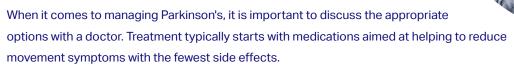
Knowing The Treatment Options May Help You Better Manage Your Symptoms for Better Quality of Life





Non-Surgical Treatments

There are many medications available to treat Parkinson's symptoms, although none yet reverse the effects of the disease.

Physical therapy or lifestyle modifications, like getting more rest and exercise may help. These include:

- · Physiotherapy (stretching and strengthening exercises,
- Gait and balance training, including the use of cueing techniques, and more)
- Occupational therapy (rehabilitation techniques that help maximize functional capacity through lifestyle adaptations and the
 possible use of assistive devices; this may include an assessment of safety in the home environment, such as the installation of
 grab rails, shower seats, and so on)
- Speech therapy (rehabilitation techniques to strengthen speech)4'5.

It is useful to encourage attention to a healthy lifestyle, including:

- · Maintaining an optimistic outlook,
- A healthy and balanced diet, and regular exercise (e.g., walking or swimming).

Advanced Therapies

Advanced Therapies is reserved for PD patients who have exhausted medical treatment.

Some of the treatments are:

Lesional (ablative) surgery	Treatment that targets and then shrinks a specific part of the brain affected by Parkinson's disease - such as the tissues that emit abnormal chemical or electrical impulses ⁶ .	Apomorphine (subcutaneous infusion or injections)	Apomorphine is a dopamine (a type of neurotransmitter) receptor agonist. It is a medicine that acts on the same receptors (tiny areas in the brain) as dopamine. It can be given to patients via injection or infusion ³ .
Jejunal L-dopa	Surgery is performed to insert a tube in the small intestine, which delivers a gel formulation of levodopa ³ . It is absorbed in the intestine and is transported to the brain, where it is converted to dopamine to manage movement-related symptoms ¹⁰ .	Deep Brain Stimulation (DBS) Therapy	DBS is a surgically-implanted medical device that may help provide patients with relief from many Parkinson's symptoms through electrical stimulation ⁷ .

Currently, the most common treatments available for people living with PD include:

- 1. Apomorphine (subcutaneous infusion or injections)
- 2. Deep brain stimulation (DBS)

Apomorphine is the most powerful dopamine receptor agonist and it can give equivalent symptom alleviation as L-dopa the medication, levodopa³.

This is effective therapy for disabling motor fluctuations 4'4a skin reactions being the most common side effect 5'5a.

As Parkinson's progresses, medications may become less effective. This is when device-assisted therapies may help.

Deep brain stimulation (DBS) is a device-assisted therapy that may help provide patients with relief from many Parkinson's symptoms through electrical stimulation6.

In deep brain stimulation, electrodes are placed in the targeted areas of the brain. The electrodes are connected by wires to a type of pacemaker device (called an implantable pulse generator) placed under the skin of the chest below the collarbone.

Once activated, the pulse generator sends continuous electrical pulses to the target areas in the brain, modifying the brain circuits in that area of the brain. The deep brain stimulation system operates much the same way as a pacemaker for the heart. In fact, deep brain stimulation is referred to as "the pacemaker for the brain."

Three types of PD patients typically benefit from DBS:1

- 1. Patients with uncontrollable tremors for whom medications have not been effective.
- 2. Patients with symptoms that respond well to medications but who, when the drugs wear off, experience severe motor fluctuations and dyskinesias, despite medication adjustments.
- 3. Patients whose movement symptoms might respond to higher or more frequent medication doses, but who are limited to do so because of side effects.

DISCLAIMER: The content on this card is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Always seek the advice of your physician or other qualified health provider with any questions you may have regarding a medical condition. This is a public initiative by Medtronic.

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