

Exercise helps prevent falls in Parkinson's patients

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Credit: Andres Ayrton from Pexels

Statistics show that 25 per cent of recently diagnosed patients suffered a fall in the first year. That came as a surprise to researchers. They had thought that falls tended to occur during later stages of the disease.

Fetching the shopping bags out of the car, going up the stairs, finding the house keys, locating the lock and opening the door. These are everyday actions that you don't think about, but they need coordination, planning and ability to be carried out.

But for a person with Parkinson's, even the simplest of tasks can cause the brain to short-circuit. The signals get crossed, and without quite being able to explain how it happens, they fall over.

"You are at more risk of falling if you have already had a fall. That's why it's important to take [falls](#) seriously, particularly at an [early stage](#) of the disease", says researcher and special physiotherapist Ylva Hivand Hiorth of Stavanger University Hospital.

In her recent PhD thesis from the University of Stavanger, she researched falls at early stages of Parkinson's disease.

When she started her research, this was a completely blank field. The researchers were surprised that as many as 25 per cent of recently diagnosed patients suffered a fall in the first year.

Their expectations were more consistent with the statistic that over 70 per cent of patients who had lived with the disease for 16 years suffered falls.

Twice as many with Parkinson's

Parkinson's disease is a chronic disease that affects the nervous system, and its symptoms vary hugely from person to person. It causes some people to have difficulty walking and keeping their balance, others have tremors, while some have muscles rigidity and find it difficult to do several things at the same time.

Around one per cent of the population over the age of 60 has Parkinson's.

In the population over the age of 70, the figure rises to four per cent. The disease becomes more common as we get older. Most people who are diagnosed are over the age of 55.

Calculations show that the prevalence will double by the year 2030, because life expectancy is increasing.

"That's why it's extremely important to know how best to meet the challenges presented by Parkinson's disease, both for the patients and for the community", says Hiorth.

Which people are suffering falls?

As well as establishing that falls at an early stage of the disease are relatively common, she has also identified the risk factors that show who is more likely to suffer an early fall.

Classifying Parkinson's disease into sub-groups with similar dominating symptoms could make it easier to identify people who are at greater risk of falling. She has found that those who have a sub-group not dominated by tremors often fall at an early stage of the disease.

"We have found that 'established fallers' are more difficult to help. Our hope is that the earlier we can intervene, the more we can do to prevent falls", says Hiorth.

People with Parkinson's are treated with medication. The medication acts by replacing the dopamine in the brain, which the body is no longer producing naturally. This suppresses some of the symptoms, but does not prevent falls.

"We don't know enough about what causes some people to fall, but several new studies indicate that we are getting closer to a solution", says Hiorth.

Tai chi can help

She believes that exercise could be important, possibly combined with new medicines.

One study shows that tai chi, which is described as a gentle, inner, Chinese martial art, could be achieving good results in preventing falls in people with Parkinson's disease. Exercises that strengthen lower limbs can also help, as can balance exercises.

"The most important investment someone can make is to find a type of exercise that they enjoy", says Hiorth.

Many people with Parkinson's become less active because of the disease. They might stop playing football for their company team, because of jokey comments made by their colleagues about their constant stumbling. Or they stop going for walks because they might fall, and need help to get up again.

Being offered rehabilitation

Up to now, patients with Parkinson's [disease](#) have not been offered the chance to stay on the hospitals Rehabilitation Ward. What they have been offered is medication, and perhaps a referral to see a physiotherapist.

"It's difficult for healthcare personnel in the public healthcare system to acquire sufficient knowledge about Parkinson's. They don't encounter all

that many patients with this diagnosis. For this reason, we have worked with the Norwegian Parkinson's Disease Association to produce a brochure about fall prevention", says Hiorth.

However, the Rehabilitation Ward at Stavanger University Hospital is now moving towards offering patients a more interdisciplinary and coordinated rehabilitation service.

They hope to be able to develop a better network between the hospital and community.

"If we manage to prevent early falls, this will give [patients](#) living with Parkinson's a better life and the confidence to stay as active as possible", says Ylva Hivand Hiorth.

More information: Ylva Hivand Hiorth: *Falls in Parkinson's disease*. Doctoral Thesis, University of Stavanger (2016)

C. G. Canning et al. Exercise for falls prevention in Parkinson disease: A randomized controlled trial, *Neurology* (2014). [DOI: 10.1212/WNL.0000000000001155](#)

Provided by University of Stavanger

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