

Practice Guidelines

Osteoarthritis Management: Updated Guidelines from the American College of Rheumatology and Arthritis Foundation

Key Points for Practice

- Weight loss, exercise, tai chi, and patient-directed activity programs can improve pain and function in knee and hip OA.
- In knee and hip OA, intra-articular corticosteroid injections and oral and topical NSAIDs improve pain and function only over the short term.
- Transcutaneous electrical nerve stimulation, immunomodulators, glucosamine, and biologic injection therapies should be avoided in OA.
- Cognitive behavior therapy and balance training appear to improve pain in OA; acupuncture and thermal interventions slightly improve pain and function.

From the *AFP* Editors

Affecting more than 300 million people worldwide, osteoarthritis (OA) is common and difficult to manage. Although OA can involve any joint, the knee, hip, and hand are most commonly affected. The 2019 American College of Rheumatology/Arthritis Foundation guidelines reviewed the effectiveness of pharmacologic and nonpharmacologic treatments for OA in the knee, hip, and hand.

Recommended Treatments

NONPHARMACOLOGIC

The guideline recommends exercise, tai chi, and self-efficacy or self-management programs as

Coverage of guidelines from other organizations does not imply endorsement by *AFP* or the AAFP.

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

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

CME This clinical content conforms to AAFP criteria for CME. See CME Quiz on page 79.

Author disclosure: No relevant financial affiliations.

first-line treatments. Exercise and tai chi slightly improve pain and function in knee and hip OA. No particular exercise is superior, although most studies used aerobic exercise. The benefit from tai chi lasts for at least 24 weeks, whereas exercise is beneficial for up to one year. Pain in OA is related to weight, and even a 5% weight loss provides notable improvement in knee and hip pain. Patient-directed activities, such as using activity trackers, online modules, cognitive behavior therapy, and goal setting consistently demonstrate small improvements in function and pain.

A few treatments are effective for OA in specific joints. For knee OA, tibiofemoral knee braces reduce pain and improve walking speed. Hand orthoses appear to improve pain and function for OA in the first carpometacarpal joint.

PHARMACOLOGIC

Although recommendations include medical treatment, effective medications offer only short-term benefit in pain and function. Oral nonsteroidal anti-inflammatory drugs (NSAIDs) provide temporary improvement in pain and function for hand, knee, and hip OA. Oral and topical NSAIDs offer equivalent short-term pain relief and improved function for knee OA. With oral formulations, treatment with the lowest dose and for the shortest treatment duration possible should be recommended.

Short-term improvement in pain and function for knee and hip OA is expected with the use of intra-articular corticosteroid injections. Ultrasound guidance during knee and hip injections has been shown to improve patient pain scores during the procedure and in the weeks following the injection.

Treatments Recommended Against NONPHARMACOLOGIC

Transcutaneous electrical nerve stimulation should not be recommended because it does not improve pain or function in knee OA.

PHARMACOLOGIC

Unlike most rheumatologic diseases, no effective disease-modifying medications have been identified for OA. Immunomodulators such as tumor necrosis factor inhibitors and interleukin-1 receptor antagonists are not effective and have significant risks. Similarly, bisphosphonates, methotrexate, and hydroxychloroquine (Plaque-nil) do not improve pain or function but have significant toxicities. The guideline recommends against glucosamine alone or with chondroitin because treatment does not improve knee and hip OA in studies without industry funding.

The guideline recommends against several biologic injection therapies that have safety concerns and have failed to demonstrate clinical benefit, including platelet-rich plasma, stem cells, and hyaluronic acid.

Treatments with Conditional Recommendations

CONDITIONALLY RECOMMENDED

Acupuncture and thermal (i.e., applied heat or cold) interventions should be considered for small improvements in pain and function for up to one year. Balance training with or without strength training reduces pain from lower extremity OA. Cognitive behavior therapy is also beneficial for pain control. In select patients who do not experience adverse effects, prescribing tramadol, acetaminophen, or duloxetine (Cymbalta) may provide short-term pain relief from OA.

CONDITIONALLY RECOMMENDED AGAINST

The use of modified shoes, lateral and medial wedge orthotics, and manual therapies provides little relief for knee and hip OA. Non-tramadol opioids should be avoided in the treatment of OA, given the high risk of toxicity and dependency.

Although colchicine, fish oil, and vitamin D for hip, knee, and hand OA have little to no harmful effects, there is insufficient benefit to consider their use. Prolotherapy and intra-articular botulinum toxin injections for knee and hip OA are conditionally not recommended because of the lack of effectiveness in a small number of trials.

Editor's Note: This new guideline has a large evidence review for a common and difficult-to-treat condition. Limits to the guideline include the subjectivity of recommendations and significant conflicts of interest. Recommendations were based on consensus of 70% of voting members instead of the strength of evidence. This subjective evaluation is especially concerning because pharmaceutical conflicts of interest were reported by 84% of members.—Michael J. Arnold, MD, Contributing Editor

The views expressed in this article are those of the authors and do not necessarily reflect the official policy or position of the Department of Veterans Affairs or the U.S. government.

Guideline source: American College of Rheumatology/Arthritis Foundation

Evidence rating system used? Yes

Systematic literature search described? Yes

Guideline developed by participants without relevant financial ties to industry? No

Recommendations based on patient-oriented outcomes? Yes

Published source: *Arthritis Care Res (Hoboken)*. February 2020;72(2):149-162.

Available at: <https://www.rheumatology.org/Portals/0/Files/Osteoarthritis-Guideline-Early-View-2019.pdf>

Andrew Buelt, DO

Bay Pines Veterans Affairs Medical Center, Bay Pines, Fla.
Email: andrew.buelt@va.gov

Dusty Marie Narducci, MD, CAQSM, CEDS, FAAFP ■