

[Is there a “best” pain reliever for osteoarthritis?](#)

POSTED APRIL 04, 2016, 9:30 AM

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Osteoarthritis (OA) affects tens of millions of Americans and is a leading cause of disability and reduced quality of life across the globe. Other than joint replacement surgery, there is no known “cure” for OA, and most treatments focus on relief of symptoms such as pain. Often, the first step is non-medication-based approaches such as physical therapy, exercise, and weight loss. Most patients, however, will eventually use pain relievers such as non-steroidal anti-inflammatory drugs (NSAIDs). Other kinds of medication, such as opioids, have also been tested as treatments for OA, and there is ongoing debate about what treatments are best.

NSAIDs vs. opioids: Was there a clear winner?

A [recent study](#) compared oral NSAIDs and oral opioids for relief of osteoarthritis pain. Researchers at Harvard-affiliated Brigham and Women’s Hospital performed a meta-analysis (that is, they combined and summarized the results of numerous published studies). They included clinical trials in which patients with knee osteoarthritis (KOA) were chosen at random to receive treatment that lasted at least 2 months.

The researchers carefully chose which studies to include, and two members of the team independently reviewed each study and extracted the data. They selected studies that used a common, well-validated, and widely-accepted measure of pain (the WOMAC scale, which rates pain on a scale from 0 to 100). Data from over 5,500 patients were included, and the researchers found that, on average, oral NSAID treatment reduced pain by around 18 points on the WOMAC scale. Treatment with less potent oral opioids (such as tramadol) also reduced pain by around 18 points, and potent oral opioids (such as oxycodone) reduced pain by around 19 points on the WOMAC scale. Since, on average, patients started out with pain ratings of around 50-60 out of 100, each of these medications achieved around a 30% reduction in patients’ pain.

In short, each of these medications helped reduce pain, and their effects were about identical. The finding of a roughly 30% reduction in pain is very consistent with studies of many treatments for chronic pain. While we are fairly good at acute pain management, many chronic pain conditions such as OA, low back pain, and others are harder to treat effectively. Many researchers in the field believe that a multidisciplinary team (which includes health care providers with different backgrounds) working together to use a number of different approaches to manage pain offers the most effective way of managing chronic pain. And there is good evidence for the effectiveness of these kinds of treatments. For example, a patient with severe KOA might: be treated with NSAIDs prescribed by her primary care physician; see a physical therapist to work on strengthening and conditioning the leg muscles; receive occasional steroid shots in the knee to alleviate inflammation and pain in the joint; and see a nutritionist to help with diet and weight loss, which relieves pressure on the joint and can significantly reduce knee pain.

Working toward a personalized approach to pain management

This meta-analysis cannot tell us which of these types of medication (if any) should be prescribed for a particular patient. No study can. The person-to-person variation in the effectiveness of any KOA treatment is huge. One patient may get near-total pain relief while another is not helped at all. These findings do give clinicians a benchmark for the “typical” amount of pain relief that might be expected from these medications, and suggest that, since they work about equally well, the choice of which one to use will be influenced by considerations other than effectiveness. Providers and those suffering with chronic pain also need to weigh potential side effects. Treatment (especially long-term treatment) with oral NSAIDs can result in stomach problems like bleeding, ulcer, and stomach upset, as well as high blood pressure and kidney problems. Opioids can have side effects such as constipation, nausea, and drowsiness. As you are also likely aware, opioids are also associated with a risk of serious overdose and addiction.

Many of us in the field of pain management are hopeful that eventually we will be able to more effectively “personalize” pain treatment on the basis of an individual’s characteristics, and his or her likely responses to a particular treatment. It is worth noting that non-medication treatments such as exercise, weight loss, and improvements in diet generally have few or no side effects, and have benefits that extend beyond relief of knee pain (for example, improvements in heart health). For most people, these treatments should be included as a part of their multidisciplinary pain management program, regardless of the medication options being considered.

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