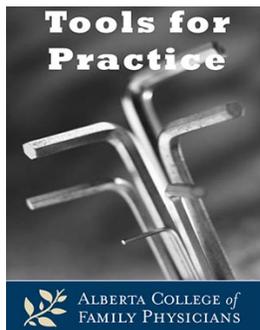


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**Reviewed: October 22, 2013**  
**Evidence Updated: Cochrane review moved from context to evidence**  
**Bottom Line: Unchanged**  
**First Published: April 27, 2010**



## **Gabapentin & Chronic Pain: Missing Evidence and Real Effect?**

**Clinical Question: What is the evidence to support gabapentin (or pregabalin) in chronic peripheral neuropathic pain?**

**Bottom-line: The apparent benefit of gabapentin in chronic pain was exaggerated by publication and reporting biases. In carefully selected patients with peripheral neuropathic pain, gabapentin may offer moderate or more pain relief for one in every 6–8 patients but causes adverse events in a similar number. There is no trial evidence pregabalin is superior to gabapentin.**

### **Evidence:**

- Review of 20 Randomized Controlled Trials (RCTs) of gabapentin for off-label use (primarily 17/20 for pain).<sup>1</sup>
  - Eight were never published (40%).
  - Reporting of outcomes in 12 published studies:
    - Only four used the planned primary outcome.
    - Of 180 predefined secondary, 122 (68%) not reported.
- Meta-analysis of all trials (including unpublished).<sup>2</sup>
  - Moderate-marked improvement in pain occurs in 13-17.5% more patients than placebo.
    - Number Needed to Treat (NNT) 6–8 (two weeks).
    - Efficacy greatest in post-herpetic neuralgia.
    - No benefit for acute pain or in dose escalation beyond 900 mg (but more adverse events).
  - Adverse events: NNH 8 (dizziness, somnolence, confusion, etc.).
- Cochrane review of 29 studies (3,571 patients) of gabapentin for 12 chronic pain conditions (78% neuropathic pain types).<sup>3</sup>
  - NNT for moderate benefit was 6 and for substantial benefit was 7.

### **Context:**

- An older Cochrane review<sup>4</sup> (of published studies only) reported gabapentin gave effective pain relief in chronic pain, NNT 3–4.
  - Another review<sup>5</sup> found similar.
- Pregabalin best case: Effective peripheral chronic pain relief is NNT 4–5 but this only includes published data.<sup>6</sup>
  - Common Drug Review<sup>7</sup> (including unpublished trials) reported pregabalin was intermittently (but not consistently) better than placebo.
    - No direct clinical trial evidence for superiority over gabapentin.
    - One trial had an active comparator: Pregabalin not superior to placebo but a tricyclic antidepressant was.
- Other reviews suggest tricyclic antidepressants are similar<sup>8</sup> or perhaps superior<sup>8,9</sup> to gabapentin or pregabalin. This evidence may be biased by time and trial quality.<sup>8</sup>
- While publication bias and selective reporting likely occur more in industry funded research, non-profit funded RCTs also selectively report outcomes.<sup>10</sup>

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