

# Preventing activity-related falls in Parkinson's



## Project information

Lead researcher	Dr Emma Stack
Location	University of Southampton
Cost	£182,799 over 3 years
Start date	March 2010
Type of project	Senior Research Fellowship
Project code	F-0901

## Project background

We've all heard lots about the benefits of exercise for keeping mind and body generally fit and healthy. And now there is a growing body of research to show that exercise can be particularly good for people with Parkinson's. It can affect day-to-day life in several ways, from helping to reduce non-motor symptoms such as depression to improving balance and coordination. Recent studies have even suggested that exercise might slow down the progression of Parkinson's and reduce the main motor symptoms of tremor, rigidity and slowed movement.

However, people who have Parkinson's can have particular trouble with falling and turning during everyday activities. Not surprisingly, many people with the condition are reluctant to exercise if it makes falling more likely. So we need to find out more about why people with Parkinson's fall and whether there any ways to improve people's safety during exercise.

- **Certain common activities can result in a fall for people with Parkinson's.** We don't fully understand why, but tripping over, stepping backwards and misjudging distances can often lead to falling. People with other conditions such as stroke have a different set of 'risky' activities.
- **Unfamiliar settings may make falling more likely.** Previous research on falling in Parkinson's has focussed on developing ways of moving to prevent falls within the home. But we know much less about how and why falls happen outside the home. Less familiar locations could make it harder to control posture.
- **Fear of falling may prevent people with Parkinson's from continuing to be active.** Unfamiliar places may seem daunting enough that going out and being active becomes something to avoid. Many people with Parkinson's stop doing exercise and activities they previously enjoyed and this can reduce the opportunity to meet people socially.

### What the researchers are doing

Dr Stack's team at Southampton are finding out about which situations and locations outside the home result in falls. Two hundred people with Parkinson's with a recent history of falling are answering a questionnaire about what caused the falls, how they landed and what happened during the weeks and months afterwards as a result of falling. Dr Stack is also testing a smaller group of people in the lab to find out how, for example, they step over objects of various heights and lean forward to reach for targets at different distances. Participants will wear a safety harness during the tests to make sure they aren't able to fall. They'll also wear sensors on their clothes and shoes so that 3-D motion capture software can store the results for digital video analysis to understand how people with Parkinson's move.

### How the research will help people with Parkinson's

The team will use their results to work with health professionals such as movement therapists to develop ways for people with Parkinson's to get active safely and confidently. They'll also create a booklet and DVD to share the information with as many people with Parkinson's as possible.

### For more information, please talk to the Research Team

Call	<a href="tel:02079639313">020 7963 9313</a>
Email	<a href="mailto:research@parkinsons.org.uk">research@parkinsons.org.uk</a>
Write	Parkinson's UK, 215 Vauxhall Bridge Road, London SW1V 1EJ