**Q** How do oral NSAIDs compare to other oral analgesics right after an acute musculoskeletal injury?

**EVIDENCE-BASED ANSWER**

**NONSTEROIDAL ANTI-INFLAMMATORY DRUGS** (NSAIDs) are at least as effective as other oral analgesics (opioids, acetaminophen) in relieving pain in the first few days after an acute musculoskeletal injury. Evidence also indicates that using NSAIDs results in fewer adverse events than using narcotics (strength of recommendation [SOR]: A, systematic review of randomized controlled trials [RCTs], as well as individual RCTs).

**Evidence summary**

A Cochrane review of 16 RCTs (2144 patients) compared pain relief and return to function with oral NSAIDs and other oral analgesics (acetaminophen, opioids, or opioids plus acetaminophen) in patients who had suffered a soft tissue injury within the past 48 hours.¹ No differences between NSAIDs and acetaminophen were seen in pain relief at fewer than 24 hours on a 100-point visual analog scale (VAS) (4 trials; 359 patients; mean difference [MD]=1.56; 95% confidence interval [CI], -3.9 to 7.0). Nor were differences observed in return to function at 7 days (3 trials, 386 patients; risk ratio [RR]=0.99; 95% CI, 0.90-1.09).

No differences in pain relief between NSAIDs and oral opioids were seen at fewer than 24 hours (2 trials, 757 patients; MD=0.02; 95% CI, -3.71 to 3.68) nor at days 4 to 6 (one trial, 706 patients; MD=-2.9; 95% CI, -6.06 to 0.26). Compared with NSAIDs, opioids showed a small increase in return to function at 7 days (2 trials, 749 patients; RR=1.13; 95% CI, 1.03-1.25), but the combination of acetaminophen and opioids didn’t show a difference (one trial, 89 patients; RR=1.28; 95% CI, 0.90-1.81).

Adverse gastrointestinal events (not defined) were no different between NSAIDs and acetaminophen (7 trials, 627 patients; RR=1.76; 95% CI, 0.99-3.14) and occurred less often with NSAIDs than with oral opioids (2 trials, 769 patients; RR=0.51; 95% CI, 0.37-0.69). Overall, the authors concluded that low-quality evidence consistently showed NSAIDs were at least equal to other oral analgesics in efficacy of pain relief and return to function.

**Naproxen vs oxycodone:**

The opioid has more adverse effects

A double-blind, noninferiority, randomized trial (published after the Cochrane review search date) compared the effects of treatment with a single dose of oxycodone with a single dose of naproxen in 150 adult emergency department (ED) patients in a tertiary care academic center who had acute soft tissue injury and pain scores between 3 and 7 (on a 1-to-10 scale).² Injuries included sprains, strains, contusions, low-back injury, and intervertebral disk problems. The authors didn’t clearly define “acute” with regard to time from injury.

Patients were randomized and given a single dose of oxycodone 10 mg or naproxen 250 mg with water. Pain scores and adverse effects were reassessed at 30 minutes and
NSAIDs are at least as effective as opioids and acetaminophen in relieving pain from acute musculoskeletal injury.

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