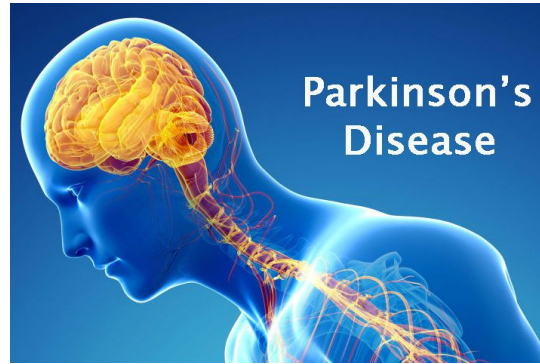


Understand the Differences in Carbidopa/Levodopa Formulations for Parkinson Disease



Parkinson's Disease (PD) is progressive and cannot be cured. However, it is possible to slow the progression and improve symptoms. The disease occurs when the brain's dopamine-producing neurons of the substantia nigra become impaired or die. Without enough dopamine, the body is unable to smoothly coordinate movement. Symptoms appear such as tremors, rigidity, slow starting, and instability. Patients may eventually have trouble speaking, swallowing, toileting, and more. Depression and anxiety are common, and even psychosis may be observed in advanced disease. As PD progresses, there are increasing periods of "off time" when symptoms worsen prior to another medication dose. A healthcare team's understanding of available treatments and how to select the appropriate forms can be critical to optimizing therapy for specific patients.

The mainstay of treatment is carbidopa/levodopa to replace dopamine and reduce symptoms. Levodopa is a precursor to dopamine. Carbidopa is given with levodopa to prevent the body from metabolizing levodopa before it can cross into the central nervous system where it exerts its action. This medication is often sufficient to treat earlier PD and in the right doses and timing, can be well-tolerated. It is important to taper off carbidopa/levodopa or dopamine agonist to avoid NMS (neuroleptic malignant syndrome) which can be life-threatening.

This article discusses various carbidopa/levodopa formulations, administration tips, and when usage could be appropriate. The article also rightfully advocates for the use of provider and pharmacist expertise as well as neurological consults when transitioning between different dosage forms, as they are not directly interchangeable.

Immediate Release (IR) carbidopa/levodopa tablets (Sinemet) have short-acting windows, more "off-time" as PD progresses, and require more frequent administration. Controlled Release formulations contain ½ IR carbidopa/levodopa beads, and 2/3 time-release beads (Rytary ER Capsule.) An enteral solution (Duopa) can be administered via J-tube and can increase efficacy with fewer doses. Finally, levodopa inhalation powder (Inbrija) works within 10 minutes and is a rescue therapy to reduce "off-period" durations. Caregivers will need to be educated on proper admin to assist patients with this route of administration.

Carbidopa/levodopa formulation errors are commonly seen in hospital admissions. This can be a huge concern for both long-term care facilities and hospitals attempting to reduce readmission rates and improve outcomes. Caregivers on the front lines in long-term care settings are positioned to optimize patient care and dosing strategies of carbidopa/levodopa in residents with PD based on timing and severity of symptoms

Article Link: [Understand the Differences in Carbidopa/Levodopa Formulations for Parkinson Disease \(pharmacytimes.com\)](https://www.pharmacytimes.com/article/understand-the-differences-in-carbidopa-levodopa-formulations-for-parkinson-disease)

Image Link: [Pin on Healthcare and Medical \(pinterest.com\)](https://www.pinterest.com/pin/healthcare-and-medical/)