RE: Board of Health Meeting - WEC Oral Health Status Information Report | June 25, 2026

The importance of oral health and the potential to improve it through effective public health interventions are indisputable. The WEC Oral Health Status Information Report ("the Oral Health report") promotes community water fluoridation (CWF) as a means to that end, particularly for those experiencing health inequities. However:

- **There is no mention of numerous high quality studies, reviews and other academic papers by neurocognitive experts, many of them Canadian, associating cognitive harm to developing brains from fluoride ingestion by pregnant women and small children**.
- **It cites a caries reduction factor attributable to CWF that is not supported by either current science or local data. The most recent studies also show no compelling evidence of reductions in social inequalities in dental health.**

My request to the Board of Health is that pregnant women and caregivers of formula-fed infants be provided with factual and transparent public messaging on the science relating to fluoride. Recommending that they AVOID FLUORIDATED WATER WHILE THEIR BABIES' BRAINS ARE MOST VULNERABLE is consistent with the precautionary principle.

PRECAUTIONARY PRINCIPLE

Public Health Ontario describes the precautionary principle as follows:

> In public health, the precautionary principle is a type of primary prevention: problems and risks are avoided by not engaging in certain activities until it is certain that the activities will not lead to harm.
>
> Source: *Precautionary Principle - Applications Relevant to Public Health Emergency Preparedness*

A 2001 paper in the American Journal of Public Health acknowledges Public Health's responsibility to remember the precautionary principle:

> The core maxim of the precautionary principle is that an action should not be taken when there is scientific uncertainty about its potential impact. We in public health must recognize that the precautionary principle applies to our own actions, that when a public health action is proposed, the burden of proof—to ensure that all risks and consequences are taken into account—rests on us just as surely as it rests on others.
>
> Source: *The Precautionary Principle Also Applies to Public Health Actions - PMC*

HEALTH CANADA: Health Effects of Fluoride in Drinking Water

In June 2023, Health Canada published a summary report titled *Expert Panel Meeting on the Health Effects of Fluoride in Drinking Water*.

On page 9, it states:

> **A growing body of evidence suggests that fluoride in drinking water may be associated with reduced IQ scores in children at fluoride levels that may be found in Canadian drinking water. Health Canada commissioned an independent systematic review, which concluded that, on the basis of the weight of evidence, cognitive dysfunction (specifically, reduced IQ scores in children) should be considered as a candidate endpoint when setting the health-based value for fluoride in drinking water.**

This important document is not referenced in the Oral Health report.

The National Toxicology Program (NTP), part of the National Institutes of Health (NIH), is the highest-level scientific review. Its monograph, published in August 2024, concludes that higher water fluoridation levels "*are consistently associated with lower IQ in children.*" In the 19 highest-quality studies, 18 linked higher fluoride with lower IQs. Several of these studies found this link at levels in fluoridated water, 0.7 mg/L.

NTP's meta-analysis of 74 human studies from 10 nations, published January 2025, reaffirms the NTP monograph, finding that the more fluoride a child is exposed to, the more likely that child's IQ will be lower than if they were not exposed.

Some children are more genetically susceptible to toxins and others simply drink more water or ingest more food and drinks processed with fluoridated water. All fluoride consumed contributes to the toxic load, contradicting claims that no children are harmed from drinking fluoridated water.

It is not prudent to promote CWF while completely ignoring the published science on cognitive risk. Dentists and dental associations who minimize or deny these impacts are not experts in cognitive health. But neurotoxicology experts are sounding alarm bells on the impacts of CWF, even at current concentrations, on developing brains.

Four of the most significant studies published since 2018 that document the seriousness of fluoride's neurotoxicity are from Canada.

Yet, the Oral Health report does not reference this important and relevant science.

- 2020: Babies fed formula mixed with fluoridated water averaged 6 IQ points less than those mixed with non-fluoridated water. Non-verbal IQ losses were even higher, an average of 13 points.

- 2019: Every 1 mg/L increase in fluoride in pregnant women's urine linked to a decrease in IQ in their male children. JAMA Pediatrics' physician editor said, *"I would not have my wife drink fluoridated water*" if she were pregnant. Linda Birnbaum, PhD, retired director of the National Toxicology Program, said, "*It is time to protect kids' developing brains from fluoride*."
- 2019: A nearly 300% higher risk of ADHD was found for children living in fluoridated areas, reaffirming earlier studies linking fluoride to ADHD in Mexico (2018) and the U.S. (2015).
- 2018: Iodine-deficient adults - nearly 18% of the population - with higher fluoride levels had a greater risk of hypothyroidism (known to be linked to lower IQs). Author Ashley Malin, PhD, said, "*I have grave concerns about the health effects of fluoride exposure."*

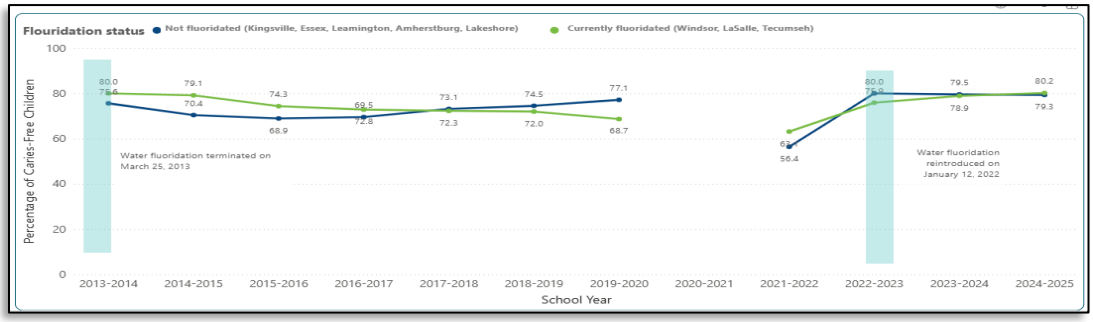
Click here for a summary of 18 academic papers (since 2019) showing and association between childhood fluoride exposure & harm to developing brains

ORAL HEALTH IMPROVED IN BOTH FLUORIDATED & NOT-FLUORIDATED COMMUNITIES

The Oral Health report notes that oral health indicators improved across several measures after the reintroduction of CWF in Windsor, Tecumseh and LaSalle in 2022. This implies, without actually saying it, that CWF is the reason for the improvement.

And yet, it provides no explanation as to why WECHUs Oral Health Data Dashboard shows that caries-free rates in the area's not-fluoridated municipalities have consistently improved since 2014 (other than the pandemic years, during which data was not collected).

Furthermore, since 2022, whether the communities have CWF or not, the results are almost identical. No differences even begin to approach the 25% caries reduction rate that the Oral Health report cites.

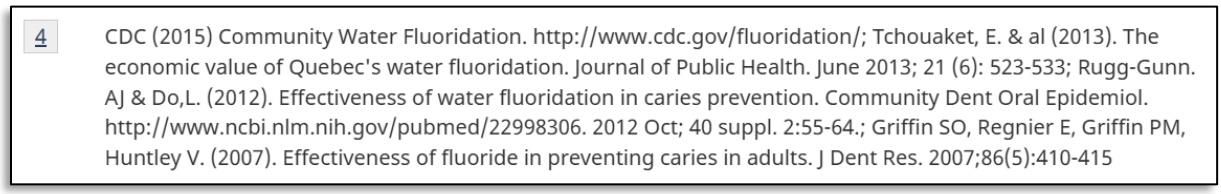


Source: *Oral Health Data Dashboard | The Windsor-Essex County Health Unit*

Quite possibly, factors other than CWF are the underlying cause of improved oral health trends. Unfortunately, neither the Oral Health report, nor WECHU's Oral Health Data Dashboard provide additional insight into the differences and similarities in outcomes between the fluoridated and non-fluoridated municipalities in Windsor-Essex.

CWF NOW ASSOCIATED WITH MUCH SMALLER REDUCTION IN TOOTH DECAY THAN PREVIOUSLY

It is true that PHAC's 2022 report *The State of Community Water Fluoridation across Canada* associates CWF with an approximate 25% reduction in tooth decay. However, every single reference for this figure dates back more than 10 years.



4 CDC (2015) Community Water Fluoridation. http://www.cdc.gov/fluoridation/; Tchouaket, E. & al (2013). The economic value of Quebec's water fluoridation. Journal of Public Health. June 2013; 21 (6): 523-533; Rugg-Gunn. AJ & Do,L. (2012). Effectiveness of water fluoridation in caries prevention. Community Dent Oral Epidemiol. http://www.ncbi.nlm.nih.gov/pubmed/22998306. 2012 Oct; 40 suppl. 2:55-64.; Griffin SO, Regnier E, Griffin PM, Huntley V. (2007). Effectiveness of fluoride in preventing caries in adults. J Dent Res. 2007;86(5):410-415

Source: *The State of Community Water Fluoridation across Canada*

There is good reason to doubt this figure today.

The Cochrane Collaboration, a non-profit organization of 30,000 expert researchers and health professionals from around the world, is considered the gold standard of evaluating effectiveness of health interventions. While its 2015 review titled *Water fluoridation for the prevention of dental caries* mentioned 26% cavity reduction from CWF, it also noted that:

- **71% of the studies were conducted prior to 1975. This was before the widespread introduction of the use of fluoride toothpaste.**
- **Insufficient information exists to determine whether initiation of water fluoridation changes disparities in caries across socioeconomic status levels.**
- **97% of the studies were at high risk of bias and there was substantial between-study variation.**

In any event, the 25% figure cited in the Oral Health report has now been superseded by two important studies published in 2024. Both point to much more modest impacts than previously understood.

- October 2024 - Water fluoridation for the prevention of dental caries: The Cochrane Collaboration's latest (2024) systematic review analyzed data from the 21 highest-quality studies. It found that fluoridation increased cavity-free results in primary (baby) teeth by **only 4% and in permanent teeth by only 3%. Neither result is statistically significant and includes the possibility of no benefit at all. It also found no sufficient evidence that fluoridation benefited low-income families.**

- January 2024: The LOTUS Study – With 6.4 million study subjects, this is the largest fluoride study ever conducted. Its aim was to determine the effectiveness and cost-effectiveness of water fluoridation for adults and adolescents. Over 10 years, people receiving optimally fluoridated water experienced **only a 2% reduction** in the number of decayed, missing, and filled teeth, compared to those whose water was not fluoridated. **The study found NO meaningful benefit to water fluoridation, nor any compelling evidence that water fluoridation reduced social inequalities in dental health.**

REMARKABLE DECLINE AND SUSTAINED LOW LEVELS OF CARIES IN NORDIC POPULATIONS—Explanations & Implications for Public Oral Health

A Nordic study published earlier this month sought to understand the sustained declines in caries in children's teeth. No Nordic countries have CWF:

> June 2026 - Remarkable decline and sustained low levels of caries in the Nordic populations—Explanations and implications for public oral health: Caries levels in Nordic child populations declined from among the highest in the world to among the lowest and sustained at these low levels for half a century by means of a public oral health program largely based on self-applied brushing with fluoride toothpaste, despite continued high levels of sugar consumption. The authors conclude that toothbrushing with fluoride toothpaste is a robust population strategy that should be promoted as a valid alternative to community water fluoridation for the control of dental caries.

This study shows that adding fluoride to the water supply is not necessary to significantly improve oral health. Safer strategies do in fact exist.

CORE VALUES EMBEDDED IN WECHU STRATEGIC PLAN: Trust and Integrity

For public health interventions to be effective, they must be based on accurate and current scientific evidence. It is no secret that trust in public health has significantly eroded in recent years. The inconsistencies noted above are examples of misleading information that, if not addressed, will further entrench public skepticism. This will almost certainly result in the opposite effect that the core values in WECHU's strategic plan aim to promote.

Yours sincerely,

Philippa von Ziegenweidt