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## Efficacy and safety of ibuprofen in the treatment of acute fever in pediatric patients compared to acetaminophen: Systematic review

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**Objective:** Evaluate the efficacy and safety of ibuprofen (5-10 mg/kg) compared to acetaminophen (10-15 mg/kg) in the treatment of acute episodes of fever in children under 12 years.

**Methodology:** We performed a systematic review that evaluated ibuprofen and acetaminophen in the treatment of fever in children. The search was carried out using the Medline, Embase, and Cochrane databases, restrictive to randomized clinical trials (RCT) published without limitation of language or year of publication. Two researchers independently selected the studies and collected the data. The risk of bias was evaluated using the Cochrane parameters. The outcomes of interest were proportion of children with fever (temperature > 38.5°C) and average (median) body temperature at 1, 4, 6 and 12 hours (h), occurrence of adverse events (AE) and serious adverse events (SAE).

**Results:** 13 RCTs met selection criteria out of 288 references that were found. Two RCTs had high risk of bias in randomization, concealment, and blinding. Four RCTs reported proportion of children with fever, and showed that a lower proportion of children treated with ibuprofen had fever than treated with acetaminophen at 1h and 12 h. These differences were not statistically significance but clinically relevant. There was no difference in body temperature at 1, 4 and 12 h. There were no differences in the percentage AEs and SAEs between the two treatments.

**Conclusions:** These findings suggest that ibuprofen has a fast and sustained activity compared to acetaminophen in the treatment of fever, and has similar tolerability.

### Biography

Juan Manuel Reyes is a Pharmacist with Master's degree in Clinical Epidemiology from National University of Colombia. He is the Outcome Research Coordinator in Pfizer Colombia. He has experience in development of clinical practice, systematic review, meta-analysis and mixed treatment comparison and non-interventional studies.

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