

HEALTH *Matters*

A RESOURCE TO HELP KEEP YOU INFORMED

April is Parkinson's awareness month!!

Sometimes called the "shaking palsy" disease, Parkinson's afflicts millions worldwide and is second only to Alzheimer's as a neurodegenerative disorder.

Named for the British doctor who first identified the disease in 1817, Parkinson's is also symbolized by the red tulip.

Among the better known sufferers of the disease are the late Pope John Paul II, boxer Muhammed Ali, and actor Michael J. Fox. Although the disease affects both men and women, men have a slightly higher risk of developing the condition that most often strikes after age 50.



What is Parkinson?

Parkinsonism is a chronic, progressive, neurodegenerative disease characterised by the presence of tremor, rigidity and bradykinesia (brady: slow; kinesia: movement) in addition to loss of postural reflexes and freezing.

Most common symptoms	Other symptoms
Tremors (usually on one side of the body and at rest) Slowness and Stiffness Impaired Balance Rigidity of the muscles As the disease progress: Excessive Sweating Bladder frequency/urgency Orthostasis	Fatigue Loss of smell Soft Speech (dysarthria) Problems with handwriting Stooped posture Constipation Sleep Disturbances

Sources: Parkinson Society of Canada and e-therapeutics.ca

Typically there are five stages associated to the Parkinson's Disease.

Medication providing the most benefit are directed at replenishing dopamine within the brain. However, currently there is no cure.

Treatment aim at :

- Improving functioning and quality of life
- Minimizing acute and long-term side effects of medications
- Instilling a positive outlook, despite the chronic, progressive nature of PD

Are there non-drug therapies?

- Physical therapy helps mobility, flexibility and balance
- Occupational therapy helps with daily activities
- Speech therapy helps with voice control
- Exercise helps muscles and joints and improves overall health and well-being

If you have requests, suggestions or comments for future issues, your feedback may be directed to suzie@medicalartspharmacy.ca

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Medications used in the treatment of Parkinson's Disease

Generic Names- Trade Names	Mechanism of Action	Side Effects
Levodopa: Levodopa/carbidopa (Sinemet®, Sinemet CR®) Levodopa/carbidopa/ entacapone (Stalevo®) Levodopa/benserazide (Prolopa®)	Levodopa is converted in dopamine. Carbidopa and benserazide inhibits peripheral dopa-decarboxylase. Levodopa crosses the brain barrier without the carbidopa and benserazide where it is transformed in dopamine.	Nausea, vomiting, orthostatic hypotension, dyskinesias, patterns of dyskinesia may be more complex with Sinemet CR®, hallucinations, confusion. ↓“kick” compared to Sinemet immediate-release;
Dopamine Agonists†: bromocriptine pramipexole‡ (Mirapex®) ropirinole‡ (Requip®)	Stimulates dopamine receptors directly	Nausea, vomiting, orthostatic hypotension, hallucinations, psychosis,
MAO-B Inhibitors: selegiline (Eldepryl®) rasagiline (Azilect®)	Block breakdown of dopamine	Insomnia, confusion, hallucinations, ? dyskinesia, autonomic dysfunction. Use lower dose of 0.5 mg in patients with mild hepatic impairment and avoid in patients with severe impairment.
amantadine	Releases dopamine	Nausea, constipation, dry mouth, insomnia, anxiety, impaired concentration, livedo reticularis, orthostatic hypotension, ankle edema. Use with caution in elderly; avoid in pregnancy and in patients with cognitive deficits.
Anticholinergics Agents: benztropine (Cogentin®) procyclidine (Kemadrin®) trihexyphenidyl (Artane®)	Blocks the action of acetylcholine (Ach)	Dry mouth, blurred vision, mental changes, difficulty voiding, constipation limit their use in the elderly
COMT Inhibitors: entacapone (Comtan®)	helps prevent peripheral metabolism of levodopa which increases its availability to the brain	Dyskinesia, nausea, sleep disorder, anorexia, diarrhea, hallucinations; urine discolouration.

† Pergolide , a dopamine agonist, was withdrawn from the Canadian Market in 2007 because of its association with cardiac valvulopathy.

‡sudden sleep attacks; caution patients about potential compulsive behaviours such as pathologic gambling or hypersexual behaviour; caution patients about driving or operating dangerous machinery.

Prescription Cascades

It is not uncommon for adverse drug effects in the elderly to be attributed to “old age” or their health condition rather than being recognized for what they are. In some instances these adverse drug reactions get treated with new medication. This results in what is know as a prescribing cascade where a second agent is added to treat an adverse drug reaction caused by a first agent. One example of a prescribing cascade is the misdiagnosis of extrapyramidal side effects caused by metoclopramide resulting in the initiation of levodopa/carbidopa or an other medication to treat PD. Consultant pharmacists can make an important contribution to patient care by identifying patients who may suffer as a result of these prescribing cascades and alerting the physician so that appropriate changes can be made.

Also included in this package: Drug-Induced Parkinsonism (Pharmacist's Letter / Prescriber's Letter) Reprinted with permission CR 11526 and Principles of Sleeping well

Principles of Sleep Hygiene

- Stick to a regular sleep schedule- even on weekends
- Exercise regularly-avoid exercise in the late evening
- Go to bed only when sleepy
- Put your worries aside when you go to bed
- Do something relaxing and enjoyable before bedtime
- Make your bedroom quiet and comfortable
- Avoid large meals just before bedtime
- Use your bedroom only for sleep and sexual activity
- If you can not sleep within 15-20 minutes get up and go to another room. Return to bed only when drowsy
- Remove the clock from eyesight
- Do not nap during the day. If you must nap, limit it to 30 minutes in the early afternoon
- Avoid alcohol, nicotine and caffeine use
- Avoid frequent use of anxiolytics-sedatives and hypnotics
- Schedule outdoor time at the same time each day
- Have your pharmacist check your medications for potential sleep effects
- Avoid bright lights (e.g.: from TV , computers, video games) before bed