

Covering Letter
21st January, 2017

Submission on the Amendment to Fluoridation of Water Supplies Bill

To the Health Select Committee

Personal Details:

This submission is from Dr. Stan Litras BDS BSc, Level 10, 86 Lambton Quay, Wellington.

I wish to appear before the committee to speak to my submission.

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SUBMISSION

I oppose the intent of this amendment.

ABOUT ME

I am a graduate of the University of Otago Dental School, and have been in private practice in Wellington for over 30 years, also having served as President of the Wellington branch of the New Zealand Dental Association (NZDA) and on the NZDA as a board member.

On graduation I took the dentist's Hippocratic Oath "for the public weal", an old word for the public good (possibly also an old world concept in some circles).

My current ethical framework as a NZ dentist requires me to respect human rights, including the right to informed consent, right to refuse treatment, put the patient's individual interests first, and respect individual differences.

In 2013 I became concerned that the Ministry of Health (MOH) and District Health Boards (DHBs) were misrepresenting fluoride science to the public, overstating benefits and understating health risks.

Along with other NZ dentists who had come to similar conclusions, I formed a study group Fluoride Information Network of Dentists (FIND) to allow review and discussion of the evidence, and to contribute to accurately informed public opinion and discussion, as required by our Code of Ethics.

I have presented evidence based information at many public meetings on fluoridation around New Zealand and Australia, at City Council hearings, and I provided an affidavit at the South Taranaki Court case against the DHB. I have communicated with leading scientists in the field around the world, have contributed to discussion in the NZ Dental Journal and NZDA Newsletter. I collaborated in the Cochrane Review 2015, co-authored a scientific critique of the Gluckman Review 2014, and have published on Researchgate. I have published a website containing PDFs or links to critical scientific research in fluoridation, presentations, etc. in the public interest www.fluoridation.nz

I oppose the intent of this bill because:

1. I consider the intent of this Amendment is not in the spirit of the Health Act, breaches Human Rights, and is not in the public interest.
2. The purpose of the Amendment appears to be to suppress public discussion and information by taking the decision making away from communities and making it a central government decision, using the DHBs as a proxy.
This denies transparency, oversight and informed consent, which is fundamental in a democracy to protect the public from poor Ministry decisions which can be detrimental to their health and wellbeing, of which there are prior examples.¹
3. With the large body of evidence suggesting that water fluoridation is not effective, not safe, and not cheap, anachronistic and misguided MOH agendas to extend water fluoridation are going against the weight of knowledge and will result in expensive (to ratepayers) white elephants around the country, money which can better be used to reduce child tooth decay with targeted education programs.

¹ Let us Spray, TV3 documentary on 245T <https://www.youtube.com/watch?v=9HZOkp2jDwg>

Outline Of Submission:

I. AMENDMENT IS NOT CONSISTENT WITH THE SPIRIT OF THE HEALTH ACT

1. Fluoride is a contaminant
2. Public is misinformed about fluoride chemicals
3. Contamination of raw water or pollution of water supply
4. Violates human rights guarantees

II . DISCLOSURE STATEMENT IS FLAWED

1. General intent is not in the public interest
2. Weight of evidence is not represented accurately and objectively
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 - b. Why water fluoridation is Not Effective
3. Harm from exposure is understated
 - a. Fluoride Toxicity is misrepresented
 - b. No Requirement to Monitor Fluoride Exposure or assure safety
 - c. Evidence of harm
 - d. Dental Fluorosis
 - e. Thyroid disease
 - f. Brain Development
 - g. Denials
4. Impact Analysis Flawed
5. Legislative content
6. Bill of Rights Act
7. External consultation
8. Charges
9. Decision making powers
10. Delegated Legislation

A note on endorsements

III. SUMMARY

IV. RECOMMENDATIONS

V. ATTACHMENTS

1. IQ Loss Paper (2016)
2. Critique of Gluckman review (2015)
3. Auckland Decay Data Paper (2017)
4. NZ Decay Data Paper (2014)
5. Video Clip (245T)

I. AMENDMENT IS NOT CONSISTENT WITH THE SPIRIT OF THE HEALTH ACT

1. Fluoride is a contaminant

Part 2A of the Health Act 1956 states:

(1) The purpose of this Part is to protect the health and safety of people and communities by promoting adequate supplies of safe and wholesome drinking water from all drinking-water supplies.

Fluoride is an environmental contaminant ². In the body, it causes damage to cells of many organ systems and damages DNA.³ Addition of fluoride chemicals to the water supply does not make it safe and wholesome, but less safe and less wholesome.

This Amendment seeks to increase the levels of fluoride contamination in the drinking water of all New Zealanders.

2. Public misinformed about fluoride chemicals

69A 2 (i) provides for the dissemination of information about drinking water.

However, the MOH has not given accurate information to the public regarding the fluoride put in the water, such as its source and its health risks

The MOH, and DHBs acting under its direction, advise the public that they are simply topping up levels of naturally occurring fluoride.⁴

In fact, fluoride chemicals used are not the same as the fluoride which occurs naturally (calcium fluoride), and is itself an environmental contaminant. They are silicofluorides, Grade 6 or 8 toxic waste from the phosphate fertilizer and aluminium industries, which have been sourced primarily from China and Belgium in the past. These dissociate in water, releasing toxic fluorine, and silicate products whose behaviour in the body is unknown. Additionally, these waste products are not medicinal grade, but contain various contaminants such as arsenic, lead and radon.⁵

3. 69ZZO Contamination of raw water or pollution of water supply

(1) Every person commits an offence who does any act likely to contaminate any raw water or pollute any drinking water, knowing that the act is likely to contaminate or pollute that water, or being reckless as to the consequences of that act.

² WHO Guidelines for drinking water quality. Fourth edition, WHO 2011. <http://www.who.int>

³ **Molecular Mechanisms of Cytotoxicity and Apoptosis Induced by Inorganic Fluoride.** Natalia Ivanovna Agalakova and Gennadii Petrovich Gusev. Review Article. ISRN Cell Biology. Volume 2012, Article ID 403835, 16 pages. doi:10.5402/2012/403835

⁴ www.fluoridefacts.govt.nz

⁵ Physiologic Conditions Affect Toxicity of Ingested Industrial Fluoride. Sauerheber, R. J. Environmental and Public Health Vol 2013 <http://dx.doi.org/10.1155/2013/439490>

Fluoridation of water supplies without monitoring individual exposure levels is reckless as to the consequences of adding a contaminant.

There is no requirement in the amendment for monitoring of fluoride exposure at the individual level, as recommended by the National Research Council report to the Environmental Protection Agency ⁶ and by the World Health Organization⁷.

4. Violates human rights guarantees

69P 3 (c) must not include any requirement that fluoride be added to drinking water.

Most importantly, this amendment seeks to remove the guarantee enshrined in the Health Act 1956 of the public's right to choose whether they want to have this medical intervention or if they prefer to have clean water to drink, cook and bathe with and instead reduce cavities by brushing their teeth to remove plaque.

II. DISCLOSURE STATEMENT IS FLAWED

The Departmental Disclosure Statement from which the Health (Fluoridation of Drinking Water) Amendment Bill was developed, shows a concerning lack of democratic process

1. General intent is not in the public interest

Part One: General Policy Statement

'In deciding whether to make a direction, DHBs will be required to consider scientific evidence and whether the benefits of adding fluoride to drinking water outweigh the financial costs, taking into account local oral health status, population numbers, and financial cost and savings.'

There is no accommodation for external input and public discussion, hence a lack of transparency. There is no oversight nor checks and balances, to counter lack of objectivity and conflicts of interest. There is no requirement to monitor detrimental health effects or total fluoride exposure in individuals.

"The Bill also provides two offence provisions, which make it an offence for a local government drinking water supplier not to comply with DHB directions on whether a water supply should be fluoridated, and for a local government drinking water supplier to discontinue fluoridating their water where they are already doing so, unless directed not to by the relevant DHB."

⁶ NRC review 2006 **Fluoride in Drinking Water: A Scientific Review of EPA's Standards** .
<http://www.nap.edu/catalog/11571.html>

⁷ Basic Methods for Assessment of Renal Fluoride Excretion in Community Prevention Programmes for Oral Health. http://apps.who.int/iris/bitstream/10665/112662/1/9789241548700_eng.pdf

This sets an unsavory precedent, whereby the government can forcefully utilize the water supply to broadcast chemicals universally. It is authoritarian.

2. Weight of evidence is not represented accurately and objectively

Part Two: Background Material and Policy Information

Published reviews or evaluations

2.1. Are there any publicly available inquiry, review or evaluation reports that have informed, or are relevant to, the policy to be given effect by this Bill?

“The World Health Organization and other international health authorities have endorsed water fluoridation as the most effective public health measure for the prevention of tooth decay.” - MOH

However, they fail to point out:

1. The WHO also classifies fluoride as an environmental contaminant and says the individual exposure levels should be monitored.
2. The European Union considers water fluoridation to be ineffective (SCHER 2011)
3. Most developed countries reject fluoridation as being unsafe or ineffective
4. CDC stated that water fluoridation is too weak to effect decay
5. Leading researchers in the field say water fluoridation is too weak
6. NZ school data show no difference in decay rates between fluoridated and unfluoridated areas
7. International comparisons show lower decay rates in unfluoridated countries.
8. Old studies showing benefit are irrelevant and unreliable: (York and Cochrane Reviews)

MOH: “The safety and efficacy of water fluoridation has been evaluated many times, and systematic reviews consistently find that it prevents and reduces dental decay and does not cause harmful health effects. This includes a study recently published by the Cochrane Collaboration.”

In fact, the Cochrane Review did not look at health effects, apart from dental fluorosis, where it found 40% of children affected by fluoride overdose.

Having been involved with the development of this review, I am thoroughly familiar with its interpretation.

Calculations of decay saved were obtained by pooling data, most of it pre dating availability of fluoridate toothpaste in the 1970's, and many changed lifestyle factors, hence the authors concluded they had no confidence in the level of decay reduction in today's developed countries.

(a) MOH claims of benefit are not supported

Tooth decay is directly related to poverty and poor education, and water fluoridation status has not made any difference in NZ communities overall.

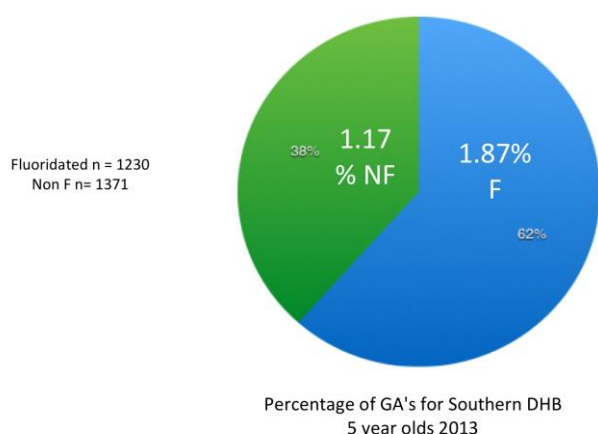


While emotionally manipulative images shown by Public Health Agencies both here and Australia of small children requiring extractions under General Anaesthetic are disturbing, they are misleading the public by suggesting this is a result of insufficient fluoride in the water.

Such GA sessions occur just as much if not more for children from fluoridated communities as they do in unfluoridated parts of the country, such as Christchurch and Nelson-Marlborough, which have less child tooth decay than most fluoridated areas.

Data obtained from DHBs indicate that in Auckland, areas with fluoridated water supplies have a greater proportion of children with severe tooth decay than unfluoridated areas.⁸

More GA's in fluoridated areas Southern DHB

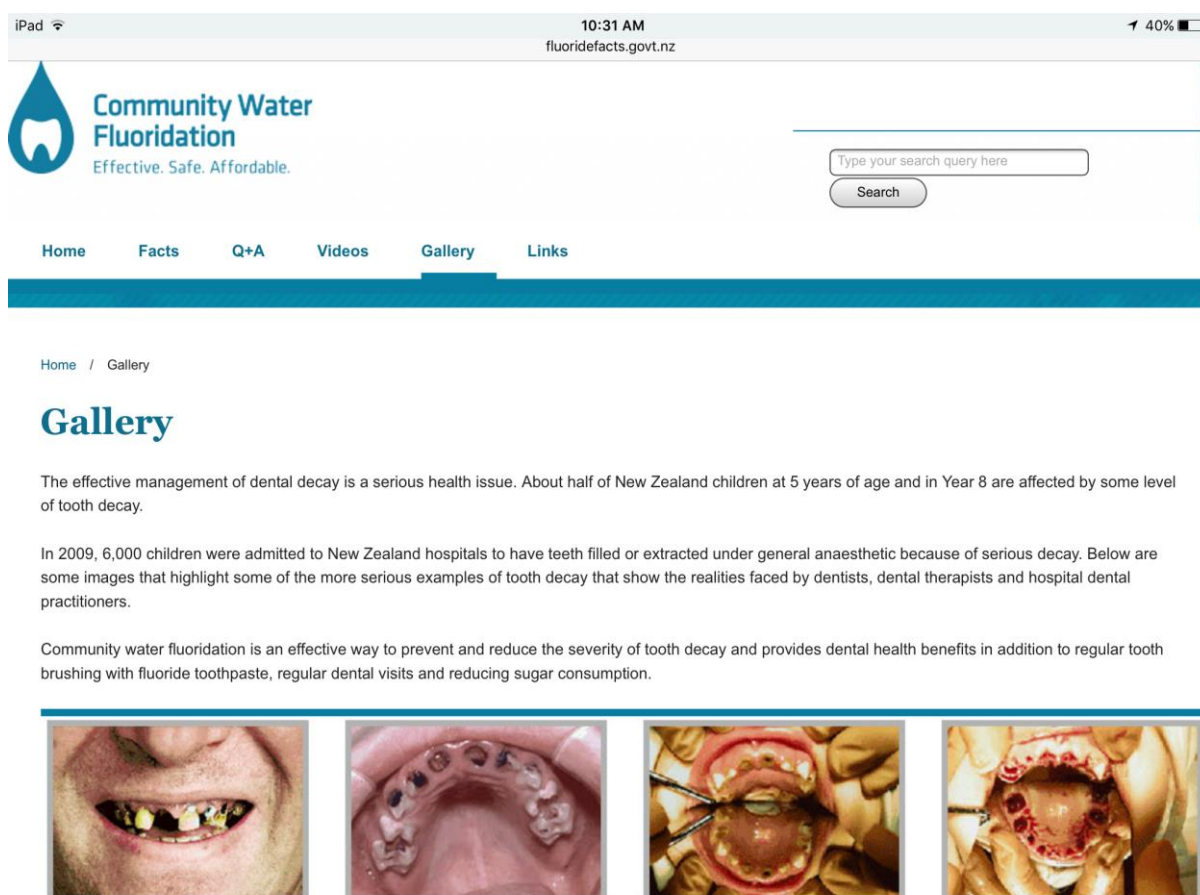


Data obtained from MOH under OIA

⁸ The effect of community water fluoridation on the incidence and severity of tooth decay in 31,720 Auckland children...Litras, S, January 2017 DOI: 10.13140/RG.2.2.22524.13449

Most overseas countries have rejected water fluoridation as being a breach of human rights or a danger to health, and yet their kids have fewer cavities than those in fluoridated NZ.

The MOH misinformed New Zealanders for decades that swallowing fluoride tablets and drinking fluoridated water would make developing teeth more resistant to decay, and it still continues to do so.



(b) Why Water Fluoridation is Not Effective

The predominant action of fluoride in fighting tooth decay is topical, that is by direct application to the mouth, and not systemic, that is, it does not work by swallowing, either in water, fluoride tablets, or any other source.^{9 10}

⁹ Featherstone J.D., Prevention and reversal of dental caries: role of low level fluoride. Community Oral Epidemiology 1999, 27:31-40

¹⁰ Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States. Fluoride Recommendations Work Group. CDC MMRW 2001

This was proven over 20 years ago, and therefore the only result from swallowing fluoride is an increased risk of health damage.

While MOH have recently tried to suggest that after you swallow fluoride it comes back in the saliva to “protect” the teeth, the concentration returning in saliva is too weak to be of any benefit.^{11 12}

SCIENCE DOES NOT SUPPORT FLUORIDATION

“ It is now widely accepted that the action of fluoride is topical and that it works by helping to slow down the decay process after it has started, that is, its action is in the early stage of the decay, not on healthy enamel or established decay ” *Featherstone 1999*

**At 1ppm water fluoridation, fluoride in saliva is 0.016ppm,
Too weak to have any effect** **CDC, 1999**

“ To this end, the constant bioavailability of fluoride in the saliva in low doses is desirable. Unfortunately, the increase of salivary fluoride levels from living in a 1ppm fluoridated area is too weak to have any noticeable effect” *Oliveby 1999*

“The concentration of fluoride in ductal saliva, as it is secreted from salivary glands, is low – approximately 0.016 parts per million (ppm) in areas where drinking water is fluoridated and 0.006 in non fluoridated areas. This concentration of fluoride is not likely to affect cariogenic activity.” *CDC 2001*

The action of fluoride is by slowing down the loss of calcium and phosphate ions from the enamel surface at the early stages of cavity formation. It can do this if it is present in the saliva in sufficiently high levels. These levels occur for up to 3 hours after brushing with fluoride toothpaste or using a fluoride mouth rinse. These products generally contain 1,000 ppm of fluoride ion, considerably higher than the 1 ppm in fluoride water, in fact 1,000 times higher. On the other hand, cavity formation is accelerated by acids produced by sugary foods, such as found in sweetened drinks and take away foods. The DHBs assume that children in the high decay risk groups will drink the fluoride water rather than the sweetened drinks, but this is unlikely to be the case.

¹¹ U.S. Centres for Disease Control and Prevention, Morbidity and Mortality Weekly Report, U.S. Centres for Disease Control and Prevention, Atlanta, GA, USA (2001)

¹² Ekstrand J, Oliveby A. Fluoride in the oral environment. *Acta Odontol Scand* (1999). 57: 330-333

3. HARM FROM FLUORIDE EXPOSURE IS UNDERSTATED

(a) Fluoride Toxicity is Misrepresented

The chronic toxicity limit is 0.05 mg a day per kg of body weight, known as the Minimal Risk Level (MRL)¹³, and while some people dismiss fluoride toxicity by claiming you would have to drink a bathtub of fluoridated water before any damage to health occurs, this in fact just serves to illustrate the level of ignorance and misinformation which is occurring.

For the record, the amount of fluoride in a bathtub full of water fluoridated at 1 ppm is around 35 mg, which is the fatal dose which would kill a 70kg adult. However, if you are drinking it regularly, health damage can start to occur from 100 times less than that.

In a healthy person, Toxic effects are likely to occur above:



0.65mg

0.05
mg/kg/day



3.75mg

The US Agency for Toxic Substance and Disease Registry (ATSDR) 2003 chronic duration oral Minimal Risk Level (MRL) for fluoride

<http://www.atsdr.cdc.gov/toxprofiles/tp11-c8.pdf>

It is highly likely that a large proportion of children and many adults are already exceeding the limits considered safe for total daily fluoride intake from all sources, as calculated in the ESR report 2009.¹⁴ A recent Canadian study estimates that 60% of kids are exceeding safe levels.¹⁵

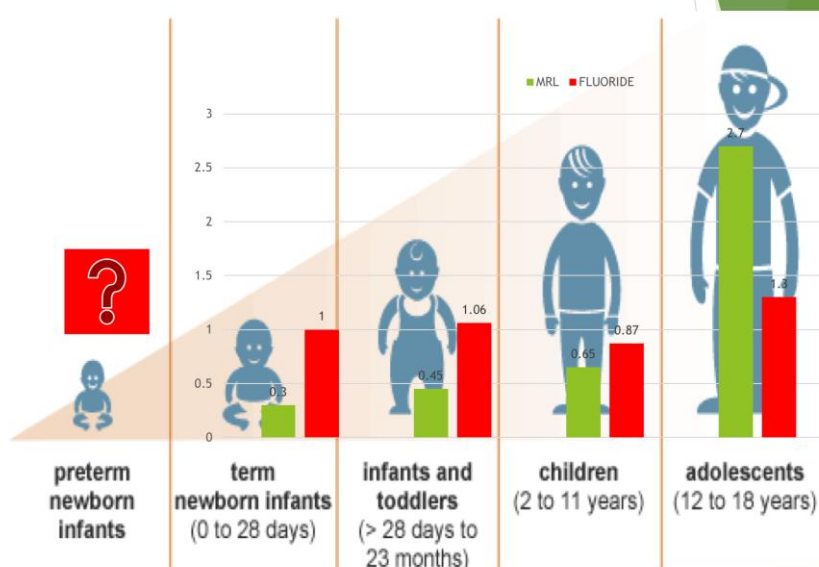
¹³ **Fluoride MRL.** ATSDR 2003. <http://www.atsdr.cdc.gov/toxprofiles/tp11-c8.pdf>

¹⁴ **Estimated Dietary Fluoride Intake for New Zealanders.** P Cressey et al. www.esr.cri.nz July 2009

¹⁵ McLaren L. 2016. Fluoridation exposure status based on location of data collection in the Canadian health measures survey: Is it valid? Journal of the Canadian Dental Journal 82:g17.

Most NZ children may exceed safe limits in F+ areas

Total Fluoride Levels vs MRL mg/day



Maori and Pacific Islanders, children, developing embryos, low Socioeconomic groups, adults with kidney disease, are groups who are at particular risk of health damage from fluoride overdose. Other groups include the elderly, diabetics, iodine deficient, and thyroid

Estimated Fluoride ingestion (mg/day) for high intake adults

Age	Kg	TOTAL (with CWF)	MRL MAX DOSEAGE
Adult	75	2.37	3.75
High intake adult	75	10.65	3.75

1. Dietary fluoride intake is about **five times higher** for adults in the high fluoride intake group, eg high beer or tea drinkers.
2. Maori are **twice as likely** as the average to be in the high fluoride group.
3. Most deprived groups are about **25% more likely** than average to be in the high fluoride diet group. (Ref. ESR report, page 39)

patients, outdoor workers and athletes. This is even conceded, although in a cryptic manner, in the Gluckman review 2014.

(b) No Requirement to Monitor Fluoride Exposure or assure safety

The present Amendment does not require monitoring of research on health risks from fluoride exposure, nor for any NZ research to be conducted to provide proof of safety.

It is extremely irresponsible for a Health Act to promote addition of a toxic substance to the water supply to treat tooth decay, while ignoring the risk to overall health.

DHBs are not following best practice recommendations of WHO and NRC, which would require them to monitor fluoride exposure at the individual level. To not be monitoring total fluoride exposure in people, while adding additional fluoride via water fluoridation, is negligent.

(c) EVIDENCE OF HARM

The NRC report was the major review of evidence of harm from water fluoridation.

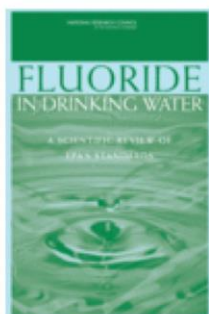
It concluded that research on fluoride links to cancer, sterility, senile dementia, ADHD, diabetes, SIDS, Depression and suicidality, obesity, bone fracture, arthritis and joint disease, etc. are equivocal and inconclusive. It suggested that more and better research needs to be done, particularly in countries which choose to fluoridate their water.

The DHBs have misrepresented the findings of the NRC report to New Zealanders as finding water fluoridation to be completely safe.

To avoid such misunderstanding, the review reinforces that "the absence of evidence.... should not be taken to imply an absence of effect"

Comprehensive review of health effects from fluoride in water

Fluoride in Drinking Water: A Scientific Review of EPA's Standards
Committee on Fluoride in Drinking Water,
National Research Council, 2006



"It is a fundamental premise of interpreting evidence from trials that the absence of evidence, or the existence of poor-quality evidence, should not be confused with, or taken to imply, an absence of effect"

**Could not assure safety:
more research needed**

While the DHBs have not seen fit to conduct any research as per NRC recommendations, further research subsequent to the 2006 NRC review has nevertheless occurred and reinforces health concerns.

(d) Dental Fluorosis

Dental fluorosis is a bio marker of fluoride overexposure during childhood. It is present in approximately 40 percent of New Zealanders. This is great cause for concern, as there are no guarantees that damage to other organ systems have not occurred at these levels.

Dental fluorosis : fluoride overdose during tooth development



40%

This could be a large burden on our health resources and the health and welfare of kiwis of all ages, as fluoride can cause damage to cells and DNA even at low doses.

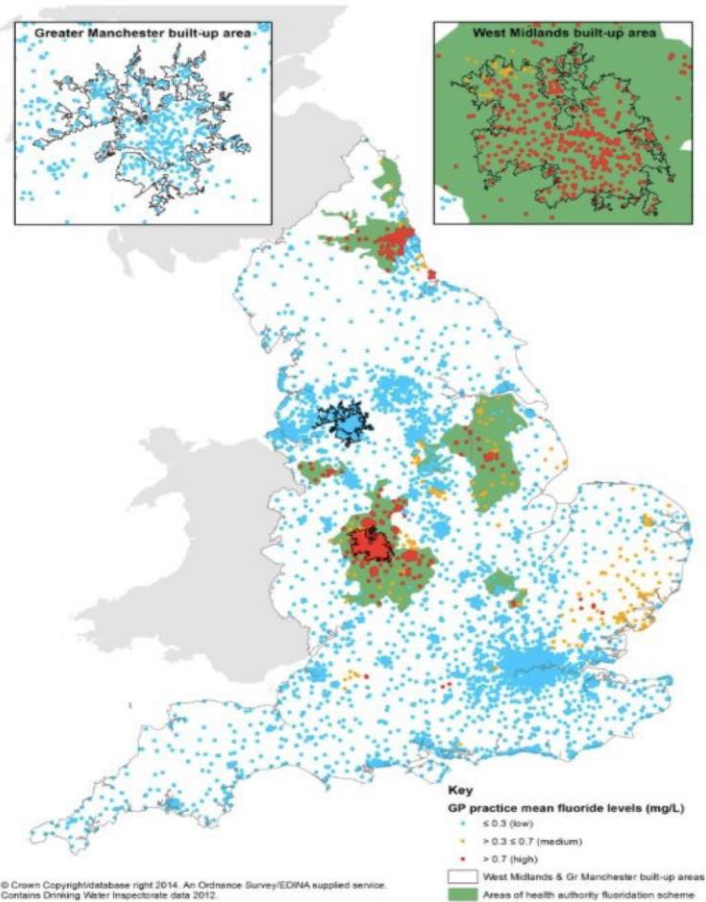
(e) THYROID DISEASE

Peckham (2015) at the university of Kent, published a large research study in UK 2015¹⁶ found that fluoridated areas had twice the number of people with hypothyroid disease as those living in unfluoridated areas. This is consistent with the NRC review conclusion that fluoride effects the thyroid from doses as low as 0.01 mg/kg/day (less than 1 litre of F+water) for an iodine deficient adult and 0.05 mg/kg/day in a healthy adult. This is without considering fluoride intake from other sources such as food and beverages, toothpaste, dental treatment and medications.

¹⁶ **Are fluoride levels in drinking water associated with hypothyroidism prevalence in England?**
Peckham S, et al. J Epidemiol Community Health 2015;0: 1-6

Pekham, 2015

"We found that practices located in the West Midlands (a wholly fluoridated area) are nearly twice as likely to report high hypothyroidism prevalence in comparison to Greater Manchester (non-fluoridated area)."



(f) BRAIN DEVELOPMENT

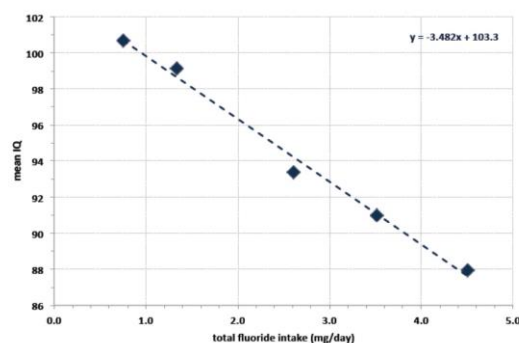
Grandjean (2015), one of the leading developmental neurotoxicologists in the world, published a systematic review of fluoride affects on the brain which led to fluoride being classified as a developmental neurotoxin,^{17 18} alongside lead, mercury, and PCBs as one of only 12 chemicals “known to cause developmental neurotoxicity in human beings.”

¹⁷ **Neurobehavioural effects of developmental toxicity.** Review. Dr Philippe Grandjean, MD, Philip J Landrigan, *Lancet Neurology*. Volume 13, No. 3, p330–338, March 2014. MD.DOI: [http://dx.doi.org/10.1016/S1474-4422\(13\)70278-3](http://dx.doi.org/10.1016/S1474-4422(13)70278-3)

¹⁸ **Developmental Fluoride Neurotoxicity: A Systematic Review and Meta-Analysis.** Anna L. Choi, Guifan Sun, Ying Zhang, and Philippe Grandjean, *J. Environ Health Perspect* 120:1362–1368 (2012). <http://dx.doi.org/10.1289/ehp.1104912> [Online 20 July 2012]

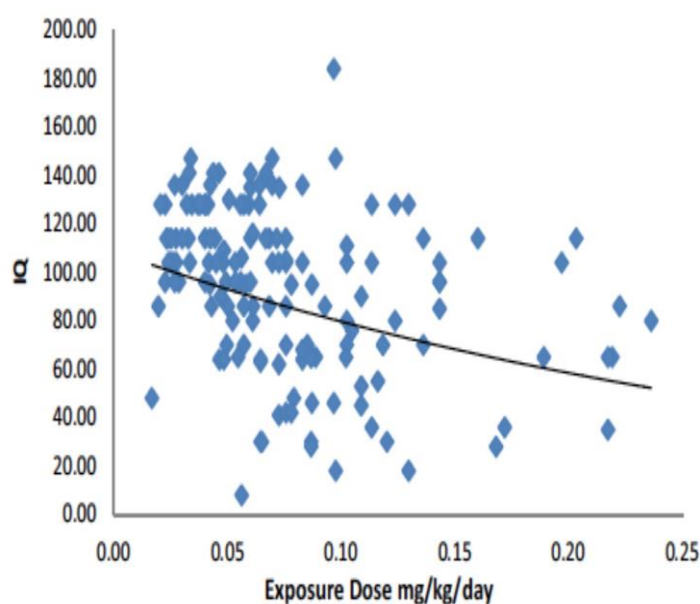
There have in fact been a large number of robust studies subsequent to the 2006 review that strongly indicate that fluoride exposure at levels attained in fluoridated areas of NZ reduce IQ in children.^{19 20}

FIGURE 1: Relationship Between Daily Fluoride Dose and IQ
(SOURCE: Wang et al. 2012, Tbl. 4)



Wang found that a daily intake of just 2.61 mg F/day was associated with a large, statistically significant 7.28-point drop in *average* IQ. Assuming an average weight of 32 kg,¹⁶ a daily intake

FIGURE 2: Relationship Between Total Daily Intake and IQ
(SOURCE: Das & Mondal 2016, Fig. 6)



¹⁹ Wang QJ, Gao MX, Zhang MF, et al. 2012. Study on the correlation between daily total fluoride intake and children's intelligence quotient. Journal of Southeast University (med Sci Ed) 31 96): 743-46. (Translated by Fluoride Action Network)

²⁰ Dental fluorosis and urinary fluoride concentration as a reflection of fluoride exposure and its impact on IQ level and BMI of children of Laxmisagar, Simlapal Block of Bankura District, W.B., India. Das, K and Mondal, NK, Environmental Monitoring and Assessment 188(4):218, 2016

More recent research indicates a strong link to ADHD

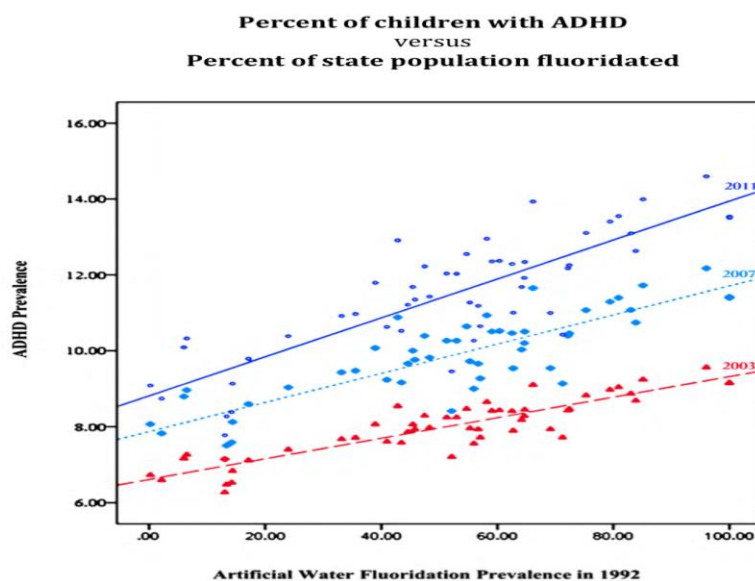


Figure 1. Artificial fluoridation prevalence predicting ADHD prevalence after adjusting for 1992 median household income, by state. Each color is for a different year of ADHD prevalence data: 2003, 2007, and 2011.

Figure and text adapted from:

Malin AJ, Till C. Exposure to fluoridated water and attention deficit hyperactivity disorder prevalence among children and adolescents in the United States: an ecological association. *Environmental Health*. 2015;14. doi:10.1186/s12940-015-0003-1. Available at: <http://www.ehjournal.net/content/14/1/17/abstract>

(g) DENIALS

DHBs dismiss the IQ studies by this top team of experts by citing a very poor and deceptive study conducted in Dunedin, which compared the IQ levels of children born in fluoridated and unfluoridated areas of Dunedin in the early 1970s, but did not control for total fluoride intake. The researchers subsequently admitted that children in their unfluoridated community were swallowing fluoride tablets to replace fluoride water, so were probably consuming the same levels of fluoride. Osmunson ²¹

The misrepresentation of the validity and reliability of scientific research in order to market fluoridation to the public and influence public opinion has been a feature of water fluoridation in NZ ever since the initial Napier-Hastings trial in the 1950's was groomed to falsely show benefit from water fluoridation.

²¹ Osmunson B, Limeback H, Neurath C. 2016. [Study incapable of detecting IQ loss from fluoride](#). *American Journal of Public Health* 106(2):212-3.

MOH: “In 2014 the Prime Minister’s Chief Science Advisor and the Royal Society of New Zealand, assisted by a panel of experts, conducted a systematic analysis of the local and international scientific evidence for and against fluoridation of water supplies.

This was a poorly conducted and misleading review, and did not follow guidelines to ensure reliability and lack of bias for systematic reviews. It has been characterized as a whitewash. A full scientific critique highlighting the weaknesses of the Gluckman review is attached²²

4. IMPACT ANALYSIS FLAWED

2.5. For the policy to be given effect by this Bill, is there analysis available on:

(a) the size of the potential costs and benefits? YES

(b) the potential for any group of persons to suffer a substantial unavoidable loss of income or wealth? NO

MOH: “A report by the Sapere Research Group (2015) commissioned by the Ministry of Health estimates the total capital and operating costs of extending fluoridation to populations not receiving fluoridated water to be \$144 million over a 20-year period, including a significant upfront capital investment and smaller annual operating costs. The Sapere report estimates that extending water fluoridation to those areas that do not currently have fluoridation would be associated with net savings of over \$600 million over twenty years with most of the savings to consumers and a small amount to Vote Health. This estimate takes into account the lower cost-effectiveness of fluoridating water at smaller water treatment plants which represent a greater proportion of the currently non-fluoridated water supplies. The conclusion that fluoridation and extended fluoridation would result in net savings was shown to be robust under a range of assumptions. “

These reports on cost effectiveness are not objective, and do not take into account the cost of repairing the damage by dental fluorosis, the cost to the health system of treating diseases caused or contributed to by fluoride overdose (for example, it is estimated that the loss of a single IQ point costs around \$30,000 in lost lifetime earnings for an individual), and are based on inflated and unreliable estimates of dental treatment cost savings.²³ More reliable assessments of cost effectiveness do not find financial benefits.

²² **Scientific and critical analysis of the 2014 New Zealand Review “Health Effects of water fluoridation. A review of the scientific evidence”.**

KathleenMThiessen · HSMicklem · StanLitras. https://www.researchgate.net/publication/274655749_Scientific_and_Critical_Analysis_of_2014_New_Zealand_Review_Health_effects_of_water_fluoridation_A_review_of_the_scientific_evidence

²³ Ko L and Thiessen KM, A critique of recent economic evaluations of community water fluoridation

5. *Part Three: Testing of Legislative Content*

Consistency with New Zealand's international obligations

3.1. What steps have been taken to determine whether the policy to be given effect by this Bill is consistent with New Zealand's international obligations?

MOH: "The Bill affects domestic water supplies only, and does not make any changes to rules around the trade of fluoride. "

I consider it breaches the UNESCO Universal Declaration on Bioethics and Human Rights (2005) Article 6 which states "in no case should a collective agreement or the consent of a community leader or other authority substitute for an individual's informed consent".²⁴

Also can affect trade, eg China has banned imports of high-Fluoride teas

6. *Consistency with the New Zealand Bill of Rights Act 1990*

3.3. Has advice been provided to the Attorney-General on whether any provisions of this Bill appear to limit any of the rights and freedoms affirmed in the New Zealand Bill of Rights Act 1990?

MOH: "The Ministry of Justice advised the Attorney-General on 2 November 2016 that the Bill appears to be consistent with the rights and freedoms affirmed in the Bill of Rights Act 1990. In reaching that conclusion, they considered the consistency of the Bill with the rights set out in s10 (right not to be subjected to medical or scientific experimentation), s11 (right to refuse to undergo medical treatment) and s25(c) (right to be presumed innocent until proven guilty)

This is dependent on a bizarre and highly questionable judicial finding that putting fluoride in water to reduce tooth decay is not a medical treatment. This is oxymoronic and raises questions about how such judicial decisions are made.

7. *External consultation*

3.6. Has there been any external consultation on the policy to be given effect by this Bill, or on a draft of this Bill? NO

MOH: "Public consultation was not carried out during the development of the Regulatory Impact Statement as Government had not yet indicated whether it would transfer decision-making responsibility from territorial local authorities. Wider consultation on the proposal could occur through the Select Committee process following the introduction of the amendment bill. "

The select committee is insufficient process for public consultation.

Oral submissions are restricted to 10 minutes speaking time and are at the discretion of the chairman, who has shown bias, as have a number of select committee members.

Given the importance of potentially permitting a toxic chemical to be added to all citizens drinking water by government decree, there should be much greater scope for external and public consultation, and this must be done thoroughly and transparently, such as a televised tribunal with presentation of evidence and debate from all stakeholders.

²⁴ UNESCO Universal Declaration of Bioethics and Human Rights (2005) http://portal.unesco.org/en/ev.php-URL_DO=DO_TOPIC&URL_SECTION=201.html

8. Charges in the nature of a tax

4.2. Does this Bill create or amend a power to impose a fee, levy or charge in the nature of a tax? NO

This does not appear to be the case, as it will result in increased rates at regional level to fund programs. Press reports already claim that it will cost Christchurch ratepayers millions of dollars, for example.

9. Significant decision-making powers

4.6. Does this Bill create or amend a decision-making power to make a determination about a person's rights, obligations, or interests protected or recognized by law, and that could have a significant impact on those rights, obligations, or interests?

MOH: NO

"The Bill transfers decision-making powers about fluoridation of drinking water from territorial local authorities to DHBs. However, this will not have a significant impact on a person's rights, obligations or interests as it is transferring decision-making from one public body to another."

This is disingenuous.

The bill will restrict public discussion.

There is no mechanism in the Bill for public consultation to DHB directives to fluoridate.

DHB s cannot make autonomous decisions, as they are compelled under Crown Entities Act to follow instructions of the health minister.

10. Powers to make delegated legislation

4.7. Does this Bill create or amend a power to make delegated legislation that could amend an Act, define the meaning of a term in an Act, or grant an exemption from an Act or delegated legislation?

NO

4.8. Does this Bill create or amend any other powers to make delegated legislation? NO

Actually it does, as it removes the rights to not be commanded by government to fluoridate.

Conclusion

DHBs, as enforcers of MOH policy, are not objective in their assessment of water fluoridation science, they do not provide accurate information to the public, and are prone to institutional bias and conflicts of interest.

As such, removal of oversight and transparency as proposed by this Amendment is not in the public interest.

Credibility of endorsements

The WHO considers fluoride to be an environmental contaminant which can result in the disfiguring spinal deformity known as skeletal fluorosis at levels found in some areas, and these countries have the expensive task of removing it from water supplies.

The WHO does claim, ironically, that at levels up to about 1 ppm, it may benefit teeth. The WHO oral health policy²⁵ was written by a panel of 4 people, including Sheila Jones, a paid officer of the British Fluoridation Society, and Michael Lennon, the Chairman of the BFS. The BFS has the stated goal of spreading water fluoridation to as many people as possible, so the objectivity of the WHO advice on benefits of fluoridation must be in question.

The NZDA, who are the main lobby group for fluoridation, receives a great deal of funding from multi-national fluoride selling companies such as Colgate. These companies would face huge financial losses all around the world if the safety of fluoride intake levels is questioned. This must put NZDA endorsement of water fluoridation in question.



Dental research, also is open to influence by corporate funding and publication bias, so must be carefully scrutinized for its validity.

Other endorsements cited, such as the NZMaori Oral Health Service, the NZ dental therapists, etc. all take their lead from the NZDA, so simply serve to “fluff out” the list.

On the other hand, despite DHB claims to the contrary, the vast majority of countries do not fluoridate, and have rejected it as a breach of human rights (eg Germany), as a toxic substance which damages health (eg Netherlands), or for other reasons.

²⁵ The effective use of fluorides in public health. Sheila Jones, Brian A. Burt, Poul Erik Petersen & Michael A. Lennon. Bulletin of the WHO 2005; 83: 670-676

III. SUMMARY

The amendment proposed is ill founded and is likely to result in more harm than good to the NZ public, particularly Maori, children and the poor.

It is authoritarian, heavy handed, violates human rights, is based on unreliable information and bias, lacks due diligence, oversight, checks and balances, transparency and accountability.

It aims to stifle public discussion and enable government enforced mass medication.

With mounting evidence of health risks and lack of effectiveness internationally, this Amendment will result in the erection of a large number of expensive white elephants around the country, money which could be used to reduce child tooth decay with proper preventive schemes built around education.

IV. RECOMMENDATIONS

1. Reject this Amendment in its entirety, as it is not in the public interest.

2. CHANGES TO SECTION 2A of the HEALTH ACT 1956

The current situation, while permitting community discussion, has allowed DHBs to influence community decisions by running propaganda campaigns to influence public opinion in referenda, and lobbying councils with misinformation and misrepresentation.

I suggest the following changes to the Health Act section 2A would be in the public interest, to be consistent with due diligence, transparency, oversight and human rights

1. There will be a moratorium on water fluoridation until safety is proven
2. DHBs will show due diligence and responsibility in water fluoridation schemes:
 - (a) Methodologically sound research must be undertaken to assure safety from deliberately increased fluoride exposure. This must include, but not be limited to effects on the brain, effects on the endocrine system, effects on the child in utero.
 - (b) Measurement of individual fluoride levels in each area, following WHO protocols. This must include, but not be limited to, children, Maori and Pacific Islanders, hypothyroid disease patients, diabetics, and underprivileged families.
3. Fluoride will not be added to drinking water until evidence of safety (1above), is obtained.
 - (a) new fluoridation schemes will not be started

(b) existing fluoridation schemes will be suspended until evidence of safety (1 above) is obtained.

4. Water suppliers who continue to fluoridate without safety clearance by DHBs will face penalties under the water pollution clause
5. A balanced committee, with transparency of information made open to the public, to assess evidence of benefit versus risk
6. DHBs will engage in public forums to discuss the evidence behind their decision-making
7. Information to public will have accurate information and be overseen by an independent panel balanced for bias (informed consent)
8. Full disclosure of commercial and political conflicts of interest from panel members and lobby groups.
9. Disclosure of source of fluoride and listing of contaminant levels.

V. Attachments:

IQ LOSS STUDY
Critique of Gluckman
Auckland study
NZ data analysis project
Open Letter to Dunne
VIDEO