



# Gait disturbances and freezing in Parkinson's disease: Essential Facts for Patients

## WHAT ARE THE TYPES OF GAIT DISTURBANCES PATIENTS WITH PARKINSON'S DISEASE (PD) MAY EXPERIENCE?

The appearance of these walking disturbances can be broadly divided into 2 categories:

### Continuous

- Slowness of gait with small shuffling steps. Swinging of the arms may be reduced or absent during walking.

### Episodic

- Freezing: common in 50% of patients. Patients feel their feet stuck to the ground. May lead to falls.
- Festination: Patients appear to be chasing forward suddenly. May lead to falls due to its unpredictability.

## WHY DO GAIT DISTURBANCES AND FREEZING HAPPEN?

Like most motor symptoms that may occur in PD patients (e.g. slowness, muscle stiffness and tremor), gait alterations and freezing are caused by loss of control in brain regions responsible of producing smooth and purposeful movements.

## WHEN DOES FREEZING OCCUR?

- When preparing to take the first step to walk after resting for a period of time (gait initiation)
- During walking (especially when crossing door frames, stepping into an elevator or onto an escalator, or turning to a different direction)
- During an anxious situation
- May be related to the effects of the medication you receive for treating your motor symptoms

## HOW ARE GAIT AND FREEZING ASSESSED BY THE DOCTOR?

To evaluate gait, a doctor needs to ask about your clinical history. Also, a detailed neurological examination may be necessary. The doctor may assess if you are having problems in taking your first step, as well as reduced arm swing, walking speed, stride length, problems to make turns, and foot clearance. Also, some timed tests may be used and the doctor may try to provoke freezing of gait by asking you to walk through narrow spaces, turning or doing two things at the same time. The doctor may encourage you to see the physiotherapist for more detailed assessment and management.

## HOW DO I MANAGE THESE GAIT DISTURBANCES BY MYSELF?

- To reduce gait freezing

### ABCDE concept

Together with their caregivers, patients can have better gait when they understand the ABCDE concept. They can practice and apply the B and E components in their daily activities too. Hence, patients can help to reduce the occurrence of gait abnormalities by maintaining their step rhythm/length.

Allocate sufficient time: Plan the movement before doing it.

Break down the task: Break down a complex task such as walking into smaller steps. This can help to perform the task more easily. Examples like heel down then toe down.

Conscious effort: Use full concentration when trying to perform each step successfully.

Dual task to avoid: Do one thing at a time. Focusing on one task at a time can help to achieve faster and smoother movement. For example, avoid talking over the phone while walking.

External cues: cues like vocal instructions and visual lines can help to maintain the walking rhythm and step length. Examples like keeping the walking rhythm with metronome beats, stepping on the next floor lines ahead and counting 1, 2, 3, 4. Your doctor may refer you to a physiotherapist to find the most effective external cues to help you to unfreeze.

- To continue walking after gait freezing or festination has occurred

Caregivers and patients can follow the following steps.

1. Stay calm.
2. Take a deep breath.
3. Use the most effective way to take a step again, e.g. counting left-right-left-right, shifting hips sideways to mimic weight shift during walking, taking a step backward/sideways.
4. Each forward step initiated should have started with heel placed first on the ground.
5. If someone wants to help, it is better to provide support from the side, count rhythmically, and open the space for walking. Pulling the arms may worsen gait freezing.