

The background is a dark blue gradient with several white and light-colored pills and medicine bottles scattered around. A large white pill is in the top left, a yellow pill is in the top right, and a brown pill is in the center. Two white medicine bottles are in the bottom left and bottom right corners.

Medication Options for Parkinson's Symptoms: A to Z Review

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Is this medication good for me?

- Parkinson's is not one disease, but a group of conditions with similar characteristics (symptoms)
- Age of onset → duration of disease
- Current age: <70yo or 70 or above



Is this medication good for me?

- Type of Parkinson's:
 - tremor-predominant
 - postural-instability and gait disorder
- Associated symptoms:
 - Cognitive decline/dementia
 - Sleep issues/REM sleep behavior disorder
 - Hallucinations
 - Orthostatic hypotension
 - Impulsivity



Is this medication good for me?

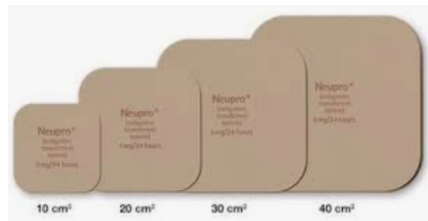
- Previous medications
- Current medications
- Accessibility/insurance
- Support system
- Location
- Ethnic/cultural/language barriers



Oral dopaminergic medications

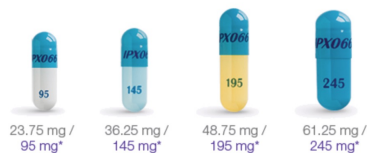
- Dopamine agonists

- Ropinirole (Requip XL)
- Pramipexole (Mirapex ER)
- Rotigotine transdermal (Neupro patch)



- Levodopa

- Carbidopa/levodopa (immediate release)
- Carbidopa/levodopa ER/CR (extended release)
- Carbidopa/levodopa ODT (Parcopa)
- Carbidopa/levodopa/entacapone (Stalevo)
- Carbidopa/levodopa IR/ER (Rytary)
- Carbidopa/levodopa (segments 6.25mg/25mg) Dhivy



Oral dopaminergic medications

- Half-life of levodopa is 1 hour
 - Absorption depends on food intake and gut motility
 - Scheduling and mealtime
 - Acts on all dopamine receptors
- Half-life of dopamine agonists 6-8 hours
 - Side effect profile:
 - Somnolence
 - Impulsivity
 - Hallucinations
 - Acts on selective dopamine receptors

Anticholinergic medications

- Trihexyphenidyl (Artane)
- Amantadine
- Benztropine (Cogentin)



Anticholinergic medications

- Can help with tremor and rigidity; not much help with bradykinesia (slowness)
- Uncomfortable side effects:
 - Cognitive slowing/clouding
 - Blurry vision
 - Dry mouth
 - Constipation
 - Urinary retention
- Older = more side effects

Boosters

- MAO-B Inhibitor

- Rasagiline (Azilect)
- Selegiline
- Saffinamide (Xadago)



- COMT-inhibitors

- Entacapone (Stalevo)
- Opicapone (Ongentys)



Boosters

- MAO-B Inhibitor
 - May increase levodopa effectiveness by 20%
 - Once per day dosing, except for:
 - Selegiline: can help with alertness
 - Some consideration with interactions with antihistaminic and certain antidepressants (fluoxetine), pain meds (tramadol, methadone), antitussives (dextromethorphan), muscle relaxants (cyclobenzaprine)
- COMT-inhibitors
 - Red color in sweat and urine
 - Can cause diarrhea
 - Extended-release may take longer for side effects to improve or resolve

Boosters

- Adenosine A2A antagonists
(Nourianz--istradefylline)

NOURIANZ[®] 
(istradefylline) tablets
20 mg | 40 mg

Boosters

- Adenosine A2A antagonists
(Nourianz--istradefylline)
 - Caution if tobacco use (>20cig/d)
 - Side effects:
 - Decreased appetite
 - Compulsive behaviors

Amantadine

- Amantadine (regular or immediate release)
- Extended release forms:
 - Gocovri
 - Osmolex ER



NDC 70482-075-30
Osmolex[®] ER
(amantadine)
Extended-release Tablets
129 mg
30 Tablets Rx Only

NDC 68025-076-90
Osmolex[®] ER
(amantadine)
Extended-release Tablets
193 mg
90 Tablets Rx Only

NDC 68025-077-90
Osmolex[®] ER
(amantadine)
Extended-release Tablets
258 mg
90 Tablets Rx Only

Amantadine

- Helps with dyskinesias
- Use limited by side effects:
 - Dizziness
 - Hallucinations
 - Ankle swelling
 - Livedo reticularis
- Extended release form Gocovri:
evidence of decreasing off time



On-demand medications

- Inhaled levodopa



- Subcutaneous injection apomorphine (Apokyn)



On-demand medications

- Inhaled levodopa
 - Benefit within 10-15 min
 - Reactive cough
 - Need to know technique
- Subcutaneous injection apomorphine (Apokyn)
 - Benefit within 5-10 min (fast acting)
 - Nausea and low blood pressure
 - Need to know technique and have titration teaching/evaluation

On-demand medications

- Sublingual apomorphine (Kynmobi)



On-demand medications

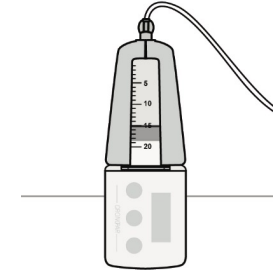
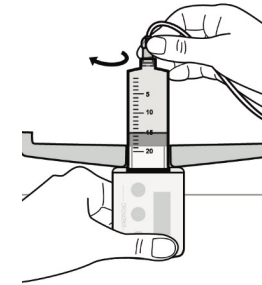
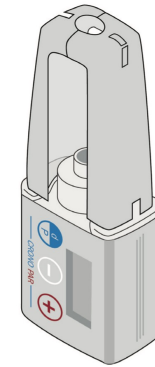
- Sublingual apomorphine (Kynmobi)
 - Benefit within 10-15 min
 - Nausea (may need to prepare with antinausea medication)
 - Mouth/throat swelling/pain

Advanced Therapy

- Enteric levodopa pump (Duopa)



- Subcutaneous infusion levodopa



- Subcutaneous infusion apomorphine



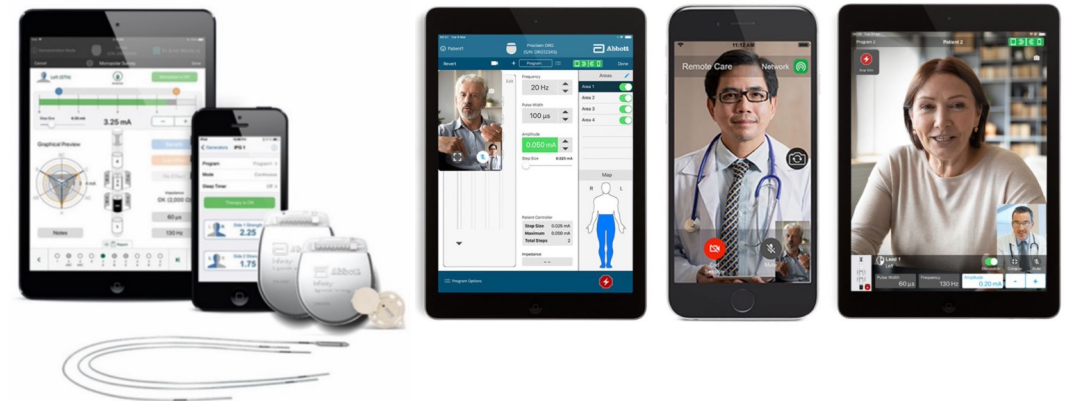
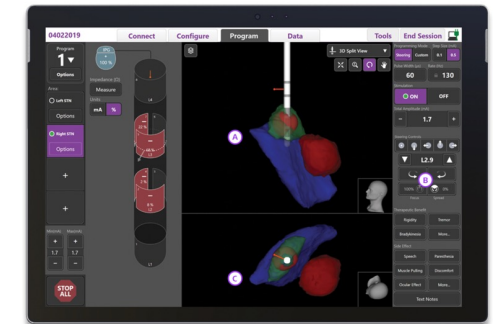
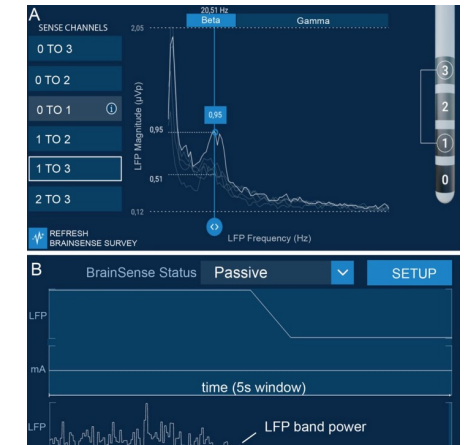
Advanced Therapy

- Enteric levodopa pump (Duopa)
 - Stoma: PEG/J tube
 - External pump
 - 12 hours of continuous infusion

- Subcutaneous infusion levodopa/apmorphine
 - Small subcutaneous needle
 - Smaller external pump
 - Can use only during the day or day and night
 - Skin irritation/infection/abcess

Advanced Therapy

- Deep Brain Stimulation (DBS)
 - Medtronic (BrainSense, segmented electrodes, independent current control, SureTune)
 - Boston Scientific (segmented electrodes, independent current control, rechargeable, StimView)
 - Abbott (NeuroSphere, segmented electrode)





Non-motor symptoms:

- Hallucinations
 - Primavanserin (Nuplazid)
 - Quetiapine (Seroquel)



Non-motor symptoms:

- Orthostatic hypotension
 - Droxidopa (Northera)
 - Fludrocortisone (Florinef)
 - Midodrine





Non-motor symptoms:

- Depression/anxiety
 - SSRI/SNRI/benzos





Non-motor symptoms:

- Cognitive decline
 - Donepezil (Aricept), rivastigmine (Exelon), galantamine (Razadyne)
 - Memantine (Namenda)



A woman with short brown hair is lying in bed at night, looking at a large analog clock. She has a concerned expression. The room is dimly lit, with a blueish tint. The clock is in the foreground, slightly out of focus, showing the time as approximately 10:10. The woman is wearing a white top and a dark watch on her left wrist. The background is dark, suggesting a bedroom at night.

Non-motor symptoms:

- Insomnia/RBD
 - Melatonin, low dose clonazepam
 - Trazadone
 - Mirtazapine
 - Amitriptyline
 - Quetiapine
 - Gabapentin
 - others

Thanks!

Questions?