

Pharmacologic management of acute dental pain in children under 12 years of age

For pharmacologic management of acute dental pain in children under 12 years of age, IAPD endorses the joint report of the American Dental Association Science and Research Institute, the University of Pittsburgh School of Dental Medicine, and the Center for Integrative Global Oral Health at the University of Pennsylvania¹.

Reference

1. Carrasco-Labra A, Polk DE, Urquhart O, Aghaloo T, Claytor Jr JW, Dhar V, Dionne RA, Espinoza L, Gordon SM, Hersh EV, Law AS. Evidence-based clinical practice guideline for the pharmacologic management of acute dental pain in children: A report from the American Dental Association Science and Research Institute, the University of Pittsburgh School of Dental Medicine, and the Center for Integrative Global Oral Health at the University of Pennsylvania. *The Journal of the American Dental Association.* 2023 Sep 1;154(9):814-25

Scope and purpose of this document: To provide recommendations to assist clinicians, patients, and parents and guardians in determining the most appropriate use of pharmacologic strategies for the management of acute dental pain after simple and surgical tooth extractions and the temporary management of toothache associated with pulp and furcation or periapical disease in children.

A. Recommendations for the pharmacologic management of acute dental pain: postoperative pain after 1 or more simple or surgical tooth extractions in children under 12 years age.

Evidence based recommendations

1. For the management of acute postoperative dental pain in children[†] undergoing 1 or more simple or surgical tooth extractions[#], the guideline panel suggests initiating the pain management scheme using ibuprofen (suspension, tablet) alone[‡], naproxen (>2 years)[§] (suspension, tablet) alone[‡], or either of the 2 in combination with acetaminophen[‡] (suspension, tablet, oral disintegrating tablet, caplet, rectal suppository) over the use of acetaminophen alone (**conditional recommendation, with very low certainty of evidence**).
 - 1.1. If postprocedural (that is, simple or surgical tooth extraction[#]) pain control using nonsteroidal anti-inflammatory drugs alone is inadequate, the guideline panel suggests the addition of acetaminophen[‡] (**conditional recommendation, with very low certainty of evidence**).
 - 1.2. When nonsteroidal anti-inflammatory drugs are contraindicated[^], the guideline panel suggests the use of acetaminophen alone (**conditional, very low certainty**).
2. For the management of acute postoperative dental pain in children undergoing 1 or more surgical tooth extractions[#], the panel will not formulate recommendations for or against corticosteroids owing to a paucity of evidence.

B. Recommendations for the temporary pharmacologic management of toothache in children with no immediate access to definitive dental treatment.

Recommendations

3. For the temporary management* of toothache (symptomatic pulpitis [that is, reversible or symptomatic irreversible pulpitis with or without symptomatic apical periodontitis or symptomatic periapical or furcation involvement] or pulp necrosis with symptomatic apical periodontitis or periapical or furcation pathosis, or acute apical abscess) before definitive dental treatment in children†, the guideline panel suggests the use of ibuprofen (suspension, tablet) alone‡, naproxen (>2 years)§ (suspension, tablet) alone‡, or either of the 2 in combination with acetaminophen‡ (suspension, tablet, oral disintegrating tablet, caplet, rectal suppository) over the use of acetaminophen alone (**conditional, very low certainty**).
- 3.1.** If pain control using nonsteroidal anti-inflammatory drugs alone is inadequate, the guideline panel suggests the addition of acetaminophen‡ (**conditional recommendation, with very low certainty of evidence**).
- 3.2.** When nonsteroidal anti-inflammatory drugs are contraindicated^, the guideline panel suggests the use of acetaminophen alone (**conditional recommendation, with very low certainty of evidence**).

Good Practice Statements for Dental Pain Management

- The guideline panel advises clinicians to assess children's pain using suitable tools for their ages. For example, a Faces scale (≥ 3 years), a numerical rating scale (≥ 8 years), a visual analog scale (≥ 8 years), or a behavioral scale (aged 1-3 years).
- The guideline panel advises clinicians to counsel patients and their caregivers that they should expect some pain, and the analgesics should make their pain manageable. The guideline panel also recommends discussing with the patient, parent, guardian, or caregiver their past experiences, preferences, and values regarding managing acute dental pain before prescribing.
- The guideline panel reminds users of these recommendations that they only apply to settings in which definitive dental treatment is not immediately available. These pharmacologic strategies will alleviate dental pain temporarily until a referral for definitive dental treatment is in place.
- The guideline panel recommends clinicians thoroughly review the patient medical and social history and medications and supplements to avoid overdose and adverse drug-drug interactions.
- According to the US Food and Drug Administration, codeine and tramadol are contraindicated^ in children younger than 12 years. In addition, topical benzocaine should not be used in infants or young children owing to the high risk of methemoglobinemia.

† The guideline panel defined children as patients younger than 12 years.

Not all extractions in children will require the use of an analgesic. This recommendation applies only when there is unresolved postoperative pain or when conducting multiple extractions.

- * These recommendations are applicable only to settings in which definitive dental treatment is not available. Definitive dental treatment includes pulpectomy, nonsurgical root canal treatment, incision for drainage of abscess, and tooth extraction. Patients or their caregivers should be instructed to contact their healthcare provider if the pain fails to lessen over time or if the referral to receive definitive dental treatment within 2 through 3 days is not possible.
- ‡ When defining dosages, weight should be the primary directive as opposed to age.
- § The recommendation for the use of naproxen in children older than 2 years in this guideline is an off-label use. Naproxen is approved by the US Food and Drug Administration (FDA) for use as young as age 12 years. Naproxen is also approved for prescription use only in pediatric patients with polyarticular juvenile idiopathic arthritis as young as age 2 years. Naproxen is not FDA approved in children aged 0 through 2 years.
- ^ A drug should be contraindicated only in those clinical situations for which the risk from use clearly outweighs any possible therapeutic benefit. Only known hazards, and not theoretical possibilities, can be the basis for a contraindication.