

Anticonvulsants in the treatment of low back pain and lumbar radicular pain: a systematic review and meta-analysis

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Back pain is a common issue seen in the family medicine practice that can result in significant morbidity. There are many therapies and pharmacological options available for treatment of back pain, but high quality studies showing efficacy are lacking for many of these options. In 2012, a BMJ review showed treatment benefit of gabapentin for low back radicular pain based on one study, and a few although not all guidelines subsequently suggested a trial of anticonvulsants for patients with acute neuropathic pain. This has resulted in a significant increase in use of anticonvulsants in the family practice setting for low back pain. This review examines the use of anticonvulsants (topiramate, gabapentin or pregabalin) to treat low back pain with or without radicular pain. 9 studies were examined for a total of 859 participants. Of note, however, this study was not able to perform any significant subgroup analysis, such as acute vs chronic low back pain.

1. Low back pain with or without radiating leg pain
 - a. Gabapentin
 - i. No effect for pain in short term. High quality evidence.
 - ii. No effect for pain in intermediate term, low quality evidence
 - b. Topiramate
 - i. Small clinically significant improvement pain in short term, moderate evidence
 - ii. No effect on disability in short term
2. Lumbar radicular pain
 - a. Gabapentin or pregabalin
 - i. No effect on pain in intermediate term, high quality evidence
 - ii. No effect on disability in short, intermediate, and long term, moderate evidence
 - b. Topiramate
 - i. No effect on pain or disability in short term. Low quality evidence
3. Adverse events
 - a. Higher in anticonvulsants compared to placebo, high quality evidence
 - b. Most common side effects: drowsiness, somnolence, dizziness, nausea

In summary, this review suggests that anticonvulsants do not appear to improve patients' pain or disability with regards to back pain, with or without radicular pain. While there are many nuances, the key to treating back pain without red flags remains centered on patient education, exercise therapy, and getting a multidisciplinary treatment program involved whenever possible.

Jim Niu PGY3 Sport and Exercise Medicine Fellow

Advisor: Dr. Taryn Taylor, BKin, MSc, MD, CCFP (SEM), Dip Sport Med