



TITLE: Ibuprofen 600 mg or 800 mg for Acute Pain: Clinical Effectiveness

DATE: 06 December 2016

RESEARCH QUESTIONS

1. What is the clinical effectiveness of 600 mg ibuprofen for acute pain?
2. What is the clinical effectiveness of 800 mg ibuprofen for acute pain?

KEY FINDINGS

Three randomized controlled trials were identified regarding the clinical effectiveness of 800 mg ibuprofen for acute pain.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2011 and December 1, 2016. Internet links were provided, where available.

SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

Disclaimer: The Rapid Response Service is an information service for those involved in planning and providing health care in Canada. Rapid responses are based on a limited literature search and are not comprehensive, systematic reviews. The intent is to provide a list of sources of the best evidence on the topic that the Canadian Agency for Drugs and Technologies in Health (CADTH) could identify using all reasonable efforts within the time allowed. Rapid responses should be considered along with other types of information and health care considerations. The information included in this response is not intended to replace professional medical advice, nor should it be construed as a recommendation for or against the use of a particular health technology. Readers are also cautioned that a lack of good quality evidence does not necessarily mean a lack of effectiveness particularly in the case of new and emerging health technologies, for which little information can be found, but which may in future prove to be effective. While CADTH has taken care in the preparation of the report to ensure that its contents are accurate, complete and up to date, CADTH does not make any guarantee to that effect. CADTH is not liable for any loss or damages resulting from use of the information in the report.

Copyright: This report contains CADTH copyright material and may contain material in which a third party owns copyright. **This report may be used for the purposes of research or private study only.** It may not be copied, posted on a web site, redistributed by email or stored on an electronic system without the prior written permission of CADTH or applicable copyright owner.

Links: This report may contain links to other information available on the websites of third parties on the Internet. CADTH does not have control over the content of such sites. Use of third party sites is governed by the owners' own terms and conditions.

Table 1: Selection Criteria

Population	Patients with acute pain (subgroups of interest: patients who regularly take ibuprofen, patients with rheumatic issues)
Intervention	Q1: oral ibuprofen 600 mg, single dose, immediate release Q2: oral ibuprofen 800 mg, single dose, immediate release
Comparator	Other doses of ibuprofen (e.g., 200 mg, 400 mg, 600 mg, 800 mg), placebo
Outcomes	Clinical benefits (e.g., pain relief) and harms (e.g., prolonged bleeding times, gastrointestinal upset)
Study Designs	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials and non-randomized studies.

Three randomized controlled trials were identified regarding the clinical effectiveness of 800 mg ibuprofen for acute pain. No relevant health technology assessments, systematic reviews, meta-analyses, or non-randomized studies were identified. Additional references of potential interest are provided in the appendix.

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Randomized Controlled Trials

1. Bednarek PH, Creinin MD, Reeves MF, Cwiak C, Espey E, Jensen JT, et al. Prophylactic ibuprofen does not improve pain with IUD insertion: a randomized trial. *Contraception*. 2015 Mar;91(3):193-7.
[PubMed: PM25487172](#)
2. Avraham S, Gat I, Duvdevani NR, Haas J, Frenkel Y, Seidman DS. Pre-emptive effect of ibuprofen versus placebo on pain relief and success rates of medical abortion: a double-blind, randomized, controlled study. *Fertil Steril*. 2012 Mar;97(3):612-5.
[PubMed: PM22265034](#)
3. Chor J, Bregand-White J, Golobof A, Harwood B, Cowett A. Ibuprofen prophylaxis for levonorgestrel-releasing intrauterine system insertion: a randomized controlled trial. *Contraception*. 2012 Jun;85(6):558-62.
[PubMed: PM22176793](#)

Non-Randomized Studies

No literature identified.

PREPARED BY:

Canadian Agency for Drugs and Technologies in Health

Tel: 1-866-898-8439

www.cadth.ca

APPENDIX – FURTHER INFORMATION:

Previous CADTH Reports

4. Non-steroidal anti-inflammatory drugs for pain: a review of safety [Internet]. Ottawa: CADTH; 2013. [cited 2016 Dec 2]. (CADTH rapid response report: summary with critical appraisal). Available from: <https://www.cadth.ca/non-steroidal-anti-inflammatory-drugs-pain-review-safety>

Non-Randomized Studies

Healthy Patients

5. Butcher BE, Carmody JJ. Sex differences in analgesic response to ibuprofen are influenced by expectancy: a randomized, crossover, balanced placebo-designed study. *Eur J Pain*. 2012 Aug;16(7):1005-13.
[PubMed: PM22337582](#)

Additional References

6. Summary safety review - prescription oral ibuprofen (non-steroidal anti-inflammatory drug) - risk of serious heart and stroke adverse events at high doses [Internet]. Ottawa: Health Canada; 2016. [cited 2016 Dec 2]. Available from: <http://www.hc-sc.gc.ca/dhp-mps/medeff/reviews-examens/ibuprof-eng.php>