

CARBIDOPA + LEVODOPA TAB:

Class: Anti-Parkinson's Agent (Decarboxylase Inhibitor with Dopamine Precursor)

Indications: Anti-Parkinson's Agent

Available dosage form in the hospital: TAB (25MG + 250MG)

Trade Names:

Dosage:

Parkinson's disease: Oral:

-Immediate release tablet, orally-disintegrating tablet:

-Initial: Carbidopa 25 mg/levodopa 100 mg 3 times/day

-*Dosage adjustment:* Alternate tablet strengths may be substituted according to individual carbidopa/levodopa requirements. Increase by 1 tablet every 1-2 days as necessary, except when using the carbidopa 25 mg/levodopa 250 mg tablets where increases should be made using $\frac{1}{2}$ -1 tablet every 1-2 days. Use of more than 1 dosage strength or dosing 4 times/day may be required (maximum: 8 tablets of any strength/day or 200 mg of carbidopa and 2000 mg of levodopa)

-Controlled release tablet:

-Patients not currently receiving levodopa: Initial: Carbidopa 50 mg/levodopa 200 mg 2 times/day, at intervals not <6 hours

-Patients converting from immediate release formulation to controlled release: Initial: Dosage should be substituted at an amount that provides ~10% more of levodopa/day; total calculated dosage is administered in divided doses 2-3 times/day (or ≥ 3 times/day for patients maintained on levodopa ≥ 700 mg). Intervals between doses should be 4-8 hours while awake; when divided doses are not equal, smaller doses should be given toward the end of the day. Depending on clinical response, dosage may need to be increased to provide up to 30% more levodopa/day.

-*Dosage adjustment:* May adjust every 3 days; intervals should be between 4-8 hours during the waking day (maximum dose: 8 tablets/day)

-Intestinal infusion via PEG tube: Intestinal gel (Canadian labeling; not available in U.S.): **Note:** Conversion to/from oral levodopa tablet formulations and the intestinal gel formulation can be done on a 1:1 ratio. Total daily dose (expressed in terms of levodopa) consists of a morning bolus dose, a continuous maintenance dose, and additional bolus doses when necessary. Nighttime dosing may be necessary in certain rare situations (eg, nocturnal akinesia). Dosage adjustments should be carried out over a period of a few weeks.

- *Morning bolus dose* (based on previous morning levodopa intake and volume to fill intestinal tubing): Usual: Levodopa 100-200 mg (5-10 mL); Maximum: Levodopa 300 mg (15 mL)

-*Continuous maintenance dose:* Adjustable in increments of 2 mg/hour (0.1 mL/hour) and based on previous daily intake of levodopa: Usual: Levodopa 40-120 mg/hour (2-6 mL/hour) infused up to 16 hours; Range: Levodopa 20-200 mg/hour (1-10 mL/hour)

-*Additional bolus doses:* Usual: Levodopa: 10-40 mg (0.5-2 mL), if needed for daytime hypokinesia; in patients requiring >5 additional boluses/day, the maintenance dose should be increased

-Restless leg syndrome (RLS) (unlabeled use; Silber, 2004): Oral:

-Immediate release tablet: Carbidopa 25 mg/levodopa 100 mg (0.5-1 tablet) given in the evening, at bedtime, or upon waking during the night with RLS symptoms

-Controlled release tablet: Carbidopa 25 mg/levodopa 100 mg (1 tablet) before bedtime for RLS symptoms that awaken patient during the night

Renal Impairment:

Use with caution; manufacturer labeling makes no specific dosing recommendations.

Hepatic Impairment:

Use with caution; manufacturer labeling makes no specific dosing recommendations.

Common side effect:

Cardiovascular: Arrhythmia, chest pain, edema, flushing, hypotension, hypertension, MI, orthostatic hypotension, palpitation, phlebitis, syncope

Central nervous system: Agitation, anxiety, ataxia, confusion, delusions, dementia, depression (with or without suicidal tendencies), disorientation, dizziness, dreams abnormal, EPS, euphoria, faintness, falling, fatigue, gait abnormalities, headache, hallucinations, impulse control symptoms, insomnia, malaise, memory impairment, mental acuity decreased, nervousness, neuroleptic malignant syndrome, nightmares, on-off phenomena, paranoid ideation, pathological gambling, psychosis, seizure (causal relationship not established), somnolence

Dermatologic: Alopecia, malignant melanoma, rash

Endocrine & metabolic: Hot flashes, hyperglycemia, hypokalemia, libido increased (including hypersexuality), uric acid increased

Gastrointestinal: Abdominal pain, abdominal distress, anorexia, bruxism, constipation, diarrhea, discoloration of saliva, duodenal ulcer, dyspepsia, dysphagia, flatulence, GI bleeding, heartburn, nausea, sialorrhea, taste alterations, tongue burning sensation, weight gain/loss, vomiting, xerostomia

Genitourinary: Discoloration of urine, glycosuria, urinary frequency, priapism, proteinuria, urinary incontinence, urinary retention, urinary tract infection

Hematologic: Agranulocytosis, anemia, Coombs' test abnormal, hematocrit decreased, hemoglobin decreased, hemolytic anemia, leukopenia

Hepatic: Alkaline phosphatase abnormal, ALT abnormal, AST abnormal, bilirubin abnormal, LDH abnormal

Neuromuscular & skeletal: Back pain, dyskinesias (including choreiform, dystonic and other involuntary movements), leg pain, muscle cramps, muscle twitching, numbness, paresthesia, peripheral neuropathy, shoulder pain, tremor increased, trismus, weakness

Ocular: Blepharospasm, blurred vision, diplopia, Horner's syndrome reactivation, mydriasis, oculogyric crises (may be associated with acute dystonic reactions)

Renal: Difficult urination

Respiratory: Cough, dyspnea, hoarseness, pharyngeal pain, upper respiratory infection

Miscellaneous: Discoloration of sweat, diaphoresis increased, hiccups, hypersensitivity reactions (angioedema, pruritus, urticaria, bullous lesions [including pemphigus-like reactions], Henoch-Schönlein purpura [IgA vasculitis])

Pregnancy Risk Factor C