Parkinson’s and ‘Wearing Off’

Parkinson’s is a slowly progressive disease which means that its symptoms will gradually change and evolve over time, becoming more severe. Many of the symptoms of Parkinson’s respond well to drug treatment, but over time, the response a patient may get from their medication and the way it controls the symptoms may change.

One of the principal drug treatments for the management of the symptoms of Parkinson’s is l-dopa. It has been the main treatment method for forty years and is normally very effective when it is first used to treat the symptoms of Parkinson’s. However, as the disease progresses, the length of time that the patient’s symptoms are controlled (known as ‘on’ time) shortens and the ‘off’ time lengthens. This is known as ‘wearing off’. Symptoms of ‘wearing off’ include changes in movement and mobility, thoughts and feelings, sensations and general feelings of well-being. ‘Wearing off’ can occur with all drugs, but it is most commonly noticed and associated with l-dopa.

Parkinson’s sufferers very frequently comment that the most difficult aspect to deal with is they can get both motor and non-motor symptoms. Some people with Parkinson’s choose to avoid l-dopa therapy altogether because they have been frightened by what they heard about ‘wearing off’.

Why ‘wearing off’ occurs

The reason this occurs is because in the early stages of the disease, when you take a dose of l-dopa, the brain is able to store any excess dopamine. This can be released at a later stage when dopamine levels are low. This ensures a good continuous supply of dopamine throughout the day and consequently effectively control of most of the symptoms of Parkinson’s. However as Parkinson’s progresses, the brain has fewer cells that can take up l-dopa and store it as dopamine or to produce it.

Over the years, many attempts have been made to improve the availability of
l-dopa (i.e. increase the length of time that it remains active in the body). Most of each dose of l-dopa does not reach the brain as it is broken down by enzymes in the gut and blood stream. L-dopa is now routinely combined with enzyme inhibitors to prevent this excessive breakdown of the drug before it reaches the brain, where it is needed. This means that more l-dopa is available to provide better symptom control for longer periods each day.

**How ‘wearing off’ is identified**

*Motor symptoms* of Parkinson’s relate to movement and mobility such as: hands shaking, trouble using hands, trouble getting out of a chair or car, muscle cramping, trouble speaking, general slowness and stiffness.

Because they are observable, these are the ones that most obviously telegraph ‘wearing off’. However there are other symptoms that have nothing to do with movement.

*Non-motor symptoms* include: anxiety, restlessness, panic attacks, trouble breathing, insomnia or sleep disturbances, excessive sweating, trouble thinking clearly, slowness of thinking, lack of energy and aching and numbness.

**How is ‘wearing off’ treated**

Doctors can switch patients to a new treatment that combines l-dopa with other agents in order to reduce the breakdown of l-dopa in the gut and bloodstream and improving dopamine profusion to the brain, providing better symptom control for longer periods each day.

There are also controlled-release formulas which can be beneficial for night-time symptom management, but are less predictable during the day.

The doctor can increase the strength of the tablets or increase the number of tablets during the day.

Interestingly, for some people with Parkinson’s, protein intake can reduce l-dopa absorption. It is advisable to take l-dopa one hour before or 2 hours after meals.
It is also recommended that fibre and fluid intake be increased to avoid constipation which would reduce L-dopa absorption.

**What Can a Caregiver Do?**

Carefully monitor the patient’s behavior for signs of ‘wearing off’ is key. The motor symptoms are easily identified. It takes greater sensitivity and closer observation to detect the non-motor symptoms. All changes should be recorded on a Progress Chart. When a trend starts to appear, it should be immediately shared with the family and/or medical professional.

Knowing how much help to provide at these times is important. Obviously too little assistance will exacerbate the discomfort that a patient experiencing ‘wear out’ will feel. At the same time, when the patient is not at the point where they need help, stepping in may elicit a curt response from the patient who still values independence.

This is why it is very important for a caregiver or caregiver team to take what we call a 360° perspective - monitoring both their physical and emotional behavior and tracking how this is changing over time. And modifying the care plan accordingly.