

Health Canada Review of Fluorides in Drinking Water is Inaccurate and Unacceptable

The Scientific Method underpinning research presupposes a willingness to continually reexamine scientific evidence and assumptions. It also presupposes that scientifically rigorous criteria are used for the evaluation of all studies. It is expected that any responsible and authoritative organization concerned with health regulations would conform to these basic principles of science. Health Canada's recent review of fluorides in drinking water demonstrates that they are either unable or unwilling to do so. The points presented below substantiate this allegation:

1. Health Canada misrepresents the World Health Organization. The WHO has no official policy position with criteria number regarding artificial water fluoridation.
2. Health Canada repeatedly misrepresents the National Research Council 2006 Review of Fluorides in Drinking Water.
3. The Health Canada panel lacks the necessary expertise for proper risk assessment of fluoridation chemicals on plants, animals and humans. Four out of six members are dentists who have no expertise outside of the oral cavity. The remaining two members have no published research on fluorides, demonstrating a lack of expertise.
4. Health Canada incorrectly assumes in their risk assessments that living conditions and diet are the same today as they were in the 1930s and 1940s.
5. Health Canada fails to substantiate their claims with research evidence. This is scientifically unacceptable and makes such claims invalid.
6. Valid evidence-based reviews do not omit entire areas of research (e.g. Thyroid, pineal gland research) without justification. Such obvious omissions from the available research in this review makes any conclusions by Health Canada invalid.
7. Valid evidence-based reviews do not omit research by their own panel members. Such omissions are inexplicable, except for the fact that the omitted research does not support the conclusions of the panel.
8. The review accepts uncritically, the poor quality scientific evidence regarding the efficacy of artificial water fluoridation, as described by the York Review 2000 committee, whereas 100% certainty is demanded for scientific evidence regarding safety. This demonstrates that Health Canada is using a double standard in their review, which is scientifically unacceptable.
9. Health Canada ignores the current epidemic of dental fluorosis by reaffirming the Maximum Acceptable Contaminant level of 1.5 mg/L for fluorides in drinking water and claiming that 0.7 mg/L recommended for artificial water fluoridation is safe. Like "Burton's lead line" along the gums which is used as a biomarker for lead poisoning, dental fluorosis is a visible sign of fluoride toxicity.
 - 70.9% dental fluorosis at 0.7-1.2 mg/L fluoride, J Public Health Dent 2006;66(2):92-6

- 25-70% dental fluorosis in artificially fluoridated communities, Ontario Ministry of Health & Long Term Care Review 1999

10. Health Canada fails to explain why the Canadian Water Quality Guideline for fluoride in source water to protect aquatic species is 0.12 mg/L, yet the Canadian Drinking Water Quality Guideline to protect humans is more than ten times higher (1.5mg/L).

11. Health Canada admits to the Auditor General of Canada Petitions office that incorrect answers were provided to petitioners.

Conclusions

We demand that Health Canada reconsider the review and the review process:

- by creating an objective committee with qualified experts that have published studies on fluoride and fluoridation in scientific journals,
- balanced with scientists for or against fluoridation.
- This review should include all valid scientific studies published, particularly recent ones as they reflect present dietetic and environmental conditions and keeps up with all conclusions of important reviews
- This review should have clear scientific criteria for the evaluation of studies and should explain why each study analyzed is retained or rejected.
- This review should include the complete intake of fluoride from all sources including fluoride from food, from all hygiene and dental products, from supplements still used in dentistry and pediatrics, from medications (300 medications contains fluoride), from salt (salt from Windsor and Sifto mines contains 200 ppm of fluoride), from insecticides and fumigation residues and from environmental pollution, with complete standard deviation with those with maximum risk of exposition.
- This review should evaluate precisely the therapeutic effective needed dose to prevent dental decay in mg/kg/day and the dose susceptible to cause the first sign of excessive intake determined by the appearance of questionable dental fluorosis as presented by Warren, Levy and al. 2008, one of the authors of this review. If any overlapping of the therapeutic margin and the toxic margin is found, the use of fluoride as a therapeutic agent should be discarded for medical and moral reasons.
- This review should include a health risk evaluation for those that are very young, or very old, for those who drink large amounts of water due to their work, physical activities or diseases and those who are affected with kidney diseases that affect fluoride excretion and finally those that have been already affected by fluoride intoxication (immigrants from fluorosis endemic regions : India, Iraq, Turkey, Algeria, China, etc. as immigration is part of the Canadian reality).
- This review should include a complete review of the environmental impacts of fluoridation

and its addition to the already existing fluoride industrial pollution, particularly in problematic industrial regions.

- This review should include the legal and ethical aspect of imposing fluoridation to an entire population as reviewed by the Nuffield Council on Bioethics and the Canadian Charter of Rights and Freedoms, particularly as fluoride has no nutritional function and by consequence is a medication and is considered as so by the pharmaceutical legislation in Canada.

Without these corrections this review lacks scientific integrity, making the conclusions invalid.