

Dyskinesia in Parkinson's Disease

What are Dyskinesias?

Some people may experience involuntary, dance like movements in their arms, trunk and legs. These involuntary movements are known as 'dyskinesias' and can include twitches, jerks, twisting or writhing movements, or simple restlessness. They occur initially when the level of levodopa in the bloodstream is at its peak, but may appear at any time later on. Dyskinesias are associated with long-term use of levodopa containing medicines (trade names Sinemet, Madopar and Stalevo) and they usually occur in people who have had Parkinson's disease (PD) for some time.

Why do Dyskinesias Occur?

It is assumed that dyskinesias are the result of a combination of levodopa treatment and the progression of PD. The exact cause of dyskinesias is unknown, but they seem to be connected to the excessive dopaminergic stimulation brought about by levodopa treatment. When levels of dopamine are increased temporarily by taking levodopa, this has the effect of over-stimulating the part of the brain concerned with motor control, and involuntary movement results.

What Kinds of Dyskinesia Are There?

Dyskinesias can affect various parts of the body, but often involve the limbs and trunk. They can take the form of rapid, dance-like movements which some people have described as being almost the opposite of their PD symptoms, since instead of rigid muscles and slowness of movement, the person will have loose and floppy muscles, and too much movement.

The timing of dyskinesias can also vary greatly between individuals. The most common form can be found when the dose of levodopa is reaching the peak of its effectiveness, and brain dopamine levels are at their highest; this is known as 'peak-dose dyskinesia'. Much less commonly, dyskinesia can occur both when the dose of medication is beginning to take effect, and when the effects begin to 'Wear Off' and can be more difficult to treat than peak-dose dyskinesia.

Not everyone develops dyskinesia. When dyskinesias do occur, they can appear in different forms, and their frequency and timing can differ from person to person. Some people can have dyskinesias for most of the day, but for others they may only appear after taking a tablet, or just before the next is due. Some people may barely notice their dyskinesias, while for others they may be a source of great concern. They can be both embarrassing and exhausting and may even result in damage to the person with PD or objects in their vicinity as the limbs move around uncontrollably. Occasionally, the involuntary movements may result in loss of balance leading to a fall.

Often, involuntary movements can be more upsetting to an observer than to the person actually experiencing them.

How Can Dyskinesia be Treated?

Dyskinesia can be difficult to treat. Because it appears as a result of the build-up of an increased sensitivity to dopamine levels in the brain, the first option would be to reduce the amount of levodopa treatment. However, as this approach could lead to the return of PD symptoms such as tremor, rigidity or slowness of movement, and could also mean more 'Wearing Off' or 'On/Off' effects, this is not always possible.

There may come a time when your doctor feels that a change to your medication regime may be necessary to help deal with the Dyskinesias. There are many options available now, from long acting Dopamine Agonists to Enzyme Inhibitors which can allow the levodopa to work more smoothly and effectively, which would promote continuous delivery of dopamine to the brain.

Usually, if people are having trouble with dyskinesias, they will seek to find a balance between better mobility and involuntary movements. However, many people would rather be "On" with Dyskinesia, then "Off" and unable to move.

What Can People with Parkinson's and Dyskinesia Do to Help Themselves?

Being optimistic, taking each day as it comes, eating well, getting out and socialising can all help.

To maximise 'On' time with the least possible dyskinesia, it can be helpful to complete a 24-hour diary, where they can indicate the times and frequency of their symptoms, fluctuations, times and frequency of their dosage and times of meals. This can help both the person with Parkinson's and the Parkinson's specialist to understand their response to medication and get the best response from their medication. The 24 hour diaries are available from the Parkinson's Association and from the website www.wearingoff.com.

Fluctuations can be difficult to treat, and people can differ over how they want them managed. It is important to get the right balance for each person, to ensure they have the best quality of life possible.

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Other Relevant Information Sheets:

M1.1: Motor Fluctuations in Parkinson's Disease
M1.3: On-Off in Parkinson's Disease
M1.4: Wearing Off in Parkinson's Disease
G4: Medications and Parkinson's Disease
NM4: Muscle Cramps and Dystonia in Parkinson's Disease

DISCLAIMER – The information on these pages is not intended to be taken as advice. No changes to your treatment should be made without prior consultation with your doctor or allied health professional.

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