

People for Safe Drinking Water
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November 16, 2009

To:
Vice-President, Provost of the University of Toronto
Ontario Minister of the Environment
Ontario Minister of Health
Environmental Commissioner of Ontario
Environmental Commissioner of Canada
Minister for Health Canada

Dear Professor Cheryl Misak, Vice President and Provost of the University of Toronto

I wish to file a letter of concern regarding comments made by a faculty member at the University of Toronto, Dr. Locker. He recently made sweeping generalizations about the toxicological effects of fluoridation chemicals on humans and offered apparent guarantees regarding their safety while admitting that he was not an expert. This astonishing public commentary is inconsistent with known facts and demonstrates a lack of scientific rigour. (<http://besustainable.com/greenmajority/category/transcripts/transcripts-features/>)

The Carcinogen Identification Committee of the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment (OEHHA) has now selected fluoride for the possible listing for cancer hazard identification. ¹ Fluoride seems to satisfy the US EPA 2005 Guidelines as "Likely to be Carcinogenic to Humans" or Category 2.²

An epidemic of fluorosis disease in Canada is evident, with 10-11% of 9 and 13 year children in Halton Region, one of the few regions in Ontario which has collected fluorosis data, reported to have moderate forms of dental fluorosis in a 2005-2007 survey by the public health service (MO-12-08). As a non-practising dentist, does Dr. Locker understand how difficult and costly it is to treat dental fluorosis?

Also of concern are recent statements made by Dr. Locker which contradict earlier papers written by him. Below is a time line of published papers and commentary by Dr. David Locker with accompanying analysis.

Locker D. 1999 Benefits and Risks of Water Fluoridation: An Update of the 1996 Federal-Provincial Sub-committee Report Prepared under contract for: Public Health Branch, Ontario Ministry of Health First Nations and Inuit Health Branch, Health Canada.
http://www.health.gov.on.ca/english/public/pub/ministry_reports/fluoridation/fluor.pdf

- "In Canada, actual intakes are larger than recommended intakes for formula-fed infants and those living in fluoridated communities. Efforts are required to reduce intakes among the most vulnerable age group, children aged 7 months to 4 years."

- “Current studies support the view that dental fluorosis has increased in both fluoridated and non-fluoridated communities. North American studies suggest rates of 20 to 75% in the former and 12 to 45% in the latter.”
- “The magnitude of effect is not large in absolute terms, is often not statistically significant, and may not be of clinical significance.”

Cohen H, Locker D. 2001 The Science and Ethics of Water Fluoridation Journal of the Canadian Dental Association. 67(10): 578-80. Dr. Cohen has a PhD in political and moral philosophy from the University of Toronto. <http://www.cda-adc.ca/jcda/vol-67/issue-10/578.html>

- “In the absence of comprehensive, high-quality evidence with respect to the benefits and risks of water fluoridation, the moral status of advocacy for this practice is, at best, indeterminate, and could perhaps be considered immoral.”
- “Ethically, it cannot be argued that past benefits, by themselves, justify continuing the practice of fluoridation. This position presumes the constancy of the environment in which policy decisions are made. Questions of public health policy are relative, not absolute, and different stages of human progress not only will have, but ought to have, different needs and different means of meeting those needs. Standards regarding the optimal level of fluoride in the water supply were developed on the basis of epidemiological data collected more than 50 years ago. There is a need for new guidelines for water fluoridation that are based on sound, up-to-date science and sound ethics. In this context, we would argue that sound ethics presupposes sound science.”

Dr. David Locker 2004: Medical Hotseat <http://video.google.com/videoplay?docid=8651924132181016035>

“I will concede that there are dental health risks” “If children are exposed to high levels of fluoride they do get a condition called dental fluorosis which is damage to the enamel.” “In severe forms it can be pitting, flaking.”

“I think a problem with a lot of the literature on fluoridation, it was biased in that it only considered the benefits and it didn't consider the other side of the coin which was the risks.”

“One thing that troubles me about the social justice argument is that ... we are almost making everyone drink fluoridated water when really what we are trying to do is address high caries, dental decay rates in a minority of children. And it may be that there are better ways of targeting those children.”

Quinonez CR, Locker D. 2009 Public Opinions on Community Water Fluoridation. Can J Pub Health 100(2):96-100. <http://pubget.com/search?q=authors%3A%22David%20Locker%22>

“For example, during the writing of this report, a municipal plebiscite in one Canadian community asked: Are you in favour of the fluoridation of the public water supply of this municipality? There was a 35% voter turnout, and the great majority (87%) voted that they were not in favour.¹⁵ Yet in a plebiscite only two years earlier in the same community, approximately **66%** had been in favour of fluoridation.¹⁶”

FALSE: The results of the 2006 referendum were **56%** in favour of fluoridation. (see attached

official document from Dryden, Ontario)

Conclusions are not tenable based on the evidence provided

Survey results regarding artificial water fluoridation (AWF):

- 45% heard about AWF = 55% had not heard about AWF
- 60% of the 45% believed it was effective = 27% of those surveyed believe it is effective
- 63% of the 45% believed it was safe = 28% of those surveyed believe it is safe and therefore support AWF

When the 55% of people who expressed no opinion about AWF are included in this analysis:

- 72-3% of those surveyed have no opinion or do not support the hypothesis that it is effective
- 72% of those surveyed do not have an opinion or do not support the hypothesis that it is safe or support AWF

This means that only 27% of the individuals surveyed actually supported artificial water fluoridation, while 72% of the total population had no opinion or did not support artificial water fluoridation. *“To conclude, it appears that Canadians still support CWF”* is therefore not a tenable conclusion when you include the 55% who had no opinion, therefore cannot be said to support artificial water fluoridation. The implication is that the majority of Canadians support artificial water fluoridation but this survey data does not demonstrate that the majority of Canadians support it.

Please note that less than 50% of Canadians (~40%) live in communities that have artificial water fluoridation. This also does not support the conclusions of this paper.

Locker et al used a small sample size in their survey (N=1005) which was effectively reduced to 46% of this number (N=462). A real sample size of 1,000 is barely adequate, *even if the selection of those surveyed is very well randomised*. A sample size of 462 is both totally inadequate for any serious survey, and almost certainly reflects factors which have exacerbated the self-sampling problem. They did not adjust the confidence level (95% \pm 3%) for the real sample size of N=462. Nor did they use the customary disclaimer of “19 times out of 20”. This casts additional doubt on the validity of their conclusions.

NOT Scientific Discourse

“First, it is necessary to not get caught up with the fervour of anti-fluoride sentiment. No amount of credible science will satiate such appetites.”

“More importantly, these data also point to the potentially harmful aspects of anti-fluoride discourse.”

“Second, if any action is taken to counter anti-fluoride sentiment, a social marketing approach under the purview of ‘issues management’ and ‘communications’ expertise in governments is a good direction.”

“policy leaders will need to attend to two distinct challenges: the influence of anti-

fluoride sentiment, and the potential risks created by avoiding fluoride.”
The above statements do not belong in a serious scientific paper. To suggest that discourse regarding artificial water fluoridation is “potentially harmful” resembles political propaganda. To completely avoid mentioning risks associated with the ingestion of an unregulated, uncontrolled drug added to our drinking water is scientifically unacceptable.

Ironically, Dr. Locker implied in his 1999 review that the risks of avoiding artificial water fluoridation may be non-existent because the evidence does not support any dental benefit: “The magnitude of effect is not large in absolute terms, is often not statistically significant, and may not be of clinical significance.”

Ironically, Dr. Locker also suggested in 2001 that “the moral status of advocacy for this practice is, at best, indeterminate, and could perhaps be considered immoral.”

According to comments by Dr. Phillip Michael's June 2, 2009, on behalf of the International Society of Doctors for the Environment to the European Union Scientific Committee on Health and Environmental Risks (SCHER): Fluoridation - Call for Information.
<http://fluoridealert.org/michael-2009.html>

“Proper risk assessment of the physiological effects would require the addition of extensive expertise in fluorosis (dental & skeletal) in developmental toxicity, in neuroscience including brain and IQ effects , in endocrinology including pineal gland effects , in thyroid function, in osteopathology including bone cancer , in nephrology, and in effects on the gastrointestinal tract, immune system, reproduction, respiratory function and include allergic/hypersensitive effects.”

No evidence has been presented that Dr. Locker has the required expertise to do a proper toxicological assessment of fluoridation chemicals. As for the 2009 CDW secretariat review panel, one would expect it to be comprised of qualified individuals in areas of science and medicine that are relevant to the material facts of the issue.³

“Yet regardless of its recognized successes, within popular culture there remains considerable debate regarding the safety and value of CWF.”

“while there is ample evidence that CWF is an effective means to control dental caries, there now exists a very real challenge”

No citations are provided for these claims of “recognized successes” and “effective means to control dental caries” as cited above. Argument by assertion is not a scientifically valid way to justify a controversial public health measure.

A valid scientific paper would weigh the arguments for and against a concept. There is an absence of discussion of the vast research literature demonstrating health harm. There is also an absence of discussion of the research literature which has discredited the early fluoridation trials and studies and which has never been refuted.⁴ If there is irrefutable evidence that artificial water fluoridation is really safe and beneficial, why not simply provide scientific evidence that demonstrates safety and efficacy instead of conducting a public opinion poll?

Are the concerns regarding artificial water fluoridation by women and children justified?

“women, those with children, those who pay for dental care out-of-pocket, and those who avoid fluoride, were all less likely to support CWF;” & “Multivariately, those with children under 6 years remains as the only predictor.” Quinonez & Locker 2009

Health Canada: "If more than used for brushing is accidentally swallowed, get medical help or contact a Poison Control Centre right away".

Health Canada: "...children under age 3 should not use fluoridated toothpaste..."

Health Canada: "Never give fluoridated mouthwash or mouth rinses to children under six years of age, as they may swallow it."

American Dental Association recommends that children under 1 year use water: "purified, distilled, deionized, demineralized, or produced through reverse osmosis."

Scientific Committee of the Food Safety Authority of Ireland 2001: "the precautionary principle should apply and recommends that infant formula should not be re-constituted with fluoridated tap water"

A recurring theme: no one is held accountable for false and misleading statements

Health Canada's position as reflected in petition responses are quoted and cited by Quinonez and Locker. It is therefore important that these Health Canada responses to petitioners be accurate. However, Health Canada recently admitted to this petitioner and the Auditor General petitions office that incorrect responses were given. Therefore, these government responses cannot be relied upon for accuracy, suggesting that they are not a good source upon which to base government policy decisions.

The Chief Dental Officer for Health Canada has provided false and misleading information to government agencies, media and Canadian citizens. Proof of this misinformation is easy to verify from the public record. These allegations have never been refuted.⁵

The Royal College of Dental Surgeons of Ontario (RCDSO) is enabled to be a self-regulating organization, due to Ontario government legislation. This organization has provided false and misleading information to government agencies, media and Canadian citizens. Proof of this misinformation is easy to verify from the public record. These allegations have never been refuted.⁵

Various members of the Public Health Service have also made incorrect statements of known fact in cities across Canada. Proof of this misinformation is easy to verify from the public record. These allegations have never been refuted.⁵

The Fundamental Problem

If public opinion is informed by misinformation provided by the public health service or others, then public opinion is not an appropriate scientific means with which to inform public policy.

Science is not a collection of facts, or a promotion of opinion, but a process of weeding out misinformation, and testing preliminary results with care and diligence. Scientific discourse attempts to refute what has been found, not to gather supporting evidence. It is failure to refute a theory despite diligent, well constructed attempts, that strengthens a theory. The public relies on the scientific community to do this.

There is currently no means for holding scientists accountable for things they may say in the public forum by either self-regulation or government legislation. Any abuse of this public trust by scientists will lead to an erosion of scientific integrity and public trust. Any individual(s) who distort(s) or misrepresent(s) scientific evidence and known facts for reasons of ignorance, political expedience, financial gain, or self-interest imperil(s) the integrity of scientific discourse.

Dr. Locker and Dr. Quinonez make an error of fact regarding the Dryden referendum. Their conclusion that *"it appears that Canadians still support CWF"* is not tenable based on their own survey results.

Is the scientific method being ignored to protect the entrenched status quo regarding artificial water fluoridation?

Will the provost at the University of Toronto find some way of making the following document available to the taxpayers who funded this research? The research was done by a graduate student at the University of Toronto and was a commissioned project by the head of the Dental Public Health department in Toronto, Dr. Hazel Stewart. (Azarpazhooch A, Stewart H. Oral Health Consequences of the Cessation of Water Fluoridation in Toronto 2006 August.)

Yours sincerely,

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Citations

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http://www.oehha.ca.gov/prop65/CRNR_notices/state_listing/data_callin/sqe101509.html
2. The 2005 EPA guidelines for carcinogenicity are available at:
<http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=116283>
3. Clinch CA. 2009 (a) <http://fluoridealert.org/re/canada.report.letter.clinch.pdf>

(b) <http://fluoridealert.org/re/canada.report.response.clinch.pdf>
(c) <http://fluoridealert.org/re/canada.report.omissions.clinch.pdf>
Connett P. 2009 <http://fluoridealert.org/re/connett.canada.11-11.09.pdf>

4. Sutton PRN. Fluoridation Errors and Omissions in Experimental Trials. 1959 Melbourne University Press, Victoria, Australia. & Ziegelbecker R. Please contact <htl-zb@utanet.at> for compendium of published and unpublished information which was instrumental in demonstrating to European countries that artificial water fluoridation does not prevent cavities. Azarpazhooh A, Stewart H. Oral Health Consequences of the Cessation of Water Fluoridation in Toronto 2006 August. Will the provost at the University of Toronto release this document to the taxpayers who funded this research?

5. Clinch CA 2009 False and Misleading Statements. Available at:
http://www.newmediaexplorer.org/chris/2009/10/26/people_for_safe_drinking_water.htm