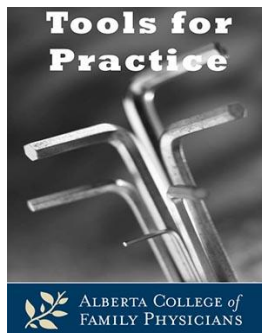


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Reviewed: December 16, 2017
Evidence Updated: Updated Cochrane review, unpublished pregabalin data added to context
Bottom Line: Unchanged
First Published: April 27, 2010



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 1 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).¹
 - 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- Meta-Analysis of all trials conducted up to 2009 (including unpublished).²
 - 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 900mg (but more adverse events).
 - Adverse events: NNH 8 (dizziness, somnolence, gait disturbance, peripheral edema, etc.).
- Cochrane review of 37 studies (5,914 patients) of gabapentin for 12 chronic pain conditions (78% neuropathic pain types).³
 - NNT for moderate benefit was 5-7 and for substantial benefit was 6-7.

Context:

- An older Cochrane review⁴ (of published studies only) reported a more optimistic estimate of pain relief in chronic pain, NNT 3-4.
 - Another review⁵ found similar.
- Pregabalin best case: Effective peripheral chronic pain relief is NNT ~8 based on published plus unpublished studies.⁶
 - Common Drug Review⁷ 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 similar⁸ or perhaps superior^{8,9} to gabapentin or pregabalin. This evidence may be biased by time and trial quality.⁸
- While publication bias and selective reporting likely occur more in industry funded research, non-profit funded RCTs also selectively report outcomes.¹⁰

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Tools for Practice is a biweekly article summarizing medical evidence with a focus on topical issues and practice modifying information. It is coordinated by G. Michael Allan, MD, CCFP and the content is written by practising family physicians who are joined occasionally by a health professional from another medical specialty or health discipline. Each article is peer-reviewed, ensuring it maintains a high standard of quality, accuracy, and academic integrity. If you are not a member of the ACFP and would like to receive the TFP emails, please sign up for the distribution list at <http://bit.ly/signupfortfps>. Archived articles are available on the ACFP website.

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