



Parkinson's
Disease Society

Genetic Testing

At present, it is estimated that up to 5% (ie. 5 in every 100 people with Parkinson's disease) may have a genetic cause. The remaining 95% are considered 'idiopathic', which means no known cause. These figures may change as research into the cause of Parkinson's progresses.

Is Parkinson's hereditary?

People with Parkinson's often ask whether their condition was inherited. In the vast majority of cases, there is no clear inheritance pattern.

There are some families (although these are rare) in which Parkinson's does appear to be passed on from one generation to the next, and in these cases the condition is inherited. In these families, genetic abnormalities appear to be involved.

What are the chances of my children developing Parkinson's?

It is extremely rare for people to pass on Parkinson's to their children.

Although the exact causes of Parkinson's are currently unknown, it is generally understood that people develop the condition due to a combination of genetic susceptibility and an external trigger. Scientists have, to date, identified 12 genes linked to Parkinson's. However, even when an abnormal gene is involved, the chances of going on to develop Parkinson's are very low.

What are the chances that I will inherit from my father/mother with Parkinson's?

Some individuals may be concerned that although they themselves do not have Parkinson's, a family member does and they themselves could be 'carriers' of the faulty genes implicated in the development of Parkinson's.

This can occur, but is exceedingly rare, as indicated by the overall number of cases thought to have a genetic basis. For Parkinson's to be passed on in this situation, both parents would have to be 'carriers' of faulty genes.

Is genetic testing available?

At present, there are no genetic tests freely available for Parkinson's. This is because the genetic causes of Parkinson's are very rare. Also, identifying the specific genetic abnormalities in these rare cases can be extremely time-consuming and very expensive. Importantly, whether a test is positive or negative is not always particularly helpful for patients or their doctors, as even when an abnormal gene is found, the chances of going on to develop Parkinson's are very low.

Will I be able to have genetic testing?

It is unlikely that a specialist will offer to conduct genetic tests, as genetic testing is currently confined to research studies. As our understanding of the genetics of Parkinson's is at an early stage, there is not currently a case for genetic testing even where a relative has the condition. Screening to identify genes associated with Parkinson's may only cause unnecessary alarm or worry in people who may never go on to develop the condition.

Where is genetic testing done and what does it involve?

There are currently no genetic tests freely available for Parkinson's. As our understanding of Parkinson's is at a very early stage, experts in genetics and Parkinson's believe there is not currently a case to apply genetic testing to clinical practice. Even if a genetic test was



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used to find an abnormal gene, it must be remembered that the chances of going on to develop Parkinson's are very low.

Therefore at present, gene tests remain within research studies.

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Charity registered in England and Wales No. 258197 and in Scotland No. SC037554.

A company limited by guarantee. Registered No. 948776 (London)

Registered office: 215 Vauxhall Bridge Road, London SW1V 1EJ

Revised October 2008

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