

Guide to Parkinson's disease medications

Class of medication: Levodopa-containing

Madopar®, Sinemet®; Stalevo® (with a COMT inhibitor)

- Work by supplying the brain with more dopamine.
- The 'gold standard' and most commonly prescribed PD treatment.
- Over time, a person's response to levodopa may decline, causing wearing off and ON–OFF fluctuations, and dyskinesias (restless movements). Freezing episodes may also appear.
- Levodopa may be prescribed alone in the early stages of PD.
- In advanced PD, other medications may be prescribed together with levodopa to control motor fluctuations, dyskinesias, and other symptoms.
- Madopar® and Sinemet® are also available in 'CR' (controlled release) versions. The medications are slowly released over 8–12 hours, which may be helpful to some people.
- The combination of levodopa and carbidopa can also be administered via the Duodopa® pump. This delivery system provides a more even supply of the medication, thereby potentially reducing the occurrence of wearing off, and ON–OFF fluctuations.
- Levodopa can also be administered in a triple combination (Stalevo®) with carbidopa and the COMT inhibitor, entacapone.
- Levodopa may cause side effects including vomiting, low blood pressure upon standing, sleepiness, hallucinations, and abnormal dreams.

Class of medication: MAO-B inhibitors

Rasagiline (Azilect®), selegiline (Eldepryl®)

- Work by preventing dopamine from being broken down in the brain.
- Can be used instead of levodopa to treat the symptoms of early PD.
- Also given with levodopa in advanced PD to treat motor fluctuations and other symptoms.
- Being investigated in clinical research for their potential to slow disease progression.
- Rasagiline is taken once daily, with no titration, and can be taken with or without food.
- Selegiline is available as a tablet that dissolves quickly in the mouth (Zelpar®).
- Rasagiline is well tolerated but can sometimes cause headache (when used alone), dyskinesia, vomiting, constipation, accidental injury, and low blood pressure upon standing (when in combination with levodopa).
- Selegiline is associated with side effects such as hallucinations, confusion, changes in blood pressure, dry mouth, and sleeping disorders, which may be due to its breakdown products.

Class of medication: Dopamine agonists

Pergolide (Celance®), cabergoline (Cabaser®), pramipexole (Mirapexin®), ropinirole (ReQuip®, ReQuip® LP), bromocriptine (Parlodel®), rotigotine (Neupro®), apomorphine (Apo-Go®)

- Work by imitating the action of dopamine in the brain.
- Can be used instead of levodopa in early PD.
- Also given with levodopa in advanced PD to treat motor fluctuations.
- Ropinirole is available in a slow-release form, and rotigotine is available as an adhesive skin patch – both these methods allow once-daily administration.
- In contrast to the other dopamine agonists, apomorphine is given by injection in cases where rapid reversal of OFF time is needed.
- Dopamine agonists can sometimes cause nausea, vomiting, low blood pressure on standing, confusion and hallucinations, constipation, abnormal dreams, hypersexuality and fatigue.

Class of medication: COMT inhibitors

Entacapone (Comtess®), tolcapone (Tasmar®)

- Work by preventing levodopa from being broken down (by COMT) before it reaches the brain.
- Are always prescribed together with levodopa.
- Are only used in advanced PD, to treat motor fluctuations and other symptoms.
- Entacapone is also available as Stalevo®, which is a combination tablet containing levodopa, and a dopa-decarboxylase inhibitor.
- COMT inhibitors generally produce few side effects. Entacapone may cause dyskinesia, nausea, urine discolouration, diarrhoea, and stomach pain.
- Liver function monitoring is required while taking tolcapone.

Other medications

Anticholinergics (e.g., orphenadrine, trihexyphenidyl, procyclidine, and bethtropine)

Amantadine (Symmetrel®)

- Anticholinergics are sometimes used to treat symptoms of mild PD, especially tremor.
- In older people, anticholinergics may cause problems with memory and confusion.
- Amantadine is used in mild PD, and may also be used to treat levodopa-induced dyskinesias.

For more detailed information on Parkinson's disease (PD) medications, see the main website.