

## Can Parkinson's Be Diagnosed Before Symptoms?

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A new type of blood test may be capable of accurately diagnosing the potential onset of Parkinson's disease in patients, up to seven years before they begin to exhibit symptoms. By measuring eight specific biomarkers in a blood sample and using artificial intelligence (AI) to accelerate the testing process, the new technology could deliver incredible results.

Not only will this provide a faster, more reliable and less invasive method of testing for Parkinson's in those believed to be at risk of contracting the disease, but it could even provide a platform for searching for ways to slow or stop its onset. As such, the findings represent an exciting breakthrough in the fight against what is proving to be the fastest-growing neurodegenerative disorder in the world.

### “After the horse has bolted”

Parkinson's is a debilitating condition which causes involuntary shaking, slowness of movement, stiffness in the muscles and cognitive or memory problems. This is caused by the dying out of nerve cells in the affected area of the brain, which in turn means the patient's brain is unable to produce sufficient amounts of dopamine.

Currently, sufferers are treated with dopamine replacement therapy, but this can also be administered once they have begun to develop symptoms. In this sense, the treatment is almost coming too late; [according to Professor Kevin Mills](#), senior author on the new study, “At present, we are shutting the stable door after the horse has bolted and we need to start experimental treatments before patients develop symptoms.”

That's especially true given that brain cells cannot be regenerated once they expire, so it's all important to take as good care of them as possible. With that in mind, the new study is causing a huge stir in the world of Parkinson's research given its possibilities of early diagnosis and improved treatment plans.

### 100% accuracy

The test, pioneered by scientists from the University of College London in the UK and University Medical Centre Goettingen in Germany, concentrated on eight particular blood-based biomarkers. 72 patients with Rapid Eye Movement Behaviour Disorder (iRBD), widely regarded as a precursor to Parkinson's in a majority of people, were subjected to the test.

The results showed that 79% of them would go on to develop Parkinson's at some point in the future and, 10 years on, the results have so far shown a 100% accuracy in predicting contraction of the disease. 16 of the original 72 patients have since developed Parkinson's

with one accurate diagnosis coming a full seven years before any symptoms were being displayed by the patient.

This test is much more patient-friendly than, say, a lumbar puncture, while also providing earlier outcomes and greater accuracy. As such, it could help to alert patients to the possible risk in the future and allow measures to be taken to protect the dopamine-producing cells. Indeed, it's even hoped that the use of these biomarkers could provide the basis for improved drug treatment options in the future.