Levodopa Prescribing Advice

It may take up to 3 months for a response to be seen after starting levodopa.

Sinemet® 110 (levodopa 100mg + carbidopa 10mg) tablets are not recommended because they contain an insufficient proportion of dopa-decarboxylase inhibitor. Ideally, for 100mg of levodopa, 25mg of dopa-decarboxylase inhibitor is needed.

Levodopa is usually taken with or after food to reduce nausea. However, to obtain maximum absorption, it can be taken on an empty stomach.

Patients often require a combination of preparations to control their symptoms.

Figure 1- Levodopa formulations available

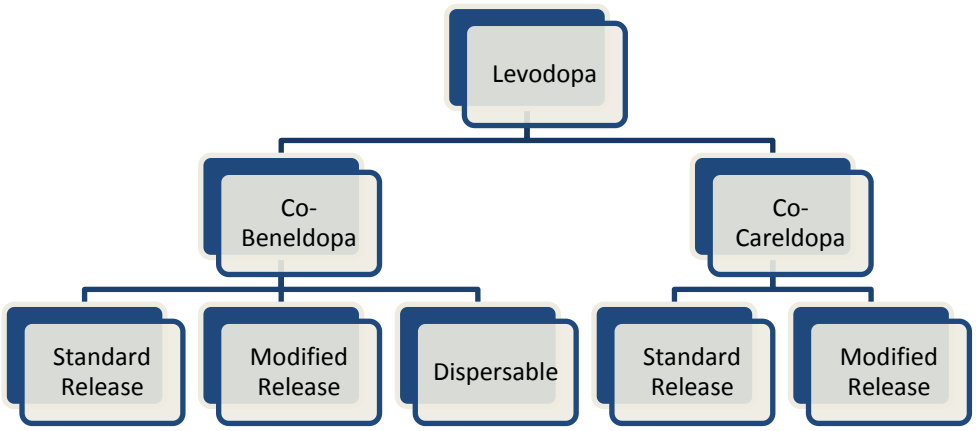

Figure 2- Levodopa preparations available

Co-Beneldopa Preparations (Madopar ®)	Co-Careldopa Preparations (Sinemet ®)
Standard Release Preparations	
Co-beneldopa 12.5/50mg capsules	Co-careldopa 12.5/50mg tablets
Co-beneldopa 25/100mg capsules	Co-careldopa 25/100mg tablets
Co-beneldopa 50/200mg capsules	Co-careldopa 25/250mg tablets
Modified Release Preparations	
Co-beneldopa 25/100mg MR capsules	Co-careldopa 25/100mg MR tablets
	Co-careldopa 50/200mg MR tablets
Dispersible Preparations	
Co-beneldopa 12.5/50mg dispersible tablets	
Co-beneldopa 25/100mg dispersible tablets	
Combination Products	
	Stalevo /Sastravi 75/18.75/200mg tablets
	Stalevo /Sastravi 100/25/200mg tablets
	Stalevo /Sastravi 125/31.25/200mg tablets
	Stalevo / Sastravi 150/37.5/200mg tablets
	Stalevo / Sastravi 175/43.75/200mg tablets
	Stalevo / Sastravi 200/50/200mg tablets

Modified release (MR) preparations

Modified release preparations can be used throughout the day, but are particularly useful at bedtime for nocturnal and morning akinesia. They can be used to reduce off-periods in patients who previously have been treated with levodopa/decarboxylase inhibitors and who have experienced motor fluctuations.

Dispersible release preparations

Dispersible preparations are useful in patients who require levodopa to have a quicker onset of action. This quicker onset of action can help with early morning akinesia. Tablets can be dispersed in water or swallowed whole.

COMT Inhibitors

Catechol-O-methyl transferase (COMT) inhibitors are used to reduce motor fluctuations in patients with later PD. They work as an adjunct to levodopa, inhibiting its breakdown and prolonging its effect. Entacapone should be used first line in preference to tolcapone due to the effect tolcapone has been reported to have on liver enzymes. Tolcapone can only be prescribed by a specialist consultant as agreed by Wirral D&T committee. Liver function tests are required every 2 weeks during the first year of therapy, and thereafter in accordance with the SPC.

Combination products

Stalevo® and Sastravi® are combination products containing co-careldopa and entacapone. NICE recommend that in view of problems with reduced concordance, patients with later Parkinson's disease taking levodopa alongside the COMT inhibitor entacapone should be offered combination products.

Complications of levodopa

Long-term levodopa complications include unpredictable motor fluctuations ("on-off" periods, end-of-dose deterioration), dyskinesias, confusion and hallucinations.

Motor complications are problematic in younger patients. Dyskinesias may respond to reducing the dose of levodopa while adding in an adjunctive agent. NICE guidelines state that the dose of levodopa should be kept as low as possible to maintain good function in order to reduce the development of motor complications.

Options for treating fluctuations include:

- Spreading the dose of levodopa throughout the day (no more than five doses/day)
- Adding an adjunctive agent (eg. a COMT inhibitor such as entacapone) to prolong levodopa
- Using dispersible levodopa to relieve morning stiffness and controlled-release levodopa to prevent nocturnal immobility and rigidity (however, NICE do not recommend these formulations first line because their release of active ingredients is unpredictable)

When adding other medicines, the dose of levodopa might need to be reduced.