

Public Testimony - January 8, 2014

To Washington State Board of Health

Julie and Olemara's stories are not unique, not even unusual. My 28 yr old autistic son also suffers terrible migraines from fluoridated water. I know two other young men with autism who also have a hyper-sensitivity to fluoridated water.

These are real people suffering real pain, hardship and health effects from fluoridation. They matter. Fluoridation chemicals are NOT safe for everyone!

Two months ago I brought to you a study that compares disease and mortality rates in fluoridated vs. unfluoridated areas of Ireland. (<http://www.enviro.ie/Feb2013.pdf>)

Any medical intervention must evaluate benefits vs. risks. Has this been done in Washington? Have you found, or are you conducting, any similar studies comparing Washington's fluoridated cities to the never-fluoridated cities of Bellingham, Spokane and Olympia?

The Ireland study shows that fluoridation increases Autism, Down Syndrome, Diabetes, Sudden Infant Death Syndrome---by 300%!---and many other diseases, including cancer. What specific current epidemiological study have you personally reviewed that warrants a dismissal of findings this shocking from Ireland?

A year ago I brought you the study from Harvard that concluded 26 out of 27 studies found risk to the developing brain. (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3491930/>) Yet most involved the natural Calcium Fluoride that carries a Health Hazard Rating of "0", whereas fluoridation products have a Hazard Rating of "3" (where "4" results in death).

So what specific current study---I'm only asking for ONE---have you personally reviewed that warrants a dismissal of the findings of the Harvard researchers and 26 other brain studies?

There ARE risks and there ARE people harmed. I will reiterate what I asked of you a year ago:

Please notify water districts that: 1) the Washington State Board of Health has NOT determined the safety of fluoridation, as they think you have, and 2) that new studies have been released that indicate possible risks to children, babies, fetuses and vulnerable populations.

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# Comparison of hydrofluorosilicic acid and pharmaceutical sodium fluoride as fluoridating agents—A cost–benefit analysis

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<http://www.sciencedirect.com/science/article/pii/S1462901113000087>

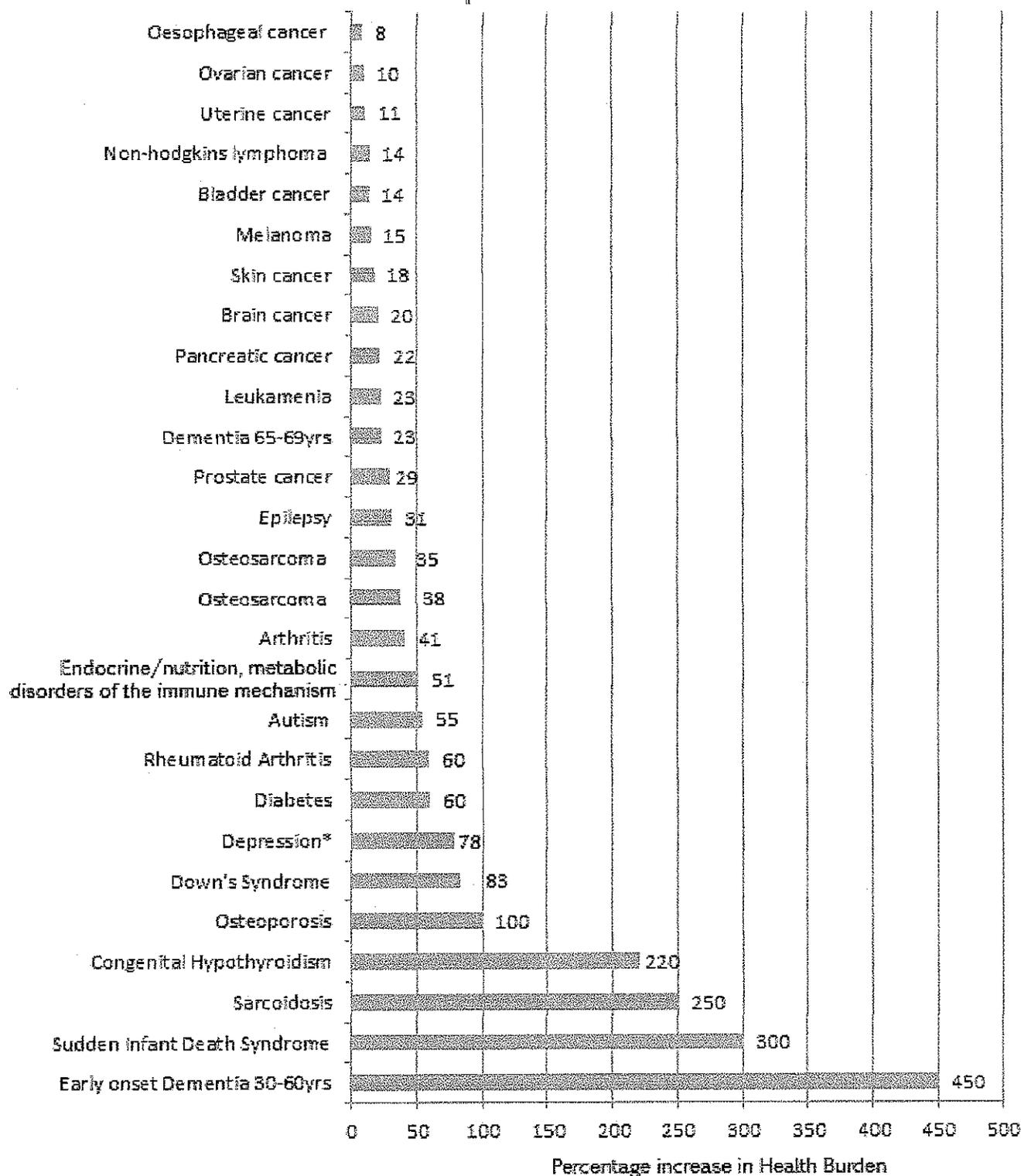
Water fluoridation programs in the United States and other countries which have them use either sodium fluoride (NaF), hydrofluorosilicic acid (HFSA) or the sodium salt of that acid (NaSF), all technical grade chemicals to adjust the fluoride level in drinking water to about 0.7–1 mg/L. In this paper we estimate the comparative overall cost for U.S. society between using cheaper industrial grade HFSA as the principal fluoridating agent versus using more costly pharmaceutical grade (U.S. Pharmacopeia – USP) NaF. USP NaF is used in toothpaste. HFSA, a liquid, contains significant amounts of arsenic (As). HFSA and NaSF have been shown to leach lead (Pb) from water delivery plumbing, while NaF has been shown not to do so. The U.S. Environmental Protection Agency's (EPA) health-based drinking water standards for As and Pb are zero. Our focus was on comparing the social costs associated with the difference in numbers of cancer cases arising from As during use of HFSA as fluoridating agent versus substitution of USP grade NaF. We calculated the amount of As delivered to fluoridated water systems using each agent, and used EPA Unit Risk values for As to estimate the number of lung and bladder cancer cases associated with each. We used cost of cancer cases published by EPA to estimate cost of treating lung and bladder cancer cases. Commercial prices of HFSA and USP NaF were used to compare costs of using each to fluoridate. We then compared the total cost to our society for the use of HFSA versus USP NaF as fluoridating agent. The U.S. could save \$1 billion to more than \$5 billion/year by using USP NaF in place of HFSA while simultaneously mitigating the pain and suffering of citizens that result from use of the technical grade fluoridating agents. Other countries, such as Ireland, New Zealand, Canada and Australia that use technical grade fluoridating agents may realize similar benefits by making this change. Policy makers would have to confront the uneven distribution of costs and benefits across societies if this change were made.

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**Highlights** ▶ Arsenic in current H<sub>2</sub>O fluoridating agents causes significant cancer treatment costs. ▶ Arsenic in USP NaF would result in 100–500-fold fewer cancers. ▶ USP NaF costs about 12 times as much as current fluoridating agents. ▶ U.S. savings as a society using USP NaF would be \$1–5 billion annually. ▶ Costs and savings are not distributed evenly throughout society.

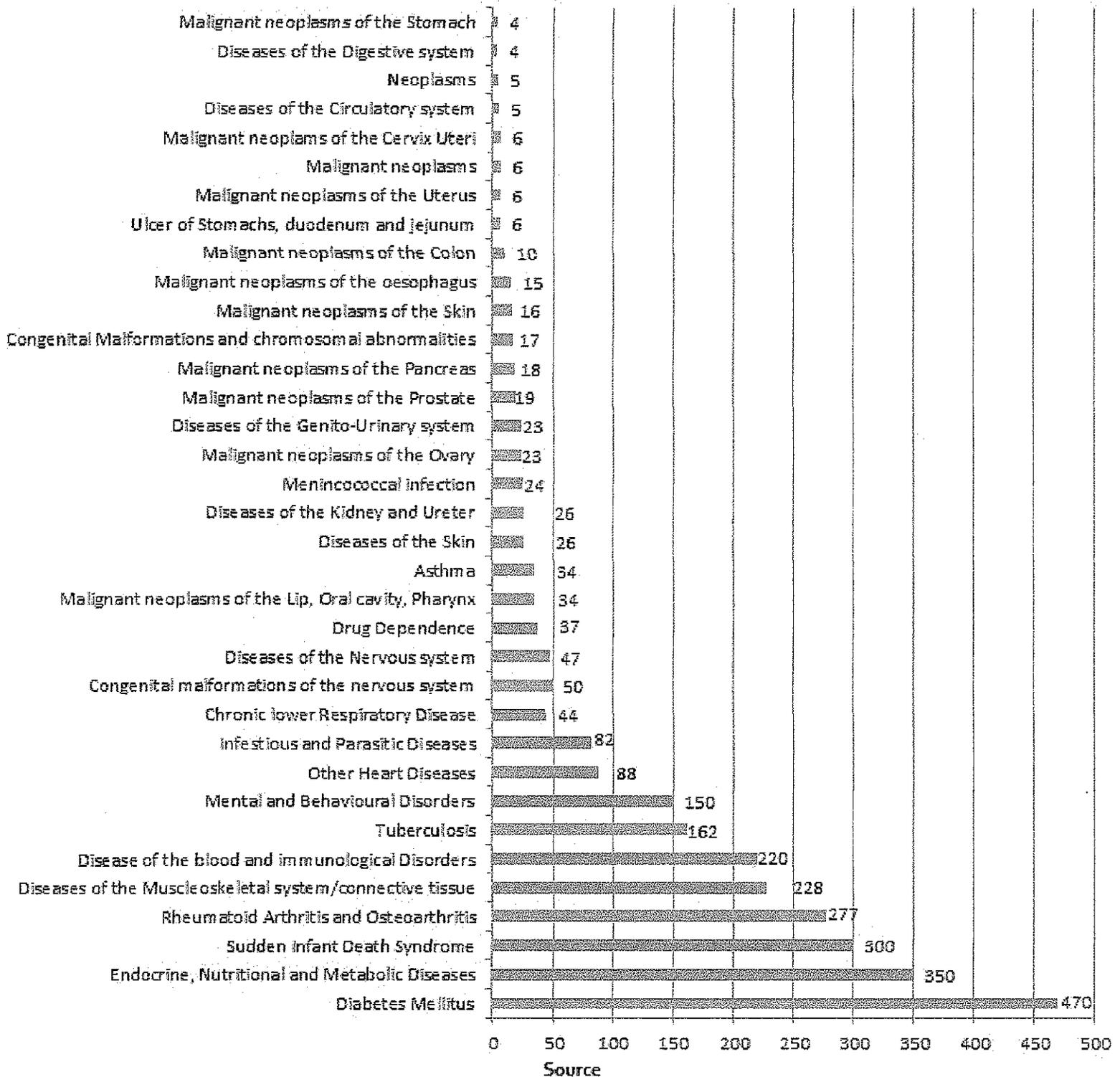
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Figure 1. Variation in Disease Burden for Population of Republic of Ireland (Fluoridated) compared to Northern Ireland (Non-Fluoridated).



Note: Where increased incidence is recorded for either male or females in certain instances, such as for cancers, the highest percentage increase is presented for either sex. Where data is not available for NI, UK data is provided.  
 \* Data from AWARE ROI/NI and Health Promotion Agency UK. Further information included in report.  
 Ireland has highest incidence in EU of Prostate cancer, Non Hodgkins lymphoma and Ovarian cancer.

**Figure 3. Increased Mortality for persons living in the Republic Of Ireland (Fluoridated) compared to Northern Ireland (Non-Fluoridated)**



(Inequalities in Mortality, A report on all Ireland Mortality data 1989-1998, Institute of Public Health 2001)

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## Developmental Fluoride Neurotoxicity: A Systematic Review and Meta-Analysis

October 1, 2012

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### Abstract

**Background:** Although fluoride may cause neurotoxicity in animal models and acute fluoride poisoning causes neurotoxicity in adults, very little is known of its effects on children's neurodevelopment.

**Objective:** We performed a systematic review and meta-analysis of published studies to investigate the effects of increased fluoride exposure and delayed neurobehavioral development.

**Methods:** We searched the MEDLINE, EMBASE, Water Resources Abstracts, and TOXNET databases through 2011 for eligible studies. We also searched the China National Knowledge Infrastructure (CNKI) database, because many studies on fluoride neurotoxicity have been published in Chinese journals only. In total, we identified 27 eligible epidemiological studies with high and reference exposures, end points of IQ scores, or related cognitive function measures with means and variances for the two exposure groups. Using random-effects models, we estimated the standardized mean difference between exposed and reference groups across all studies. We conducted sensitivity analyses restricted to studies using the same outcome assessment and having drinking-water fluoride as the only exposure. We performed the Cochran test for heterogeneity between studies, Begg's funnel plot, and Egger test to assess publication bias, and conducted meta-regressions to explore sources of variation in mean differences among the studies.

**Results:** The standardized weighted mean difference in IQ score between exposed and reference populations was  $-0.45$  (95% confidence interval:  $-0.56$ ,  $-0.35$ ) using a random-effects model. Thus, **children in high-fluoride areas had significantly lower IQ scores** than those who lived in low-fluoride areas. Subgroup and sensitivity analyses also indicated inverse associations, although the substantial heterogeneity did not appear to decrease.

**Conclusions:** **The results support the possibility of an adverse effect of high fluoride exposure on children's neurodevelopment.** Future research should include detailed individual-level information on prenatal exposure, neurobehavioral performance, and covariates for adjustment.

**Key words:** fluoride, intelligence, neurotoxicity.

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National Institute of Health, Environmental Health Perspectives

<http://ehp.niehs.nih.gov/2012/10/developmental-fluoride-neurotoxicity-a-systematic-review-and-meta-analysis/>

# Fluoridated water is unsafe for babies

by DR. BILL OSMUNSON DDS, MPH, *Mercer Island Reporter Contributor*

posted Dec 6, 2011 at 12:18 PM

In 2006 the CDC and ADA advised that infants should not consume fluoridated water. But public health agencies and water districts have failed to warn parents of this. Mercer Island's tap water — which comes from Seattle Public Utilities — contains around 200 times more fluoride than mother's milk and is not safe for infants.

The water that Mercer Island buys from Seattle contains industrial waste fluoride called "silicofluoride," which contains arsenic and lead, and also leaches lead from pipes. Studies show that lead and fluoride both reduce IQ.

A mother's breast milk provides complete nutrition for babies, but is virtually fluoride free. A baby's kidneys are only 20 percent developed and cannot excrete fluoride and lead well. As early as eight weeks, most babies are consuming some formula, often made with tap water. Fluoride is unnecessary and causes harm. Babies drink up to four times more liquids for their weight, as do adults, and ingest too much fluoride if fluoridated water is used for formula or drinking.

The FDA recognizes fluoride toxicity. For example, it requires that toothpaste labels recommend using only a pea-sized dab, and carry FDA warning statements "Do Not Swallow," but if you do swallow, "Call Poison Control." There is 0.25 mg of fluoride in a pea-sized amount of fluoridated toothpaste, which we should not swallow — the same as in one glass of fluoridated water.

The FDA also requires fluoride toothpaste to display "Drug Facts." The Washington Board of Pharmacy defines fluoride for ingestion as a prescription drug. Not even a pharmacist can sell fluoride without a prescription. Yet Seattle forces Mercer Island to distribute this drug to everyone without a prescription, without individual consent, and without limits on the quantity consumed.

Prior to any FDA drug approval, extensive efficacy and safety studies are required, yet no such high quality studies have ever been done on fluoridation materials. Fluoride is an unapproved drug.

The CDC and ADA admit that 41 percent of our adolescents have dental fluorosis — obviously a poor bargain. That's up from 10 percent before fluoridation. Dental fluorosis is an undisputed bio-marker of early toxic fluoride exposure. Over 25 human studies report that when dental fluorosis increases, damage to the brain also increases, resulting in IQ reduction.

Although EPA administrators support fluoridation, EPA scientists strongly oppose it, along with over 3,800 professionals who have signed a petition to halt fluoridation due to health risks.

The CDC, the ADA, the EPA and many peer-reviewed studies agree that infants who regularly ingest fluoridated water directly or in their formula are at risk of harm.

"The toxicity of fluoride is so great, and the purported benefits are so small — if there are any at all — that requiring everyone to ingest it borders on criminal behavior on the part of government," according to the EPA Headquarters Union.

Mercer Island should demand that Seattle deliver "just water." Meanwhile, the City of Mercer Island should provide notices in water billings and on its website that parents should avoid using fluoridated public water for making infant formula.

For more go to [www.WashingtonSafeWater.com](http://www.WashingtonSafeWater.com)

<http://www.mi-reporter.com/opinion/135116398.html>