

SAFE WATER CALGARY RESPONSE TO AMERICAN FLUORIDATION SOCIETY CLAIMS

It has come to our attention that the American Fluoridation Society (AFS) has written a response to Safe Water Calgary's critique of the CADTH report on artificial water fluoridation (https://docs.wixstatic.com/ugd/1eaedc_33811f3e342648da9164b619ff07d901.pdf).

Safe Water Calgary's (SWC) comments and corrections are below. There are far too many AFS misstatements to address individually and we wanted to keep this to a reasonable length. However, we felt it necessary to point out some major ones that are representative of virtually all of AFS's claims.

Some Untrue Statements

AFS (p. 2): "To state that the Food and Drug Administration does not approve for fluoride to be added to water in the U.S., as the authors do, is absolutely false."

SWC: *Our CADTH review never made this statement about the FDA. We have no idea where it came from.*

AFS (p. 3): "Neither France, Germany, Belgium, nor the Netherlands has banned fluoridation, as is falsely claimed by the authors . . . statements cited by the authors . . . are simply unsubstantiated opinions solicited by FAN from individuals in those countries."

SWC: Those "unsubstantiated opinions" are statements by high-level government officials (<https://fluoridealert.org/content/europe-statements/>):

France: Letter from L. Sanchez, Director de la Protection de l'Environnement: "Chemicals for drinking water treatment are listed in the State memorandum . . . Fluoride chemicals are not included. This is due to ethical as well as medical considerations."

Germany: Letter from Gerda Hankel-Khan, Federal Ministry of Health: "Generally, in Germany fluoridation of drinking water is forbidden." She also cited "the problematic nature of compulsion medication."

Belgium: Letter from Chr. Legros, Director, Belgaqua: "This water treatment has never been of use in Belgium and will never be (We hope so) into the future . . . The main reason for that is the fundamental position of the drinking water sector that it is not its task to deliver medicinal treatment to people. This is the sole responsibility of health services."

Netherlands: Website statement from RIVM report 270091004/2007 for the Dutch Ministry of Health, Welfare and Sports: "the addition of chemicals to drinking water is prohibited by law in the Netherlands. This law came into effect because it was widely perceived that drinking water should not be used as a vehicle for pharmaceuticals."

AFS (p. 4): "Water fluoridation is not the addition of a drug to water supplies." And (p. 14): "Fluoride in water supplies is not a drug."

SWC (p. 5): According to Health Canada's definition of a drug, which AFS doesn't address, fluoride most assuredly is being used as a preventive drug. And it's instructive to see the above statements of some of the European nations banning fluoridation – they certainly consider fluoride in drinking water a drug too.

AFS (p. 6): ". . . contrary to the claim of the authors, the US EPA has not established there 'to be no safe levels of arsenic and lead.'"

SWC: Yes, it has. These are the two EPA statements: "There is no known safe level of lead in a child's blood" (<https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>) and "The MCLG for arsenic is zero." (<https://safewater.zendesk.com/hc/en-us/articles/212077897-4-What-are-EPA-s-drinking-water-regulations-for-arsenic->) AFS is citing the maximum contaminant level (MCL) of arsenic and lead. MCL's are established by feasibility, which considers the cost of removing contaminants. AFS is either unaware or

conflating MCL's with the maximum contaminant level goal (MCLG), the level of a contaminant below which there is no known or expected risk to human health.

AFS (p. 10): **"Water fluoridation is not technically feasible"** (in Mexico, cited as a reason fluoridated salt is used).
SWC: There is no documentation whatsoever that fluoridation isn't technically feasible in Mexican cities or is the reason that Mexico offers salt (a consumer choice) instead of fluoridation. AFS has no citation to back up this statement.

AFS (p. 10): AFS asserted that the 2017 Bashash IQ study didn't adequately address numerous confounding factors, including family, education, maternal age, gestational age, birth weight, lead and mercury.

SWC: No, Bashash addressed and adjusted for each of these potential confounders.

(<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5915186/>)

AFS (p. 12): "The Malin 2018 study was of the effects of iodine deficiency on the thyroid, not of fluoride on the thyroid."

SWC (p. 11): No, lead author Ashley Malin says just the opposite: **"I have grave concerns about the health effects of fluoride exposure . . . And not just from my study but the other studies that have come out in recent years."**

(<https://www.ehn.org/we-add-it-to-drinking-water-for-our-teeth-but-is-fluoride-hurting-us-2611193177.html?rebellitem=1#rebellitem1>)

AFS (p. 15): **"There was no mention of concern with adverse effects on the immune system in the final (NRC) recommendation."**

SWC (p. 16): No, this is the definitive statement from the NRC report, p. 295: **"There is no question that fluoride can affect the cells involved in providing immune responses."** (<https://www.nap.edu/catalog/11571/fluoride-in-drinking-water-a-scientific-review-of-epas-standards>)

AFS (p. 17): Quoting Steven Levy, a dentist with the Iowa Fluoride Study: **"But we (IFS authors) did not say that we 'found no relation between tooth decay and the amount of fluoride swallowed.'"**

SWC: Our CADTH review never made this statement about no relation. We have no idea where Dr. Levy got this quote from.

AFS (p. 19): Referring to a study on cost effectiveness that CADTH omitted, **"Thiessen, et al. which includes the false premise that mild dental fluorosis requires treatment."**

SWC: No, Thiessen specifically said: **"For this analysis, we assume that each moderate or severe fluorosis tooth receives a porcelain veneer treatment."** Mild fluorosis wasn't included in requiring treatment.

(<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4457131/>)

One Major Example of Selective Omissions: The Neurotoxicity Studies

It's revealing that AFS never mentioned the abstract SWC included in its appendix (p. 27) on the Green et al study, linking higher fluoride levels in the urine of pregnant women in Canada to a reduction of 4.5 IQ points in their male children. Funded by NIH and published in the Journal of the American Medical Association Pediatrics, it is widely considered one of the most robust studies ever conducted, with both the study authors and independent reviewers observing that fluoride's toxicity is equal to lead. The study was so strong that the editor of JAMA Pediatrics said he wouldn't want his wife to drink fluoridated water if she was pregnant. (<https://fluoridealert.org/articles/jamacriticsims/>)

AFS's selective omission of quotes is equally revealing. It includes the quote from Choi (p. 9) expressing limitations (all human studies have limitations) of her 2012 Harvard meta-analysis that found higher levels of fluoride associated with lower IQs in children in 26 out of 27 studies. AFS didn't quote co-author Philippe Grandjean, one of the leading neurotoxicity scientists in the world, who said **"Fluoride seems to fit in with lead, mercury, and**

other poisons that cause chemical brain drain.” (<https://www.hsph.harvard.edu/news/features/fluoride-childrens-health-grandjean-choi/>)

Another glaring example is AFS’s critique of the Bashash 2017 study that also found higher fluoride levels in pregnant women linked to significantly lower IQs in their children. AFS said it had “limited, if any, applicability” to U.S. fluoridated water. Principal author Howard Hu sees it differently: “This is a very rigorous epidemiology study. You just can’t deny it. It’s directly related to whether fluoride is a risk for the neurodevelopment of children. So, to say it has no relevance to the folks in the U.S. seems disingenuous.”

(<http://fluoridealert.org/news/researchers-urge-caution-over-study-linking-fluoride-exposure-in-pregnancy-to-lower-iqs-in-children-2/>)

One Major Half-truth: The National Research Council’s 2006 report, *Fluoride in Drinking Water*

AFS cited NRC seven times. Their basic position (p. 7) was that NRC’s only charge was “to evaluate the adequacy of the EPA primary and secondary MCL’s (maximum contaminant level) for fluoride, 4.0 ppm (parts per million) and 2.0 ppm respectively, to protect against adverse effects. The final recommendation . . . was for the primary MCL to be lowered from 4.0 ppm. The sole reasons cited by the Committee for this recommendation were the risk of severe dental fluorosis, bone fracture and skeletal fluorosis . . . Nothing else.”

SWC: There was definitely something else. The other charge to NRC (p. 2 at <https://www.nap.edu/catalog/11571/fluoride-in-drinking-water-a-scientific-review-of-epas-standards>):

“The committee was also asked to identify data gaps and to make recommendations for future research . . .”

And NRC identified numerous gaps in the research data – for cancer, neurotoxicity (especially lowered IQ), diabetes, kidney disease, pineal gland function and dental fluorosis. And as mentioned in SWC’s report, they made several unequivocal assertions, including (SWC’s p. 8) that fluoride was an endocrine disruptor and “The chief endocrine effects of fluoride . . . include decreased thyroid function.”

Bottom line: NRC’s 2006 findings of fluoride’s definite health risks and need for more research directly contradicted the certainty of fluoridation supporters *since the 1950’s* that it had been proven safe.

One Major Misrepresentation: Dental Fluorosis

AFS: “Mild to very mild dental fluorosis, the level which may be associated with optimally fluoridated water . . . “ (i. e. fluoridation *isn’t* associated with moderate and severe fluorosis) and “Clearly, dental fluorosis is not an issue of concern in association with the minuscule amount of fluoride in optimally fluoridated water, even in conjunction with fluoride intake from all normal sources.” (p. 13)

SWC: It’s impossible to take AFS’s claims seriously when they make statements like this.

1. Even CADTH acknowledged fluoridation’s role in increasing ALL levels of fluorosis:
“There was a significantly higher risk of developing dental fluorosis in high fluoridated areas compared with in low fluoridated areas. The additional studies identified from the updated literature search also found that the prevalence of dental fluorosis and its severity increased with increased water fluoride levels.” (p. 13)
2. AFS completely omits the physical and psychological harm that can be caused by moderate fluorosis, which can lead to expensive treatment. (p. 14)
3. Two more recent high-level U.S. NHANES studies found much higher prevalence and severity than those used in the 2006 NRC report that AFS cited. (p. 13)
4. Fluoride, regardless of the source, causes fluorosis in a dose-response relationship. The more fluoride ingested by children ages 0-8, the higher the prevalence and severity of fluorosis. AFS’s assertions that fluoridated water contributes to mild fluorosis, but somehow stops contributing to moderate and severe levels, is biologically absurd.

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RECEIVED
IN COUNCIL CHAMBER

OCT 29 2019

ITEM: #6.1 CFS2019-0965
Public Distribution

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