

From the journal, *Fluoride*

These four papers were provided as evidence from a group who expressed concerns regarding fluoridation. Here is our assessment of the methodological quality of each paper.

Author	Title	Year	Volume & Pages	Design	Overview/Notes
Burgstahler & Spittle	Medline again rejects Fluoride	2009	42(4) 256-259	Editorial Report	This document offers a description of efforts to have the publication <i>Fluoride</i> indexed in Medline
Long, Jin, Lin, Sun, Zhang & Clinch	Fluoride Toxicity in the Male Reproductive System	2009	42(4) 260-276	Overview / Review of Literature	This is an overview of concerns with fluoride and the male reproductive system based on a selection of fluorotic human and animal studies. This paper is not a systematic review (no search, criteria, quality assessment, or systematic synthesis). Primary study data are referenced but are not provided, thus the reader cannot see the data from which conclusions/claims are drawn.
Clinch	Does Dental Fluoride use have Clinically Significant Effects on Oral Bacteria?	2010	43(4) 205-214	Discussion paper	This information discusses claims, re: Ph levels, and evidence supporting the thesis cites conference attendees and consensus statements as opposed to published or systematically gathered research evidence. The information attempts to draw causal relationships among fluoride use and bacterial resistance, health risks and other health risks. A comprehensive search for review-level or primary study evidence is not described.
Clinch	Fluoride Interactions with Iodine: Implications for Breast Health	2009	42(2) 75-87	Discussion paper	This paper draws links between iodine, fluoride use, and negative impact on thyroid hormone and mammary glands but the information does not reference causation literature nor review-level literature or syntheses.

In summary:

- The literature cited above, while exploring some interesting potential links about which others have written, is not the type of evidence that is suitable on its own for strategic decision making regarding the issue of fluoridation. **This information published in *Fluoride* could be characterized as discussion or opinion pieces.** The rationale for this statement is:
 - The paper labeled as a review (Long et al) and other papers **did not take a systematic approach** to addressing the question(s) at hand. There are no search strategies, thus it is not possible to judge whether the papers' authors would have located all of the relevant literature to inform their conclusions. Were reasonable efforts made to locate all relevant literature, there is no indication to the reader of the quality of the literature used in making the argument against fluoride.
 - **No quality assessment** of the included information was described in the papers provided. Without knowing the quality of the information presented, it is difficult to know whether it is appropriate to agree with the *conclusions reached by that information, and is also then difficult to appropriately weight the information along with other evidence.*

- The papers provided **do not appear to have done a comprehensive job of presenting relevant evidence** related to positions taken in the paper(s), some of which cited statements made at conferences or consensus statements as sources of evidence. This is not a problem had they been cited along with (and hopefully consistent with) guidelines, systematic review evidence or in the absence of systematic review evidence, corroborating primary studies.
- There is other, higher-level, quality-appraised evidence that addresses this topic, and which needs to be considered along with the information cited above. In light of other higher-level, good quality evidence, **this information should be weighted less heavily than systematic reviews that cite a number of studies on the topic, and which have done a comprehensive search for relevant evidence.**

From the National Collaborating Centre for Environmental Health (NCCEH)

Chociolko C, Waldorf D, Copes R, et al. (2010). *Environmental Health Needs and Gaps in Canada, 2008-2009*. National Collaborating Centre for Environmental Health. Vancouver, BC. Available from: URL: http://www.ncceh.ca/sites/default/files/NCCEH_2008-2009_Env_Scan_Report.pdf.

- In the NCCEH's 2008-2009 environmental scan report (referenced above), 22 respondents were asked to rate the importance of fluoride in drinking water. Four (18%) rated it as a priority. I found a few articles that they mention the stories for (from other sources that write stories citing studies, such as news daily and BBC) and a 2007 journal article that they cited in a list of journal article summaries (http://www.ncceh.ca/en/practice_policy/journal_article_summaries?page=7).
- Hobson WL et al. (2007). Bottled, Filtered and Tap Water Use in Latino and Non-Latino Children. *Archives of Pediatrics & Adolescent Medicine*, 161(5):457-461.
 - *“Latinos appear to be less likely to consume tap water. Bottled or filtered water consumption is common among children from Latino and families least able to afford the expense of bottled or filtered water. The high prevalence of not drinking tap water among low-income children has important implications with regards to oral health because of the lack of fluoride in bottled water.”*

Reviews on health-evidence.ca

- Marinho, V.C.C. et al. (2003). [Topical fluoride \(toothpastes, mouthrinses, gels or varnishes\) for preventing dental caries in children and adolescents](#). *Cochrane Database of Systematic Reviews*. 4, Art. No.: CD002782.
- Marinho, V.C.C. et al. (2003). [Fluoride toothpastes for preventing dental caries in children and adolescents](#). *Cochrane Database of Systematic Reviews*. 1, Art. No.: CD002278.
- McDonagh, M.S. et al. (2000). [Systematic review of water fluoridation](#). *British Medical Journal*. 321(7265):855-859.
- McDonagh, M. et al. (2000). [A systematic review of public water fluoridation \(Report\)](#). *NHS Centre for Reviews and Dissemination*. York, ON.
- Centre for Disease Control and Prevention (2001). [Promoting oral health: Interventions for preventing dental caries, oral and pharyngeal cancers, and sports-related craniofacial injuries: A report on recommendations of the Task Force on Community Preventive Services](#). *Morbidity and Mortality Weekly Report*. 50(RR-21):1-13.
- Lewis, D.W. et al. (1995). [Periodic health examination, 1995 update: Prevention of dental caries](#). *Canadian Medical Association Journal*. 152(6):836-846.