



"WITHIN THE FORSEEABLE FUTURE, WATER FLUORIDATION WILL BE RECOGNISED AS ONE OF THE 10 BIGGEST MEDICAL MISTAKES IN HISTORY"

Submission on Draft Annual Plan
We wish to speak to this submission.

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29th April 2008

The Mayor and Councillors
Clutha District Council

Fluoridation of townships in Clutha District

Dear Mayor and Councillors,

We write on behalf of Fluoride Action Network New Zealand Incorporated (FANNZ), and its members in your district. FANNZ is one of a number of groups of concerned citizens promoting good health by advocating the removal of known toxins from the food chain and environment. To this end FANNZ is actively working toward ending fluoridation in New Zealand. FANNZ is also part of a larger international organisation already comprising a number of the world's leading fluoride researchers, and which is rapidly growing in momentum. Our members have been researching this subject for over 30 years, and through the international organisations we are kept up to date with what is happening around the world, both scientifically and politically.

Because of the referendum result in the Clutha district we understand that fluoridation of three communities is being considered. We consider this inappropriate on a number of grounds. These are discussed below.

Further, you may be aware that there is currently an application before Food Standards Australia New Zealand (FSANZ) to allow packaged fluoridated water to be sold. If this application is approved, and we believe it will be, there will be no need to fluoridate these communities, with associated capital and ongoing operational costs to the Council. Those who want fluoridated water will not only be able to buy it but, just as importantly,

will be able to control their daily intake (to that which the DHB considers 'optimal') which they could not do if the public water supply were fluoridated.

We are also aware that the only information available to residents at the time of the referendum was provided by the District Health Board. As such it was biased and not supported by current scientific knowledge and research. On this basis, we believe the referendum results are unreliable.

We recommend that the Council vote to either not fluoridate these communities or to hold a further referendum in conjunction with the next local body elections, ensuring, as far as possible, that balanced information is provided so that residents can make an informed choice.

Basis for our position

Firstly, the referendum votes were made on the basis of completely one-sided information provided by the District Health Board (DHB). The outcome cannot be considered an informed vote. As the National Ethics Advisory Committee has held that fluoridation is a [medical] intervention, informed choice is required under their Code of Ethics.

We attach a copy of an article written recently, based on a publication in the British Medical Journal, about the unreliability of information disseminated by government agencies. In that case it was the British Government, but the NZ Government and DHBs simply cite the same disinformation as the British.

The DHB had attempted the same one-sided tactic in Waitaki. As you will be aware, the Waitaki District Council ensured that voters received balanced information by way of one side of an A4 page allocated to each side of the argument provided with voting papers. (copy enclosed). You will note the distinct difference in the quality of information (ourselves as against the DHB). You will also be aware that the vote was over 70% against fluoridation. This is a typical result when voters get both sides of the issue, as seen in Greymouth, for example.

The vote in two of the communities in question was close, especially Tapanui. We do not know the voter turnout rate. We do not believe it can be said that the Council has a clear mandate from the communities at large to fluoridate the water supplies. With communities split, on biased information, democracy is not served by using a narrow margin as an excuse to bully half the populations.

Overwhelming scientific evidence of lack of benefit from fluoridation

Secondly, all current evidence is that there is no benefit from fluoridated water: only from surface treatment such as with fluoride toothpaste. This was made clear by Featherstone in 1999¹ and later in the Journal of The American Dental Association. This reflects the current international position, denied by the NZ Ministry and DHBs. Featherstone states:

¹ Featherstone J.D.B. (1999) "Prevention and reversal of dental caries: role of low level fluoride" *Community Dentistry and Oral Epidemiology*, 1999; 27: 31 - 40.

“Fluoride works primarily via topical [surface-acting] mechanisms... The level of fluoride incorporated into dental mineral by systemic ingestion [drinking] is insufficient to play a significant role in caries prevention”.

“Until recently (note written in 1998) the major caries-inhibitory effect of fluoride was thought to be due to its incorporation in tooth enamel during the development of the tooth prior to eruption. This supposed mechanism was behind public health efforts (such as water fluoridation). There is now overwhelming evidence that the primary caries-preventive mechanisms of action of fluoride are post-eruptive through ‘topical’ effects for both children and adults”.(emphasis added)

“The topical effects of fluoride are over-riding, and the systemic incorporation of fluoride in tooth mineral is unfortunately not a major benefit”.

“The concentration of fluoride in dental enamel and dentin provided by fluoridation of drinking water or by natural fluoride levels at about 1ppm is insufficient to provide protection against caries.” The effects are all via the [topical] mechanisms of inhibition of demineralization, enhancement of remineralization and action on bacteria.” (emphases added)

“Fluoride supplements should not be thought of as providing a dietary supplement that will automatically protect against caries. This is not the case.”

Featherstone describes that the benefit from fluoride is from continued elevated levels in the saliva and plaque caused by initial application of high concentration fluoride such as in toothpaste. Five pieces of published research show that fluoridated water is too low in concentration to have this effect.²

New Zealand Data

We enclose the South Island data from the Ministry of Health, demonstrating that there is actually less tooth decay in the unfluoridated areas than the fluoridated ones, and this cannot be attributed to socioeconomic status. We also enclose records for Timrau, which ceased fluoridation in 1985. Tooth decay has declined ever since, and is now lower than any fluoridated South Island Community. We also note that the only reliable research conducted since the York Review in 2000 showed zero benefit to the permanent teeth (Armfield and Spencer, Australia, 2004).³ The apparent temporary benefit to the deciduous (‘milk’) teeth was likely due to the delay in eruption caused by fluoride, which results in less exposure to decay-causing factors than in unfluoridated children of the

² Damato, F.A. (1990). “Effect of fluoride concentration on remineralization of carious enamel.” *Caries Res.* 24(3):174-80

Cutress, T.W. (1995) “Effects of fluoride-supplemented sucrose on experimental dental caries.” *Advances in Dental Research* 9(1).

Arends, J, Christoffersen, J, Ruben, J & Jongebloed, WL (1989) “Remineralisation of bovine dentine in vitro. The influence of the F content in solution on mineral distribution.” *Caries Res.* 23. 309-14.

Pearce, E.I. (1992). Supplementation of domestic sugar (sucrose) with fluoride. *New Zealand Dent. J.* 88(393):84-8.

Tanaka, M. (1993). “Effect of fluoride incorporation into human dental enamel on its demineralization in vitro.” *Arch Oral Biol.* 38(10):863-9.

³ Jason M. Armfield and A. John Spencer, *Community Dentistry And Oral Epidemiology* Volume 32 Issue 4 Page 283 - August 2004

same chronological age. We note that the Wellington-Canterbury study by Lee and Denniston has never been accepted for publication in an internationally recognised peer reviewed journal, unlike the Armfield study) and that it is rife with methodological faults.

Health Dangers of Fluoridation

Thirdly, the 3 year review by the US National Research Council could find no level of fluoride exposure that was safe. The panel comprised respected scientists from a range of disciplines including dentistry and toxicology.

The Scientific Consensus Statement on Environmental Agents Associated with Neurodevelopmental Disorders, November 2007, published by the Collaborative on Health and the Environment's Learning and Developmental Disabilities Initiative, concluded that it was not clear that any benefits from fluoridation outweighed the risks of harm, and that "*Given the serious consequences of learning and developmental disabilities, a precautionary approach is warranted to protect the most vulnerable of our society.*"

The consensus statement outlines the current scientific understanding of the links between environmental factors and learning and development disabilities.

In fact there is growing evidence that fluoride is harmful to health in many ways. Fluoride is now linked to, among other things:

- ◆ lowered IQ
- ◆ attention deficit and hyperactivity disorder
- ◆ bone cancer in young makes
- ◆ an increase in cancer rates generally
- ◆ arthritis
- ◆ thyroid dysfunction
- ◆ dental fluorosis (the first outward sign of chronic fluoride poisoning). The Southland study showed 5% moderate to severe fluorosis, compared with 3% in the 1980s (not 14% as incorrectly circulated by Sally Gilbert of the Ministry of Health). Note that the study results did not separate unfluoridated subjects from those using fluoride tablets or having consumed fluoridated water for part of their lives.

Council's need for up-to-date information

These are very serious health concerns, resulting in an increasing need for the authorities responsible for the clean supply of water to their populations, to study the latest information. The amount of scientific research published since 1995 on the dangers, and lack of benefit, of water fluoridation is overwhelming. The documented dangers far exceed the list above. This has led the highly respected and independent (on the issue of fluoridation) US Environment Working Group to state "There is more

evidence against fluoridation today than we had against DDT when it was banned.”
Richard Wiles, EWG's Senior Vice President, told the British newspaper The Observer:

"I've spent 20 years in public health trying to protect kids from toxic exposure. Even with DDT, you don't have the consistently strong data that the compound can cause cancer as you now have with fluoride."

"The safety of fluoride in America's tap water is a pressing health concern the weight of the evidence strongly supports the conclusion that millions of boys in these [fluoridated] communities are at significantly increased risk of developing bone cancer as a result."⁴

The Council needs the most up to date information if it is to make a robust decision. It will not get such information from the DHB. All DHBs have been directed by the Minister of Health, under section 33 of the Act, to implement fluoridation without relent, and to “rebut all statements made against fluoridation”. “All” necessarily includes true statements, as acknowledged by the State Services Commission, and considered inappropriate by the Commission.

Councillors should note that:

- The Ministry of Health concedes that perfectly reputable scientists hold a view, based on the internationally published research and literature, opposing that of the Ministry (that is, opposed to fluoridation).
- Belgium has banned all fluoride supplements; not just water fluoridation
- Fluoridation is illegal in Sweden and the Netherlands, and rejected by all continental European Governments, apart from a few communities in Spain
- It is internationally accepted that fluoride's benefit is entirely or almost entirely by surface action, not from fluoridating water, which does not have a surface effect.
- Hawaii recently passed a bylaw making fluoridation illegal
- Quebec ceased fluoridation on 1 April 2008
- Since the ADA's infant formula warning several US communities have either dropped plans to fluoridate, or stopped fluoridating the water supply
- Juneau, Alaska, recently stopped fluoridation and put the question to referendum. The vote was overwhelmingly against fluoridation.
- The Hutt City Council has recently agreed to update their web site with to ensure that Hutt City residents are made aware of the US Public Health Service's

⁴ "Fluoride water 'causes cancer'," by Bob Woffinden, June 12, 2005, The Observer
http://observer.guardian.co.uk/uk_news/story/0,6903,1504672,00.html

Centers for Disease Control (CDC) and the American Dental Association's (ADA) 2006 warning that infant formula should not be made up with fluoridated water.

- The US National Research Council (NRC) completed a 3 year review by a panel of 12 experts in which they could identify no safe level of fluoride exposure, and advised that the following groups were at special risk:
 - Infants
 - Diabetics
 - Those on dialysis
 - Those with impaired kidney function, including the elderly
 - Those with high water consumption, such as outdoor workers and sports people

These 'high risk' groups comprised over 40% of the NZ population in the 2006 census.

Exposure to Legal Action

A class action lawsuit is currently being prepared in the USA, by a leading law firm specialising in class action suits, to be filed against all organisations and individuals imposing or promoting fluoridation. Fluoride Action Network (NZ) will shortly circulate key research information, fully referenced, for one purpose: to ensure that, when a class action suit is filed in NZ, those who receive that information will not be able to claim a 'good faith' defence, nor that they were just following the Ministry of Health's position on the unsubstantiated basis that the Ministry are supposedly the experts on fluoridation.

Yours faithfully,

Mark Atkin (National Co-ordinator)
Mary Byrne
Fluoride Action Network New Zealand.

Attachments:

- 1) Report on the British Medical Journal article
- 2) Letter from Chairman of York Review (NZ officials cite the York Review as evidence in support of fluoridation)
- 3) Address by Lord Baldwin, of the advisory committee to the York Review Board
- 4) Excerpts from "Second Thoughts about Fluoride", *Scientific American*, including statement by the Chair of the National Research Council Review Board.
- 5) Consensus statement on harm to children (summarised)
- 6) South Island data
- 7) "Fluoride-Gate" article – law suits.

Government selectively uses unreliable evidence to promote water fluoridation - senior UK doctors state

British Medical Journal, October 5, 2007

In the British Medical Journal, Sir Iain Chalmers, editor of the James Lind Library (set up to help people understand the evidence base of medicine), KK Cheng, professor of epidemiology at Birmingham University, and Dr Trevor Sheldon, professor and pro-vice-chancellor at York University (and Chair of the York Review Board), accuse the government of "one-sided handling of the evidence". They add that "the Department of Health's objectivity is questionable", pointing out that until 2006 it funded the widely reviled British Fluoridation Society, set up in 1969 to politically push for fluoridation.

It should be noted that the NZ Ministry of Health conducts no independent research on fluoridation, and bases its position on that of other pro-fluoridation governments such as the British Government. In fact it sends representatives to meet with such governments to ensure consistent quoting of "supporting" science, and consistent spin in denying opposing science.

In 1999, the Department of Health commissioned a systematic review of the evidence by York University. "The reviewers were surprised by the poor quality of the evidence and the uncertainty surrounding the beneficial and adverse effects," they write.

But the Department of Health used the York findings "selectively", they advise, "to give an over-optimistic assessment of the evidence in favour of fluoridation." The Department commissioned research on the effects of water in which fluoride naturally occurred, but on only 20 people. This, together with the selective use of the York review, formed the basis of the government's safety claims, they say. Even the studies attempting to show benefits to teeth were few and inconsistent. The rate of dental caries caused by tooth decay has dropped substantially both in countries which have added fluoride and those which have not.

Studies on the side-effects of fluoride in water were low-quality and it is hard to estimate how many people would suffer mottled teeth, and not possible to reach conclusions on other alleged harm, such as bladder cancer and bone fracture, they say. "There is no such thing as absolute certainty on safety," they write.

FANNZ' notes: It is important to note that the York Board was instructed only to examine epidemiological (population) studies. The US National Research Council's 3 year Review, published in 2006, examined laboratory studies also, and established risks from

fluoridation to a range of population sub-groups (comprising at least 40% of the population in NZ).

In 2007 The Lancet the oldest and highly respected independent medical journal, described fluoride as "an emerging neurotoxin" along with the rocket fuel, perchlorate.

**DEPARTMENT OF
HEALTH STUDIES**

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Professor Trevor A. Sheldon
Head of Department

In my capacity of chair of the Advisory Group for the systematic review on the effects of water fluoridation recently conducted by the NHS Centre for Reviews and Dissemination the University of York and as its founding director, I am concerned that the results of the review have been widely misrepresented. The review was exceptional in this field in that it was conducted by an independent group to the highest international scientific standards and a summary has been published in the British Medical Journal. It is particularly worrying then that statements which mislead the public about the review's findings have been made in press releases and briefings by the British Dental Association, the British Medical Association, the National Alliance for Equity in Dental Health and the British Fluoridation Society. I should like to correct some of these errors.

1 Whilst there is evidence that water fluoridation is effective at reducing caries, the quality of the studies was generally moderate and the size of the estimated benefit, only of the order of 15%, is far from "massive". (*Editor's note: This is saying the studies were not classified as "reliable" – see 7 below. Also, the studies did not allow for the 1 year delay in tooth eruption caused by fluoridation, giving a false impression of "benefit". The 15% difference equates to 1 person in 2 having 1 less filling.*)

2 The review found water fluoridation to be significantly associated with high levels of dental fluorosis which was not characterised as "just a cosmetic issue".

3 The review did not show water fluoridation to be safe. The quality of the research was too poor to establish with confidence whether or not there are potentially important adverse effects in addition to the high levels of fluorosis. The report recommended that more research was needed.

4 There was little evidence to show that water fluoridation has reduced social inequalities in dental health.

5 The review could come to no conclusion as to the cost-effectiveness of water fluoridation or whether there are different effects between natural or artificial fluoridation.

6 Probably because of the rigour with which this review was conducted, these findings are more cautious and less conclusive than in most previous reviews.

7 The review team was surprised that in spite of the large number of studies carried out over several decades there is a dearth of reliable evidence with which to inform policy. **Until high quality studies are undertaken providing more definite evidence, there will continue to be legitimate scientific controversy over the likely effects and costs of water fluoridation.** (*Emphasis added – Ed*)

(Signed) T.A. Sheldon,
Professor Trevor Sheldon, MSc, MSc, DSc, FMedSci.

British Lord Criticizes Dental Authorities for Misinforming Public about York Review

Note: The following transcript can be accessed at <http://www.parliament.uk/>

House of Lords Debate on the Queen's Speech:

Earl Baldwin's statement, 13-12-2000.

Earl Baldwin of Bewdley: 6.35 p.m. 13 Dec 2000 : **Column 427**..... I turn lastly to the vexed matter of water fluoridation. In the 1999 White Paper, Saving Lives: Our Healthier Nation, the Government announced that they were setting in motion an

"up-to-date expert scientific review of fluoride and health".

Possible legislation was foreshadowed. Partly because of the many questions I had tabled on this topic, and the debate in my name in December 1998, I found myself on the advisory board to the review team at the NHS Centre for Reviews and Dissemination at York, in close contact with the scientific process from the summer of 1999 to the publication of the [final report](#) on 6th October this year.

The expectation of the dental and medical authorities, and it is fair to say of the Government also, was that the safety and effectiveness of fluoridation would be confirmed. That expectation was disappointed. In addressing the five principal questions that were asked, the report is studded with phrases such as "limited quantity", "moderate quality", "a small number of studies", "needs further clarification", "surprising to find that little high quality research has been undertaken", "insufficient quality to allow confident statements", "not...enough good quality evidence...to reach conclusions". Important gaps in the evidence base were identified.

I pay tribute to the Government for having agreed to institute a high-quality scientific review--the first and only systematic, that is unbiased, assessment of the evidence in half a century of water fluoridation. I pay tribute to them for now taking steps, through the Medical Research Council, to put some much-needed research in hand, not before time. I cannot, however, pay tribute to the dental lobby in the aftermath of the York report.

I am aware that many of your Lordships have had briefings from the British Dental Association, the British Fluoridation Society and/or the National Association for Equity in Dental Health. I am aware, as we all are, that briefings by professional bodies, including professors of dentistry, carry weight with the public, are likely to be believed and therefore bear a particular responsibility for accuracy. These briefings and press releases are little short of extraordinary.

I have collated four pages of statements culled from these documents, with alongside them for comparison quotations from the text of the report itself. I can give the flavour of them in two or three short examples. I have placed copies in the Library for those who would like to read more.

The British Dental Association says,

"The report confirms that there is clear evidence that fluoridation reduces [decay]";

the report says,

"To have clear confidence in the ability to answer [this] question...the quality of the evidence would need to be higher".

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The British Dental Association says,

"There is no evidence that...fluoridation is linked to cancer, bone disease or any other adverse effect"; and, "The report confirms that fluoridation reduces dental health inequalities";

the report says,

"The research evidence is of insufficient quality to allow confident statements about other potential harms [than dental fluorosis] or whether there is an impact on social inequalities".

The British Fluoridation Society says,

"If there were any adverse effects...it is inconceivable that the York review would have missed them";

the York review says,

"Some possible adverse effects...may take years to develop and so...the relationship may go undetected", and, "High quality research [into adverse effects]...is needed".

One might have thought, if one did not know that fluoridation had been an article of dental faith for fifty years, that this was simply carelessness. Such a thought is dispelled when one finds a wrong figure quoted for seriously mottled teeth, which could only be cited by the author having read, and misinterpreted, some of the very small print.

This is an important public health issue. It is not the Government who are likely to be misled by such inaccurate statements--at least I hope not--so much as local councils, the public and, dare I say it, Members of Parliament, who have even been urged to put down Questions on this false basis. It is essential to put the record straight. Anyone in doubt about the facts should, as always, go to primary sources. The York report is a long one, but the summary and conclusions are only four pages each and are not hard to understand. I would urge any noble Lord who is thinking of tabling Questions not to rely on briefings, whether from dentists or opponents, but to go to the report itself.

Because I am known to oppose the fluoridation of water, I have taken the greatest care to keep in step with the leading scientists at York and to write and say nothing in interpretation of their report which goes beyond the evidence. I have the permission of Professor Sheldon, the founding director of the NHS Centre for Reviews and Dissemination at York, who chaired the advisory board which oversaw the whole review process, to quote him as follows.

"It is particularly worrying...that statements which mislead the public about the review's findings have been made in press releases and briefings by the British Dental Association, the National Alliance for Equity in Dental Health and the British Fluoridation Society. I should like to correct some of these errors".

He continues:

"1. Whilst there is evidence that water fluoridation is effective at reducing caries, the quality of the studies was generally moderate and the size of the estimated benefit, only of the order of 15%, is far from 'massive'.

"2. The review found water fluoridation to be significantly associated with high levels of dental fluorosis, which was not characterised as just a 'cosmetic issue'.

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"3. The review did not show water fluoridation to be safe. The quality of the research was too poor to establish with confidence whether or not there are potentially important adverse effects in addition to the high levels of fluorosis. The report recommended that more research was needed.

"4. There was little evidence to show that water fluoridation has reduced social inequalities in dental health".

I shall skip most of what follows and just give Professor Sheldon's final point. He states:

"The review team was surprised that in spite of the large number of studies carried out over several decades there is a dearth of reliable evidence with which to inform policy. Until high quality studies are undertaken...there will continue to be legitimate scientific controversy over the likely effects and costs of water fluoridation".

My only questions to the Minister, in the light of the state of the evidence as set out by one of the two principal scientists involved in the review and of these extraordinary briefing papers, are whether the Government still think it appropriate, first, to go on making financial contributions to the British Fluoridation Society, and, secondly, to encourage certain health authorities, as they have said that they would, to consider water fluoridation schemes. The noble Lord would also do me a good turn if he could secure for me a reply from his colleague the Secretary of State to the personal letter I wrote to him on this matter on 5th August, repeated on 7th October, and reminded again on 14th November. With fluoridation, things tend to take a long time.

Lord Colwyn: 8.47 p.m. **Column 459-460** (i.e. much later)

Perhaps I may touch briefly on fluoridation. I am well aware that the noble Earl, Lord Baldwin, will have given an opposite view to mine. The recent York Review has confirmed that fluoridation is safe and effective in reducing levels of tooth decay and is essential in the fight to reduce inequalities in dental health.

Excerpts from “Second Thoughts about Fluoride”, *Scientific American*, January 2008, pages 74–81

“What the committee found is that we’ve gone with the status quo regarding fluoride for many years—for too long, really—and now we need to take a fresh look. In the scientific community, people tend to think this is settled. I mean, when the U.S. surgeon general comes out and says this is one of the 10 greatest achievements of the 20th century, that’s a hard hurdle to get over. But when we looked at the studies that have been done, we found that many of these questions are unsettled and we have much less information than we should, considering how long this [fluoridation] has been going on. I think that’s why fluoridation is still being challenged so many years after it began.”

John Doull, chairman, National Research Council Review Board (pp80-81)

Page 75: Most fluoridated water contains much less fluoride than the EPA limit, but the situation is worrisome because there is so much uncertainty over how much additional fluoride we ingest from food, beverages and dental products. What is more, the NRC panel noted that fluoride may also trigger more serious health problems, including bone cancer and damage to the brain and thyroid gland. Although these effects are still unproved, the panel argued that they deserve further study.

Page 75: **TOO MUCH OF A GOOD THING:** Fluoride is in many foods, beverages and dental products. The ubiquity of the cavity-fighting chemical can result in overconsumption, particularly among young children.

Page 78: **Scientific attitudes toward fluoridation may be starting to shift in the country where the practice began.**

Page 79: But enamel fluorosis, except in the severest cases, has no health impact beyond lowered self-esteem: the tooth marks are unattractive and do not go away (although there are masking treatments). The much more important question is whether fluoride’s effects extend beyond altering the biochemistry of tooth enamel formation. Says longtime fluoride researcher Pamela DenBesten of the University of California, San Francisco, School of Dentistry: “We certainly can see that fluoride impacts the way proteins interact with mineralized tissue, so what effect is it having elsewhere at the cellular level? Fluoride is very powerful, and it needs to be treated respectfully.”

Page 80: Clashes over the possible neurological effects of fluoride have been just as intense. Phyllis Mullenix, then at the Forsyth Institute in Boston, set off a firestorm in the early 1990s when she reported that experiments on lab rats showed that sodium fluoride can accumulate in brain tissue and affect animal behavior. Prenatal exposures, she reported, correlated with hyperactivity in young rats, especially males, whereas exposures after birth had the opposite effect, turning female rats into what Mullenix later described as “couch potatoes.” Although her research was eventually published in *Neurotoxicology and Teratology*, it was attacked by other scientists who said that her methodology was flawed and that she had used unrealistically high dosages. Since then, however, a series of epidemiological studies in China have associated high fluoride exposures with lower IQ, and research has also suggested a possible mechanism: the

formation of aluminum fluoride complexes—small inorganic molecules that mimic the structure of phosphates and thus influence enzyme activity in the brain. There is also some evidence that the silicofluorides used in water fluoridation may enhance the uptake of lead into the brain.

Page 80: The NRC committee concluded that fluoride can subtly alter endocrine function, especially in the thyroid—the gland that produces hormones regulating growth and metabolism. Although researchers do not know how fluoride consumption can influence the thyroid, the effects appear to be strongly influenced by diet and genetics. Says John Doull, professor emeritus of pharmacology and toxicology at the University of Kansas Medical Center, who chaired the NRC committee: “The thyroid changes do worry me. There are some things there that need to be explored.”

2001 School Dental Services Data for 5-year-olds (South Island):

An official indicator of the oral health status of NZ 5-year-old children is provided within the table prepared by Sunitha Gowda, (Oral Health Promotion – Fluoridation Advocacy) on behalf of the Ministry of Health (MoH). A copy of this table is enclosed. Please note that “year 8” means the same as “12-year-old”.

This table is very helpful in that it compares decay rates with percentage fluoridated and with socio-economic status (SES). It is impossible to find any convincing benefit of fluoridation from this table. It is even more relevant to compare just the South Island areas as the population mix of the South Island is more coherent. Thus:-

(mft = missing decayed filled deciduous teeth)
(MFT = missing decayed filled permanent teeth)
(SES = socio-economic status)

District	Percent of Low SES	Percent Fluoridated	Percent Caries-Free at 5 yrs	Mean mft at 5 yrs	Percent Caries-free at 12 yrs	Mean MFT at 12 yrs
Otago	9	47	60	1.4	39	2.0
Nelson-Marlb.	11	0	50	2.2	51	1.3
Canterbury	15	4	49	1.8	39	1.9
Southland	24	41	48	2.3	29	2.0
West Coast	13	0	40	2.6	38	1.9

This illustration is revealing.. For example:-

- The 2 areas that are highly fluoridated (Otago and Southland) show generally the worst decay results by year 12.
- Otago (fluoridated) shows the best results for 5-year-olds but the worst results for 12-year-olds. Note also that Otago has the lowest percent of children classified as “low socio-economic status”. This data well illustrates the contention that fluoridation temporarily delays decay (by delaying tooth eruption) but that the temporary “benefit” disappears by the time such children become 12-year-olds.
- Nelson-Marlborough area, though totally unfluoridated and with a slightly poorer socio economic status than Otago, is average in the decay statistics for 5-year-olds, but has the least decay for 12-year-olds.for the whole South Island.
- Even the West Coast, though totally unfluoridated, has less decay (MFT) in 12-year-olds than for fluoridated areas of Otago and Southland.
- The presentation to Ashburton Council by Drs Williams and Lee that claimed an mft (missing filled teeth) figure for Ashburton 6-year-olds of **5.1** for 2004 and **5.21** for 2005 is simply not credible when compared to the official statistics for 5-year-olds (enclosed) as provided by the Sunitha Gowda table.

Fluoridation causes delayed eruption:

Why has the council been presented with statistics for only 6-year-olds? Drs Williams and Lee claim that this is the appropriate age group to show the effects of ceasing fluoridation in 2000. A truer statement is that it is the appropriate age group to show the effect of deferred decay caused by delayed tooth eruption in the presence of fluoridation.

This is well illustrated by the table above which shows that fluoridated Otago (when compared to all other areas in the South Island) moves from lowest decay (mft) at 5-year-olds to highest decay (MFT) at 12-year olds. It should be noted that, within the South Island, Otago has the highest percentage of children drinking fluoridated water and the least children classified as low socio economic status.

(Despite the above evidence Dr Martin Lee, the Ministry of Health’s ‘fluoridation hit man’, denies, as he must, that there is any eruptive delay caused by fluoridation. However Dr Hardy Limeback (associate professor of preventative dentistry at University of Toronto), who is much more qualified in dentistry matters, claims that there is indeed an eruptive delay and is willing to supply references to a large number of studies to that effect.

The following studies support the view that fluoride delays eruption:

- Both Newburgh and Evanston showed a decline in the number of first molars erupted in younger children.
- Feltman and Kosel study showed eruption delay of 1 year.⁵
- Krook and Maylin 1979: study on cows showed the same effect, with 1.5 to 3 years delay.⁶

The correct decay indicator is for 12-year-olds:

Because of the matters detailed above, the World Health Organisation (WHO) recommends that “the index DMFT at 12 years of age (mean number of **d**ecayed, **m**issing, and **f**illed teeth) as the most appropriate national indicator”. All national statistics are compiled on this basis.

Our NZ Ministry of Health prefers to provide statistical comparisons for 5 or 6 year-olds as this provides more convincing evidence of fluoridation “benefit”. However, because fluoridation causes a typical delay of 1 year in the eruption of deciduous teeth, such statistics are very misleading.

The following compares dental decay in 12-year-olds with and without fluoridation.

MoH statistics for decay (DMFT) in year 8 (12-year-old) NZ children for the 2004 year (which is the latest available on the MoH website). These show that fluoridation has some small benefit in the North Island but no benefit at all in the South Island. Please note that the decay statistics for the South Island areas are:-

	Fluoridated	Non-Fluoridated	% Fluoridated
Nelson-Marlborough	n/a*	1.25	0
West Coast	n/a*	1.98	0
Canterbury	2.45	1.58	4
South Canterbury	n/a*	1.63	0
Otago	1.65	1.94	47
Southland	2.03	2.11	41
Whole of South Island	1.79	1.62	

⁵ Feltman R. Kosel G, 1961, J. Dental Medicine, vol 16

⁶ Krook L, Maylin GA, Lillie JH, Wallace RS, Dental fluorosis in cattle, *Cornell-Vet*, 1983 Oct., 73:4, 340-362

(* means non-fluoridated)

(Methven and Burnham military camp are the only fluoridated areas of Canterbury)

Because Timaru ceased fluoridation in 1985 it is important that the decay trend for Timaru 12-year-olds is noted. Obviously by 1997 the 12-year-olds in Timaru District had never experienced water fluoridation. This provides a far better indicator of fluoridation “benefit” than the limited and skewed data that was presented to council with regard to Ashburton 6-year-olds. Thus:-

(Please note that “FII” (form 2) means the same as “year 8” which means the same as “12-year-old”)

- a) Decay for Timaru District 12-year-olds in **1984** = **3.75** MFT (missing filled teeth) and **15.04% caries free**. See letter dated 12/11/95 from M B Henderson, Principal Dental Officer. (enclosed)
- b) Decay for Timaru District 12-year-olds in **1989** = **2.23** MFT (missing filled teeth) and **31.05% caries free**. See letter dated 17/5/90 from Alan Roddick, Senior Dental Officer, Primary Health Division. (enclosed)
- c) Decay for Timaru District 12-year-olds in **2004** = **1.63** DMFT (decayed missing filled teeth) and **41.98% caries free**. See table of “Statistics for Decay in Year 8 (12-year-old) children for the 2004 year” sourced from the NZ Ministry of Health.

As you can see the Timaru District children have done very well without fluoridation and in fact much better than for any fluoridated area in the South Island.

Summary of: Scientific Consensus Statement on Environmental Agents Associated with Neurodevelopmental Disorders, November 2007

The consensus statement outlines the current scientific understanding of the links between environmental factors and learning and development disabilities. It was developed by the Collaborative on Health and the Environment's Learning and Developmental Disabilities Initiative.

The statement concludes:

"Given the serious consequences of learning and developmental disabilities, a precautionary approach is warranted to protect the most vulnerable of our society."

Children at heightened risk

The development of the human brain begins in utero. The long and complex development of the brain and nervous system leaves it susceptible to the adverse effects of chemical exposure.

For their body weight, children eat and breathe more than adults, thus a small exposure translates into a big dose.

Even very low doses of some biologically active contaminants can alter gene expression important to learning and developmental function.

Variations in individual susceptibility

Due to genetic variation people differ in susceptibility to exposures. Not identifying and studying susceptible subgroups can result in failure to protect those at high risk.

Children are often more susceptible than adults to the effects of exposure to environmental agents.

Children lacking certain nutrients are more vulnerable to toxicants. For example iron and/or calcium deficiency affects absorption of heavy metals such as lead and manganese. (Fluoridating agents contain significant levels of heavy metals, including lead.

As our testing methods have become more sophisticated, the recognition of individual sensitivity and, in particular, the sensitivity of the developing nervous system to the effects of environmental agents has grown.

Recent biomonitoring studies reveal the range of compounds we are exposed to and that accumulate in our bodies. Experiments with single chemicals can underestimate the effects of these chemicals in mixtures.

Where science meets the roadblock of policy

“[Despite 2000 years of knowledge that lead affected the mind, it] was added to paint and gasoline, removed only following considerable research that confirmed what was already known.”

(Similarly, fluoride’s toxicity has been known since the 1800s, yet promoters still deny this in the face of overwhelming scientific evidence.)

“Lead is probably the most studied of environmental contaminants. Its effects on development and learning are undisputed. Recent research indicates there is no safe level of lead exposure for children. Lead exposure impairs overall intelligence ... and is associated with ADHD, even at minute exposures. Efforts to prevent lead exposure provide an outstanding example of the struggle when science meets policy. The US CDC has not adjusted the blood-lead action level since 1990 despite scientific evidence of behavioural effects well below [this level]” (FANNZ would suggest that fluoridation provides an equally outstanding example, especially in light of the NRC Review findings).

Low dose effects can differ completely from high dose effects

The very low-dose effects of endocrine disruptors cannot be predicted from high dose studies, which contradicts the standard “dose makes the poison” rule of toxicology”. (Dr Albert Schatz identified this some decades ago; that low-dose effects can be quite different from high dose effects and begin to appear only below the level where high-dose toxicity reduces to near zero.)

Fluoride:

“The question is what level of exposure results in harmful effects to children. The primary concern is that multiple routes of exposure, from drinking water, food and dental care products, may result in a high enough cumulative exposure to fluoride to cause developmental effects. It is not clear that the benefits of adding fluoride to drinking water outweigh risks of neurodevelopment or other effects such as dental fluorosis.” It is important to note here that the consensus is that dental fluorosis is considered an adverse effect to be considered against fluoridation within a toxicological analysis; not just cosmetic as proponents claim.

“Fluoride-Gate” article

The article below on the CDC, "Fluoride-Gate," published on January 15 in the Juneau Empire, Alaska, has been picked up by US Water News. U.S. Water News is a monthly publication mailed throughout the country to water and wastewater treatment professionals and organizations. The San Francisco Chronicle has called U.S. Water News "the 'Wall Street Journal' of water publications."

We do not have the Water News version of this article as it is not available online.

Juneau Empire, January 15, 2008

www.juneauempire.com/stories/011508/opi_20080115024.shtml

Fluoride-Gate, naming names at Centers for Disease Control

DANIEL G. STOCKIN

Americans' distrust of societal institutions continues to grow, and now comes evidence of yet another burgeoning scandal: Fluoride-Gate. A torrent of recent bad news about the safety of fluorides has brought key names to the surface from the murky alphabet soup of players in the fluoride game at EPA, CDC, FDA, NIDCR, USDA, ADA, and AMA. The inevitable questions have begun about who knew what, when, and why was certain information kept quiet.

The first ominous drumbeats started in 2006, when a National Research Council committee recommended that the Environmental Protection Agency lower the allowable amount of fluoride in drinking water - to an unspecified level. As if that wasn't unnerving enough, the committee specifically stated that kidney patients, diabetics, seniors, infants, and outdoor workers were susceptible populations especially vulnerable to harm from fluoride ingestion.

Centers for Disease Control officials strove mightily to dismiss NRC's report as irrelevant, but in August of 2007 CDC's ethics committees received a formal ethics complaint about CDC's activities in promoting fluoridation. The complaint circled the globe via the Internet. A Kentucky attorney began assembling a list of "potentially responsible parties." After having been contacted by angry kidney patients, in September he formally notified the National Kidney Foundation that the organization may be held liable for failure to warn its constituents that kidney patients are particularly susceptible to harm from fluorides. The issue was immediately put on the agenda of the next meeting of the foundation's national board and the foundation's former position statement about fluoridated water has been retracted and the issue is now undergoing review.

The ethics complaint became a hot potato. How would CDC explain why its own data showed blacks to be disproportionately harmed by moderate and severe "dental fluorosis" teeth damage, yet CDC had not felt it necessary to openly show photos of the conditions to the black community? What would be the response of CDC's Chief of Public Health Practice, Dr. Stephanie Bailey, an African American woman who witnessed the presentation of the complaint? The complaint embarrassingly documented that Bailey had acknowledged earlier that a CDC-funded and nationally distributed public health ethics policy was not being implemented internally by CDC.

Apparently Bailey's concern about public health ethics did not extend to fluoridation. A 2007 Tennessee water agency report describes how the Harpeth Valley Utility District had accidentally introduced so much fluoride into its water that the concentration reached 18 times the amount generally in the water. The report describes how HVUD contacted Bailey, who told the district she believed "there was no health threat to HVUD's customers." This statement would be welcome news to a nervous HVUD, but is highly suspect, since Bailey could not possibly know how much of the tainted water individuals had consumed, the body weight of those who drank it (babies, children, etc), or individuals' prior health status (such as end-stage kidney disease). How could such a remarkably convenient statement come from a physician whose job description calls for her to be the "conscience of public health practice" at CDC?

Instead of having its ethics committee comprised of external ethicists look into the matter, CDC decided that the ethics charges against Director Dr. Julie Louise Gerberding and Oral Health Director William Maas would be handled internally by Dr. James Stephens, who works for Chief Science Officer Dr. Popovic, who reports to Dr. Gerberding. Without addressing many of the specifics in the complaint, Dr. Stephens predictably concluded that he had "found no evidence" that CDC managers had acted inappropriately. But the proverbial holes in the fluoridation dike can no longer be contained. This month's edition of the journal *Scientific American* has an article entitled "Second Thoughts about Fluoride." The cat is out of the bag that the Department of Agriculture has voiced concern about fluoride exposures.

Bailey's job description calls for her to address emerging and cross-cutting issues. Dr. Popovic's job is to ensure timely translation of science into practice by CDC. Citizens, attorneys and political leaders now have these officials' names and job descriptions. They should be the first, but not the only parties brought into court and into congressional hearings. Now that the "Fluoride-Gate" has swung wide open, it's time for names to be named.