

YOUR GUIDE TO

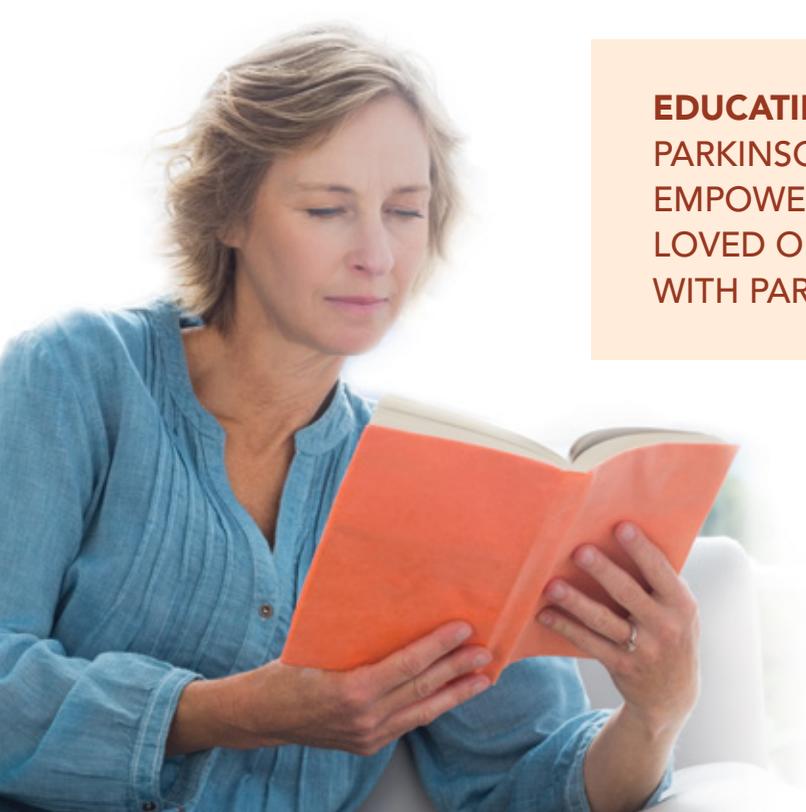
TREATMENTS
for
PARKINSON'S
DISEASE



You have been diagnosed with **PARKINSON'S DISEASE**, a medical condition of the nervous system. Parkinson's is a disease that has been extensively studied, described, and defined, but how it is experienced is different for every individual. The way your symptoms progress and the way you respond to treatment will only become clearer as you and your doctor become more familiar with your unique situation.

YOUR DOCTOR may ask you to try different types of treatments to help find the one that will help reduce your motor symptoms, improve your quality of life, while reducing the possibility of side effects. You can be involved in this discovery process by getting informed. Knowing the current treatment options available will help you to make the right decisions with your doctor about your medical care.

This brochure is here to provide some answers to questions you may have about Parkinson's disease. It summarizes the **TREATMENT OPTIONS** available in Canada and suggests therapies you may come across. This brochure can also serve as a starting point for talking to your doctor, so that you can decide together which treatment is best for you as an individual.



**EDUCATING YOURSELF ABOUT
PARKINSON'S DISEASE CAN
EMPOWER YOU AND YOUR
LOVED ONES TO LIVE WELL
WITH PARKINSON'S DISEASE**

WHAT IS PARKINSON'S DISEASE?

Parkinson's disease is a disease of the central nervous system which affects the way a person moves their body. Movement is controlled by a chemical in the brain called dopamine. In Parkinson's disease, the level of dopamine in certain brain regions is too low, resulting in motor symptoms. Although each person's experience may be different, there are four main symptoms of Parkinson's disease:

- Tremor (shaking or trembling of your hands, arms or legs)
- Stiff muscles
- Slow movements
- Problems with balance or walking

The main treatment aim in Parkinson's disease is to temporarily imitate, restore or “normalize” dopamine levels in brain regions that control body movements. Different classes of drugs exist that can temporarily replenish low dopamine levels. Drugs that temporarily replenish low dopamine do so by various ways such as replacing dopamine, imitating dopamine, or preventing the breakdown of dopamine in the brain.

HOW IS PARKINSON'S DISEASE TREATED?

Right now in Canada, there are different ways to treat Parkinson's disease. Your doctor may decide to use several of these different approaches when treating your symptoms to find the right combination for you.

1. Oral medications
2. A transdermal system (a “patch”)
3. An intestinal gel
4. Deep Brain Stimulation
5. Alternative treatment options

The most widely used treatment for Parkinson's disease is drug therapy. There are many different options. Oral medications are effective for early treatment, but there is also a transdermal system (a “patch”), which delivers medication through the skin.

At a later stage, as the disease progresses, it is possible that the motor symptoms that are severe and disabling can no longer be controlled with available oral/patch medications. At that time, there are interventional therapies available. Interventional therapies involve a surgical procedure as a way of managing later Parkinson's disease.

One drug therapy that is interventional is a gel that is pumped continuously and directly into the intestine throughout the day, until bedtime. A small opening is made in the patient's abdominal wall so that medication can be administered into the intestine using a portable pump worn on the outside of the patient's body.

Deep Brain Stimulation is another interventional treatment option in Parkinson's disease. This is not a drug therapy. Patients undergo a surgery so that electrodes can be placed into specific brain regions that control body movements. The amount of stimulation is controlled by a pacemaker-like device that is placed under the patient's skin in the upper chest, and a wire under the skin connects this device to the electrodes in the brain. The electrical impulses generated by the electrodes help regulate abnormal impulses in the brain.

There are also alternative treatment options available for the treatment of Parkinson's disease; for example exercise and balance training, music therapy and physiotherapy. These may also be included in addition to drug or interventional therapy.

WHICH MEDICATION IS RIGHT FOR ME?

Not all treatment options are appropriate for every patient. Each treatment has its own benefits and drawbacks, and choosing one treatment over the other is based on careful consideration of several factors. Together, you and your doctor will discuss your treatment options and decide what's best for you.

Here are some of the things you and your doctor will consider:

- Your age
- Your symptoms
- Your lifestyle (whether you are working or retired; what kind of leisure activities you enjoy)
- Your overall physical health
- Whether you have balance problems with walking
- Whether you have changes in intellectual abilities
- Your own attitude towards taking medication

STARTING TREATMENT

Starting treatment is a big step, and knowing what your options are can help you feel more in control of your treatment experience. The goal of therapy is to reduce motor symptoms and improve quality of life without causing too many side effects. Because Parkinson's disease can progress at a different rate for each person, your symptoms, and how they are treated, may change over time. Your doctor will adjust your medication, or try different treatments to help manage your symptoms. It is important to tell your doctor how you are responding to your treatment, so that you get the care that's most suitable as your condition changes.

The following pages include a summary of the current treatment options in Canada for early Parkinson's disease.



TREATMENT OPTIONS IN EARLY PARKINSON'S DISEASE

EARLY PD							
ORALS							PATCH
DRUG CLASS	Levodopa	COMT inhibitors & combination with levodopa/carbidopa	MAO B inhibitors	Dopamine agonists	Amantadine	Anticholinergics	Dopamine agonists
WHAT IT DOES	Levodopa is converted to dopamine in the brain then stored in nerve cells to replace depleted dopamine	COMT inhibitors can improve the duration of levodopa by blocking an enzyme responsible for breaking it down before it reaches the brain	Enhances the effect of dopamine by preventing its breakdown	Mimics the action of dopamine	Enhances dopamine release and blocks another brain chemical called glutamate	Corrects an imbalance of dopamine and another brain chemical called acetylcholine	Mimics the action of dopamine
EXAMPLES	Levodopa/carbidopa immediate release (PrSinemet®) Levodopa/benserazide immediate release (PrProlopa®)	Entacapone (PrComtan®) Levodopa/carbidopa/entacapone (PrStalevo®)	Rasagiline (PrAzilect®) Selegiline	Pramipexole (PrMirapex®) Ropinirole (PrRequip®) Bromocriptine	Amantadine	Benztropine (PrKynesia™) Ethopropazine Procyclidine Trihexyphenidyl	Rotigotine (PrNeupro®)
COMMON SIDE EFFECTS†	Abnormal movements, nausea	Uncontrollable movements (dyskinesias), nausea, discoloration of urine, sweat and saliva, diarrhea, muscle and/or joint pain	Headache, flu-like symptoms, musculoskeletal pain, joint pain, depression, urinary urgency, indigestion, falls	Nausea, stomach ache, constipation, dizziness, sleepiness, compulsive disorders	Nausea, dizziness, insomnia	Blurred vision, nervousness, listlessness, agitation, constipation	Skin irritation under the patch, nausea, headache, sleepiness

† Not a complete list of side effects. Refer to the respective Product Monographs for more information.

Treatments aimed at temporarily restoring dopamine in the brain may help to relieve the motor symptoms of Parkinson's disease. All medications cause side effects, but they do not necessarily affect all people. It is recommended to discuss any questions you have about the side effects with your doctor.

IT IS IMPORTANT TO FIND THE RIGHT BALANCE BETWEEN THE MEDICATION'S BENEFITS AND SIDE EFFECTS

LATER STAGE OF PARKINSON'S DISEASE

At a later stage, it is possible the medications you've been taking are no longer providing adequate relief from severe and disabling motor symptoms. At this time, there are two interventional treatment options, intestinal gel medication and Deep Brain Stimulation, that may be considered. Interventional treatment strategies are usually only considered after oral medications or the patch have been tried.

ADDITIONAL TREATMENT OPTIONS IN LATER PARKINSON'S DISEASE



LATER PD		
	INTESTINAL GEL MEDICATION	DEEP BRAIN STIMULATION ("DBS")
DRUG CLASS	Levodopa/carbidopa	Not applicable
WHAT IT DOES	Levodopa is converted into dopamine in the brain. Carbidopa is used together with levodopa to improve the effect of levodopa and reduce the unwanted effects of levodopa	DBS changes the electrical signals in the brain that cause symptoms of Parkinson's disease
ADMINISTRATION	A gel is pumped continuously throughout the day, until bedtime, directly into the small intestine through a tube called a percutaneous endoscopic gastrostomy-jejunal tube or "PEG-J" tube	Electrodes are implanted within certain areas of the brain and are connected by wires to a type of pacemaker device implanted under the skin in the upper chest. The electrodes produce electrical impulses that help regulate abnormal impulses
EXAMPLE	Levodopa/carbidopa (PrDUODOPA®)	Not applicable
COMMON SIDE EFFECTS†	<p>Side effects of the medication: Upset stomach, vomiting, involuntary movements</p> <p>Problems related to the surgery: Pain in the abdomen, redness and swelling around the surgical wound, excessive tissue growing around the surgical wound</p> <p>Problems related to the tubing: Dislocation of the tubing, blockage in the intestine</p>	<p>Possible complications of the surgery: Bleeding in the brain, stroke, infection</p> <p>Possible side effects after surgery: Seizure, infection, headache</p> <p>Possible side effects of stimulation: Numbness or tingling sensations, muscle tightness of the face or arm, speech problems</p>

† Not a complete list of side effects. Refer to the Product Monograph for more information.

THROUGHOUT
YOUR EXPERIENCE
WITH
**PARKINSON'S
DISEASE**

talk to your doctor to
make sure you
understand which treatment
is right for you

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