

# Ibuprofen and other NSAIDs superior to codeine for managing outpatient postoperative pain

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Nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen provide better pain control and have fewer adverse effects than codeine, a commonly prescribed opioid, when prescribed after outpatient surgery, according to new research published in *CMAJ* (*Canadian Medical Association Journal*).

"In all surgery types, subgroups and outcome time points, NSAIDs were equal or superior to [codeine](#) for [postoperative pain](#)," writes Dr. Matthew Choi, Associate Professor of Surgery, McMaster University, with coauthors.

The researchers conducted a systematic review and meta-analysis of 40 high-quality randomized

controlled trials (RCTs) involving more than 5100 adults to compare [pain](#) levels and safety of medications containing codeine, such as Tylenol #3, with NSAIDs. Patients who took NSAIDs had lower pain scores at 6 and 12 hours after treatment than patients taking codeine.

"We found that patients randomized to NSAIDs following outpatient surgical procedures reported better pain scores, better global assessment scores, fewer adverse effects and no difference in bleeding events, compared with those receiving codeine," write the authors.

Codeine is widely used for postoperative pain management and is the most commonly prescribed opioid in Canada. However, codeine is associated with a range of adverse effects and potential misuse or addiction. Alternatives such as NSAIDs can help reduce opioid use in patients after dental and surgical procedures.

Given the range of procedures and dosage combinations included in the high-quality RCTs, the authors suggest that their results have wide clinical application.

"These findings are of general importance to any clinician performing painful medical procedures. The various trials in our meta-analysis evaluated a range of procedures, different NSAID types and various degrees of acetaminophen administration."

The authors conclude that their findings "strengthen existing evidence and are broadly generalizable to patients across surgical disciplines."

"Managing postoperative pain in adult outpatients: a [systematic review](#) and meta-analysis comparing codeine with NSAIDs" is published June 14, 2021.

**More information:** *Canadian Medical Association Journal* (2021).  
[www.cmaj.ca/lookup/doi/10.1503/cmaj.201915](http://www.cmaj.ca/lookup/doi/10.1503/cmaj.201915)

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