type 2 diabetes, from The Health Improvement Network database.

The findings confirmed that people with type 2 diabetes face an elevated risk of Parkinson's, when compared to another cohort of people without diabetes, but commonly prescribed drugs, GLP-1 agonists and DPP4 inhibitors, appeared to reverse that relationship.

The researchers found that people who were taking two particular classes of diabetes treatments—GLP-1 agonists (such as exenatide) and DPP4 inhibitors—were less likely to be diagnosed with Parkinson's disease a few years later (average follow up time of 3.3 years), compared to people who were taking other [diabetes medications](#). Those taking GLP-1 agonists were 60% less likely to develop Parkinson's compared to people taking other diabetes drugs.

This study provides further verification for a phase 3 clinical trial of exenatide for people with Parkinson's, led by Professor Tom Foltynie (UCL Queen Square Institute of Neurology), co-lead author of this study. The upcoming trial is currently recruiting 200 people with Parkinson's across the UK. An earlier study found that people with Parkinson's who injected themselves each week with exenatide for one year performed better in movement tests than those who injected a placebo.

Professor Foltynie said: "Our study has strengthened evidence that there is a link between type 2 diabetes and Parkinson's disease, although it remains clear that most people with diabetes will not go on to develop Parkinson's.

"We have added to evidence that [exenatide](#) may help to prevent or treat Parkinson's disease, hopefully by affecting the course of the disease and not merely reducing symptoms, but we need to progress with our clinical trial before making any recommendations."

Co-lead author Professor Li Wei (UCL School of Pharmacy) said: "It may be helpful for doctors to consider other [risk factors](#) for Parkinson's disease when prescribing medications for type 2 diabetes, but further research will be needed to confirm clinical implications."

More information: Ruth Brauer et al. Diabetes medications and risk of Parkinson's disease: a cohort study of patients with diabetes, *Brain* (2020). [DOI: 10.1093/brain/awaa262](https://doi.org/10.1093/brain/awaa262)

Provided by University College London

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