# 2022 Fluoride Action Network Update 

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## STORY AT-A-GLANCE

> The National Institute of Environmental Health Science-funded Bashash study, published in 2017, showed fluoridated water lowers IQ in children. Each 1-milligram per liter increase in fluoride in a pregnant woman's urine is associated with a four- to five-point drop in her child's IQ
> Canadian researchers found bottle-fed children who lived in a fluoridated community had, on average, nine points lower IQ compared to those who were bottle-fed in a nonfluoridated community
> The science showing water fluoridation is hurting our children is significant, and keeps growing. More than 20 studies published since 2017 have confirmed fluoride lowers IQ
> Water fluoridation became public health policy in 1950 when the U.S. Public Service endorsed the practice before any of the trials started in 1945 had been completed. For many decades since then, little effort has been made to research harmful effects
> The Fluoride Action Network (FAN) has sued the Environmental Protection Agency in an effort to end the water fluoridation policy. A win will make it easier to overturn water fluoridation policies on the state level, even if the EPA drags its heels. We're currently waiting for a final report from the National Toxicology Program. Once the report is released, FAN can go back to court and hopefully win the case

In this interview, Paul Connett, Ph.D., cofounder of and scientific adviser for the Fluoride Action Network (FAN), provides an annual status update for 2022. As long-time readers of this newsletter will know, we've supported and promoted FAN for over a decade.

Fluoride is one of the many unnecessary barriers to optimal health, and we've been fighting all this time to educate people about the risks of fluoridated water, and to end water fluoridation once and for all. During Fluoride Awareness Week, I will match your donations dollar for dollar, so please consider making a tax-deductible donation today.

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## Fluoride Lowers IQ

According to Connett, the science was conclusively resolved in 2017, when the first of the National Institute of Environmental Health Science (NIEHS)-funded studies came out. This study, the so-called Bashash study, ${ }^{1}$ confirmed what many previous investigations had shown, namely that drinking fluoridated water lowers IQ in children.
"It was a very striking study," Connett says. "It was a very, very good study. It had to be, to get NIEHS funding. It was based on individual measurements of exposure in pregnant women, and individual measurements of outcome.

They measured the fluoride levels in their urine, three times, once in each trimester. Urine level is a very good measure because it gives you a measure of total exposure, whether it comes from toothpaste, water or food.

They found a strong association between the pregnant woman's exposure to fluoride and lowered IQ in children, and they'd taken care of dozens of confounding variables. It was four to five IQ points for a 1-milligram per liter increase of fluoride.

In fact, the range for that four to five IQ point lowering was the same range that you get for pregnant women in the United States in terms of fluoride levels. So, that was the most striking thing. The average level in their urine was 0.87 parts per milligram (i.e., 0.87 milligrams per liter)."

## Children's IQ Is Being Decimated

While on the topic of IQ, there's now evidence suggesting that pandemic measures such as mask wearing and isolation have caused an average 22-point drop in IQ among babies born during the pandemic. ${ }^{2}$ Normally, only $16 \%$ of children are born with an IQ lower than 85 . Most are between 85 and 115. During the pandemic years, almost all the babies they tested scored below 85 , scoring an average of just 78 !

A four- to five-point loss for every 1-mg per liter increase in fluoride in mothers' urine was shocking, so that really says something about the harm these countermeasures have done. Compound that with fluoridated water, and some children could be looking at a 27-point loss in IQ, which is simply staggering. That's basically the difference of going from the level of genius to average, or from average to imbecile.

The pandemic restrictions were clearly an aberration, although it's not impossible that they'll try to implement them again in the future. But if we discount the impact they've had, fluoride tops the list of environmental factors that rob children of intelligence, and has been doing so for the last 75 years. Connett notes:

> "Chris Neurath, our science director, estimates that more IQ points are being lost in America from fluoride than caused by any other factor, including premature birth and exposure to lead. Fluoride, today, is causing more loss of IQ points than lead."

When the Bashash study was published, Connett thought the fight was over. But he was wrong. Water fluoridation continued unabated in many places. A few years later, a Canadian study came out (Till, 2020), showing the IQ difference between children who were bottle-fed in a fluoridated community, compared to those who were bottle-fed in a non-fluoridated community was nine points.

## Bureaucratic Inertia and Profit Motives Put Children at Risk

So, the science ${ }^{3}$ showing water fluoridation is hurting our children is there. As noted by Connett, what we've been doing for the last several decades is to try to push back the political forces that refuse to admit the error and stop their endorsement of water fluoridation.
> "One of the shocks I've had, over the last few years, since 2017, is to discover that there really are people out there who believe a small benefit to teeth, if it exists, actually warrants this risk to the brain," Connett says. "[They believe] that reducing tooth decay is more important than protecting children's brains.

And unfortunately, it includes the U.S. surgeon general. It includes the most powerful people in public health in England, Canada, Australia, New Zealand, the United States and Ireland.

When people ask me, 'Why do they fluoridate the water? Why do they take these risks in order to reduce tooth decay?' I've had to say, 'Well, you are asking me to come up with a rational explanation for irrational behavior.' It's just not rational ... there's no scientific explanation for this practice.

The only thing I can come up with is ... money ... All the major universities in the United States are benefiting from government money subsidizing dental research. And if you say that fluoridation is the best thing since sliced bread, this money keeps rolling in.

Obviously, there's also a lot of money going into the phosphate fertilizer industry, where the fluoridated chemicals come from. Instead of treating [fluoride] as hazardous waste, it's put in our drinking water. So that's another 'rational' explanation, if you like, as to why it's happening. But the most likely [reason], from my point of view, is bureaucratic inertia."

The first municipality to institute water fluoridation was Grand Rapids, Michigan, in 1945, ${ }^{4}$ but it wasn't until 1950 that the U.S. Public Health Service and the American Dental Association endorsed it. ${ }^{5}$ This occurred before any of the trials - which were
supposed to be ongoing for at least 10 years - had been completed. For many decades since then little effort has been made to research fluoride's harmful effects.

This changed in 2017 with the NIEHS National Institute of Environmental Health Sciences-funded IQ studies. However, even now, the people in charge of this policy have not been willing to admit they were wrong in promoting this practice for fear of losing credibility. It may be that if they were to admit that fluoridation was a mistake, the public wouldn't trust them on other public health practices.

Unfortunately, over time, it has only become more difficult to admit the mistake. Who wants to admit government has been harming children's health for more than 75 years without ever changing course? Personal careers may no longer be at stake, but the credibility of the agency is. Loss of public trust in our health agencies could also affect people's trust in other public health measures, including childhood vaccinations, which they want to avoid at all costs.

## Warnings Are Not Being Put Out

Now that we know there's no protection for fetuses - that any fluoride a pregnant woman consumes goes into her developing child, including its brain - pregnant women need to be told to stop drinking fluoridated water and using fluoridated toothpaste, at least while they're pregnant and possibly for some time before. But those warnings are not going out. Connett says:
"We begged the Centers for Disease Control and Prevention, saying, 'We know it's going to take you time to stop your support of this policy, but at least warn pregnant women to avoid fluoridated water and tell parents who bottle feed their infants not to use fluoridated water.'

But they won't do it. We wrote several letters to the head of the CDC, and then we asked them to listen to experts. We got experts of some of these IQ studies.

Philippe Grandjean, Bruce Lanphear and Christine Till gave a 30-minute presentation to Dr. Karen Hacker at the CDC. This was all private, no one was
watching except us, and they had no questions whatsoever ... but they continue to promote fluoridation as the best thing since sliced bread.

In fact, they're planning right now to increase the number of people potentially getting fluoridated water by 19 million, because they're developed a tablet system, like the tablets you put into urinals, big tablets of sodium fluoride, and these are injected [into the water supply] through a plastic tube. It's a very cheap delivery system, which is suitable for small communities.

So, 19 million people who have been living in rural areas, who've been protected because it was too expensive to put in all the usual equipment, now have the wonderful benefits of these fluoride tablets. And the promotion of this new delivery system is going on at the same time that the science is coming out [showing it's] lowering the IQ of children and increasing symptoms of ADHD."

## EPA Has a Duty to End Water Fluoridation

In 2016, FAN filed a petition under the Toxic Substances and Control Act (TSCA) with the Environmental Protection Agency (EPA), primarily based on Chinese studies showing fluoride harms the brain, urging them to end water fluoridation. Under the TSCA, the EPA is required to ban uses of chemicals shown to pose an unreasonable risk to the health of the American people, including vulnerable subsets.
"Dr. Philippe Grandjean did a risk assessment using the Canadian study and the Mexico City study - the Bashash ${ }^{6}$ and Green ${ }^{7}$ studies - and estimates the level of fluoride in mothers' urine associated with a one-point IQ loss in offspring is 0.2 ppm. The average in the United States is about 0.8 to 0.9 parts per million in a fluoridated community.
0.7 ppm is the recommended level to put in the water. I'm talking about the level in a mother's urine, which is approximately the same level. In Canada, they measured it as 0.91 ppm . So, if 0.2 ppm lowers IQ by one point, 0.8 ppm would
lower the IQ by four IQ points; 0.9 ppm would lower it by 4.5 IQ points. The relationship is linear."

## Update on FAN's Lawsuit Against the EPA

When the EPA rejected FAN's petition, FAN filed a lawsuit against them. The trial began in June 2020. Leading experts and scientists testified on FAN's behalf. The EPA, meanwhile, used experts from Exponent, a consulting company that does the dirty work for Dow, DuPont and other chemical companies. They've defended dioxins, PCBs and RoundUp, just to name a few.
"They tried to show, in court, that none of those things are harmful. It's all in our imagination. And they tried to do the same with fluoride, but the judge at the end was clearly impressed with the evidence ... The other striking thing in the trial is that these industry-friendly consultants, Exponent Inc., admitted that the studies we were citing ... were the best studies conducted to date.

And so, he said, 'I want to see three things. I want to see this BMD analysis published' - that was by Philippe Grandjean, and it's since been published; 0.2 ppm in mothers' urine [results in the] loss of one IQ point - 'I want to see the National Toxicology Program's (NTP) final report, and I want to see if there are any other studies which have taken place, which contradict what we've heard.'

Well, he's got the BMD analysis from Grandjean, but we are still waiting for the National Toxicology Program to finalize [its report]. And this is the final act of politics versus science in the whole fluoridation fiasco. For 70 years, they really haven't had decent science demonstrating benefits and certainly not decent science showing it was safe.

They've avoided the studies showing harm. Finally, we've got those studies. This is the final act, but clearly something is delaying that NTP report, and we think it's the dark forces behind fluoridation, the dental lobby and the other people with perhaps economic interest who cannot bear to see this practice go.

For them, protecting this policy is more important than protecting the health of our people, and that's a scary thing. When policy is king, science is a slave, and that's what we're seeing."

## Are We Witnessing the Battle of Two Agencies?

The sad fact is, many if not most of our public health agencies and regulatory bodies are completely captured by the industry, which is why public health now comes last.

Connett's wife is currently researching the role of the National Institute of Dental and Cranial Facial Research (NIDCR) in the fluoridation program. This agency came into existence in 1948, on the back of the water fluoridation program. As such, it became the conduit for dental research on the taxpayer's dime, and a lot of that money was siphoned into fluoridation.
"Fluoridation was the justification for the gravy train," Connett explains. "My wife has been going into that gravy train and I have a hunch that what we are looking at right now is the battle between two agencies: the NIEHS, which is concerned about fluoride's neurotoxicity, and the NIDCR, which does not want to see fluoridation go down the tubes."

The good news is that, since we started over two decades ago, highly-respected top experts in neurotoxicity are now involved in the research on fluoride, and more are joining in to look at the toxicity of fluoride on various tissues. New studies are coming out all the time. More than 20 have been published on fluoride and IQ since 2017.

And, even if the EPA ends up dragging its heels for years when it comes to implementation at the federal level, a positive ruling would make it far easier to end water fluoridation at the state level.

## How to Avoid Fluoride Exposure

In the meantime, how can you avoid fluoride exposure? Connett responds:
"I'll tell you what we do. We get our water from a local spring. And you do have companies that deliver spring water to your household. If you can afford it, that is the best way. If you have it done by a company that does that, they will tell you how it's tested and you will be secure knowing that you're not drinking fluoride.

I think that's the single best investment. Get non-fluoridated spring water, and use that for cooking, tea, coffee, et cetera, and drinking. The other thing you can do is, obviously, avoid fluoridated toothpaste.

Avoid mechanically deboned meat - patties, where they mince up the meat using a machine - because fluoride accumulates in animal bone, so that's where you're going to get fluoride from. If you're going to eat meat, eat whole steaks, whole chickens or whatever, not minced up. Avoid ground meat.

The other thing is fish. Tinned fish, pilchards, sardines, salmon, the bones in those tinned fish tend to be very soft [and contain loads of fluoride]. In the sea, [natural fluoride] is 1.4 ppm , parts per million, so the fish [bones contain it].

For 20-odd years I've been trying to tell people the fluoride ion is the toxic thing ... There's nothing safe about natural fluoride. The only thing about natural fluoride is when you get it, you usually get a lot of other minerals as well, including magnesium and calcium, and they in turn can be protective against fluoride.

So, if you get 1 ppm fluoride but you get 100 ppm of calcium or magnesium, that will help protect you against that fluoride ion being taken up."

If you want to get your fluoride level tested, just look up labs that measure fluoride in water. They will be able to provide you with that test, and it's typically quite inexpensive. If you have fluoridated water, be aware that it's very difficult to filter out. Cheap carbon filters won't do it. You need either reverse osmosis or distillation equipment to get it out, which is why NOT adding fluoride in the first place really is the best solution.

## What's Next With the EPA Lawsuit?

For now, we're waiting for the NTP report to come out. Once published, FAN will go back to the court. At that point, the judge will want to hear expert analyses of the report from both sides.
"He will read it, but he will want experts from both sides to convince him that the NTP is saying what we think it says - that the best studies show that fluoride lowers IQ ...

The NTP has had two draft reviews, and in those draft reviews, they found according to Chris Neurath who analyzed them - 27 studies which they classified as high quality, meaning low risk of bias ... and of those 27 high quality studies, 25 found a lowering of IQ and two did not. So, 25 out of 27.

Of those 25, 11 were done at less than 0.7 ppm or equal to 0.7 ppm . That's the level at which we fluoridate ... and the majority of the high-quality studies ... found a lowering of IQ at less than 1.5 ppm . And 1.5 ppm is what the EPA considers to be relevant, as far as any study pertaining to water fluoridation.

Remember, you've got to deal with things like margin of safety, and if IQ is lowered at 1.5 ppm, there is no margin of safety to protect children drinking 0.7 ppm, because some could drink twice as much water as other children. They would be getting the equivalent of 1.5 ppm in terms of dose. Then, you've got the range of vulnerability of those children.

So, less than 1.5 ppm fluoridation would have to end if it lowered IQ. That's if you lived in a world which was rational and in which science had a chance of actually functioning in the regulatory bodies. But most of them are captured by industry. The CDC is captured by the drug industry, the EPA is captured by the chemical industry, the FDA, until recently, [by] the mercury people [and the drug industry]."

## Sources and References

- 1, 6 FAN Bashash study 2017
- 2 EDsource.org September 17, 2021
- ${ }^{3}$ FAN Research
- ${ }^{4}$ CDC Water Fluoridation
- ${ }^{5}$ Am J Public Health. 2016 February; 106(2): 210-211
- ${ }^{7}$ FAN Green study 2019

