

## What is the most effective treatment for acute low back pain?

### EVIDENCE-BASED ANSWER

Nonsteroidal anti-inflammatory drugs (NSAIDs) are more effective than placebo for pain relief in patients with acute low back pain (grade of recommendation: A). There is no consistent evidence that NSAIDs are more effective than acetaminophen (grade: D). Muscle relaxants are effective for short-term relief of acute low back pain (grade: A), but there is no added benefit when they are used in combination with NSAIDs (grade: B). Advice to remain active speeds recovery compared with short-term bed rest (grade: A). There is no consistent evidence that epidural steroid injections are effective for acute low back pain (grade: D). Spinal manipulation or back exercises are no more effective than medications alone (grade: B).

### EVIDENCE SUMMARY

A recent systematic review found NSAIDs more effective than placebo for pain relief in patients with acute low back pain.<sup>1</sup> There is conflicting evidence regarding the effectiveness of NSAIDs versus acetaminophen or narcotics alone.

According to another systematic review, there is no difference in pain intensity at 3 weeks' follow-up between active patients and patients for whom variable lengths of short-term bed rest for treatment of acute low back pain have been prescribed.<sup>2</sup> No consistent conclusions could be drawn regarding the effectiveness of epidural steroid injections for acute low back pain.<sup>3</sup> This analysis was limited by the inclusion of all studies of patients with acute low back pain regardless of the underlying etiology and presence or absence of radicular symptoms. A systematic review of 12 trials reported inconsistent results of facet joint, epidural, and local corticosteroid injections; however, only 1 studied epidural injections.<sup>4</sup>

Cyclobenzaprine is more effective than placebo, according to a recent systematic review summary (odds ratio for improvement by day 10: 4.7 [2.7-8.1 95% CI]; number needed to treat [NNT] = 2.7 [2.0-4.2 95% CI]).<sup>5</sup> There is no statistically significant difference in pain relief between patients using NSAIDs alone versus those using both NSAIDs and muscle relaxants.<sup>1</sup> The use of muscle relaxants was associated with more adverse reactions than placebo (53% vs 28%; number needed to harm [NNH] = 4).

Performance of specific flexion or extension exercises was no more effective than analgesics.<sup>6</sup> In a randomized, controlled trial (n = 321) to assess the effectiveness of formal physical therapy for acute low back pain, patients referred to physical therapy were

more satisfied with their care than were patients given handouts on back exercises, even though disability and pain scores were unchanged.<sup>7</sup> Evidence is insufficient to support the use of spinal manipulation in patients with acute low back pain because of serious design flaws in the trials.<sup>8</sup>

### RECOMMENDATIONS FROM OTHERS

The Institute for Clinical Systems Improvement recommends conservative treatment such as cold and heat therapies and over-the-counter anti-inflammatory or analgesic drugs as the first line of treatment. Patients with acute low back pain should stay active and continue routine activity within the limits permitted by the pain.<sup>9</sup> The Agency for Health Care Policy and Research states that acetaminophen is the treatment of choice for low back pain and that NSAIDs should be used sparingly because of their potential side effects. Manipulation is safe and effective in the first month in patients who do not have radicular symptoms.<sup>10</sup>

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### CLINICAL COMMENTARY

My recent practice has been to greatly liberalize the use of opiates in the acute situation. With close phone and office follow-up, it is possible to do better than to provide reassurance alone. That the patient does not have surgical disease and will eventually improve should not obscure our obligation to relieve the acute pain. Muscle relaxants such as cyclobenzaprine may function primarily as a sedative, although they too may have a useful role.

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