

GABAPENTIN – DOES THE DOSE FIT?

- ▶ PROVIDE CLEAR DOSING AND TITRATION GUIDELINES
- ▶ DOSE AS PER RENAL FUNCTION
- ▶ DO NOT STOP ABRUPTLY IF USED FOR EPILEPSY
- ▶ WARN ABOUT SEDATION AND WEIGHT GAIN
- ▶ INVESTIGATE SERIOUS ADVERSE EFFECTS

Gabapentin is an anticonvulsant used for some types of epilepsy when people have not achieved adequate control, or have experienced unacceptable side effects with standard anti-epileptic drugs (AEDs).

Gabapentin is also used for neuropathic pain such as diabetic peripheral neuropathy, and post-herpetic neuralgia; there is limited data for its use in non-neuropathic pain. It may be necessary to trial different options or combinations of medicines to manage neuropathic pain. Amitriptyline and gabapentin can be used together if there is an inadequate response to either medicine. Gabapentin can also be useful for post-operative analgesia but is less effective for migraine prophylaxis which is an unapproved indication.

PROVIDE CLEAR DOSING AND TITRATION GUIDELINES

Gabapentin has a short half-life and has to be dosed three to four times daily. To reduce initial adverse effects such as somnolence, dizziness, and ataxia, start with an evening dose, and then *gradually* up-titrate as tolerated. It may take up to 4 weeks to achieve the optimal dose.

Slow dose titration of gabapentin

Time	Dose
Day 1-3	300mg at night
Day 4-7	300mg twice daily
Week 2	300mg three times daily
Week 3	600mg three times daily

Slower titration (eg 100mg increments) is recommended for the elderly or for people with renal impairment or multiple medical problems.

The effective dose range for **epilepsy** is generally 900 to 1800mg per day; however up to 3600mg per day (1200mg three times daily) may be required. There is minimal data to support doses above 3600mg per day.

For **neuropathic pain**, assess at each dose level before titrating upwards. The optimal dose varies from 100mg at night to 1200mg three times per day, depending on age and concomitant medical conditions. Some people may manage a higher starting dose of 300mg three times daily, titrated by 300mg every 2-3 days.

If gabapentin does not provide adequate relief after 4-6 weeks, or if side effects become unacceptable, consider other treatment options.

DOSE AS PER RENAL FUNCTION

Dose adjustments are necessary for people with poor renal function because gabapentin is cleared renally.

Gabapentin dosing recommendations

Renal function (eGFR mL/min/1.73m ²)	Total daily dose (mg/day)*
Greater than 80	900 - 3600
50-79	600 -1800
30-49	300 - 900
15-29	150 [#] - 600
Less than 15	150 [#] - 300

*Usually administered three times daily

[#]Prescribe as 300mg on alternate days

DO NOT STOP ABRUPTLY IF USED FOR EPILEPSY

Abrupt withdrawal of anticonvulsants can precipitate a seizure, and may cause anxiety, insomnia, nausea, pain and sweating.

Make sure people taking gabapentin for epilepsy understand they should not allow more than 12 hours between doses or they will be at increased risk of seizures. If gabapentin is to be discontinued, it should be done gradually over at least a week.

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WARN ABOUT SEDATION AND WEIGHT GAIN

Sedation

The most frequent side effects associated with gabapentin are somnolence and dizziness. These are not necessarily dose-related, so there is falls risk even at low doses. Advise people not to drive or operate dangerous machinery while taking gabapentin until they are sure it does not affect their ability to do so safely.

Alcohol can increase drowsiness and can increase risk of seizures. Most people with epilepsy can have one or two units of alcohol without increasing the risk.

Gabapentin can enhance the analgesic effects of morphine; this can be beneficial post-operatively because lower doses of morphine may be sufficient. Morphine can also increase the bioavailability of gabapentin. If people are taking regular gabapentin and require morphine, dose reductions may be necessary.

Weight gain

Gabapentin has been associated with weight-gain and peripheral oedema. Take special care for people with diabetes or if there are comorbidities that cause oedema, such as heart failure and nephropathy.

INVESTIGATE SERIOUS ADVERSE EFFECTS

Rash

Everyone taking antiepileptic medicines is at risk of *drug rash with eosinophilia and systemic symptoms* (DRESS) syndrome. This is a rare, but potentially life-threatening condition. Advise people to inform their doctor **immediately** if they notice any signs of hypersensitivity such as fever, lymphadenopathy or rash, and discontinue gabapentin if confirmed.

Suicidality

As with other AEDs, gabapentin may increase the risk of suicidal thoughts or behaviour. Monitor for the emergence or worsening of depression, suicidal thoughts, or unusual changes in mood or behaviour during treatment. Caregivers and families should also be advised to be alert to these symptoms and to inform the prescriber should they occur.

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KEY REFERENCES

1. Pfizer New Zealand Ltd. Neurontin (gabapentin) capsules and tablets datasheet. 17-02-16. www.medsafe.govt.nz/profs/datasheet/n/Neurontincaptab.pdf (Accessed 06-09-16)
2. Aamir T. Managing patients with neuropathic pain. Best Practice Journal 2016;75:20-30 www.bpac.org.nz/BPJ/2016/May/pain.aspx (Accessed 07-09-16)
3. The New Zealand Formulary, Gabapentin. www.nzf.org.nz/nzf_2629.html?searchterm=gabapentin (Accessed 06-09-16)

[CLICK HERE FOR FURTHER INFORMATION ON GABAPENTIN AND A FULL REFERENCE LIST](#)

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