

# Parkinson's Medications

## What you need to know!

This information sheet will help you understand what types of medication are available to treat your Parkinson's symptoms, the potential side effects, and the importance of working closely with your health care professional.

- Medication will help you function, but may cause side effects.
- It is important to find the right balance between the medication's benefits and side effects.
- Drugs for Parkinson's work on the brain's complex chemistry and may need to be taken several times a day.
- Use them as prescribed and do not alter your doses without consulting your doctor.

Contact your regional Parkinson Society through [www.parkinson.ca](http://www.parkinson.ca) for more information and support.

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### Do I have to treat my Parkinson's?

The purpose of treating Parkinson's is to reduce the effect of symptoms on your daily life. Without treatment, you will eventually find that the symptoms make it hard to perform daily activities. Symptoms, such as shaking and stiffness, may cause discomfort; the risk of injury from falls may increase, and swallowing may become more difficult.

Everyone with Parkinson's is unique and will experience different symptoms, which means the treatment you receive will be geared to your specific needs. Current treatment neither cures Parkinson's nor stops it from advancing. (See PSC Information Sheet on Progression of Parkinson's.)

### When should I start taking medication?

If you have been diagnosed with Parkinson's, you may be wondering when you should start treatment and with what medication. There is no single strategy that applies to everyone.

The timing will differ from person to person. It depends on a variety of factors, such as:

- your age
- the nature of your symptom(s)
- your lifestyle (e.g., if you are working or retired and the kind of leisure activities you enjoy)
- your overall physical health
- whether you experience balance problems with walking
- changes in intellectual abilities, and
- your own attitude toward taking medication

When to start taking medication can be decided in consultation with your neurologist or movement disorder specialist. The decision to delay taking medication requires close monitoring and evaluation for risks of falls and injuries, especially if you are older. The older you are, the more you are at risk for a fall, and Parkinson's medication, when used appropriately, may reduce this risk.

### What about medications for other health conditions?

The effectiveness of some Parkinson's drugs can be reduced when combined with drugs for other health conditions. It is important to seek advice from your doctor or pharmacist regarding any new drug prescription.

## What medications are used to treat Parkinson's symptoms?

Since many of the motor symptoms of Parkinson's are the result of a lack of dopamine in the brain, most drugs used to treat Parkinson's are aimed at temporarily replenishing or imitating dopamine. The following list is a guide to medications approved by Health Canada to treat symptoms of Parkinson's<sup>1</sup>. Speak to your doctor for detailed information regarding effectiveness and side effects of a particular drug.

### TERMINOLOGY

**Dyskinesias:** Dyskinesias are involuntary, purposeless movements of any body part. They may be mild (slight ankle twisting) or severe (uncontrollable writhing movements). Dyskinesias are usually felt during the time you are on when you have taken your medication; this is also called “**peak dose dyskinesias**”.

**On-Off Symptoms:** When medications such as levodopa relieve symptoms, you are in your “**on**” state. This means you can do your daily activities. When the medication does not work and the symptoms return, you are in your “**off**” state. This means you may not be able to do the things you want or need to do. If your symptoms return before your next dose of medication, it means you are in a “**wearing off**” state.

### SURGERY AND PARKINSON'S MEDICATIONS

If you are going to have surgery, especially requiring a general anaesthetic, talk to your surgeon/ anaesthetist ahead of time. He/she may want to discuss anaesthesia, pain relief and your drug treatment with your doctor/ neurologist. Certain pain relief drugs can interact with Parkinson's medications.

#### **Levodopa (levodopa/benserazide [Prolopa®], levodopa/carbidopa [Sinemet®, Sinemet® CR])**

- Converted into dopamine in the brain and stored in nerve cells to replace depleted dopamine
- Combined with another drug, carbidopa or benserazide, allows more levodopa to get to the brain and reduces side effects
- Helps improve muscle rigidity and movement
- Side effects include **dyskinesias**\* (involuntary movements) \*see terminology
- Over years of use, may be associated with “**wearing off**”\*

#### **Dopamine Agonists (bromocriptine [Parlodel®], pramipexole [Mirapex®], ropinirole [ReQuip®])**

- “Mimics” or imitates action of dopamine
- Can be used as initial treatment or with levodopa in advanced stages
- Side effects include sleepiness, hallucinations, leg swelling and obsessions with food, sex and activities such as shopping, gambling and Internet use

#### **Amantadine (Symmetrel®)**

- Enhances dopamine release and blocks glutamate, a brain transmitter
- Used to treat early symptoms
- Can reduce **dyskinesias** and improve **wearing off**

#### **COMT Inhibitors (entacapone [Comtan®])**

- Block a key enzyme responsible for breaking down levodopa before it reaches the brain
- Can improve duration of response to levodopa
- Side effects include **dyskinesias**

#### **Levodopa/carbidopa/entacapone (Stalevo®)**

- Substitutes individually administered immediate-release levodopa/carbidopa + entacapone
- Used to replace immediate-release levodopa/carbidopa (without entacapone) when patients experience end-of-dose wearing off

#### **Levodopa/carbidopa intestinal gel (Duodopa™)**

- Levodopa/carbidopa gel administered throughout the day with a pump via a tube directly into the small intestine
- Used in advanced Parkinson's disease
- Approved under the Notice of Compliance with Conditions (NOC/c) policy<sup>2</sup>

#### **Monoamine-Oxidase-B Inhibitors (MAO-B) (selegiline [Eldepryl®], rasagiline [Azilect®])**

- Enhance effect of dopamine by preventing its breakdown
- Side effects include **dyskinesias**

#### **Anticholinergic Drugs (Apo®-trihex, benztropine [Cogentin®], trihexyphenidyl [Artane®])**

- Corrects imbalance between dopamine and acetylcholine

## How can I get the most benefit from my Parkinson's medications?

- The timing of medications is an important way to control your symptoms. Follow the guidelines provided by your health care professional.
- Use a timer to remind you to take your medication on time to avoid “double-dosing”.
- Take each dose with a full glass of water to aid absorption.
- Do not break, crush or chew controlled-release tablets, unless instructed by your doctor.
- For nausea, take the drug after meals or with a cracker or fruit.
- Keep an accurate list of all medications, including over-the-counter products, herbal remedies, vitamins or supplements. To get a copy of Parkinson Society Canada's Medication Card, visit: [www.parkinson.ca](http://www.parkinson.ca).

## What are the side effects of Parkinson's drugs?

The most common reactions (which occur within the first several days of a new treatment) include nausea, vomiting, dizziness (drop in blood pressure), sleepiness and visual hallucinations.

In the last few years, levodopa and dopamine agonists in particular (ropinirole [ReQuip], pramipexole [Mirapex]) have been associated with the emergence of behavioral changes such as *impulse control disorders*. These are characterized by failure to resist an impulse to perform certain actions.

*Impulse control disorders* include a range of behaviors such as compulsive gambling (up to 5% of treated patients) or shopping, hypersexuality, binge eating, addiction to the Internet or to other recreational activities. These activities are often pleasant in the moment, but over time may become harmful to you or to others. If you are experiencing these behaviours, tell your neurologist/doctor. Often the medication can be adjusted which can reduce or control the behaviour.

Care partners can play an important role in helping to identify when these behaviours occur. If you are a care partner, tell the person if you have noticed a change in his/her behaviour or personality and encourage him/her to speak with the doctor immediately so medication can be adjusted.

## What are non-motor symptoms?

People with Parkinson's often experience non-motor symptoms which can be more bothersome than motor-symptoms. Some examples of non-motor symptoms include constipation, depression or anxiety, sleep disorders and cognitive changes. Adjusting the Parkinson's medications can often control these symptoms. If this approach doesn't work, specific treatment may be required. For example, depression is common in Parkinson's and usually responds well to treatment. Medications to improve cognitive function are also available.

## WHAT QUESTIONS MIGHT I ASK ABOUT TREATING PARKINSON'S?

You might find it helpful to write down any questions you have before your next appointment. This can help your visit be more efficient. Here are a few questions you may wish to ask:

1. What are the benefits of each kind of medication?
2. What are the side effects and how can I manage them?
3. When do I take the medication relative to meal time to get the best result?
4. How soon can I expect the treatment to start working?
5. How will treatment affect my daily activities?
6. How often do I need to follow up with my doctor about my medications?
7. Do drugs lose their effectiveness over time if I start treatment early on?
8. Should I be concerned about behaviours related to taking drugs, such as confusion or compulsive activities (e.g., shopping or gambling)?
9. Are my medications covered by the provincial drug plan?
10. Would a clinical trial be appropriate for me? Can you help me find one?

## How will my Parkinson's change over time?

Parkinson's will change over time. Often the changes are subtle and you may not notice them. The following checklist may help you identify these changes. Complete the checklist every 9 to 12 months. Discuss the changes with your doctor.

### YES NO

- Are you tired most of the day?
- Do you have numbness, tingling or aching?
- Are you often constipated?
- Have you or your care partner noticed changes in your thinking, e.g., solving problems or remembering things?
- Have people mentioned they have difficulty understanding you when you speak?
- Do you have problems swallowing or choking on your food?
- Have you suddenly "dozed off" while engaged in an activity (e.g., eating a meal or having a conversation)?
- Has your handwriting changed in the last 6 months?
- Have you fallen down in the last 6 months? If so, how many times?
- Do you "freeze" (stop suddenly) when walking?
- Have you or your care partner noticed changes in your ability to drive the car?
- Has your partner noticed you are having violent dreams?
- Do you feel sad for several days at a time?
- Are you experiencing changes with sexual function (e.g., no interest/performance/or "hyper" interest)?
- Do your medications take a longer time before they start working?
- Have you noticed your medications work for a shorter period of time?
- Do you have urinary problems?
- Do you feel light-headed or dizzy when you get up from a chair or bed?
- Have you or your care partner noticed that you are shopping more often or have a keen desire to buy lottery tickets or to play slot machines?
- Have you noticed a change in your sense of smell?

## CHECKLIST



### Sources

Info Parkinson, Parkinson Society Quebec, Newsletter, Spring 2009 and Summer 2009.

<sup>1</sup> Health Canada reviews all drug products, including natural health products, to assess their safety, effectiveness and quality before they are approved for sale. For information on drug and product databases, advisories and reporting adverse reactions, visit <http://www.hc-sc.gc.ca/dhp-mps/prodpharma/index-eng.php>.

<sup>2</sup> NOC/c is a form of market approval granted on the basis of promising evidence of clinical effectiveness. Health Canada has provided access to this product on the condition that additional clinical trials are carried out to verify the anticipated benefit within an agreed upon time frame (product monograph, February 20, 2007). The Common Drug Review has not recommended that Duodopa be listed on provincial formularies, primarily due to cost (\$166/day vs. \$3.00/day for other oral forms of levodopa/carbidopa). [http://www.cadth.ca/media/cdr/complete/cdr\\_complete\\_Duodopa\\_July\\_24\\_2009.pdf](http://www.cadth.ca/media/cdr/complete/cdr_complete_Duodopa_July_24_2009.pdf).