

GABAPENTIN:

Class: Anticonvulsant, GABA Analog

Indications: Adjunct for treatment of partial seizures; management of postherpetic neuralgia (PHN), Neuropathic pain, diabetic peripheral neuropathy, fibromyalgia, postoperative pain (adjunct), restless legs syndrome (RLS), vasomotor symptoms

Available dosage form in the hospital: TAB (400MG, 600MG), 300MG CAP

Trade Names:

Dosage:

-Anticonvulsant: Oral: Immediate release:

-*Initial:* 300 mg 3 times/day, if necessary the dose may be increased up to 1800 mg/day

-*Maintenance:* 900-1800 mg/day administered in 3 divided doses; doses of up to 2400 mg/day have been tolerated in long-term clinical studies; up to 3600 mg/day has been tolerated in short-term studies

Note: If gabapentin is discontinued or if another anticonvulsant is added to therapy, it should be done slowly over a minimum of 1 week.

-Diabetic neuropathy (unlabeled use): Oral: Immediate release: 900-3600 mg/day (Bril, 2011)

-Neuropathic pain (unlabeled use): Oral: Immediate release: 300-3600 mg/day (Attal, 2010; Dworkin, 2010)

-Neuropathic pain, critically-ill patients (unlabeled use): Oral: Initial: 100 mg 3 times daily in combination with I.V. opioids; maintenance: 300-1200 mg 3 times daily; maximum dose: 3600 mg daily (Barr, 2013)

-Postherpetic neuralgia: Oral:

-Immediate release: Day 1: 300 mg, Day 2: 300 mg twice daily, Day 3: 300 mg 3 times/day; dose may be titrated as needed for pain relief (range: 1800-3600 mg/day in divided doses, daily doses >1800 mg do not generally show greater benefit)

-Extended release (Gralise™): Day 1: 300 mg, Day 2: 600 mg, Days 3-6: 900 mg once daily, Days 7-10: 1200 mg once daily, Days 11-14: 1500 mg once daily, Days ≥15: 1800 mg once daily

-Postoperative pain (adjunct; unlabeled use): Oral: Immediate release: Usual dose: 300-1200 mg given the night before or 1-2 hours prior to surgery (Dauri, 2009)

-Restless legs syndrome (RLS) (unlabeled use): Oral: Initial: 300 mg once daily 2 hours before bedtime. Doses ≥600 mg/day have been given in 2 divided doses (late afternoon and 2 hours before bedtime). Dose may be titrated every 2 weeks until symptom relief achieved (range: 300-1800 mg/day). Suggested maintenance dosing schedule: One-third of total daily dose given at 12 pm, remaining two-thirds total daily dose given at 8 pm. (Garcia-Borreguero, 2002; Happe, 2003; Saletu, 2010; Vignatelli, 2006)

-Vasomotor symptoms associated with menopause (unlabeled use): Oral: Day 1: 300 mg at bedtime, Day 2: 300 mg twice daily, followed by 300 mg 3 times/day for 4 weeks and then tapered off (Butt, 2008)

Geriatric

Studies in elderly patients have shown a decrease in clearance as age increases. This is most likely due to age-related decreases in renal function; dose reductions may be needed.

Renal Impairment:

-*Immediate release:*

- $Cl_{cr} \geq 60$ mL/minute: 300-1200 mg 3 times/day
- $Cl_{cr} > 30-59$ mL/minute: 200-700 mg twice daily
- $Cl_{cr} > 15-29$ mL/minute: 200-700 mg once daily
- $Cl_{cr} 15$ mL/minute: 100-300 mg once daily
- $Cl_{cr} < 15$ mL/minute: Reduce daily dose in proportion to creatinine clearance based on dose for creatinine clearance of 15 mL/minute (eg, reduce dose by one-half [range: 50-150 mg/day] for Cl_{cr} 7.5 mL/minute)

-ESRD requiring hemodialysis: Dose for $Cl_{cr} < 15$ mL/minute plus single supplemental dose of 125-350 mg (given after each 4 hours of hemodialysis)

-*Extended release:* **Note:** Follow initial dose titration schedule if treatment-naive.

- $Cl_{cr} \geq 60$ mL/minute: 1800 mg once daily
- $Cl_{cr} > 30-59$ mL/minute: 600-1800 mg once daily; dependent on tolerability and clinical response
- $Cl_{cr} < 30$ mL/minute: Use is not recommended.

-ESRD requiring hemodialysis: Use is not recommended.

Hepatic Impairment:

There are no dosage adjustments provided in the manufacturer's labeling; however, gabapentin is not hepatically metabolized.

Common side effect:

Central nervous system: Dizziness (IR: 17% to 28%; children 3%; ER: 11%), somnolence (IR: 19% to 21%; children 8%; ER: 5%), ataxia (3% to 13%), fatigue (11%; children 3%)

Miscellaneous: Viral infection (children 11%)

Pregnancy Risk Factor: C