

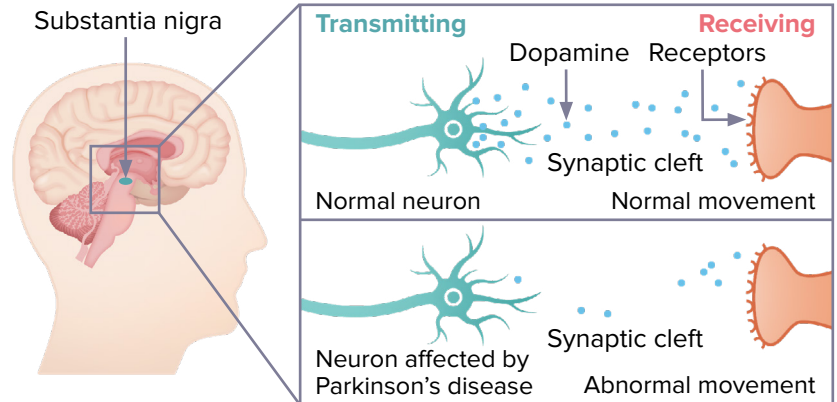
MEDICATIONS USED TO TREAT PARKINSON'S DISEASE



Parkinson's disease (PD) occurs when the brain cells that produce dopamine stop working or die, leading to imbalanced dopamine and acetylcholine levels. Insufficient dopamine results in tremors, muscle rigidity, and abnormal movements. Drug therapies are aimed at restoring dopamine levels and/or inhibiting the effects of acetylcholine. Drug therapy does not cure PD, but helps slow the progression of debilitating symptoms.



Do not abruptly stop PD medications due to risk of neuroleptic malignant syndrome. PD medications become less effective over time.



Parkinson's drugs	Mechanism of action	Possible adverse effects	Interactions/contraindications
MAO-B inhibitors e.g. Rasagiline, Selegiline	<ul style="list-style-type: none"> Inhibit MAO-B, blocking dopamine breakdown Used with levodopa to prolong action and reduce dosage 	N/V, heartburn, headache, pain, dry mouth, constipation, confusion, insomnia, seizures, hypertensive crisis, impulsivity	<ul style="list-style-type: none"> Tyramine-rich foods, antidepressants, cold medication Cardiac issues, ulcers, dementia
NMDA-type glutamate antagonists (blockers) e.g. Amantadine	Slow rate of nerve cell loss in the brain, slowing progression of PD	Dizziness, hypotension, nausea, insomnia, confusion, paranoia, hallucinations, urinary retention	<ul style="list-style-type: none"> CNS stimulants, anticholinergics Glaucoma, kidney or liver disease, enlarged prostate, epilepsy
Dopamine antagonists e.g. Pramipexole, Ropinirole, Rotigotine	<ul style="list-style-type: none"> Mimic dopamine in the brain Work longer, but less effective than levodopa 	Dizziness, sleepiness, impulsivity, hallucinations, depression, anxiety, hypotension, constipation	<ul style="list-style-type: none"> Antipsychotics, CNS depressants Cardiac or renal disease, mental illness, sleep apnea
Dopamine prodrug e.g. Levodopa/Carbidopa	<ul style="list-style-type: none"> Levodopa crosses the blood-brain barrier and is converted to dopamine. Carbidopa prevents breakdown of levodopa before it reaches the brain. 	Dizziness, confusion, anxiety, depression, hallucinations, impulsivity, fatigue, N/V, constipation, hypotension, dyskinesia, neuroleptic malignant syndrome	<ul style="list-style-type: none"> 1st-generation antipsychotics, MAO inhibitors, high-protein diet Glaucoma, history of melanoma, diabetes, ulcers, cardiac or liver disease, mental illness
COMT inhibitors e.g. Opicapone	Protect levodopa from breakdown by the COMT enzyme	Constipation, dry mouth, dizziness, dyskinesia, hallucinations, behavior changes	<ul style="list-style-type: none"> MAOIs, antihypertensives, CNS depressants Mental illness, sleep apnea, liver or kidney disease
Anticholinergics e.g. Benztropine (Cogentin)	<ul style="list-style-type: none"> Block action of acetylcholine Help decrease muscle stiffness, sweating, saliva production, difficulty walking 	Dry mouth, constipation, tachycardia, sedation, dizziness, restlessness, nervousness, insomnia	<ul style="list-style-type: none"> Lisinopril, Levothyroxine, antidepressants, antipsychotics, alcohol, many other drugs Glaucoma, enlarged prostate, liver disease, urinary blockage

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