



Why walking becomes difficult in Parkinson's disease

Rehabilitation in Parkinson's Disease: Strategies for Cueing

It is important to remember that the basic walking pattern remains in tact in Parkinson's disease, but new ways must be found to:

- Activate walking.
- Adjust the size and timing of the steps.

What causes walking to become difficult?

The basal ganglia is the part of the brain responsible for automatic movements (the ones we don't usually think about) and is affected in Parkinson's disease.

Due to loss of cells in the substantia nigra in the brain stem, a key chemical messenger – dopamine - responsible for automatic movement is depleted.

This automatic pilot is responsible for guiding our walking and other complex movements such as getting in and out of a chair or bed.

Changes in muscle tone (rigidity) can cause stiffness. Changes in balance mechanisms and involuntary movements (e.g. dyskinesia) can make people feel unsteady.

What sorts of difficulties are experienced?

- The length of steps becomes smaller.
- The rhythm of walking is affected.
- Starting and maintaining the walking pattern is a problem.
- Concentrating on other things while walking is difficult.
- Falling is more frequent.

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