

Practice Guidelines

Management of Acute Pain from Non–Low Back Musculoskeletal Injuries: Guidelines from AAFP and ACP

Key Points for Practice

- Topical NSAIDs are the most effective intervention for acute musculoskeletal pain other than low back pain.
- Although oral NSAIDs and acetaminophen are effective for acute pain relief, combining them does not improve effectiveness.
- Although moderately effective for pain relief, opioids increase gastrointestinal and neurologic adverse effects and lead to long-term use in 6% of people treated.
- Acupressure and TENS techniques are effective nonpharmacologic options for acute pain.

From the AAFP Editors

Acute musculoskeletal pain includes any injury with pain lasting less than four weeks. Injuries include sprains, strains, soft tissue injuries, whiplash, and fractures. Between 2000 and 2010, approximately one-fifth of outpatient visits for pain received a prescription for opioids. The American Academy of Family Physicians (AAFP) and the American College of Physicians (ACP) have published guidelines based on a systematic review and network meta-analysis of 207 studies involving 32,959 patients that evaluated treatments for acute musculoskeletal pain other than low back pain.

Medication Therapy

Topical nonsteroidal anti-inflammatory drugs (NSAIDs) are the primary recommended treatment, being among the most effective medications and the only to improve all measured

outcomes. Topical NSAIDs improve pain within two hours, provide sustained relief over one week, and are the most effective intervention for improving physical function. They also lead to symptom relief and patient satisfaction more than oral NSAIDs. No adverse effects are more common with topical NSAIDs than with placebo. The effectiveness of topical NSAIDs with menthol gel is similar to that of topical NSAIDs alone.

Oral NSAIDs are recommended as a secondary medical intervention. Oral NSAIDs also reduce pain at two hours and over one week and increase physical function and symptom relief, although to a lesser extent than topical NSAIDs. Oral NSAIDs do not increase patient satisfaction and lead to more gastrointestinal adverse events. Acetaminophen reduces pain at two hours and over one week, similar to oral NSAIDs, but without increasing physical function, symptom relief, or patient satisfaction. Combining acetaminophen with oral NSAIDs does not appear to be better than either treatment alone.

Opioids should be avoided for short-term pain relief. Although opioids reduce pain at two hours and over one week, only transbuccal fentanyl is more effective than topical or oral NSAIDs. Tramadol is no better than placebo for short-term pain relief and has not been studied for longer periods. Opioids increase gastrointestinal and neurologic adverse events over placebo. Six percent of individuals at low risk for opioid abuse develop prolonged opioid use after receiving opioid therapy for short-term pain, with a higher risk in cases of physical comorbidity, increased age, and opioid prescriptions for longer than seven days.

Nonpharmacologic Treatments

Acupressure is the recommended nonpharmacologic therapy with the most evidence of benefit. Acupressure appears to produce short-term pain relief and is effective for at least one week. It also improves function, but does not improve symptom

See related editorial on page 649.

This series is coordinated by Michael J. Arnold, MD, contributing editor.

A collection of Practice Guidelines published in AAFP is available at <https://www.aafp.org/aafp/practguide>.

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relief or treatment satisfaction. Studies are limited by different acupressure treatment plans.

Transcutaneous electrical nerve stimulation (TENS) is also a recommended nonpharmacologic option. TENS appears to produce short-term pain relief and pain relief for up to one week, but it does not improve physical function or symptom relief.

Other nonpharmacologic options have more limited evidence. Massage therapy produces short-term pain relief but has no other evidence of benefit. Joint manipulation may reduce short-term pain and improve symptom relief without improving physical function or treatment satisfaction. Supervised rehabilitation reduces pain over one week without improving physical function. Neither ultrasound therapy nor laser therapy reduces pain over one week, but laser therapy improves symptom relief.

Editor's Note: This guideline is based on a large systematic review and network meta-analysis of treatments for the acute musculoskeletal pain we see regularly as family

physicians. The clear superiority of topical NSAIDs for acute pain control over oral medications is potentially practice changing. The limited benefits and risks of opioid treatment for acute pain are also clearly demonstrated.—Kenny Lin, MD, Deputy Editor

The views expressed in this article are those of the author and do not necessarily reflect the official policy or position of the Department of the Navy, Uniformed Services University of the Health Sciences, Department of Defense, or the U.S. government.

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