18 September 2021

Dear Minister of Health and Secretary of the Department of Health

Thank you for agreeing to receive and reply to questions about water fluoridation.

I request a reply please from each of the Minister for Health and the Secretary of the Department of Health (the occupant of the latter named position being the real person who is responsible for signing off on Directions to Fluoridate).

Could your written responses to my questions please be sent via Port Macquarie-Hastings Council, for Cr Lisa Intemann to deliver to me? I choose not to name myself because of the likelihood of retribution in the workplace for speaking up on this matter.

My concern is people's health, and I have taken the time and effort to write now despite a history of non-responses to others on this topic from authorities, because an offer was specifically extended to the Port Macquarie-Hastings Councillors to convey such questions.

I write in the hope that NSW Health still has a conscience, both to do its duty to act to benefit people's health (and not the opposite), and to change its mind if presented with evidential reason for doubt.

In the questions below, I have not provided references to a quality required for publication, but can provide same if the level of evidence you provide in your reply warrants such response. It is after all not me, but you who are the parties responsible for causing people to consume fluoridated water and as such should be wary not to ignore valid evidence of potential harm to your consumers.

It is my view at this moment that you personally are likely ignorant of the sort of information offered below, having been bureaucratically shielded from many aspects of the truth about fluoridation. Your way out is easy: recognise the evidence presented here and from other questioners, and admit your ignorance of it to date. The mounting evidence of potential harm means we will soon be seeing the end of this fluoridation malpractice, and the sooner one gets on the right side of history on this issue the wiser.

Yours sincerely

NEURODEVELOPMENTAL TOXICITY

1 There is a rapidly growing body of published scientific evidence associating fluoride exposure with damage to the developing brain of the fetus, infant and child.[1]

The ground-breaking Grandjean study, published in 2021 in the journal *Risk Analysis*, employed the US EPA's preferred Benchmark Dose Analysis method (BMD), and confirmed that even very low fluoride exposure of the mother during pregnancy impairs brain development in the fetus. The study concluded that fluoride consumption may be causing more damage to our population than lead, mercury, or arsenic.[2]

Grandjean 2021 reports that maternal urine-fluoride concentration of 0.2 mgF/L, was associated with a 1-point reduction in IQ of the child. That fluoride concentration in urine

1. Grandjean P. "Developmental fluoride neurotoxicity: an updated review"; published 19 December 2019 in Environmental Health. https://ehjournal.biomedcentral.com/articles/10.1186/s12940-019-0551-x#citeas
2. Grandjean P. et al "A Benchmark Dose Analysis for Maternal Pregnancy Urine-Fluoride and IQ in Children"; Published 8 June 2021 in Risk Analysis. https://pubmed.ncbi.nlm.nih.gov/34101876/

equates to around only one-fifth what can be expected from fluoridation under NSW regulations.

By extrapolation from Grandjean's findings, NSW can be expected to be causing through fluoridation a lowering of around 5 IQ points on average per child, thereby shifting the intelligence bell curve leftwards, toward significantly fewer geniuses and significantly more mentally challenged children. Please do ask a demographic actuary what that means for the economic capacity of a population, and then consider whether continued fluoridation is defensible.

3 The US National Toxicology Program (NTP) is in the process of an ongoing systematic review of the effects of fluoride exposure.[3] Their most recent report, at this stage a 2019 pre-print monograph, identified 149 relevant human fluoride peer-reviewed studies on that topic.

As is common in fluoridation science, many of the studies were found to be of quite poor quality for reasons such as failing to account for confounding factors. However, NTP identified 27 of the studies as being of higher quality, and therefore worthy of closer analysis.

Granted, this monograph is not yet peer-reviewed and has not been adopted as NTP policy – the final NTP report being due by the end of 2021. However, the final report is not expected to change in any great extent, which makes their preliminary finding worthy of discussion.

The 2019 NTP monograph reports that "fluoride is *presumed to be a cognitive neurodevelopmental hazard to humans*" (page 8), which is the strongest possible conclusion of risk based on epidemiological studies. You could wait until the final NTP report comes out confirming that conclusion.

However, what will not change in the final report is that of 27 studies identified by NTP as being of higher-quality, fully 25 of them found a statistically significant adverse neurological effect from fluoride consumption. (Two found no effect, and none found any beneficial effect).[4]

That is not a wholly unexpected finding, as it is well-known that growing bodies are very susceptible to chemical disruption because of the rate of growth and the permeability of the immature blood-brain barrier.

Despite the weight of evidence, NTP nevertheless decided to further clarify the findings regarding an 'inconsistency' in the degree of adverse effect between fluoride exposure at lower and higher levels. We can expect the final NTP review to clarify that inconsistency. But there is no evident reason to expect a different direction in the final findings, especially as there is an explanatory mechanism.

QUESTION: Would the findings of Grandjean 2019 and 2021, plus the other 25 higher-quality studies reporting potential neurological damage from fluoridation, be enough to make you question the presumed safety of fluoridation? If not, how many such studies would be needed to make you doubt the claims of unconditional fluoridation safety and institute health warnings?

---

3. NTP 2019. "Draft NTP monograph on the systematic review of fluoride exposure and neurodevelopmental and cognitive health effects." https://www.asdwa.org/wp-content/uploads/2019/10/draft_fluoride_monograph_20190906_5081.pdf
4. The 25 studies are:
    1) 11 studies at or below water concentration 0.7 mgF/L: Barberio 2017, Bashash 2017, Bashash 2018, Ding 2011, Green 2019, Riddell 2019, Sudhir 2009, Till 2020, Yu 2018, Zhang 2015, Zhou 2019;
    2) 4 studies at or below water concentration 1.5 mgF/L: Cui 2018, Valdez Jimenez 2017, Wang 2012, Wang 2020; and
    3) 10 studies above water concentration 1.5 mgF/L: Choi 2015, Li 2004 (translated in Li 2008), Rocha Amador 2007, Rocha Amador 2009, Saxena 2012, Seraj 2012, Trivedi 2012, Wang 2020, Xiang 2003, Xiang 2011.

4 One of the studies considered by the NTP review – Green 2019 – is a U.S. government-funded study linking exposure to 0.7 mgF/L fluoridated water during pregnancy to lowered IQ in the child. It was published in the highly reputable *JAMA Pediatrics*.

The Green study does not help determine the safe levels of fluoride in drinking water, but conversely it does offer highly reliable evidence that fluoride is not safe for the developing brain, even at a level of 0.7 mgF/L - which is 30% **lower** than the 1 mgF/L as instituted under NSW regulations.

Following here is a link to a podcast issued by the Editors of JAMA, discussing their surprise at the findings of the Green 2019 study, and the extent of scrutiny it was subject to before the decision to publish, and I urge you to have a listen.

https://edhub.ama-assn.org/jn-learning/audio-player/17802991

Their printed Editorial can be found at:

https://jamanetwork.com/journals/jamapediatrics/article-abstract/2748628

5 In order to determine the 'safe' level of fluoride, one must first assess a dose-response by examining many related studies, and determine the lowest level of exposure where there appear to be 'no observable adverse effects' (NOAEL). The NOAEL for fluoridation in terms of adverse effects on the growing fetus appears to be **less** than 0.7 mgF/L, and very much less than the NSW fluoridation level of 1 mgF/L.

Moreover, once the NOAEL is established one cannot determine toxicological 'safety' without first applying a certain dilution to the NOAEL, in order to account for the natural variability in the human population. The most common NOAEL for that purpose is ten-fold. That means that if the NOAEL for fluoridation was determined to be 0.7 mgF/L, the safe level could be 1/10th of that, namely 0.07 mgF/L.

QUESTIONS: There is now strong evidence associating fluoride consumption with adverse neurodevelopmental effects in the fetus at levels of around 0.7 mgF/L, which is itself 30% lower than applies to NSW fluoridation - even before allowing for a safety margin.

With that information in mind, do you still stand by the claim that fluoridation at 1 mgF/L is unconditionally safe for everyone?

Will you give me your personal assurance and guarantee that fluoridation at 1 mgF/L is safe for me and my family as consumers of fluoridation?

If you cannot honestly answer 'Yes' to either of those questions, will you immediately institute action to ensure that the NSW community is provided with accurate warnings of the knowable risks from fluoridation? If not, why not?

Will you also act to ensure that all pregnant women are enabled to be tested for fluoride burden, so they can manage their bodily fluoride levels to ensure they are not causing harm to their fetus? If not, why not?

Will you act to ensure that warnings are issued to inform expectant mothers not to consume fluoridated water, and to inform parents not to make-up bottle feeds using fluoridated water? If not, why not?

BIOLOGICAL TOXICITY

The findings to date from the NTP review are not the only reliable data available on fluoridation risk. The US National Research Council's *Fluoride in Drinking Water: A Scientific Review of EPA's Standards* (2006) is a three-year multi-disciplinary assessment of published

studies investigating the effect of fluoride consumption on human biology.[5] The NRC 2006 report found that the US assumed 4 mgF/L safe level of fluoride in water is not safe and should be lowered.

The report identified risks to various organs, including: bone; tooth; brain; endocrinal system; thyroid; pineal gland; insulin secretion; immune system; gastrointestinal system, and kidney, as well as exacerbation of the effects of iodine deficiency. In many instances, those risks appeared in association with fluoride consumption much lower than a water concentration of 4 mgF/L, and even lower than 1 mgF/L, down to 0.2 mgF/L in the case of iodine deficient individuals.

The NRC report combined with the studies being analysed by the NTP review, offer a treasure-trove of existing studies upon which to conduct a dose-response analysis, to ascertain a reliable NOAEL for fluoride consumption.

As fluoridation is forced on basically the entire community, and as the emerging evidence is strongly suggestive that fluoride consumption is not safe for all the population, fluoridating authorities such as yourselves would appear beholden, under your legal duty of care, not to continue fluoridating without properly assessing fluoride toxicity and applying an appropriate safety factor.

QUESTIONS: Are you still confident of the safety of fluoridation? If so, please will you provide the published evidence upon which you rely for your conclusion, and which of course must be of higher quality than that provided by the 2006 NRC report and the 2019 NTP review collectively?

UPPER LEVELS OF INTAKE FOR INFANTS

I am very concerned at the apparently careless approach being adopted with respect fluoridation and infants. It seems critical first to recognise that human milk typically contains very little fluoride (typically under 0.005 mgF/litre), meaning that infants have evolved consuming very little fluoride, and there is no normal biological function known to require the involvement of fluoride. All attempts to demonstrate a normal biological purpose for fluoride have failed.

That fact has long been recognised, and historically the recommended upper limit for fluoride consumption by infants has been either zero or very low. I will willingly provide a host of historical fluoridation reports to confirm.

Infants who are breastfed are not so much at risk. But infants who are bottle-fed are at distinct risk from both the fluoride in formula and the make-up water. In 2006, the American Dental Association recognised the problem and publicly warned parents saying, “If using a product that needs to be reconstituted, parents and caregivers should consider using water that has no or low levels of fluoride.” Similar statements and warnings appeared in Australia, but soon disappeared.

Contrary to historic wisdom, and despite a growing body of evidence associating fluoride ingestion with damage to the developing brain, in November 2016 NHMRC substantially INCREASED its recommended Upper Level of Intake for infants and children up to 8 years of age, as shown in the table.

---

[5] National Research Council. 2006. *Fluoride in Drinking Water: A Scientific Review of EPA's Standards*. Washington, DC: The National Academies Press
https://www.nap.edu/catalog/11571/fluoride-in-drinking-water-a-scientific-review-of-epas-standards

Age Group	Pre-2017	2017	Increase
Infants and children up to 8 years (mg/kg bodyweight/day)	0.1	0.2	100%
Infants 0 – 6 months (mg)	0.7	1.2	71%
Infants 7 – 12 months (mg)	0.9	1.8	100%
1 – 3 years (mg)	1.3	2.4	85%
4 – 8 years (mg)	2.2	4.4	100%

Australia's recommended upper fluoride intake limits for infants and children are now significantly higher than or double the upper limits used in the United States and elsewhere.

The "Expert Working Group" (EWG) within NHMRC, who reviewed and changed these Upper Levels in 2016, admitted that, based on the original Upper Levels determined by the US Institute of Medicine in 1997, most Australian infants would exceed those consumption limits. In particular, the Working Group recognised that bottle-fed babies fed using fluoridated make-up would likely exceed the Upper Limits.

Alarmingly, rather than reducing the limits and taking appropriate steps to warn parents of the possible risks and need to reduce fluoride consumption, the Working Group simply doubled the upper levels without special notice to the community. Such action seems to be an egregious assault on human health and safety and must be explained.

QUESTIONS: All efforts by others to secure an explanation from NHMRC as to the justification for doubling the allowable upper intake limit for infants and children have failed.

Will you please request from NHMRC, and provide in your reply to me, their reason for doubling the Upper Limits and the evidence upon which they rely in making that change?

Do you personally still support fluoridation despite the known risk to bottle-fed infants if fed with fluoridated make-up water? If so, why?

I look forward to your answers to my questions.

KIND REGARDS