

Gabapentin (Gabapentinum)

(Gabapentin*, Neurontin*) POM CD SCHEDULE 3

- **Client Information Leaflet:** [Gabapentin](#)
- **Formulations**

Oral: 100 mg, 300 mg, 400 mg capsules; 600 mg, 800 mg film-coated tablets; 50 mg/ml solution.

- **Action**

The precise mechanism of action of gabapentin is unknown but it appears to bind to a specific modulating protein of the voltage-gated calcium channels, resulting in a decreased release of excitatory neurotransmitters. Gabapentin is structurally related to GABA and does increase levels of GABA in the CNS but does not appear to alter GABA binding, uptake or release. The mode of action of the analgesic effect may be due to down-regulation of excitatory neurotransmitters in the dorsal horn of the spinal cord or its inhibitory effect on dorsal horn N-methyl-D-aspartate receptors.

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- **Use**
 - Adjunctive therapy in the treatment of seizures refractory to treatment with conventional therapy, although the supporting evidence in dogs is weak.
 - Treatment of chronic pain states, such as neuropathic pain and possibly postoperative pain.
 - Studies have shown it to be effective in improving quality of life in dogs with syringomyelia and effective in reducing the amount of opioid required postoperatively.
 - A double-blind, placebo-controlled crossover trial showed the effectiveness of a single dose for storm phobia.

After multiple dosing, peak plasma concentrations of gabapentin are usually achieved within 2 hours of a dose, and steady state achieved within 1–2 days. It is partially metabolized by the liver before renal excretion and has an elimination half-life of 3–4 hours. Abrupt discontinuation of the drug has precipitated seizures in humans; therefore, tapered withdrawal is recommended. Monitoring of serum levels does not appear useful in dogs or humans. Use with caution in patients with renal impairment, behavioural abnormalities or severe hepatic disease.

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- **DOSES**
 - **Dogs**
 - 10–20 mg/kg p.o. q6–8h (starting dose; incremental dose increases are recommended).
 - For storm phobia: single dose of 25–30 mg/kg given 90 minutes before a storm.

- **Cats** 5–10 mg/kg p.o. q8–12h (starting dose; incremental dose increases are recommended).