

Maternal Fluoride Exposure During Pregnancy Correlates to Lower IQ in Their Children

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STORY AT-A-GLANCE

- › Fluoride is an endocrine-disrupting chemical linked to thyroid disease, impaired memory, attention-deficit hyperactive disorder and lowered IQ in children
- › A long-term study sponsored by the U.S. National Institute of Environmental Health Sciences found a correlation between fluoride exposure in utero and subsequent reductions in cognitive function
- › Each 0.5 mg/L increase in fluoride over 0.8 mg/L in the mother's urine was associated with a 2.5-point reduction in IQ and a 3.15-point reduction in general cognitive index scores in the child
- › As the level of fluoride increased, IQ decreased — across the full range of exposures — which means there's no level at which there is no detrimental effect on cognition; it's only a matter of degree
- › In 2015, the recommended level of fluoride in drinking water in the U.S. was lowered to reduce symptoms of overexposure, from an upper limit of 1.2 mg/L to 0.7 mg/L, but even this level is likely placing children's brain development and function at risk

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Many still do not realize the proven health risks inherent with fluoridated water, but the information is spreading. Beginning in 1945, it was claimed that adding fluoride to drinking water was a safe and effective way to improve people's dental health. Over the

decades, many bought into this hook, line and sinker, despite all the evidence to the contrary.

Scientific investigations have revealed that fluoride is an endocrine-disrupting chemical,¹ and have linked it to the rising prevalence of thyroid disease.² Importantly, fluoride has been identified as a developmental neurotoxin that impacts short-term and working memory, contributes to rising rates of attention-deficit hyperactive disorder³ and lowered IQ in children.⁴

In addition, a long-term, multimillion-dollar study sponsored by the U.S. National Institute of Environmental Health Sciences (NIEHS) and conducted by a research team that has produced over 50 papers on the effects of environmental exposures on children's cognitive health, shed light on the price children paid when their mothers were exposed to fluoride during pregnancy.

As noted by Paul Connett, Ph.D., toxicologist, environmental chemist and former director of the Fluoride Action Network (FAN) in the video commentary above (while retiring and handing over the director's position to his son Michael, Connett remains very active in the organization):

"This should spell the end of water fluoridation worldwide. How can you possibly continue to expose millions of pregnant women and children to a known neurotoxic substance, now that you know there's a relationship between how much fluoride a woman is exposed to in pregnancy and the IQ of the children born to them?"

Lowered Fluoridation Level Still Too High

In April 2015, the U.S. government admitted the "optimal" level of fluoride recommended since 1962 had in fact been too high, resulting in over 40% of American teens having dental fluorosis – a sign of fluoride overexposure. In some areas, dental fluorosis rates are as high as 70% to 80%, with some children suffering from advanced forms.

As a result of these findings, the U.S. Department of Health and Human Services (HHS) lowered its recommended level of fluoride in drinking water by 40%, from an upper limit of 1.2 milligrams per liter (mg/L) to 0.7 mg/L.⁵

The HHS will re-evaluate dental fluorosis rates among children again around 2025, to assess whether they were correct about this new level being protective against dental fluorosis. However, even if 0.7 mg/L lowers incidence of dental fluorosis, the study clearly showed this does NOT mean it's a safe level overall.

Prenatal Fluoride Exposure Lowers IQ in Children

In a complaint filed against the U.S. Environmental Protection Agency in response to its denial of a petition to ban water fluoridation, FAN, along with a coalition of environmental and public health groups, presented the agency with more than 180 studies showing fluoride caused neurotoxic harm and reduced IQ in children.⁶

Many of these studies found harm at levels within the range, or precariously close to, the levels millions of American children receive on a regular basis. All in all, there are more than 300 animal and human studies demonstrating fluoride can cause:⁷

- Brain damage, especially when coupled with iodine deficiency or excessive levels of aluminum
- Reduced IQ
- Impaired ability to learn and remember
- Neurobehavioral deficits such as impaired visual-spatial organization
- Impaired fetal brain development

We can add another study to this ever-growing list. This study,^{8,9,10,11} published in Environmental Health Perspectives in 2017, found a correlation between fluoride exposure in utero and subsequent reductions in cognitive function at the ages of 4 and 6 through 12.

Each 0.5 mg/L increase in fluoride over 0.8 mg/L in the mother's urine was associated with a 2.5-point reduction in IQ and a 3.15-point reduction in general cognitive index (GCI) scores in the child, leading the authors to conclude that:

"... [H]igher prenatal fluoride exposure, in the general range of exposures reported for other general population samples of pregnant women and nonpregnant adults, was associated with lower scores on tests of cognitive function in the offspring at age 4 and 6 [to] 12 y[ears]."

Prenatal Exposure More Hazardous Than Childhood Exposure

According to lead author Howard Hu, founding dean of the Dalla Lana School of Public Health at the University of Toronto, this is one of the largest, longest and most rigorously executed studies on fluoride and neurodevelopment ever conducted. The data was collected from nearly 300 Mexican mothers and their children.

While Mexico does not fluoridate drinking water, Mexicans are still exposed to many other sources of fluoride, including naturally occurring fluoride in water, fluoridated salt, dental products, supplements, pesticides and tea.

Importantly, the researchers found that prenatal exposure was far more influential with respect to cognitive function than subsequent fluoride exposure during childhood. As noted by Hu, "the fetal system tends to be more sensitive to environmental toxicants than once the child is born," and this study supports that view. According to Connett:

"This is the biggest moment for us since the Fluoride Action Network was formed in 2000. It vindicates the concerns we have had on fluoride's neurotoxicity since Mullenix's study on animal behavior in 1995 and the first two Chinese studies on IQ published in 1996."

The mean level of fluoride in the urine of the mothers included in the study was 0.9 mg/L. In the U.S., 75% of the population's drinking water is fluoridated, and according to Hu, the levels of fluoride found in Mexican mothers is unlikely to be significantly different from those found in American women.

Despite that, the American Dental Association (ADA) is still refusing to see the light and commented on the study saying its findings "are not applicable to the U.S.," and that the ADA "continues to endorse fluoridation of public water as the most effective public health measure to prevent tooth decay."¹² How the ADA can prioritize the prevention of tooth decay over IQ loss is simply incomprehensible.

This is especially outrageous in light of research¹³ that showed fluoride only works — and inefficiently at that — when used topically. It has no beneficial effects on teeth when ingested. Besides, there are far more effective and safer options for decreasing tooth decay than using a topical poison or ingesting a harmful industrial pollutant!

IQ Loss From Fluoride Exposure Is Significant

According to Connett, the featured study is very important, as it revealed the loss of IQ is quite large. Essentially, a child of a mother drinking water with 1 part per million (ppm) of fluoride would be predicted to have an IQ that is 5 to 6 points lower than a child born to a mother who drank fluoride-free water.

Another important point to be made with regards to this study is that they measured fluoride in urine, which is a far more accurate indicator of total fluoride intake than simply measuring the concentration of fluoride in drinking water, and then calculating how much water is being consumed.

When drinking water is the dominant source of fluoride, then fluoride concentrations in urine and water are typically about the same. Hence, a mean urine fluoride level of 0.9 mg/L implies these women were ingesting the same amount of fluoride as women drinking water with a fluoride level of 0.9 mg/L — just 0.2 mg/L above the currently recommended level for drinking water in the U.S.

When you factor in the range of fluoride exposures in the study, the exposure is likely very close to the range found in many fluoridated areas of the U.S. In a personal email to me, Connett writes:

"The doses in this study are directly applicable to areas with artificial fluoridation. There is no need to extrapolate downward from effects at higher doses. The claims by fluoridation defenders that only studies using much higher doses than occur in areas with artificial fluoridation have shown a loss of IQ are squarely refuted by this study.

Those false claims range from 11 times to 30 times higher, but are based on the logical fallacy that it is the highest dose amongst several studies that is relevant, when it is the LOWEST dose amongst studies that is most relevant."

NIEHS Study Confirms Earlier Results, Necessitating Action

The study also controlled for a wide range of factors – including lead, mercury, socioeconomic status, smoking, alcohol use and pregnancy-related problems – that could potentially skew the results or produce a false effect.

Importantly, the researchers were able to largely rule out the influence of these confounding factors. It also confirms the results of earlier, less sophisticated studies done in Mexico and China, which have been criticized for their shortcomings. According to Connett:

"Some of those studies had higher fluoride exposures than commonly found in the U.S., but many did not. The sole study in a country with artificial water fluoridation (as opposed to artificial salt fluoridation, which was likely a main source of fluoride in this new study) was by Broadbent in New Zealand.

That study found no association between water fluoridation and IQ and was trumpeted by fluoridation defenders. But that study was shown to have almost no difference in TOTAL fluoride intake between the children with fluoridated water and those with unfluoridated water, since most of the children drinking unfluoridated water were given fluoride supplements."

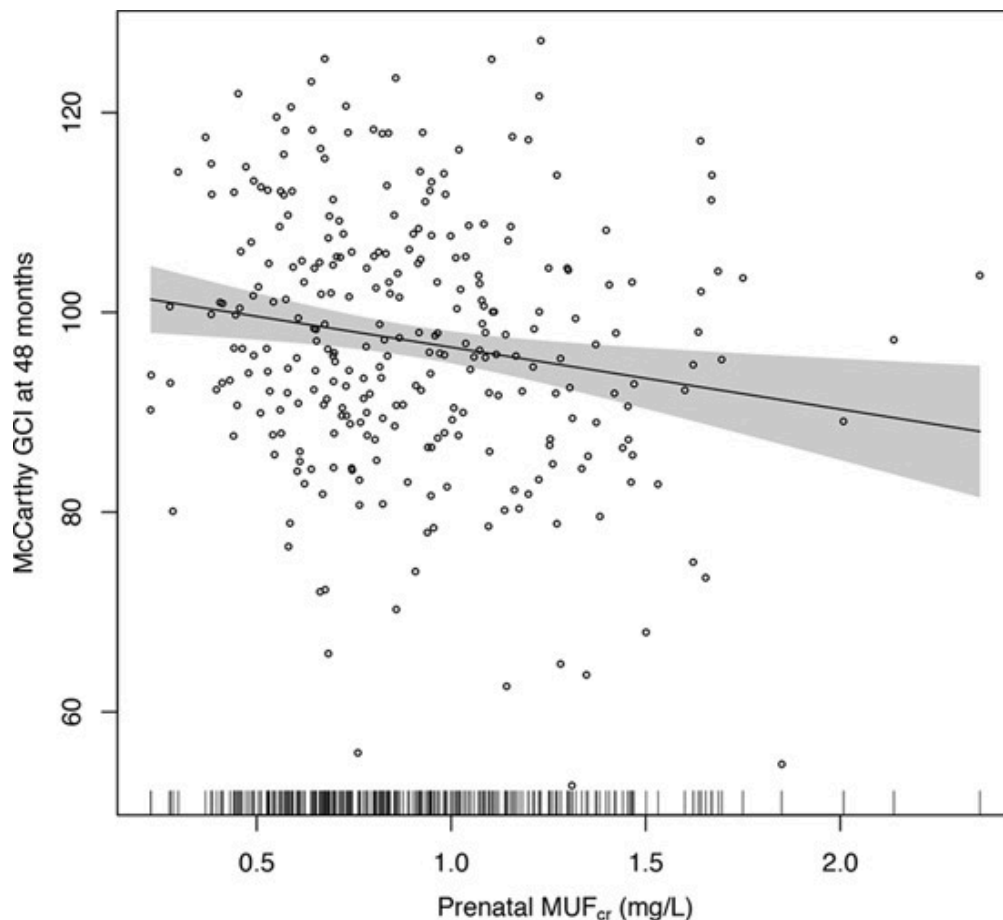
Hu and his co-authors are cautious in their conclusions, and this is to be expected. But that does not detract from the fact that the implications of this study are enormous. No

singular study can prove fluoride lowers IQ when consumed in doses found in fluoridated areas, but when you add it to previous studies, it clearly raises a bright red flag.

Study Shows Linear Relationship Between In Utero Fluoride Exposure and IQ Loss

Another really important finding that is being downplayed or entirely ignored by mainstream media is the fact that there was no threshold below which fluoride did not affect IQ. The study explains this as follows:

"The smooth plot of the association between GCI [editor's note: IQ test at age 4] and maternal prenatal urinary fluoride from an adjusted GAM model [editor's note: a model that corrects for extraneous factors] suggested a linear relation over the exposure distribution (Figure 2)."



Source: [Environmental Health Perspectives September 2017; 125\(9\)](#)

In a nutshell, this means that as the level of fluoride in urine increased, IQ decreased – across the entire range of exposures, from lowest to highest. This, in turn, means there's no level at which there will not be some kind of detrimental effect on cognition – it's just a matter of degree.

Remarkably, the ADA tried to brush off these results by saying it doesn't apply to Americans drinking fluoridated water because the source of the fluoride was unidentified. As noted by Connett, "This makes no sense. It is irrelevant whether the Mexican women got their fluoride from fluoridated salt, fluoride in drinking water, or from fluoridated dental products."

The Many Ways in Which Fluoride Harms Children's Brain Function

As mentioned, there are now hundreds of studies showing fluoride damages brain function, in a variety of different ways. Among the proposed mechanisms of harm, studies have shown fluoride can:¹⁴

Interfere with basic functions of nerve cells in the brain	Reduce nicotinic acetylcholine receptors	Reduce lipid content in the brain
Damage the pineal gland through fluoride accumulation	Impair antioxidant defense systems	Damage the hippocampus
Damage Purkinje cells	Increase uptake of aluminum, which has neurotoxic effects	Encourage formation of beta-amyloid plaques (the classic brain abnormality in Alzheimer's disease)
Exacerbate lesions induced by iodine	Increase manganese absorption, which has also	Impair thyroid function, which can also affect brain

deficiency

been linked lower IQ in
children

development

Fluoride Is an Unapproved Drug

If everyone knew the dangers of fluoride and had a choice, most would likely opt for fluoride-free drinking water. Unfortunately, you don't have that choice if you live in an area that adds fluoride to its municipal water supply. Whether you want it or not, you're being medicated with a substance known to have toxic effects.

It's important to remember that fluoride is in fact a drug, since it's used to prevent a disease (tooth decay), and no other drug has ever been administered as a public health measure across the board without regard for age, sex, medical need and other factors that might place you at increased risk for side effects. Patients who are prescribed drugs must be medically monitored, yet in the case of fluoride, no one is tracking anything.

Once you put fluoride in the water, there is no way to control who gets it and how much, and if you suffer side effects, there's no recourse. Most don't even realize that their health problems might be connected to fluoride toxicity. Fluoride in water is not even regulated by the U.S. Food and Drug Administration (FDA), even though it regulates fluoride in toothpaste and other oral care products, which must bear warning labels about the danger of ingesting those products.

The FDA does not even recognize fluoride supplements (which, like water, are ingested) as safe and effective. In fact, to this day the FDA classifies them as "unapproved new drugs." In 2016, the FDA clamped down on pharmacies selling and misrepresenting unapproved fluoride supplements.

They also issued a warning letter to a fluoride supplement manufacturer, demanding it to cease making the product because it's an unapproved drug — hence it is illegal to manufacture and sell.

So, how is it that fluoride can still be added to water supplies across the U.S. for the purpose of preventing tooth decay — a purpose that, in the eyes of the FDA, renders it a drug, and one which they've never approved as safe or effective? It's a most curious situation that no one appears to have the answer to.

Water Fluoridation Is a Violation of Freedom of Choice

Water fluoridation is an absolute violation of your freedom of choice — to take a drug or not, and a toxic one at that. Fluoroquinolones (fluoride-containing antibiotic and antimicrobial drugs) require FDA black-box warnings, and some of the newer ones have been withdrawn due to toxicity.¹⁵ Fluoride-containing drugs have the unique ability to penetrate your central nervous system, including your brain, which is often why fluoride is used in the formulation.

So, why should we think fluoride in water won't affect the brain? In light of all the evidence, it's high time we cease this careless and dangerous public health practice. It's bad medicine that is doing far more harm than good.

Moreover, the types of fluoride typically added to water supplies are not even "clean" pharmaceutical grade fluoride — which is toxic enough — but rather the chemical byproducts of aluminum, steel, cement, phosphate fertilizer and nuclear weapons manufacturing. These fluoride chemicals have been shown to contain all sorts of toxic contaminants, including lead, arsenic, radionucleotides and aluminum.

To learn more about fluoride and how you can help end this harmful practice, I highly recommend getting a copy of Connett's book, "[The Case Against Fluoride](#)".

Sources and References

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