

Many treatments are available for Parkinson's disease (PD) thanks to continuing research. Treatment approaches include medication and surgical therapy. Other treatment approaches include general lifestyle modifications (rest and exercise), physical therapy, support groups, occupational therapy and speech therapy. Most available medications for PD treat dopamine deficiency by either helping to replace it, preventing its breakdown or mimicking its effects. The goal of treatment is to maximize the management of symptoms while minimizing troublesome side effects.

MAO-B Inhibitors

- » Block the actions of the MAO enzyme, type B, which is responsible for the majority of the breakdown of dopamine in the brain
- » When used as initial therapy to treat early symptoms of PD, MAO-B inhibitors help control motor symptoms and may delay the need for levodopa therapy
- » Have been shown to reduce "off" time when prescribed along with levodopa
- » May be given once or twice daily in different dosage forms
- » Are considered to have lower dopaminergic side effects

Levodopa

- » Levodopa is a drug the body can convert into dopamine and is one of the most effective treatments for the symptoms of PD
- » Levodopa's benefit becomes less predictable as the disease advances
- » The risk of complications, such as motor fluctuations (the "on-off" effect) and dyskinesias (involuntary movements), increases over time
- » It has become common practice to look at other medications to use as individual therapies or in conjunction with levodopa
- » In some cases, the choice may be made to delay using levodopa in order to prolong its effectiveness in later stages of PD, especially in younger patients

COMT-Inhibitors

- » Catechol-O-methyl transferase (COMT) inhibitors block an enzyme in the body to allow more levodopa to be transported to the brain to be converted to dopamine
- » COMT-inhibitors are only used with carbidopa/levodopa therapy
- » Have been shown to reduce "off" time in PD patients taking levodopa
- » Can be taken several times per day with each dose of carbidopa/levodopa
- » Are considered to have lower dopaminergic side effects

Dopamine Agonists

- » Dopamine agonists (DAs) mimic the effects of dopamine in the brain
- » DAs may be used alone in patients newly diagnosed with PD or used in combination with levodopa and/or other treatments
- » Can be effective in early stages of PD to help control motor symptoms
- » When taken in combination with levodopa, dopamine agonists may reduce involuntary movements (dyskinesias) associated with long-term levodopa therapy

Amantadine

- » May provide mild benefit for symptoms of PD like tremors, stiffness and slowing activity or movement in early PD
- » May be prescribed in advanced PD to help reduce dyskinesias

Surgical Treatment

- » Brain surgery is a treatment option for patients if currently available medications are not effective, or if symptoms have progressed to the point that prescription medications no longer offer a benefit
- » One brain surgery option is deep brain stimulation (DBS), where neurosurgeons implant an electrode into an area of the brain that effects movement
 - » The electrode delivers continuous high-frequency electrical stimulation, helping control the movement centers in the brain
 - » DBS may allow for a reduced dose of levodopa which may reduce or eliminate dyskinesia