



Merilyn Haines B App Sc Med Lab Tech

Co-founder Queenslanders For Safe Water, [Air & Food Inc](#)

[www.qawf.org](http://www.qawf.org)

# Overview Fluoridation

## – Why it should be Stopped –

A look at the fluoride chemicals

95% of the world does not fluoridate water

Exaggerated claims of effectiveness

Little absolute difference in tooth decay

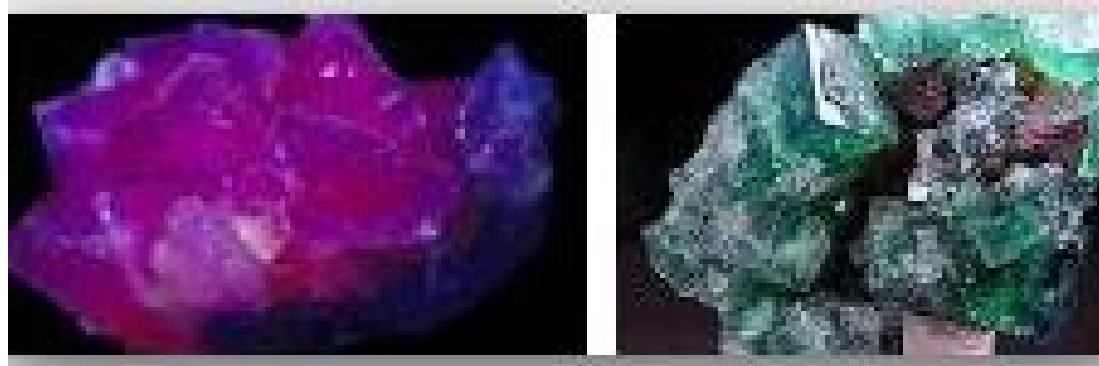
Fluoride dangers and harm

Mass Medication

Push Polls and Endorsements

Take Home Message

# Natural Fluorides & Un- natural (man made) Fluorides



Fluoride compounds exist in nature eg, **Fluorite, Calcium Fluoride**

Legislated Fluoride chemicals added to drinking water  
do NOT exist in nature

- Sodium Fluoride** ( S6 poison - source aluminium smelting industry)
- Sodium Silicofluoride** ( S6 poison - source phosphate fertiliser manufacturing)
- Hydrofluorosilicic Acid** ( S7 poison - source phosphate fertiliser manufacturing)

# What natural fluoride can do at higher levels

Lead and Arsenic are natural - natural doesn't mean good

Home

## Fluorosis crippling villagers in Punjab

Submitted by *Sahil Nagpal* on Wed, 03/05/2008 - 22:59. **Health News** **Simranjit Kaur**  
**India News** **Punjab**

Khemkaran Sector (Punjab), Mar 5: Fluorosis arising from excessive fluoride content in water cripples villagers and causes severe deformities in Punjab.

Besides being affected by deformed limbs, villagers also suffer from cataract, and premature ageing.

"The villagers are facing a host of health problems due to the hard water. Knees are severely deformed, eyesight turns weak and teeth have started falling and that too at a young age. We don't want anything from politicians, only safe and pure drinking water," said Simranjit Kaur, a resident.

The concentration of fluoride in water in the Khemkaran sector is much higher than the permissible levels prescribed by the World Health Organisation (WHO).

"Teeth are seriously discoloured due to excess fluoride in the drinking water. They turn weak because of the excess fluoride which is normally more than the permissible levels prescribed by the WHO as 1 PPM (Parts Per Million)", said Dr. Parminder Singh, a dentist at local hospital.

Fluorosis is a condition caused by the excessive intake of fluorine and is commonly of two types - Skeletal Fluorosis and Dental Fluorosis.

As the names suggest, it first affects the bones due to excessive accumulation of fluoride in bones and the latter affects the teeth. (ANI)



“Besides being affected by with deformed limbs, villagers also suffer from cataract and premature ageing”

# Where the Silico-fluoride chemicals used for water fluoridation come from (1)

- Phosphate rock - crushed, pulverised then boiled with concentrated Sulphuric Acid (there is about 4% F in the phosphate rock) - lead sulphides are frothed away
- Two fluoride gases are given off - HF and SiF<sub>4</sub> - go up smokestack – **Fluoride gases (pollution) MUST be captured**
- Water is sprayed into the wet – scrubbers ( pollution capture)
- **The 2 gases then dissolve in water, react together and form a new compound - H<sub>2</sub>F<sub>6</sub>Si – Hydrofluorosilicic acid – (this chemical does NOT EVEN EXIST IN NATURE)**
- Water repeatedly recirculated in the wet scrubbers – dissolving more and more of the two fluoride gases – till Hydrofluorosilicic acid is concentrated to about 25% solution

## Where the Silico-fluoride chemicals used for water fluoridation come from (2)

- Hydrofluorosilicic acid can then be tankered and sold directly to water treatment plants (as is - not cleaned up)

OR

- **The Hydrofluorosilicic acid can be further reacted with Soda Ash** (Sodium Carbonate) - a salt is formed, then precipitated out, then dried bagged and shipped out to sell to for use for water fluoridation

**Instead of having to pay to get rid of fluoride pollution  
– can make money out of waste**

# Schedule 6 and 7 Poisons are chemicals with High Toxicity

**Sodium Fluorsilicate**      **Na<sub>2</sub>SiF<sub>6</sub>**

**Fluosilicate de Sodium**  
**Esfluosilicati di Sodio**  
**Fluorossilicato de Sodio**  
**Natriumhexafluorsilikaat**  
**Natriumhexafluorosilikat**  
**Natriumhexafluorosilicat**

por inhalación, por ingestión y en contacto con la piel. En caso de accidente o de malestar, acúdase inmediatamente al médico (si es posible, muéstresele la etiqueta).

Indånding, ved hudkontakt og ved indtagelse under lås og utilgængeligt for børn. I tilfælde af kontakt med øjnene, skylles straks grundigt med vand og læge kontaktes. Ved tilfælde eller ved lidelse er lægebehandling nødvendig; vis etiketten, hvis det er muligt.

Einatmen, Verschlucken und Hautkontakt vermeiden.

Unter Verschluss und für Kinder unzugänglich aufbewahren. Bei Berührung mit den Augen sofort mit Wasser abspülen und Arzt konsultieren. Bei Unfall oder Unwohlsein sofort Arzt zuziehen (wenn möglich, dieses Etikett vorzeigen).

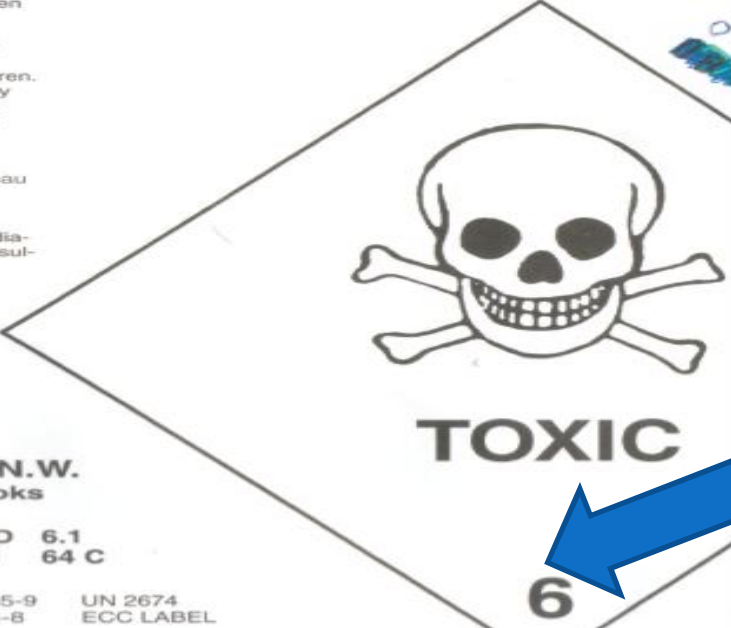
Toxic by inhalation, in contact with skin and if swallowed. Keep locked up and out of the reach of children. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Toxique par inhalation, par contact avec la peau et par ingestion. Conserver sous clef et hors de portée des enfants. En cas de contact avec les yeux, laver immédiatement et abondamment avec de l'eau et consulter un spécialiste. En cas d'accident ou de malaise, consulter immédiatement un médecin (si possible lui montrer l'étiquette).

Tossico per inalazione, contatto con la pelle e per ingestione. Conservare sotto chiave e fuori della portata dei bambini. In caso di contatto con gli occhi, lavare immediatamente e abbondantemente con acqua e consultare un medico. In caso di incidente o di malessere consultare immediatamente il medico (se possibile, mostrargli l'etichetta).

Vergiftig bij inademing, opname door de mond en aanraking met de huid. Achter slot en buiten bereik van kinderen bewaren.

ren. Bij aanraking met de huid, spoel af met veel water. Bij een ongeval, raadpleeg onmiddellijk een arts. Toxico por inhalación, Guardar fechadamente as crianças. Em caso de acidente, procurar imediatamente o especialista.



**TOXIC**

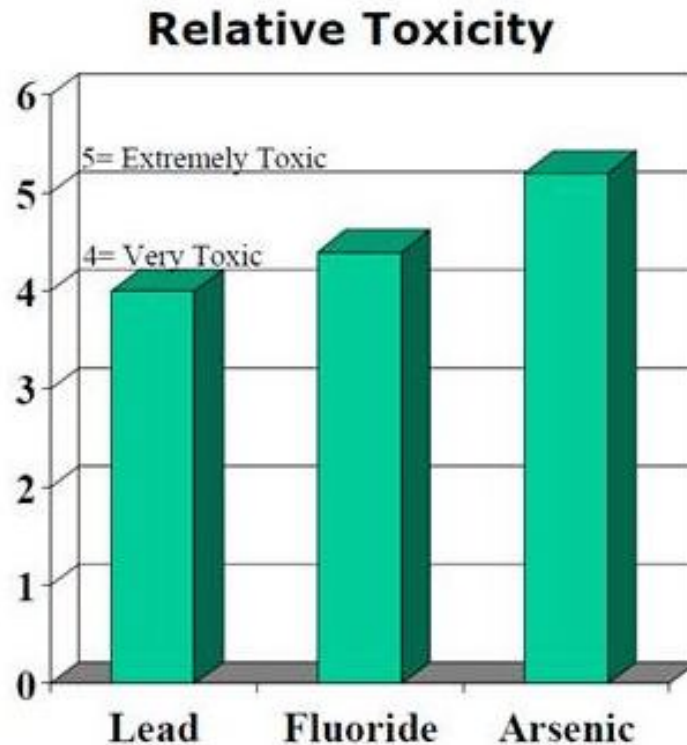
**6**

**1000 kg N.W.**  
Use no hooks

<b>IMDG</b>	<b>RID</b>	<b>6.1</b>
<b>ADR</b>	<b>6.1</b>	<b>64 C</b>

CAS: 16893-85-9      UN 2674  
ECC: 240-934-8      ECC LABEL

# Toxicity of Fluoride compared to Lead and Arsenic



Source: *Clinical Toxicology of Commercial Products* LD50 data - 1984

**Toxicity based on LD50 – Clinical Toxicology of Commercial Products  
5<sup>th</sup> edition 1984 Gosselin, Smith and Hodge**

# REDOX Pty Ltd – SODIUM FLUORIDE

## MATERIAL SAFETY DATA SHEET Mar 2001

REDOX PTY LTD
MATERIAL SAFETY DATA SHEET
Hazardous according to criteria of Worksafe Australia

### Poisons Schedule : 6

**Uses : As insecticide, particularly for roaches and ants ; in other pesticide formulations;** constituent of vitreous enamel and glass mixes; as a steel degassing agent; in electroplating; in fluxes; in heat- treating salt compositions; **in the fluoridation of drinking water;** for disinfecting fermentation apparatus in breweries and distilleries, preserving wood pastes.

**REDOX Pty Ltd – SODIUM FLUORIDE**  
**MATERIAL SAFETY DATA SHEET Mar 2001**

**Health Effects – Chronic**

“Chronic exposure may cause mottling of teeth and bone damage ( osteosclerosis ) and fluorosis. Symptoms of fluorosis include brittle bones, weight loss, anaemia, calcified ligaments, general ill health and joint stiffness. **Populations that appear to be increased risk from the effects of fluoride** are individuals that suffer from Diabetes Insipidus or **some forms of renal impairment”** page 3

# Fluoride chemicals are allowed to contain **Cadmium, Lead and Arsenic**

Queensland Health

September 2010

## Water Fluoridation



## Code of Practice



Revised September 2010

Water Quality Unit  
Environmental Health Branch



*NSF/ANSI Standard 60:  
Drinking Water Chemicals  
Health Effects (NSF 60) the  
**main impurities of  
concern for fluoride  
are arsenic,  
cadmium, copper  
and lead***

**Qld Health 2010  
Code of Practice P 54**

# Fluoride chemicals allowed to contain Cadmium, Lead and Arsenic

## Water Fluoridation



## Code of Practice



Revised September 2010

Water Quality Unit  
Environmental Health Branch



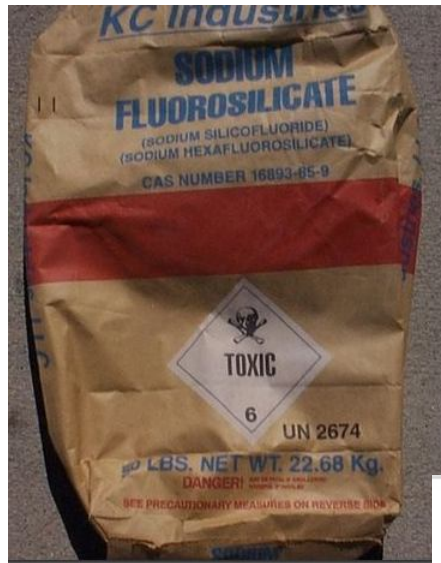
Table 1

Impurity	Maximum Impurity Content (MIC)*		
	Sodium Fluorosilicate (mg/kg)	Sodium Fluoride (mg/kg)	Fluorosilicic Acid (mg/L)
Arsenic	420	320	130
Cadmium	120	90	37
Copper	121,300	90,500	37,200
Lead	610	450	186

\*A conservative fluoride dosing concentration of 1mg/L has been adopted in deriving these specifications.

**Sodium Fluorosilicate ( Sodium Silicofluoride ) is allowed to contain... 420 mg of Arsenic, 120 mg Cadmium, 610 mg Lead and 121,300 mg Copper in every kg of the chemical**

# Fluoride chemicals used - imported from China



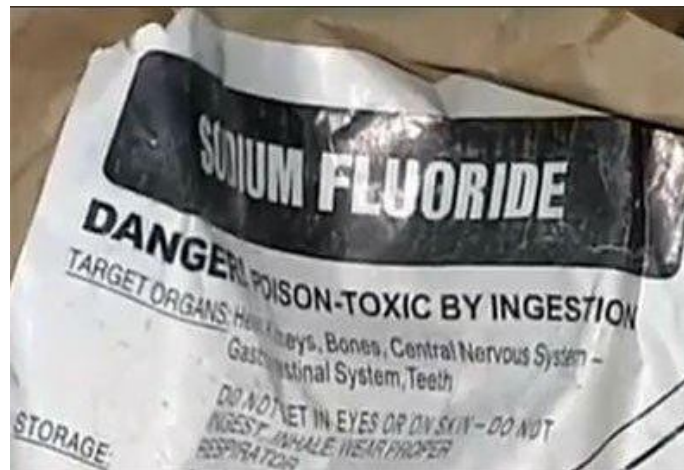
Ref MO/10/2352  
CTS 09373/10



Queensland  
Government

Office of the  
Minister for Natural Resources  
Mines and Energy and  
Minister for Trade

In February this year, Seqwater awarded a two-year fluoride supply contract to Australian supplier Quantum Chemicals following an open tender process. This company sources its fluoride chemical from Shanghai Mintchen Development Co Ltd, based in Shanghai, China.



**Ministerial Letter dated July 2010**

**Most of water fluoridation chemicals used in Qld are imported from China**

**China does not fluoridate**

# Status of water fluoridation in the world

Less than 5% of world's population has artificially fluoridated water but parts of China, India, Rift Valley are naturally contaminated



What countries has significant water fluoridation ? - mostly USA, NZ, Australia, Republic of Ireland, Singapore , Hong Kong, Malaysia, Canada (50 %), UK ( 10 % )

**Fluoridated Australia in step with the USA –**

**Australia is out of step with 95% of worlds population**

**97% of the population of Western Europe  
now drinks Non-Fluoridated Water**

**Austria\***

**Belgium**

**Denmark**

**Finland**

**France\***

**Germany\***

**Greece**

**Iceland**



**Italy**

**Luxembourg**

**Netherlands**

**Northern Ireland**

**Norway**

**Scotland**

**Sweden**

**Switzerland\***

\*Some fluoridate their salt

# The FDA – and the TGA have never approved water fluoridation chemicals for that use



FDA – has never approved – just  
***“grandfathered in”*** as already in  
use before the FDA formed ....

....**already in use as  
insecticides**



***“The TGA has never evaluated  
water fluoridation chemicals for  
safety and effectiveness ”***

***are “ excluded therapeutic goods ”***

Correspondence with TGA 2011



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
NATIONAL RISK MANAGEMENT RESEARCH LABORATORY  
CINCINNATI, OH 45268

November 16, 2000

OFFICE OF  
RESEARCH AND DEVELOPMENT

Roger D. Masters  
Research Professor of Government  
Dartmouth College  
Department of Government  
6108 Silsby Hall  
Hanover, New Hampshire 03755-3547

Dear Professor Masters:

We have received your letter dated September 27, 2000, requesting empirical scientific data we may have on the health effects of fluosilicic acid or sodium silicofluoride and manganese neurotoxicity.

To answer your first question on whether we have in our possession empirical scientific data on the effects of fluosilicic acid or sodium silicofluoride on health and behavior, our answer is no. Health effects research is primarily conducted by our National Health and Environmental Effects Research Laboratory (NHEERL). We have contacted our colleagues at NHEERL and they report that with the exception of some acute toxicity data, they were unable to find any information on the effects of silicofluorides on health and behavior.

In answer to your question on empirical information we may have on manganese neurotoxicity, NHEERL scientists forwarded to us several manuscripts with reference sections that contain information on the neurotoxicity of manganese. These are enclosed for your information.

I apologize for the delay in responding to your request and hope you find the enclosed information useful.

Sincerely,

Robert C. Thurnau, Chief  
Treatment Technology Evaluation Branch  
Water Supply and Water Resources Division

Enclosures

## Letter from United States Environmental Protection Agency to Prof Masters in 2000

**Apart from some acute toxicity data the USA EPA and the National Health and Environmental Research Laboratory were **unable to find any information on the effects of silicofluorides on health and behaviour****

**Silicofluorides have been in use for water fluoridation for 50 years – but no information on health effects?**

**When water fluoridation started in the 1950 s in the USA and Australia - there wasn't ...**

**fluoridated toothpastes**

**fluoridated mouth washes**

**School Dental Services ( Whitlam started )**

**fluoride treatments at Dentists**

**dental sealants ( significantly prevent decay )**

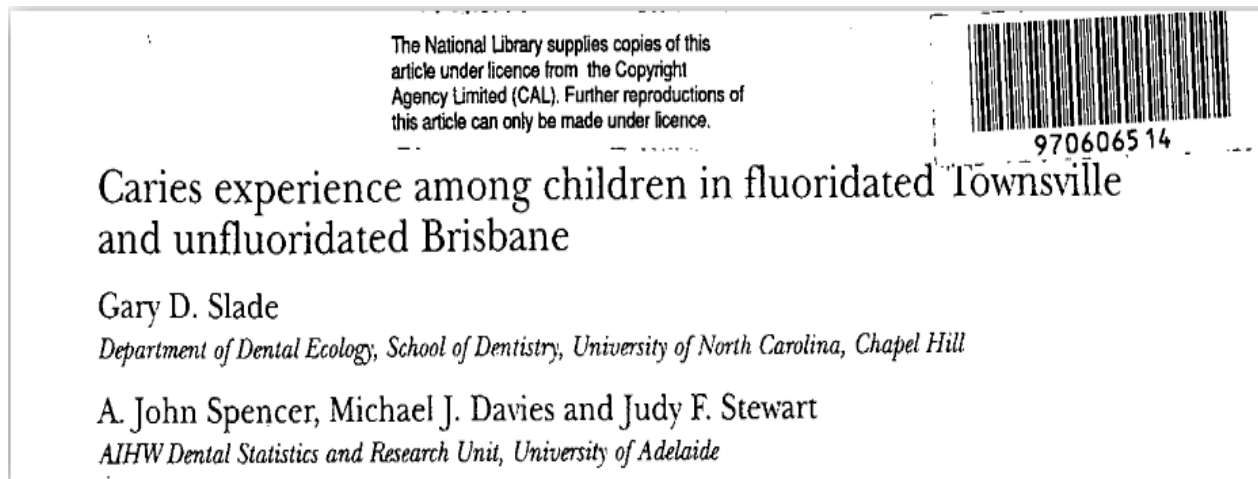
**good understanding of importance of oral hygiene**

**Does water fluoridation really significantly reduce tooth decay NOW in children or adults ?**

**The evidence seems weak that it does**

# Townsville vs Brisbane Study (1996)

**This 1996 publication was what Premier Anna Bligh based mandated fluoridation on.**



**In this study tooth decay was measured as decayed tooth surfaces  
teeth have either 4 surfaces (incisors) or 5 surfaces ( molars )**

**28 teeth in a child's mouth = 128 tooth surfaces**

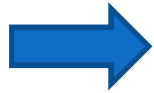
**Queenslanders were told in 2007**

**Children from Fluoridated Townsville have  
65% less tooth decay than children from  
Non-Fluoridated Brisbane**

**In 2005 this message was on the Qld Dental Association website**

**In 2007 Qld Health made this claim in newspaper advertisements**

# Qld Health *“resulting in - 65 % less tooth decay”*



**This glass of water could protect your smile**

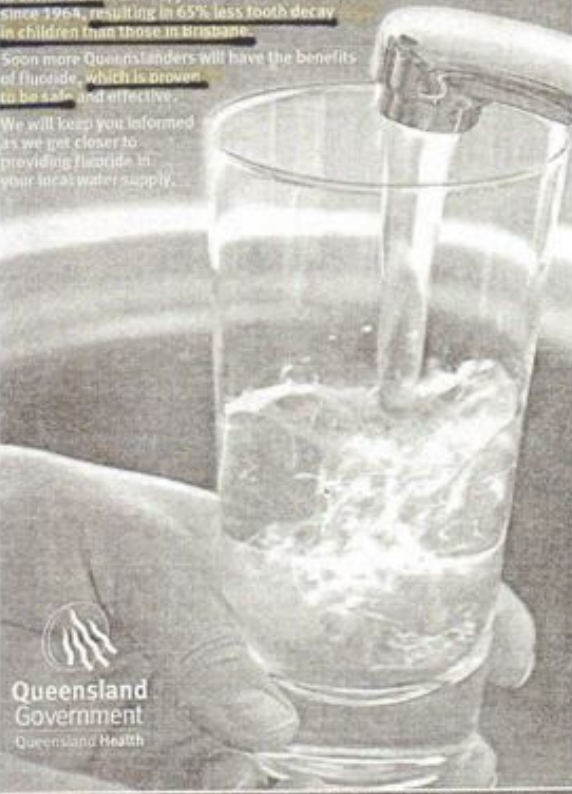
From next year the State Government will be spending 535 million to help protect Queenslanders' teeth.

Every other Australian State and Territory has provided fluoride in water supplies to help protect people's teeth for the last 30-40 years.

**In Townsville, water supplies have been fluoridated since 1964, resulting in 65% less tooth decay in children than those in Brisbane.**

Soon more Queenslanders will have the benefits of fluoride, which is **proven to be safe and effective.**

We will keep you informed as we get closer to providing fluoride in your local water supply.



Queensland Government  
Queensland Health

To find out the facts on fluoride, go to [www.health.qld.gov.au](http://www.health.qld.gov.au)

Thursday, December 6, 2007 The Courier-Mail

- *“ In Townsville, water supplies have been fluoridated since 1964, resulting in 65% less tooth decay in children than those in Brisbane”*
- *“ fluoride, which is proven to be safe and effective ”*

Qld Health newspaper advertisements  
Dec 2007

# How did they get the 65% less decay ?

Table 4: Caries experience (decayed, missing or filled surfaces) in the permanent dentition

Age (years)	Townsville			Brisbane			Difference		Total
	n	Mean DMFS <sup>a</sup>	SD <sup>b</sup>	n	Mean DMFS <sup>a</sup>	SD <sup>b</sup>	%	Absolute	
6	300	0.04	0.23	472	0.10	0.54	60	0.06	
7	240	0.09	0.37	440	0.26	0.83	65	0.17	
8	262	0.25	0.68	375	0.52	1.09	52	0.27	
9	226	0.41	0.93	403	0.51	1.05	20	0.10	
10	205	0.57	1.10	387	1.13	1.96	50	0.56	
11	188	0.65	1.26	370	1.45	2.25	55	0.80	
12	69	0.94	1.63	205	1.80	2.79	48	0.86	

Note: (a) DMFS = number of decayed, missing or filled surfaces per child. (b) SD = standard deviation

# Townsville vs Brisbane ( 1996 )

0.26 tooth surfaces( Brisbane) – 0.09 ( Townsville )  
= 0.17 tooth surfaces difference

$0.17/0.26 \times 100 = 65\%$  fewer decayed tooth surfaces

**An absolute difference of a tiny 0.17 of one tooth surface ( out of over 100 tooth surfaces in a child's mouth ) at age 7 yrs was promoted by Qld Health as 65 % less decay**

# **Townsville vs Brisbane ( 1996 )**

**When Qld Health claimed 65 %  
difference in tooth decay.....**

**it was not 65% of the number of  
teeth in the mouth – it was less than  
 $\frac{1}{4}$  of one tooth difference**

**This was the “PIVOTAL” study used in 2007 to justify  
mandated fluoridation in Queensland**

# Townsville vs Brisbane 1996

For a **lifetime** of drinking fluoridated water children aged between 6 and 12 years old had only a **minute difference of 0.23 tooth surfaces less decay in their permanent teeth (out of possible 128 tooth surfaces)**

**Qld Health now claiming fluoridation  
makes 45 % difference**

# Townsville Bulletin - 2<sup>nd</sup> March 2013

TOWNSVILLE BULLETIN 2<sup>nd</sup> March 2013

Dental treatment is looking like a mirage for the hundreds on Townsville's public waiting list,

writes Daniel Bateman



PENSIONERS are being forced to take out personal loans in order to pay for dental treatment, with some waiting as long as 15 years to be seen by the public dentist. Townsville's oral health waiting list has blown out to "unacceptable" lengths for 887 people waiting more than five years for an appointment.

**"with some waiting up to 15 years to be seen by the public dentist"**

So – has fluoridation been a success in Townsville ?

20 special report

## Waiting lists

Dental treatment is looking like a mirage for the hundreds on Townsville's public waiting list, writes Daniel Bateman

**Case study 1: Judy Edwards**

Judy and George Edwards described their struggle to get dental treatment from the Queensland Government, and all they were offered was a personal loan to pay for it.

When the regional oral health specialist recommended a personal loan, she was told that she had to wait 15 years for a dental appointment.

She said she had to take out a personal loan to pay for dental treatment, which she said was "unacceptable".

She said she had to wait 15 years for a dental appointment, which she said was "unacceptable".

She said she had to wait 15 years for a dental appointment, which she said was "unacceptable".

21 the editor DAVID BOWEN

## show system in decay

**Case study 2: Glenn Eardman**

Glenn Eardman wanted to see a public dentist, but he was told to wait 15 years. He said he had to take out a personal loan to pay for dental treatment, which he said was "unacceptable".

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**Case study 3: Louise Yates**

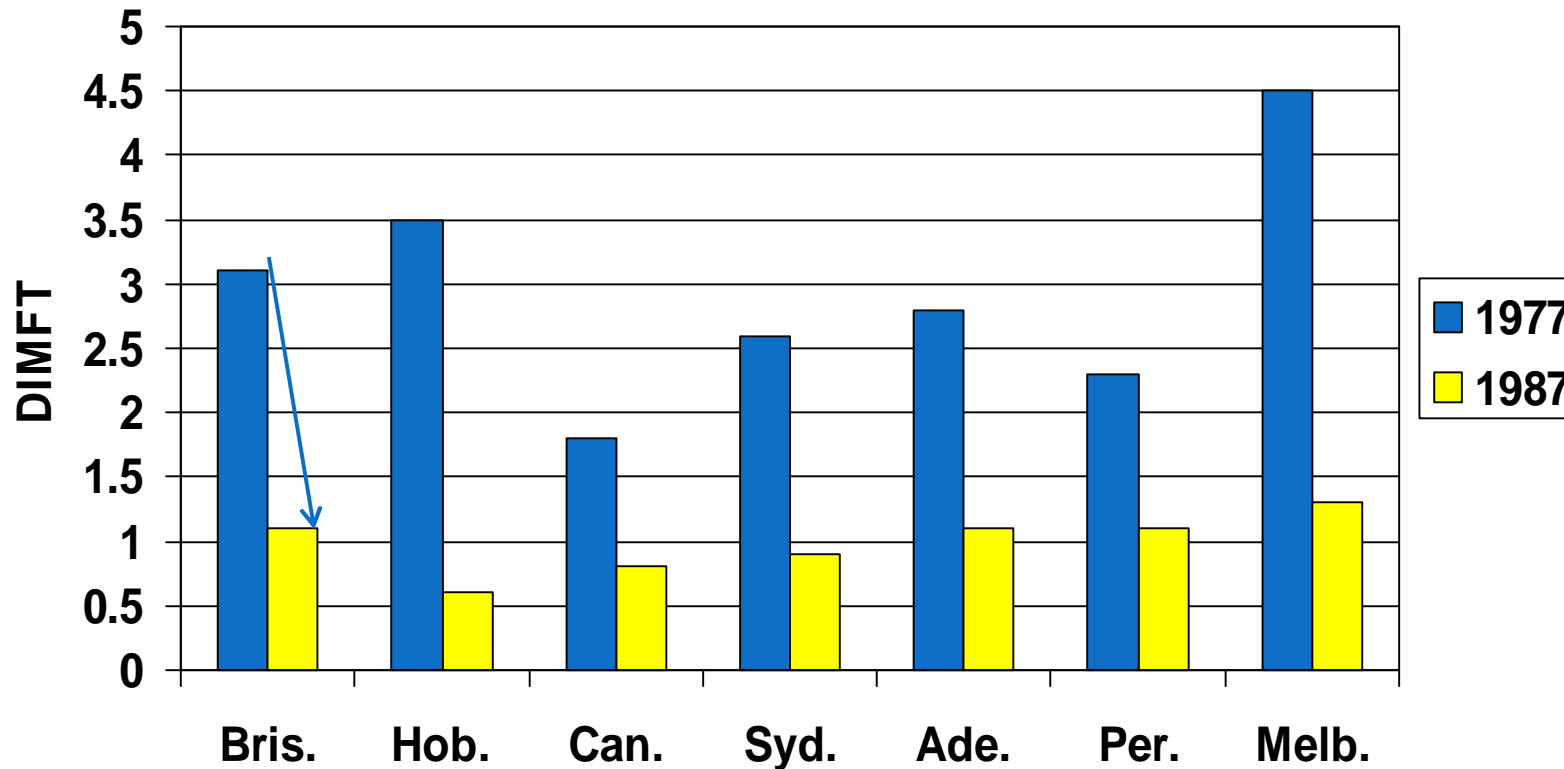
Louise Yates wanted to see a public dentist, but she was told to wait 15 years. She said she had to take out a personal loan to pay for dental treatment, which she said was "unacceptable".

She said she had to wait 15 years for a dental appointment, which she said was "unacceptable".

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# Average Tooth decay in 10 year olds by Capital City 1977 and 1987

Tooth decay had gone down similarly in Brisbane children without water fluoridation



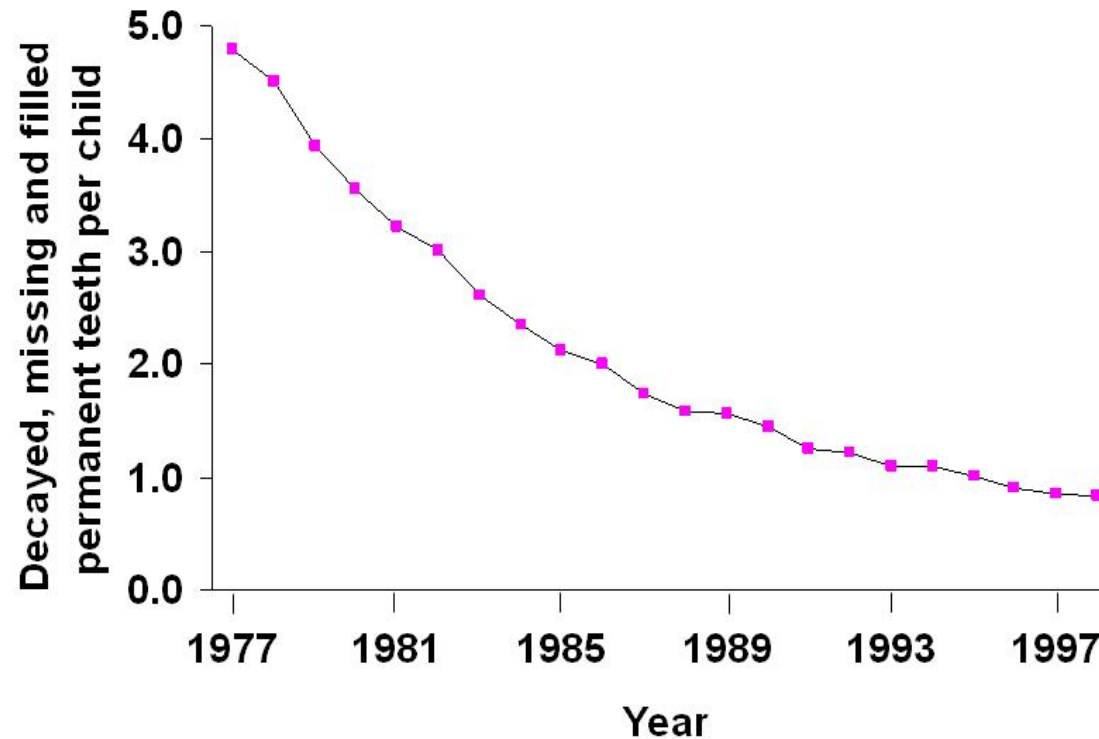
School Dental Service data ( FOI - Dr Mark Diesendorf, 1990).

**All cities except Brisbane fluoridated for at least 10 years by 1987**

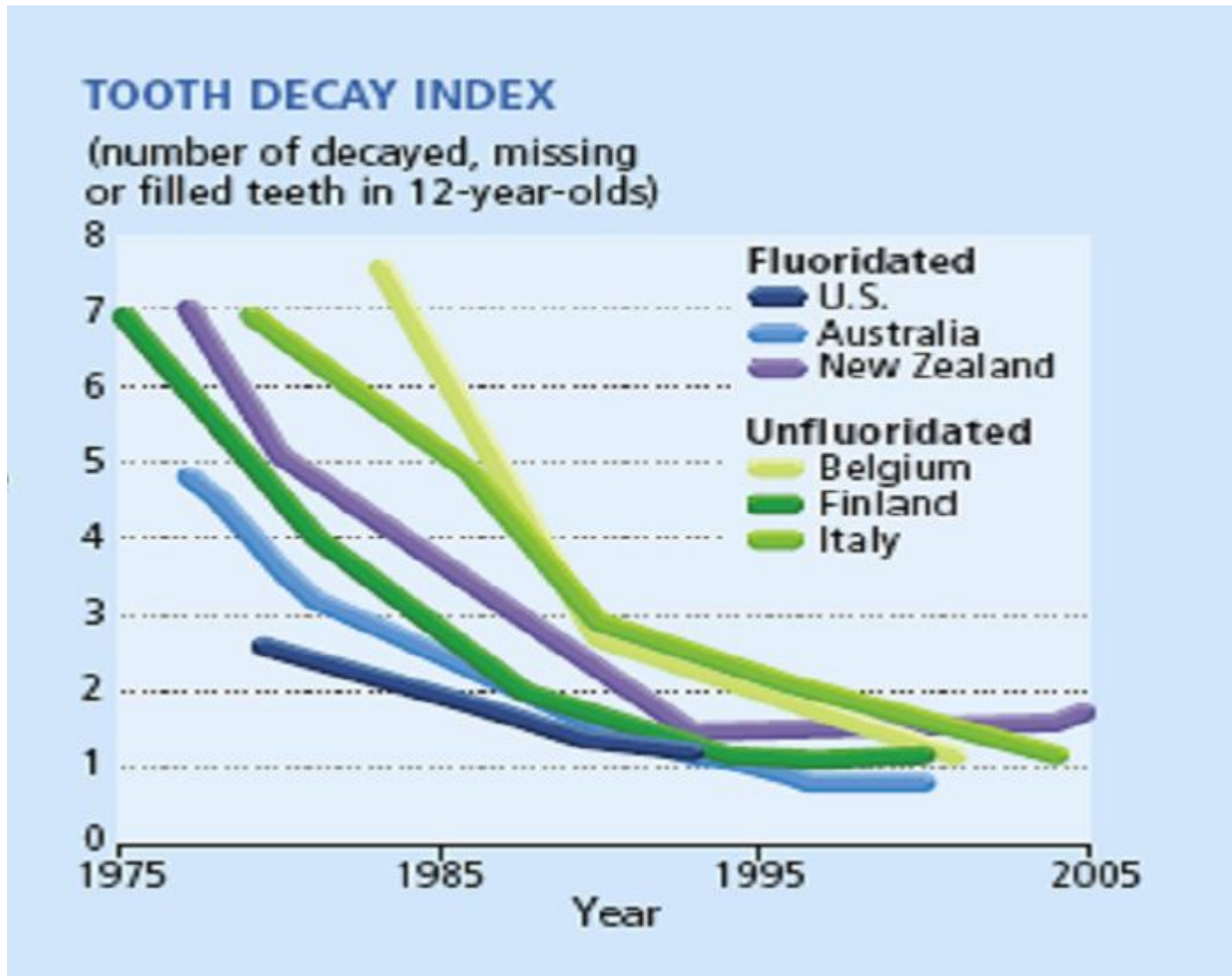
# Tooth decay had come down similarly in Qld's 12 year olds – before forced fluoridation



## Dental decay, Australian 12-yr olds 1977-1998



# Scientific American 2007



# Australian Childrens Dental Surveys

Australian Interstate comparisons of 12 year old DMFT  
from 4 published AIHW Australian Children's Dental Surveys

Year of survey	2000	2001	2002	2003-04	% of population with fluoridated water ***
New South Wales	0.55*	**	**	**	92 % of population have fluoridated water
Victoria	1.11	0.93	0.98	1.06	77 % of population have fluoridated water
Queensland	<b>1.17</b>	<b>1.25</b>	<b>1.26</b>	<b>1.19</b>	<b>&lt;5% of population have fluoridated water</b>
Western Australia	0.89	0.82	0.92	0.87	92% of population have fluoridated water
South Australia	0.60	0.67	0.84	0.82	90% of population have fluoridated water
Tasmania	0.98	<b>1.26</b>	<b>1.21</b>	<b>1.18</b>	83% of population have fluoridated water
Aus Capital Territory	<b>1.39</b>	<b>1.38</b>	<b>1.27</b>	1.06	100% of population have fluoridated water
Northern Territory	0.97	0.73	0.84	0.92	70% of population have fluoridated water
Gold Coast #	<b>0.86</b>	<b>1.07</b>	<b>1.02</b>	<b>1.16</b>	<b>Gold Coast - water supply not fluoridated</b>
Australia	0.84	0.95	1.02	1.03	> 65 % population have fluoridated water



**Old children** (before fluoridation) at age 12 years old (**WHO Std**) **have very similar, or even less decay** than 12 year olds from Tasmania ( 83% fluoridated ) and the ACT ( 100 % fluoridated )

DMFT of 1 means an overall average of only 1 tooth with some experience of decay – **only a fraction of one tooth variation between states** – Qld even less than some states.

# Latest published Australian Children's Dental Survey –2008 - pub Sept 2012

Table 2.6: Caries experience in the deciduous teeth of 6-year-olds by state and territory, 2008

State/territory	Decayed teeth (d)		Missing teeth (m)		Filled teeth (f)		dmft	
	Mean	CI	Mean	CI	Mean	CI	Mean	CI
Qld	1.57	1.33–1.82	0.10	0.05–0.15	0.94	0.77–1.16	2.61	2.29–2.93
WA	1.06	0.90–1.21	0.04	0.02–0.06	0.78	0.66–0.91	1.85	1.65–2.05
SA	1.06	1.01–1.12	0.25	0.22–0.28	0.94	0.89–0.99	2.25	2.16–2.34
Tas	1.23	1.13–1.32	0.60	0.53–0.66	0.79	0.71–0.86	2.61	2.46–2.76
ACT	0.57	0.47–0.67	0.03	0.01–0.04	0.56	0.47–0.65	1.16	1.00–1.32
NT	1.11	0.70–1.52	0.11	0.04–0.19	0.88	0.55–1.20	2.10	1.57–2.63
Australia (6 states/territories only)	1.30	1.25–1.35	0.13	0.12–0.15	0.88	0.84–0.91	2.31	2.24–2.37

Note: Results for Australia exclude Victoria, due to lack of access to the data, and New South Wales, due to a lack of representativeness of the sample.

**Tasmanian 6 yr olds ( 83% fluoridated ) have exactly the same average amount of tooth decay as Qld 6 year olds ( before fluoridation )**

# Latest published Australian Children's Dental Survey –2008 - pub Sept 2012

Table 2.7: Caries experience in the permanent dentition of 12-year-olds by state and territory, 2008

State/territory	Decayed teeth (D)		Missing teeth (M)		Filled teeth (F)		DMFT	
	Mean	95% CI	Mean	95% CI	Mean	95% CI	Mean	95% CI
Qld	0.61	0.48–0.73	0.04	0.01–0.07	0.66	0.54–0.78	★ 1.31	1.11–1.50
WA	0.32	0.25–0.40	0.01	0.00–0.03	0.35	0.29–0.40	0.68	0.58–0.78
SA	0.38	0.35–0.40	0.04	0.03–0.05	0.59	0.56–0.62	1.01	0.97–1.05
Tas	0.60	0.54–0.66	0.09	0.07–0.12	0.59	0.54–0.64	★ 1.28	1.20–1.36
ACT	0.16	0.12–0.21	0.02	0.00–0.04	0.53	0.45–0.60	0.71	0.62–0.81
NT	0.41	0.21–0.60	0.13	–0.01–0.26	1.41	1.02–1.79	★ 1.94	1.50–2.39
Australia (6 states/territories only)	0.48	0.46–0.51	0.04	0.03–0.05	0.59	0.56–0.61	1.11	1.07–1.14

Note: Results for Australia exclude Victoria, due to lack of access to the data, and New South Wales, due to a lack of representativeness of the sample.

**Tasmanian 12 yr olds ( 83% fluoridated ) have the same average amount of tooth decay as Qld 12 year olds (before fluoridation)**

**\* Northern Territory Children 12 year olds ( 70 % fluoridated ) have the most decay \***

# Lets keep things in perspective !

**Fifty years ago Australian 12 year olds had on  
average 10 to 12 decayed teeth ( DMFT 10 or 12)  
( *Lord Mayors Fluoridation Taskforce Report 1997* )**

**Now Australian 12 year olds have a DMFT of  
around only 1 on average (only 1 tooth that has  
had some experience of decay)**

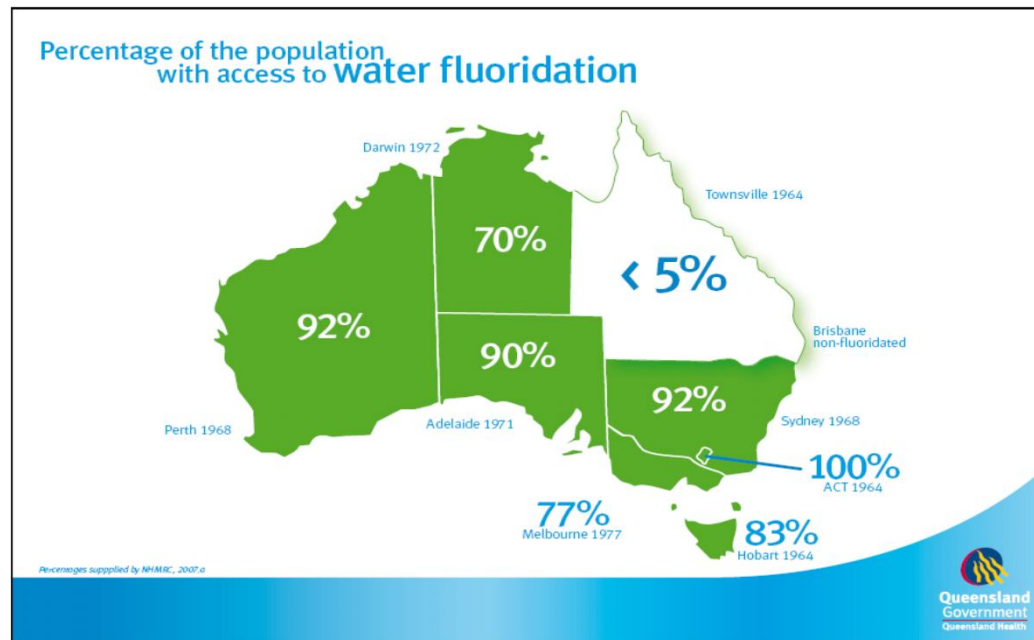
**We are now quibbling about a FRACTION of one  
tooth difference - not 10 or 11 teeth**

**Is fluoridated water EFFECTIVE  
in decreasing tooth decay?**

**Data from Australia and overseas  
show little difference between  
fluoridated and non fluoridated  
communities**

# Status of water fluoridation in Australia in 2007

Queensland 2007 < 5% of Qld population “ *with access* ” to fluoridated water



In 2007 Queensland was **IN STEP** with the rest of the world  
- less than 5% of the world has fluoridated water

# National Adult Oral Health Survey 2004-06

Despite 50 years of fluoridation very little data on adult tooth decay - only 2 Australian national adult oral health surveys have ever been done

**National report was released in 2007 – widely and aggressively used to promote water fluoridation.** Individual state & territory reports released 2008



Australian Government  
Australian Institute of  
Health and Welfare

## Australia's dental generations

The National Survey of Adult Oral Health 2004–06



# In – house presentation Adelaide University on National Adult Oral Health Survey 2004 -2006



ARCPOH  
Dental School  
The University of Adelaide  
South Australia 5005  
Tel (08) 8303 4454  
Fax (08) 8303 4858  
E-mail:  
[kaye.robertsthomson@adelaide.edu.au](mailto:kaye.robertsthomson@adelaide.edu.au)

## Caries experience in Australian States and Territories

Kaye Roberts-Thomson

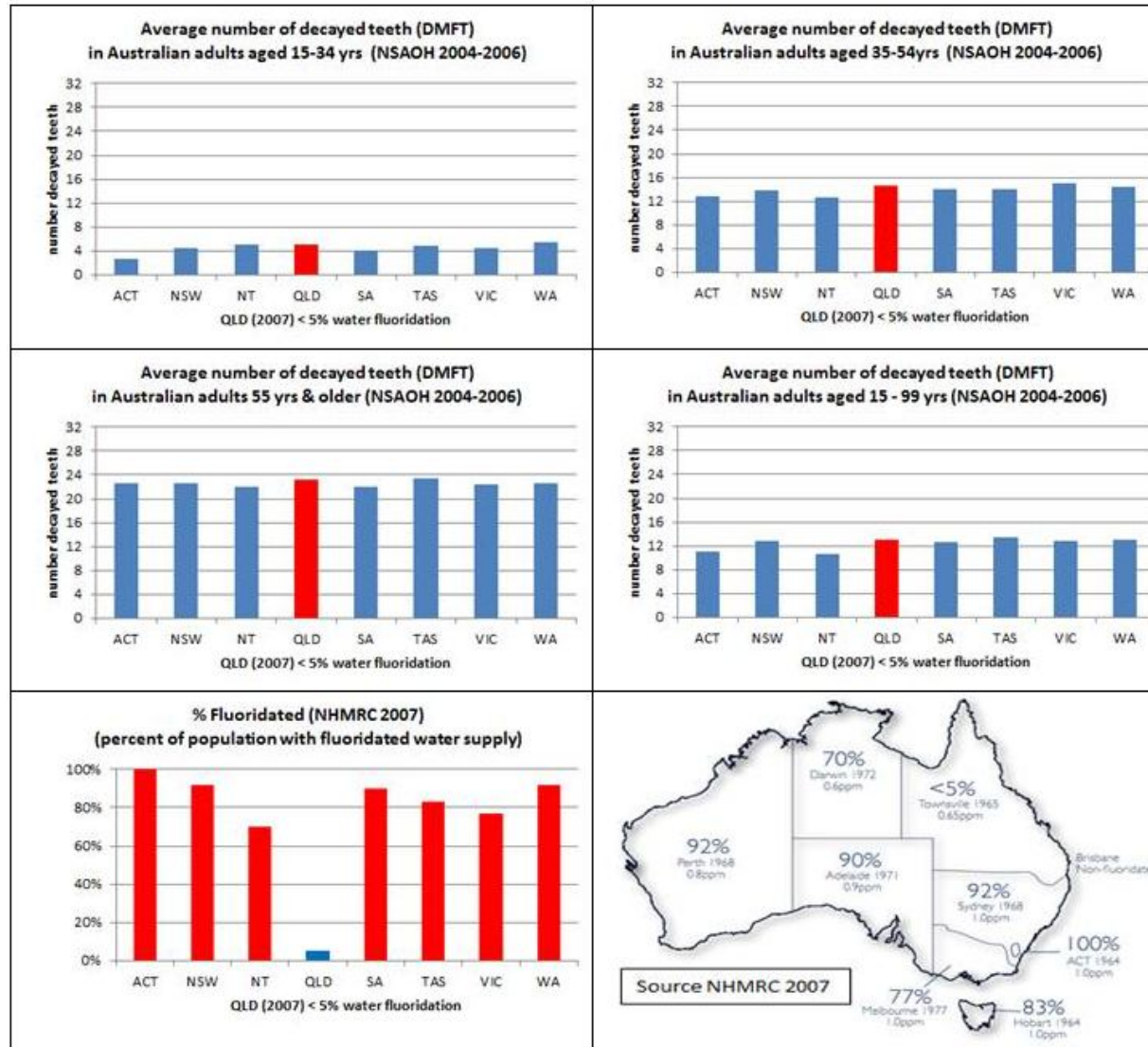
Presented at the workshop:  
"State and territory findings from the 2004–06  
Australian National Survey of Adult Oral Health",  
February 25-26, 2008. Adelaide, SA.

When Adelaide University released the report– **they knew there was little difference between the states** – but they used the report to promote fluoridation regardless

## Average number of teeth with caries experience



# Very little difference in tooth decay in adults - 2004 – 2006 survey



# Drinking fluoridated water for 40 years or more doesn't seem to reduce or prevent adult tooth decay?

Mean number of decayed teeth ( DMFT ) in adults from 2004-2006 National Survey Adult Oral Health  
by state/ age group/ % population with fluoridated water ( NSAOH 2004-2006 and NHMRC 2007 )

State/ Territory	Mean DMFT age 15-34 yrs	Mean DMFT age 35- 54 yrs	Mean DMFT Age55 + yrs	Mean DMFT age 15-99 yrs	% population with fluoridated water
Aus Cap. Territory	2.6	12.9	22.7	11.0	100%
New South Wales	4.4	13.9	22.7	12.8	92%
Northern Territory	5.0	12.7	22.1	10.7	70%
Queensland	5.0	14.6	23.1	13.1	<5% - at 2007
South Australia	4.1	14.0	22.1	12.7	90%
Tasmania	4.9	14.1	23.4	13.4	83%
Victoria	4.4	15.1	22.5	12.8	77%
West Australia	5.4	14.5	22.7	13.1	92%

DMFT = (Decayed Teeth plus Missing teeth and Filled teeth due to decay)



**Queensland adults did NOT have the WORST tooth decay in any adult age group**

**2004-2006 National Adult Oral Health Survey ( published 2007-08)**  
**A new analysis report of 2004-06 survey published online – March 2013**

**Generation born in the 30 year period ( 1960 -1990 ) post fluoridation had a difference of only 1.14 decayed teeth ( 10 % less ) with prolonged exposure to fluoridated water compared to those with negligible exposure** (many with little exposure to fluoridated water would be those living in rural areas with lower incomes and often with limited access to dental care)

---

**RESEARCH REPORTS**

**Clinical**

G.D. Slade<sup>1\*</sup>, A.E. Sanders<sup>1</sup>, L. Do<sup>2</sup>, K. Roberts-Thomson<sup>2</sup>, and A.J. Spencer<sup>2</sup>

<sup>1</sup>Department of Dental Ecology, University of North Carolina at Chapel Hill, Room 4501E, UNC School of Dentistry, 385 South Columbia Street, CB#7455, Chapel Hill, NC 27599 7455, USA; and <sup>2</sup>Australian Research Centre for Population Oral Health, The University of Adelaide, Australia; \*corresponding author, [gary\\_slade@dentistry.unc.edu](mailto:gary_slade@dentistry.unc.edu)

**Effects of Fluoridated Drinking Water on Dental Caries in Australian Adults**

# How in 2007 Queensland Health represented the “ NEED ” for fluoridation

## The state of oral health in Queensland



Teeth exposed to fluoridated water



Teeth without exposure to fluoridated water



Four-year-old child undergoing general anaesthetic for dental decay

**\* Qld Health sent this document to selected MPs in early 2008 before they voted on fluoridation**

# Really ?



Teeth exposed to  
fluoridated water

*“ Teeth exposed to fluoridated water ”*

Qld Health 2007



Teeth without exposure to fluoridated water

*“ Teeth without exposure to fluoridated water ”*

Qld Health 2007

**Or was this fraudulent promotion ?**

# BABY BOTTLE TOOTH DECAY OCCURS IN ALL STATES.

## Qld Health has another take in its marketing!

### The state of oral health in Queensland



Teeth exposed to fluoridated water



Teeth without exposure to fluoridated water



Four-year-old child undergoing general anaesthetic for dental decay

### Prof Hardy Limeback:

“Rampant smooth surface decay, especially in the front teeth, as well as that massive open bite (suggesting constant sucking on a soother or baby bottle)...all point to obvious baby bottle tooth decay. That kind of tooth decay occurs even in cities that are fluoridated and, in my opinion, will NOT be prevented in non-fluoridated areas even if the formula is made with fluoridated bottled or tap water. **It is false and misleading to use such a severe case of dental decay to suggest that fluoridation would help these children.**”



# Examples of severe tooth decay were used to force fluoridation

**HOWEVER** - every state has a problem with a small percentage of children with severe tooth decay and there is NO such thing as a " **fluoride deficiency** "

**Oral hygiene education and dietary education is the real answer**



## A rotten state of affairs

CAROLINE MARCUS

EVERY two days in Sydney at least 10 children are forced to endure dental operations under general anaesthetic in the public sector.

Two of those children will be younger than five years old.

There were 1600 children under 15 who required dental surgery in the past 12 months, with 20 per cent aged up to four, according to figures given to *The Sunday Telegraph* by the Westmead Centre for Oral Health.

The head of the centre, Angus Cameron, said while they did not keep figures for the private sector, he estimated that there would be an additional 500 children a year undergoing such treatment.

sundaytelegraph 6.2.2011

There was evidence from NSW Health's Child Dental Health Survey in 2007 that there had been an increase in decay over the past five or six years, he said.

And while Australia ranks relatively well in a list of developed countries with the lowest rates of tooth decay among 12-year-olds, there are an alarming number of Australian children with severe cases.

"What we know is 10 per cent of children have 80 per cent of the disease," Mr Cameron said. "There are some children we actually have to take to theatre to take every single tooth out."

"It is trying to target the dental care to those high-risk groups and trying to prioritise their care," he said.



A young child with severe tooth decay

Sydney fluoridated since 1968

Every 2 days at least 10 children in the Public Sector have general anaesthetics for severe tooth decay

At least 2 of those children will be under 5

Sunday Telegraph 6.2.2011

<http://www.optuszoo.com.au/news/204063/wa-toddlers-endure-multiple-tooth-extractions.html>

## WA toddlers endure multiple tooth extractions

Sep 28, 2010 11:15am



**Perth fluoridated in 1968  
92% of West Australians have  
fluoridated water  
Many Perth toddlers with severe  
tooth decay – with fluoridation**

This set of decaying teeth belong to a three-year-old Perth child and is one of many "bombed-out" mouths paediatric dentists are confronted with each week.

This set of decaying teeth belong to a three-year-old Perth child and is one of many "bombed-out" mouths paediatric dentists are confronted with each week.

Perth dentists and academics have urged parents to take their children for oral check-ups well before they begin school to reduce the number of toddlers being placed under general anaesthetic to extract rotting teeth or fit crowns.

# Queensland Health - there are no adverse health effects from fluoridated water

*“Fact – the only known side effect of  
known optimal fluoridation is a  
**slight** increase in dental fluorosis”*

“Common fluoride myths” - Qld Health document 2007

# Fluoridated water claimed not to cause harm - but fluoride exposure is linked ...

- Lowering of IQ
- Dental fluorosis
- Skeletal fluorosis
- Brittle bones – possible increase in fractures
- Fluoride accumulating in Pineal gland
- Depressed thyroid activity
- Hypersensitivity: adverse reactions
- Osteosarcoma (bone cancer) in young men
- Risk to the kidney impaired ( Aborigines / Diabetics)

# No risk assessments were done by Queensland Health

As a consequence Queensland Health was of the view that following this recommendation from the NH&MRC regarding the safety and effectiveness of water fluoridation, within the recommended range, no further human health risk assessment was necessary.

## 2009 Freedom of Information on Qld Health

**Outcome of FOI - no Risk Assessments had been done for fluoridation  
&  
No Environmental Impact Statements had been done either**

# Freedom of Information application to Qld Health to get **Risk Assessments** for fluoridation – **none had been done**

With regard to any requirement for a risk assessment of the decision to introduce mandatory fluoridation, the WQU advised that it is unclear precisely what you are asking. If you are asking why a human health risk assessment for the introduction of fluoridation was not undertaken, then the correct response is that Queensland Health has adopted the recommendation of the NHMRC review of water fluoridation, published in 2007 ([http://www.nhmrc.gov.au/publications/synopses/\\_files/eh41.pdf](http://www.nhmrc.gov.au/publications/synopses/_files/eh41.pdf)) that:

“Fluoridation of drinking water remains the most effective and socially equitable means of achieving community-wide exposure to the caries prevention effects of fluoride. It is recommended that water be fluoridated in the target range of 0.6 to 1.1 mg/L, depending on climate, to balance reduction of dental caries and occurrence of dental fluorosis.”

As a consequence Queensland Health was of the view that following this recommendation from the NH&MRC regarding the safety and effectiveness of water fluoridation, within the recommended range, no further human health risk assessment was necessary.

***“Qld Health of view that following the recommendation of the NHMRC ( 2007 ) - no further human health risk assessment was necessary”***

**Qld Health 2009**



**Queensland Government**  
Queensland Health

# The NHMRC 2007 Fluoridation Review is claimed as proof of safety

...strongly suggests beneficial for reducing dental caries...

**Suggests??**



**NHMRC Public Statement**

The Efficacy and Safety of Fluoridation 2007

The existing  
body of evidence  
strongly suggests  
that fluoridation  
is beneficial  
for reducing  
dental caries  
(NHMRC 2007).

# Fluoride and Kidney impairment

*“People with **kidney impairment** have a **lower margin of safety for fluoride intake**. Limited data indicate that their **fluoride retention may be up to three times normal** ”*

*NHMRC Australian Drinking Water Guidelines 2004 & 2010*

Has the NHMRC ever investigated cumulative effects of fluoride on people with Kidney impairment? **NO!**

**No** – even though this was a specific requirement of the Tender to do the 2007 NHMRC fluoride review ( known through FOI )

# **THE BRITISH GOVERNMENT REVIEW of Water Fluoridation – done by York University (published 2000)**

## **Objective 4 of the Review:**

***“Does water fluoridation have negative effects”***

**Professor Sheldon (Chairman of the Review ) wrote an open  
letter tabled in the House of Lords in 2001 .....**

# Professor Sheldon's Letter to UK Parliament - House of Lords (2001)

“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, British Medical Association,** The National Alliance for Equity in Dental Health and the British Fluoridation Society. I should like to correct some errors .....

# Professor Sheldon's Letter to UK Parliament -House of Lords (2001)

*" 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 high levels of fluorosis"*

**The report recommended that more research was needed**

# Professor Sheldon's Letter to House of Lords 2001

DEPARTMENT OF  
HEALTH STUDIES

Innovative Centre,  
York Science Park,  
University Road,  
YORK, YO10 5DG

3/1/2001

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, 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".
- 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.

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



# IS FLUORIDE SAFE?

There is not one study  
in the 65 years of  
water fluoridation  
to show it is safe

# THE NATIONAL RESEARCH COUNCIL (NRC, 2006) USA

## *“ Fluoride in Drinking Water ”*

- A panel of 12 experts spent three and half years reviewing the literature on water fluoridation and on March 22, 2006 produced a 507 page report with over 1000 references (NRC, 2006).
- **This review is a textbook on the toxicology of fluoride**
- The review was on the safety of its maximum contaminant drinking water standard for fluoride (4 ppm)
- **The committee examined research on much lower levels.**
- The findings have been rejected by Australian Authorities in a few lines because of the focus on 4 ppm

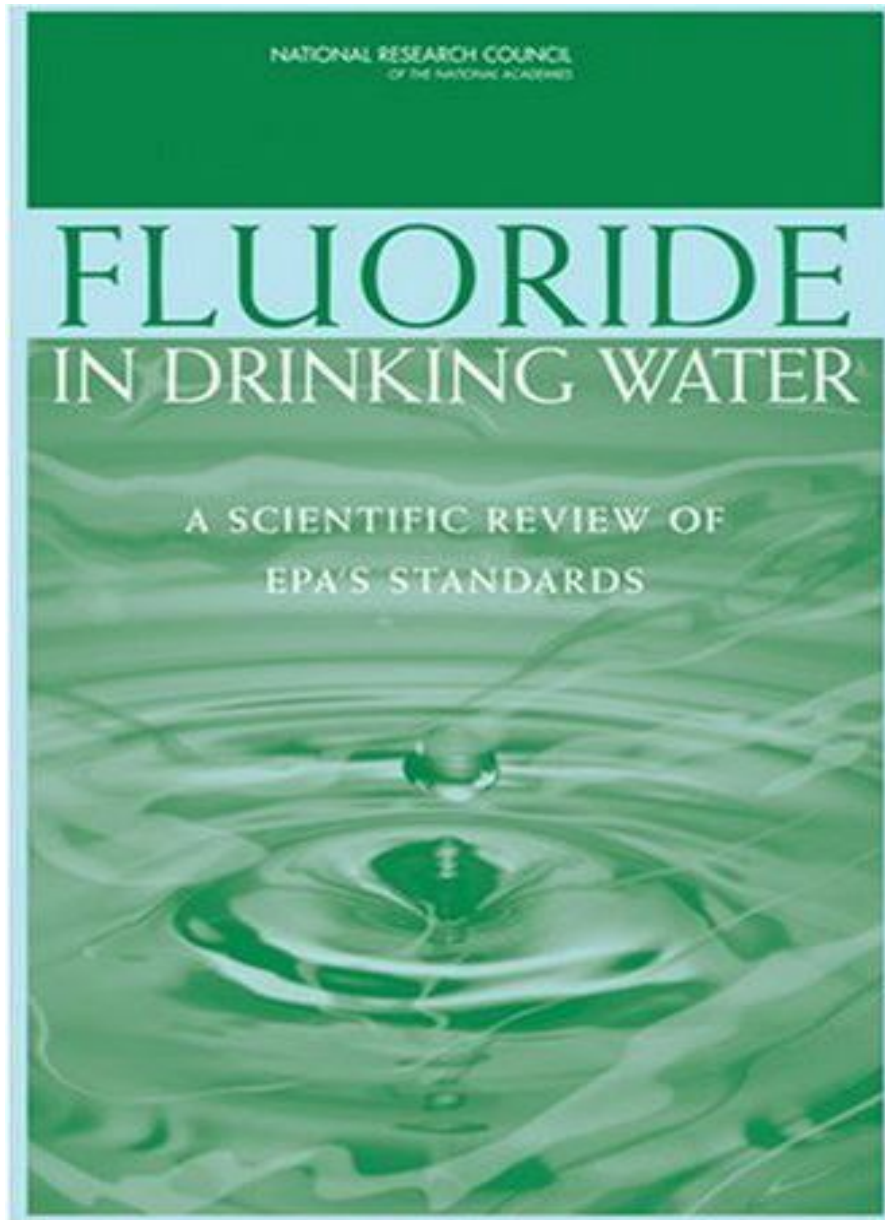
# Exposure Analysis Used By The NRC Panel: 2006

**Many of the effects were observed at water concentrations lower than 4 ppm**

**Uptake of aluminum** into the rat brains exposed to fluoride at **1 ppm**  
**Lowered IQ** in children in Chinese studies at levels of **2.5-4.0 ppm**;  
**Increased hip fracture** rates in the elderly at levels between **1 - 4 ppm**

If a person drinks twice as much water, they get twice as much fluoride ,  
four times as much water, four times as much fluoride.

As water intake is random and intake cannot be controlled, all of these studies become relevant for water consumption at 1 ppm.



**It is a textbook on the toxicology of fluoride –listed many potential adverse health effects –**

**recommended more research needs to be done**

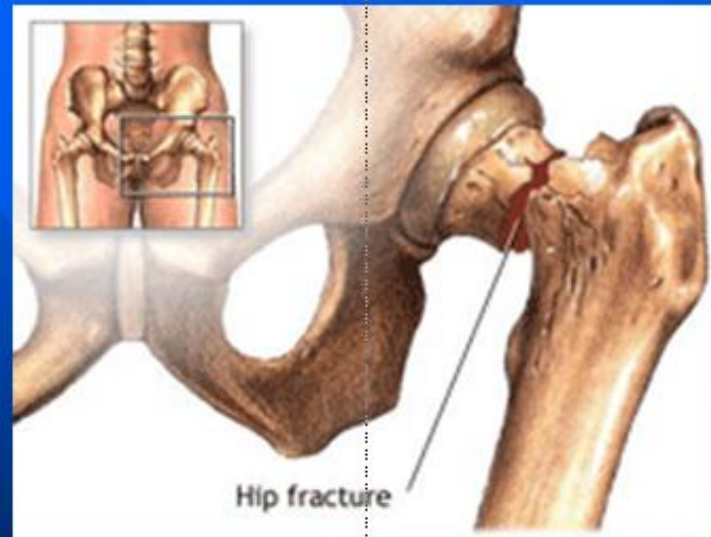
Published 2006

# **NRC AND FLUORIDE'S DANGERS 2006**

- Fluoride **damages the teeth** (chapter 4)
- Fluoride **damages the bone** (chapter 5)
- Fluoride **damages the brain** (chapter 7)
- Fluoride **interferes with the endocrine system** (chapter 8)
- Fluoride **may cause Osteosarcoma** (ch 10)
- The panel looked at exposure analysis (chapter 2) indicates that **some people are already exceeding safe levels for some end points when drinking water at 1 ppm.**

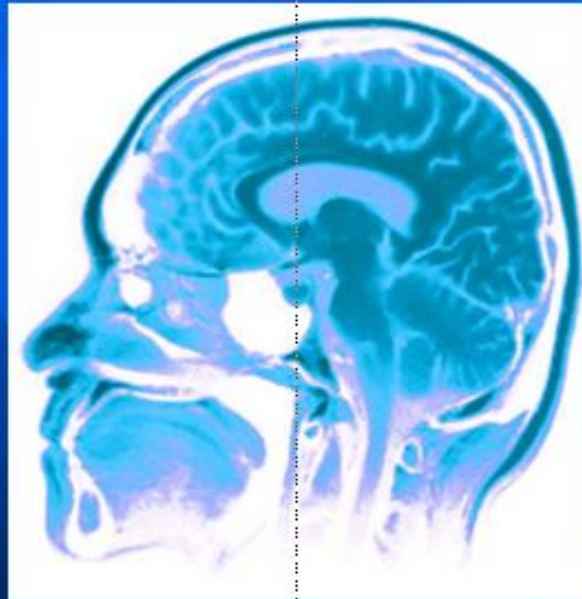
# Bone fractures

*National Research Council (2006):  
Fluoride & Skeletal System*



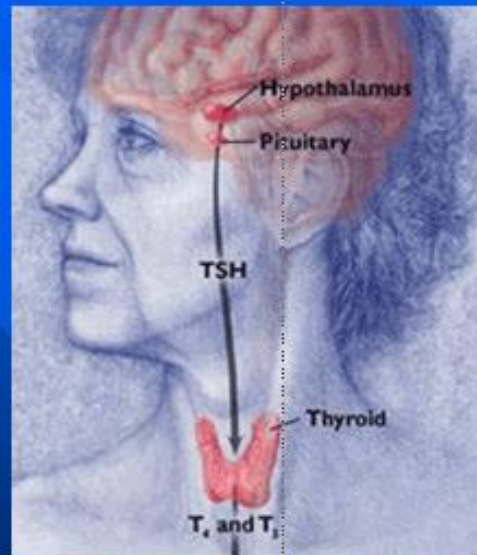
"All members of the committee agreed that there is scientific evidence that under certain conditions fluoride can weaken bone and increase the risk of fractures."

*National Research Council (2006):*  
**Fluoride & the Brain**



“it is apparent that fluorides have the ability to interfere with the functions of the brain.”

*National Research Council (2006):*  
**Fluoride & the Thyroid**



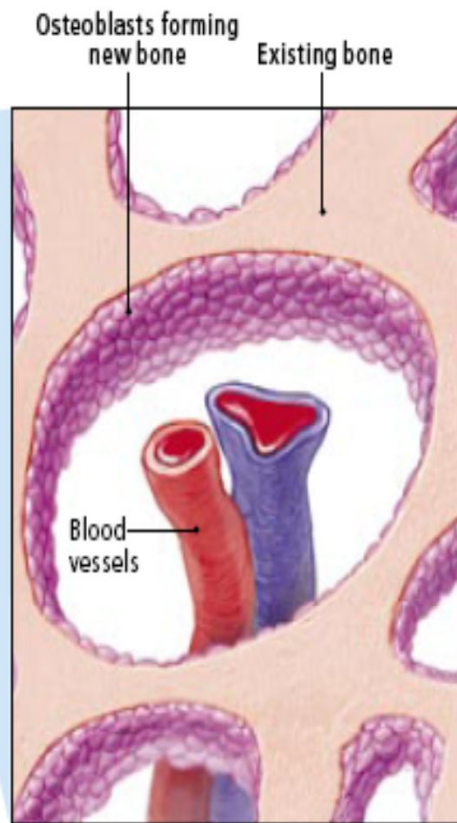
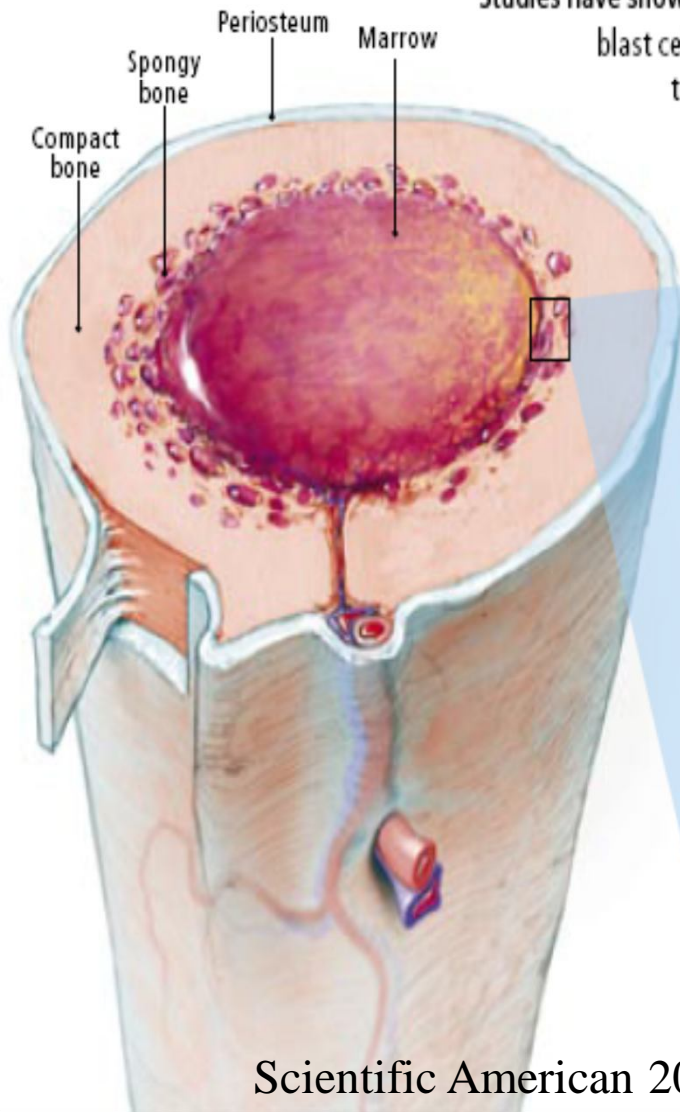
“several lines of information indicate an effect of fluoride exposure on thyroid function.”

# Scientific American 2008

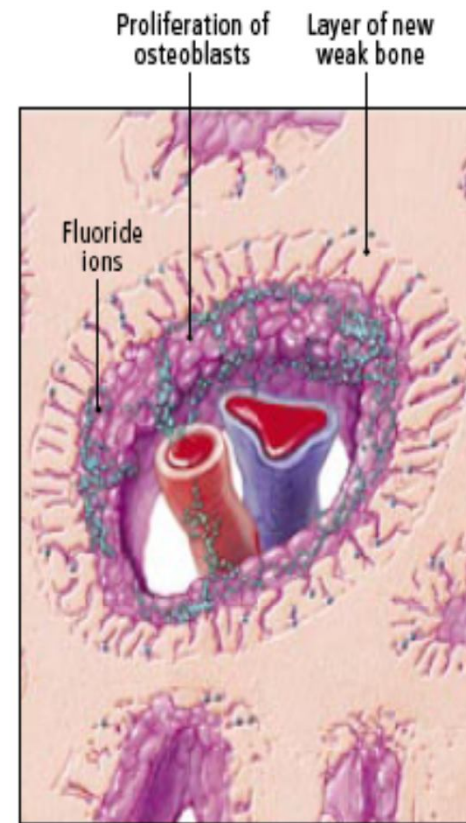
[AREA OF CONCERN]

## IS FLUORIDE WEAKENING BONE?

Scientists have focused on fluoride's effects on bone because so much of the chemical is stored there. Studies have shown that high doses of fluoride can stimulate the proliferation of bone-building osteoblast cells, raising fears that the chemical may induce malignant tumors. Fluoride also appears to alter the crystalline structure of bone, possibly increasing the risk of fractures.



▲ Normal Bone Formation



▲ Effects of Excessive Fluoride

Scientific American 2008

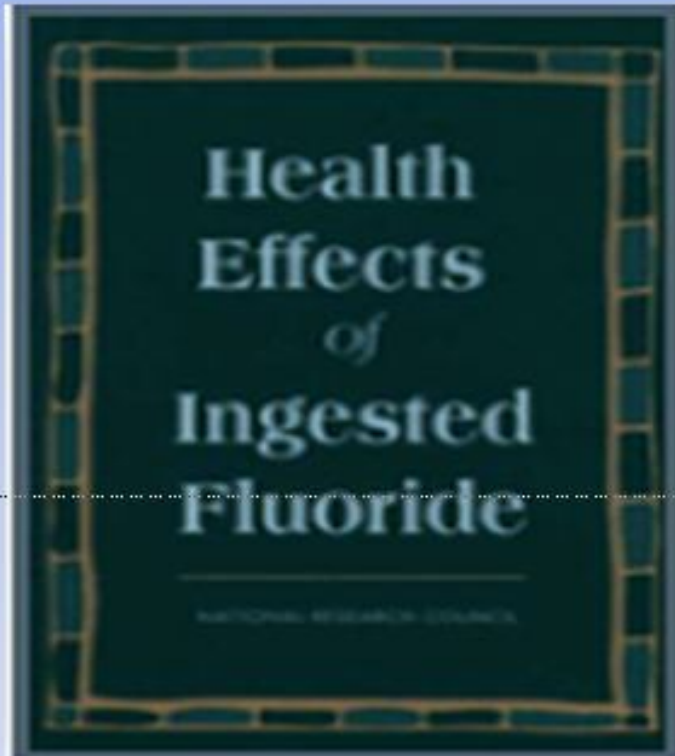
# FLUORIDE

## TOO MUCH FLUORIDE

Can cause fluorosis



# What is dental fluorosis?



Health Effects of Ingested Fluoride  
National Research Council (USA) 1993

*“ One side effect of too much fluoride **ingested** in early childhood **while teeth are forming** is dental fluorosis; the enamel covering of teeth **fails to crystallise properly**, leading to **defects** ranging from barely discernible to **severe brown stain, surface pitting and brittleness.** “*

# What Dental Fluorosis looks like



“Very Mild”



“Mild”



“Moderate”



“Severe”

Dental Fluorosis is the outward sign of fluoride toxicity that happened when teeth were forming in the child's gums

# The New South Wales Child Dental Health Survey 2007

## **Prevalence of dental fluorosis 11-12 yr old Children**

Among children aged 11 to 12 years 3.8 % of children had Moderate Dental Fluorosis ( TF scores of 3 or more ) compared to 0.2 % in non – fluoridated areas

**Nearly 4 in a 100 children in fluoridated NSW areas had Moderate Fluorosis** - compared to only 2 in a 1000 in non- fluoridated areas

## **Australian Research links Moderate Dental Fluorosis to Psychological harm – harm to self esteem**

Among NSW children aged 11 to 12 years 24.2 % ( nearly a quarter ) in fluoridated areas had some degree of Dental Fluorosis



NIH Public Access

Author Manuscript

*Monogr Oral Sci.* Author manuscript; available in PMC 2012 September 04.

Published in final edited form as:

*Monogr Oral Sci.* 2011 ; 22: 81–96. doi:10.1159/000327028.

NIH-PA Author Manuscript



## Chronic Fluoride Toxicity: Dental Fluorosis



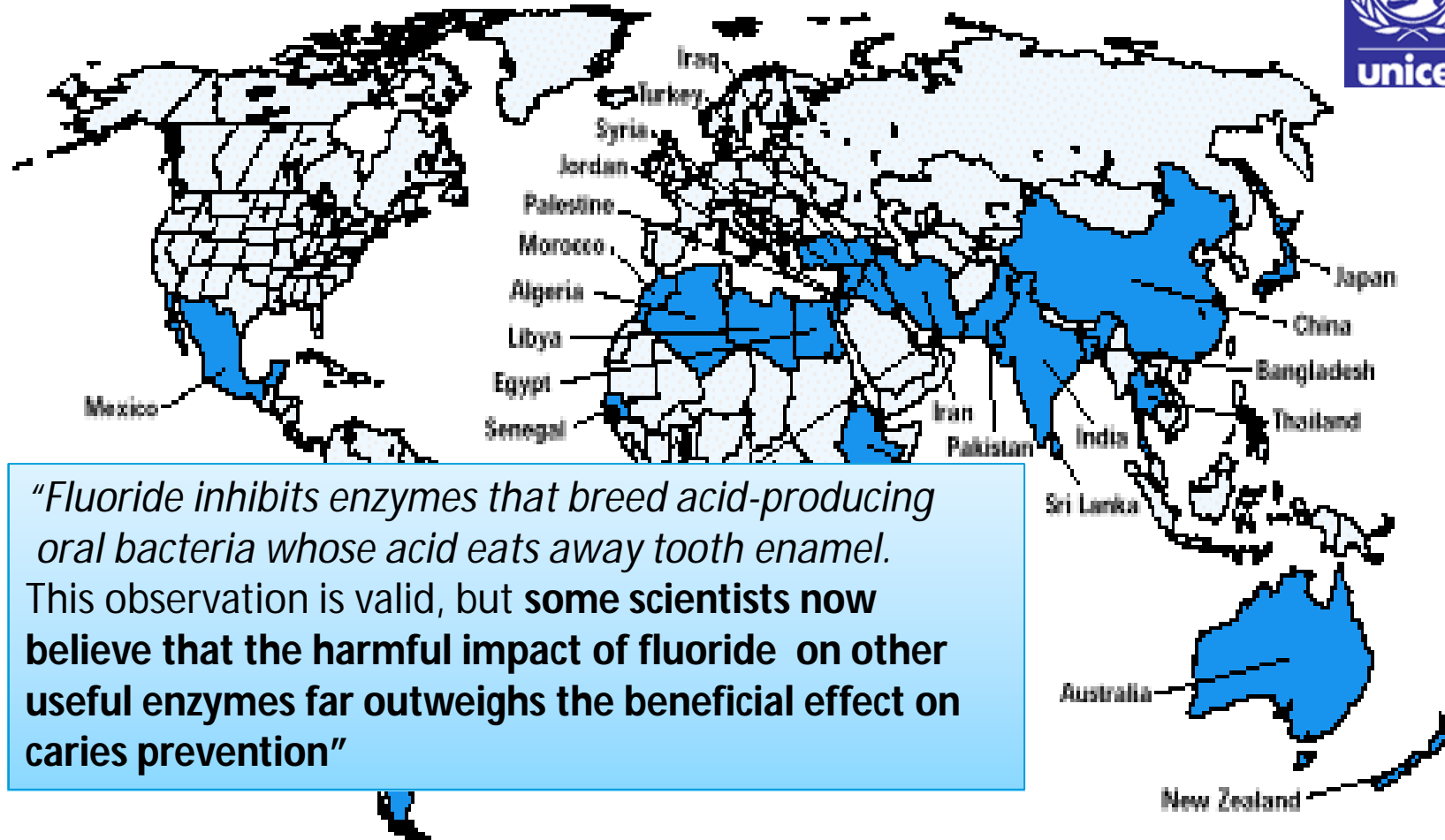
**Pamela DenBesten and Wu Li**

Department of Orofacial Sciences, School of Dentistry, University of California, San Francisco, Calif., USA

### Abstract

Dental fluorosis occurs as a result of excess fluoride ingestion during tooth formation. Enamel fluorosis and primary dentin fluorosis can only occur when teeth are forming, and therefore fluoride exposure (as it relates to dental fluorosis) occurs during childhood. In the permanent dentition, this would begin with the lower incisors, which complete mineralization at approximately 2–3 years of age, and end after mineralization of the third molars. The white

# UNICEF's Position on Water Fluoridation



*"Fluoride inhibits enzymes that breed acid-producing oral bacteria whose acid eats away tooth enamel. This observation is valid, but **some scientists now believe that the harmful impact of fluoride on other useful enzymes far outweighs the beneficial effect on caries prevention**"*

*Countries with endemic fluorosis due to excess fluoride in drinking water*



In 2005, the Centers for Disease Control published the results of a national survey of dental fluorosis conducted between 1999 and 2002. **According to the CDC, black children in the United States have significantly higher rates of dental fluorosis than either white or Hispanic children.**

.... have found black children in the United States are disproportionately impacted by dental fluorosis.

**Not only do black children have higher rates of fluorosis, they have more severe forms of the condition.**

It is not yet known why blacks suffer higher rates of dental fluorosis. According to the CDC, it may be a result of “biologic susceptibility or greater fluoride intake.” (CDC 2005). Whatever the explanation, it is clear that the **black community is being disproportionately harmed by current fluoride policies in the United States.**

# TOP FLUORIDE EXPERT APOLOGISES FOR PUSHING FLUORIDATION

Dr Hardy Limeback ( Prof Preventative Dentistry) - **"Mottled and brittle teeth** - In Canada we are now **spending more money treating dental fluorosis than we do treating cavities.** That includes my own practice."

One of the most obvious living experiments today, Dr. Limeback believes, is a proof-positive comparison between any two Canadian cities. **"Here in Toronto we've been fluoridating for 36 years. Yet Vancouver - which has never fluoridated - has a cavity rate lower than Toronto's."** And, he pointed out, cavity rates are low all across the industrialized world including Europe, which is 98% fluoride free

Interview with Barry Forbes, published in "The Tribune", Mesa, AZ Dec 5<sup>th</sup> 1999

# Fluoride and babies

**Babies do NOT need fluoride.**

Breast -milk contains an average of **only 0.004 ppm F** (unfluoridated areas) *National Research Council report Fluoride in Drinking Water 2006*

Water fluoridated at 1.0 ppm F used to reconstitute infant formula **contains 200 times more fluoride** than what babies would get from breast milk



# Fluoride and babies

- Since 2006 the Centre For Disease Control and the American Dental Association have advised that parents can use **water low in fluoride to reconstitute infant formula to reduce risk of dental fluorosis**
- In Jan 2011 the US Public Health Service put out advice that they were going to **lower their “ optimal fluoride level “ down to 0.7 ppm** – (lower than Australia) – because of dental fluorosis concerns
- In mid 2012 the State of New Hampshire passed legislation that all water consumers be warned annually **that fluoridated water poses a risk of dental fluorosis for bottle fed babies**

# Fluoride and babies


*“ infants of all age groups will receive fluoride that is above the NHMRC Upper Limits of safety from the combination of fluoride in fluoridated water at 1.0 mg/L and any additional fluoride that may be present in formula.”*

Aust N Z J Public Health. 2009 Dec;33(6):573-6. *Fluoride content of powdered infant formula meets Australian Food Safety Standards.* Clifford H, Olsowy H, Young M, Hegarty J, Cross M ( Queensland Health Staff )

## Recommended viewing

via Fluoride Action Network go to section FAN TV

<http://www.fluoridealert.org/fan-tv/dr-whyte/>



**A PEDIATRICIAN SPEAKS  
OUT ON FLUORIDATION**  
**DR. YOLANDA WHYTE**

In this short video, Dr. Yolanda Whyte discusses some of the reasons she opposes fluoridating water supplies.

[LEARN MORE](#)

# Fluoride and lowering of IQ

- **36** human studies have found elevated fluoride exposure associated with reduced IQ
- **16** animal studies -fluoride exposure impairs the learning and memory capacity of animals
- References for these 52 studies - see [www.fluoridealert.org/studies/brain01/](http://www.fluoridealert.org/studies/brain01/)

# Fluoride and lowering of IQ



Developmental Fluoride Neurotoxicity: A Systematic  
Review and Meta-Analysis

Anna L. Choi, Guifan Sun, Ying Zhang, Philippe Grandjean

<http://dx.doi.org/10.1289/ehp.1104912>

Online 20 July 2012



**2012 Harvard Study  
Meta- analysis of 27  
studies**

**Mean difference - drop 7 IQ pts**

**Fluoride concentrations in  
water mostly only 2, 3 or 4  
times that of fluoridated water  
– dose depends on amount of  
water drunk**

**LITTLE MARGIN OF SAFETY**

# Developmental Fluoride Neurotoxicity: A Systematic Review and Meta-Analysis

- *"The children in high fluoride areas had **significantly lower IQ than those who lived in low fluoride areas,**"* write Choi et al.
- *"**Fluoride seems to fit in with lead, mercury, and other poisons that cause chemical brain drain,**"* Grandjean says. "The effect of each toxicant may seem small, but the combined damage on a population scale can be serious, especially because the brain power of the next generation is crucial to all of us."
- Choi's team writes, *"**Fluoride readily crosses the placenta. Fluoride exposure to the developing brain, which is much more susceptible to injury caused by toxicants than is the mature brain, may possibly lead to damage of a permanent nature.**"*

# Fluoride Exposure and Cognitive Outcomes (2)

Ref	Location	No in high Exposure	No in reference	Age	Fluoride Exposure Drinking Water mg/L	Outcome Measure	Result
Lin et al 1991	China	33	86	7-14	<b>0.88</b> (High) 0.34 (Ref)	CRT-RC	Lower IQ in High F
Yao et al, 1997	China	188	314	7-14	<b>2.0</b> (High) 0.4 Ref	CRT- RC	Lower IQ in High F
Seraj et al, 2006	Theran	41	85	Not spec	<b>2.5</b> (High) 0.4 Ref	Raven	Significan Lower IQ in High F

**CRT-RC** Chinese Raven Test, Rural Version, **Raven** – Raven 2003

Some tests are visual, some are verbal, some tests only use abstract-reasoning problems, and some tests concentrate on arithmetic, spatial imagery, reading, vocabulary, memory or general knowledge

# Fluoride Exposure and Cognitive Outcomes (2)

Ref	Location	No in high Exposure	No in reference	Age	Fluoride Exposure Drinking Water mg/L	Outcome Measure	Result
Poureslami et al, 2001	Iran	59	60	6-9	<b>2.38 High</b> 0.41 Ref	Raven	Lower IQ in High F
Xu et al, 1994	China	97	32	8-14	<b>1.8 High</b> 0.8 Ref	Binet-Simon	Lower IQ in High F
Yao et al, 2006	China	188	314	7-14	<b>2.0 High</b> 0.4 Ref	CRT-RC	Lower IQ in High F

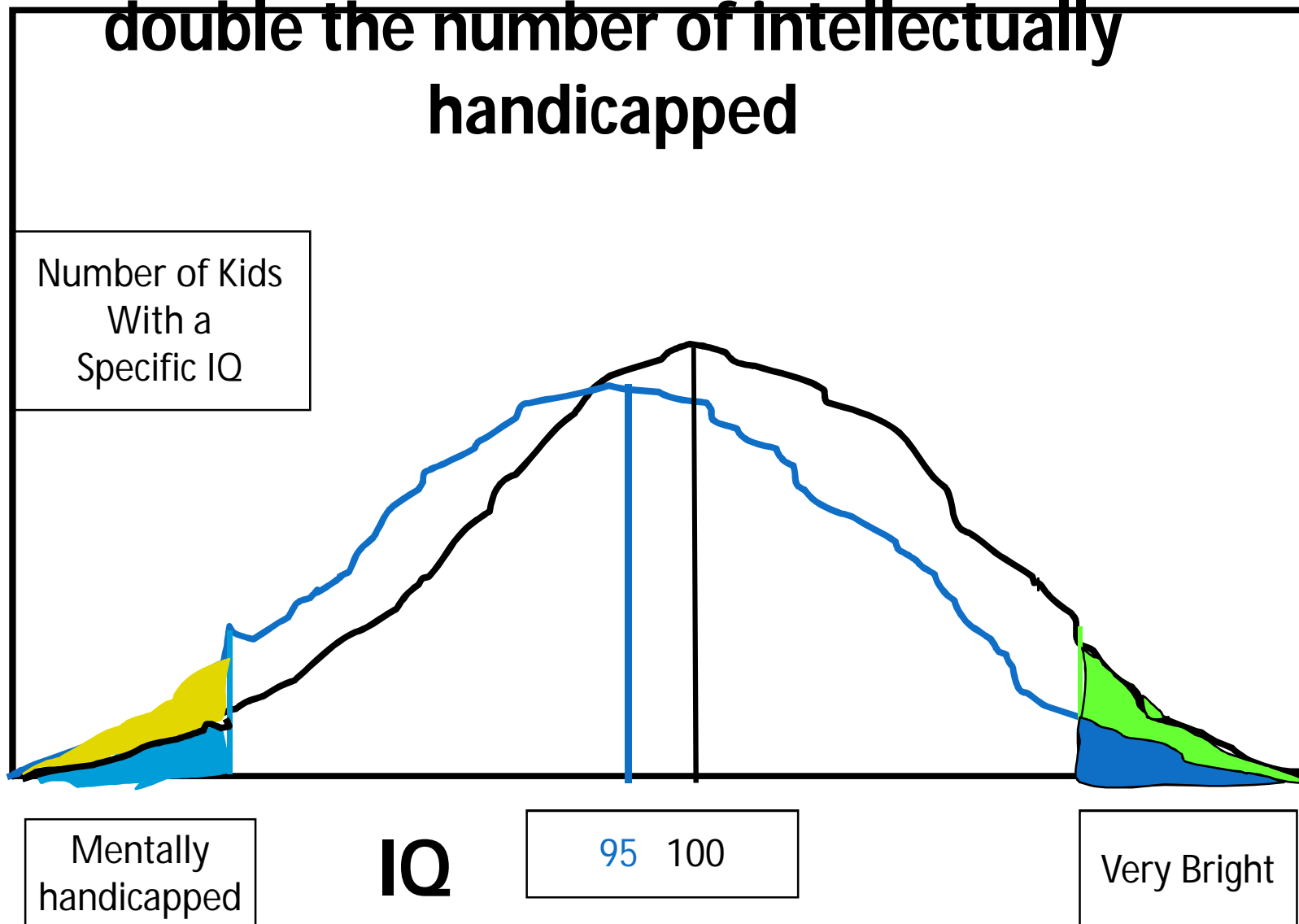
**CRT-RC** Chinese Raven Test, Rural Version, **Raven** – Raven 2003 (focus on visual reasoning) **Binet-Simon** – Focus on verbal abilities

Some tests are visual, some are verbal, some tests only use abstract-reasoning problems, and some tests concentrate on arithmetic, spatial imagery, reading, vocabulary, memory or general knowledge

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**IQ and population – a left shift of 5 IQ points can halve the number of very gifted and**

**double the number of intellectually handicapped**



# 2006 – Study published showing strong link to Osteosarcoma Bone cancer in young men who had lived in fluoridated areas

## Harvard Dental School; March 2006

- Boys drinking fluoridated water at levels recommended by the U.S. Centers for Disease Control and Prevention are at **5- 7 times greater risk of Osteosarcoma than boys drinking non -fluoridated water.**
- The NHMRC 2007 review did not emphasise this study - **the NHMRC preferred a “ letter to the editor ”** from the lead author’s PhD supervisor - **a Colgate consultant**

# Water fluoridation & Osteosarcoma bone cancer

Cancer Causes Control (2006) 17:421–428  
DOI 10.1007/s10552-005-0500-6

ORIGINAL PAPER

## Age-specific fluoride exposure in drinking water and osteosarcoma (United States)

Elise B. Bassin · David Wypij · Roger B. Davis ·  
Murray A. Mittleman

*Conclusions : Our exploratory analysis found an association between fluoride exposure in drinking water during childhood and the incidence of Osteosarcoma among males but not consistently among females. Further research is required to confirm or refute this observation. - this finding has not been refuted*

## Fluoride levels and osteosarcoma

Simmi Kharb, Ravindra Sandhu, Zile Singh Kundu<sup>1</sup>

*“ These results suggest a link between fluoride exposure and osteosarcoma. ”*

South Asian Journal of Cancer Oct – Dec  
2012 Volume 1 Issue 2

### Abstract

**Context:** Osteosarcoma is a rare malignant bone tumor, commonly occurring in the age group of 10 to 24 years. Recent reports have indicated that there is a link between fluoride exposure and osteosarcoma. **Aims:** The present study was planned to analyze serum levels of fluoride in patients of osteosarcoma and fluoride content of their drinking water. **Settings and Design:** The present study was carried out comparing 10 patients of osteosarcoma and 10 healthy volunteers (who served as controls). **Materials and Methods:** Serum and drinking water fluoride levels were estimated by ion selective electrode. **Statistical analysis used:** The data were computed as mean  $\pm$  SD and Student's t test was applied. **Results:** Both, the serum and drinking water fluoride levels, were significant by higher in patients with osteosarcoma as compared to controls ( $P < 0.05$ ,  $P < 0.001$ , respectively). **Conclusions:** These results suggest a link between fluoride exposure and osteosarcoma.

**Key words:** Fluoride, osteosarcoma, serum, water

# Qld Health says      no such thing as a fluoride allergy –    its just a myth



## *Myth: Fluoride causes allergies*

**Fact** Fluoride is found naturally in most foods and water.

**Fact** Reviews by peak health bodies around the world show no connection between water fluoridation and allergies, hypersensitivity or other immunological effects.

## So – just where are Qld Health's studies ?

There were none found – Freedom of Information on Qld Health - just a couple of sentences - an opinion ( opinion is now retired )

# Fluoride and allergy type reactions

- **Studies** - Dr Hans Moolenburgh (Netherlands )
- **Studies** - Dr George Waldbott ( USA )
- **Studies** - Dr Feltman and Kosel ( USA )
  
- **No studies ever done in Australia** - the NHMRC has never given any grants to research fluoride and allergies/ chemical sensitivity

Feltman and Kosel,  
1961

One per cent of  
Patients reacted  
adversely to  
1 milligram  
Fluoride tablets

Reversible  
Symptoms =  
Dermatological,  
Neurological  
&  
Gastro-intestinal

ABBOTT LABORATORIES, SCIENTIFIC DIVISIONS  
NORTH CHICAGO, ILLINOIS

75<sup>TH</sup>  
ANNIVERSARY

DEPARTMENT OF MEDICINE

June 18, 1963

Dear Doctor

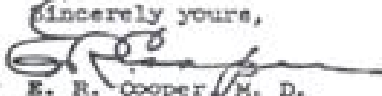
We write in response to your recent request for information concerning the source of our statements concerning sensitivity to fluoride.

Substantiation of this statement can be found as follows:

Feltman, R. and Kosel, G., Prenatal and Postnatal Ingestion of Fluorides--Fourteen Years of Investigation--Final Report, Journal of Dental Medicine, 16:190, October 1961.

"One percent of our cases reacted adversely to the fluoride. By the use of placebos, it was definitely established that the fluoride and not the binder was the causative agent. These reactions, occurring in gravid women and in children of all ages in the study group affected the dermatologic, gastro-intestinal and neurological systems. Eczema, atopic dermatitis, urticaria, epigastric distress, emesis, and headache have all occurred with the use of fluoride and disappeared upon the use of placebo tablets, only to recur when the fluoride tablet was, unknowingly to the patient, given again. When adverse reactions occur, the therapy can be readily discontinued and the patient or parent advised of the fact that sensitivity exists and the element is to be avoided as much as possible."

We hope that this information is of value, and thank you for your interest in our firm.

Sincerely yours,  
  
E. R. Cooper, M. D.  
Product Information

**DR. JONATHAN A. STREETON**

M.B. B.S. F.R.A.C.P. F.C.C.P. F.A.F.O.M.  
CONSULTING RESPIRATORY PHYSICIAN

TELEPHONE: (03) 9419 1957  
(03) 9419 8769  
PRIVATE: (03) 9509 8933  
FAX: (03) 9419 8792  
(INTERNATIONAL 61-3+)  
E-MAIL : jastreeton@ozemail.com.au

JONATHAN A. STREETON PTY. LTD  
A.C.N. 006 294 051  
A.B.N. 51 009 284 051  
141 GREY STREET,  
EAST MELBOURNE, 3002  
PROVIDER NO. 247283 X

Permission has been  
received for use of  
this information

1<sup>st</sup> October 2007

**TO WHOM IT MAY CONCERN**

**Re: Ms. Elaine VALENTINE**

I write regarding Elaine Valentine, of 5 Anderson St, East Geelong 3219, and d.o.b. 25.9.43.

Elaine Valentine attended for review consultation on the 23<sup>rd</sup> of August 2007, and I would note that I have previously seen Elaine Valentine in June 2003.

Whilst it is not possible to objectively confirm Elaine Valentine's symptom pattern, the serial history as given to me, together with the normal clinical findings on both occasions, and unremarkable investigations undertaken in June 2003, I remain of the opinion that Elaine Valentine has an inexplicable, and presumably idiosyncratic response to fluoridated water, which she has demonstrated in a number of different situations, both within Victoria, as well as interstate.

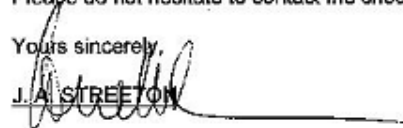
Elaine Valentine has advised me that the Geelong water supply is shortly to be fluoridated, and whilst I wholeheartedly support this action on the grounds of Public Health, and improvement in dental hygiene, on the other hand, Elaine Valentine is at risk of responding adversely to a significant degree.

In view of the fact that Elaine Valentine is currently supplied with mains water supply, and if that mains water supply becomes, for her, no longer a safe potable supply in view of her undefined chemical sensitivities, then it would in my opinion seem quite appropriate for Elaine Valentine to erect storage tanks in her domestic backyard for the purposes of maintaining her own domestic water supply. Whether these tanks are replenished from rainwater roof collections, or from non-fluoridated sources is obviously a matter of negotiation depending on rainfall and other related circumstances.

I would therefore recommend that appropriate permits be issued by the relevant governmental bodies that Elaine Valentine be given permission to proceed with the placement of storage tanks of adequate capacity on her property in East Geelong.

Please do not hesitate to contact me should further comment be required.

Yours sincerely,

  
J. A. STREETON

c.c. Dr. A. G. Di Stefano



**Figure 3 :** Case 3 – severe eruption following visit to Tasmania where fluoridated water taken unwittingly . Skin symptoms

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American Medical Association

535 NORTH DEARBORN STREET CHICAGO, ILLINOIS 60610

TWX-  
910-221-0300

AREA CODE 312  
827-1800

DIVISION OF SOCIO-ECONOMIC ACTIVITIES  
RAYMOND L. WHITE, M.D., *director*

DEPARTMENT OF  
ENVIRONMENTAL HEALTH

CHARLES C. EDWARDS, M.D.  
*acting director*  
FRANK W. BARTON  
JOSEPH E. FLANAGAN, JR.  
HOWARD N. SCHULZ  
JAMES G. TELFER, M.D.  
MEL I. WEISBURD

*American Medical Association*  
May 13, 1965

May 13, 1965

Mr. R. Fulton  
70 Thorne Street  
Toronto  
New South Wales, Australia

Dear Mr. Fulton:

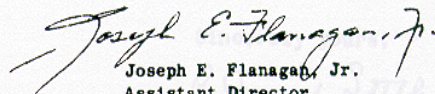
In acknowledgment of your letter of May 10, 1965 to the Secretary of the American Medical Association I am attaching a copy of the "AMA Policy Statement: Fluoridation of Public Water Supplies."

You will notice that this Association endorses the principle of fluoridation of public water supplies to reduce the incidence of dental caries; it does not become involved in endorsement of fluoridation of water supplies of specific cities.

The American Medical Association is not prepared to state that "no harm will be done to any person by water fluoridation."

The American Medical Association has not carried out any research work, either long-term or short-term, regarding the possibility of any side effects.

Sincerely yours,



Joseph E. Flanagan, Jr.  
Assistant Director  
Department of  
Environmental Health

JEF:ws  
Encl.

**The American Medical Association  
is not prepared to state that**

***"no harm will be done to any  
person by water fluoridation"***

***"The American Medical Association has not  
carried out any research work either long-  
term or short - term regarding the possibility  
of any side effects. "***



*Myth: Water fluoridation is mass medication*

**Fact** Queensland Health does not consider the addition of fluoride to drinking water to be “mass medication”, but simply adjusting the level of a substance already found naturally in the water to provide a substantial public health benefit.

- Note
- (1) the chemicals used for fluoridation do not occur in nature
  - (2) simply “adjusted” means adding up to 20 times as much
  - (3) common sense dictates if addition of fluoride to water is for an intended medicinal / therapeutic purpose – it is a medication

## Queensland Government Position Statement on Water Fluoridation

Whilst recognising that the balance of the scientific argument favours the use of fluoride in the pursuit of oral health, it is a principle of ethical public health that mass, involuntary medication must never proceed without the express consent of the community. The balance of argument rests on evidence which suggests that the prevalence of dental caries in both adults and children is reduced in communities where the water supply contains certain levels of fluoride.

In Queensland, referendum guarantees the consent of the community under the *Fluoridation of Public Water Supplies Act (1963)* (the Act). Queensland Government recognises that there is not a unanimity of opinion on the health and environmental impacts of fluoridation, but in view of the prevailing balance of argument, encourages public debate aimed at enhancing oral health.

Water fluoridation was introduced in all Australian States in the 1960's, and about 80 per cent of the population of most states now receive fluoridated water supplies. The Nicklin Government introduced the Act in Queensland in 1963. It places the responsibility for proposing this public health measure to communities, and carrying out their decisions, on individual local governments. At present, only about 5% of the Queensland population have consented to the fluoridation of their water.

Queensland Government supports the introduction of water fluoridation wherever it receives the consent of the community affected. It acknowledges the endorsement of fluoridation by many science and health organisations, including the National Health and Medical Research Council, Federation Dentaire Internationale (FDI), the International Association for Dental Research (IADR), and the World Health Organisation (WHO).

The achievement of improvements in oral health in the population is one of the Key Performance Objectives set out in the *Queensland Health Corporate Plan 1996-2001*. The fluoridation of water supplies may be one avenue for the achievement of the oral health objectives set out in this document, and the *Public Health Services Plan for Achievements 1996-1999*



**Queensland Government**  
Queensland Health 2003

In 2003 the Qld Govt had formally acknowledged that Fluoridation without the express consent of the community was unethical mass medication

# FLUORIDATION IS MASS MEDICATION

- Fluoride chemicals are added to drinking water in an attempt to prevent tooth decay and repair decay

• **Fluoridated water *"is a constant repair kit for life"***

Old Chief Health Officer Jeannette Young

- **Fluoridation is done for a therapeutic purpose or medicinal purpose – to treat people**
- Chlorination is different to fluoridation - is done to treat water – to make water safe to drink

# FLUORIDATION IS MASS MEDICATION

- Fluoridation attempts to **treat people**
- Fluoridation is thus Mass Medication
- **Mass Medication** violates two principles of medical ethics:
  1. Principle of **informed consent** to medication
  2. Principle of **controlled dose**.

# DOSE IS UNCONTROLLED

**Fluoride concentration** is controlled BUT the **dose** is only controlled by thirst

- **High Fluoride intake groups are:**
  - **Babies** - formula mixed with F water get more than 100 times the fluoride dose of breast milk (National Health & Med Research Council recommends that babies have NO fluoridated water) – only 14% mums breast feed to 6 mths
  - **labourers and athletes**
  - **people with diabetes** , kidney disease, etc.
  - **heavy tea drinkers** get double dose
  - **healthy** people who drink more than 2 litres of water

**Fluoridation is mass medication – no doctor would force medication on patients especially for....**

- Persons unseen**
- Medical histories unknown**
- Dose controlled only by thirst**
- With no right of refusal – for a LIFETIME**
- And with no individual follow-up or review**



# Queensland Health claims .....

Old Health - Fluoridated water reduces tooth decay

both **systemically** ( ingested - when you eat or drink )

and **topically** ( when it touches your teeth when drinking water )

Fluoridated toothpaste has a massive 1000 parts per million fluoride

Dentists are increasing selling very high 5000 ppm fluoride toothpaste - for increased topical effect

Fluoride's main benefit is TOPICAL.  
It works on the outside of the tooth.



"Its actions primarily are topical for both adults and children."  
*Centers for Disease Control, 1999*

"Fluoride's predominant effect is posteruptive and topical."  
*Centers for Disease Control, 2001*

**Swallowing fluoride makes a much sense as  
swallowing sun-block to prevent sunburn**

# What fluoride is & What it is not

In water it is -  
colourless, odourless  
and tasteless

it is bio- accumulative  
at least 50 % of ingested  
& absorbed fluoride  
accumulates in the body  
( mostly in the bones )

not a vitamin  
not a nutrient

There is not a single  
animal or human study to  
show that it necessary to  
ingest fluoride for –  
life, good health  
or even.....good teeth

# The absolute waste of water fluoridation

- **Less than 1% of fluoridated water is drunk** – most goes on gardens, down the sink or toilet
- **Ongoing annual costs – every year**
- **Savings in tooth decay ???** – only 0.23 of one tooth surface (out of 128) – or maybe none !

**At what cost dental fluorosis and any other adverse health effects?**

# PUSH POLLS & ENDORSEMENTS

- PUSH POLLS – most had a leading preamble, and leading questions - 60 % support for fluoridation
- Local Govt Assn of Qld 2005 poll – **majority of people wanted a Referendum first**
- ***If 30 % of people don't want it , I won't force it on them*** 2005 -Lord Mayor Campbell Newman

When fluoridation began in the 1950's Dental and Medical were ALSO endorsing cigarette smoking – sometimes health authorities get it VERY wrong

**ENDORSEMENTS OF WATER FLUORIDATION  
FROM DENTAL ASSOCIATIONS  
ARE NOT RISK ASSESSMENTS &  
ARE NOT HEALTH AND SAFETY STUDIES**



**Endorsements are JUST endorsements  
no proof of safety- no liability attached**

**19,293 DENTISTS ADVISE**

Smoke **VICEROYS!**

The Nicotine and Tars Trapped\* by The **VICEROY** Filter  
**CAN NEVER STAIN YOUR TEETH!**

*According to repeated nationwide surveys,*

**More Doctors Smoke CAMELS than any other cigarette!**

Doctors in every branch of medicine were asked, "What cigarette do you smoke?" The brand named most was Camel!

You'll smoke Camels for the same reasons as more doctors smoke them. Camels have that cool mildness, pack after pack, and a flavor unmatched by any other cigarette. Make this week's test: Smoke only Camels for 30 days and see how well Camels please your taste, how well they soothe your throat as you smoke. You'll see how enjoyable a cigarette can be!

**THE DOCTORS' CHOICE IS AMERICA'S CHOICE!**

For 30 days, test Camels in your "I-Zone" (I for Throat, I for Taste).

[www.StrangeCosmos.com](http://www.StrangeCosmos.com)

TIME 1950

# The ethical AND safe way to reduce toddler tooth decay



Oral health education and support for mothers, including home visits and telephone calls, **were found to reduce the rate of decay in children down to 2 per cent**

The research found that **prenatal education** had a **vital role** in ensuring children's oral health.

**Ms Plonka \* used tooth brushing instruction and general dietary advice six monthly from birth....**

## October 2012

*"The answer to early childhood tooth decay could be just a phone call away."*

in Brisbane's south **where 23% of Toddlers suffer from substantial tooth decay**  
Researchers have found preventative strategies that could be the solution

*"We wanted to find out what kind of preventative measures would help communities the most **and the drastic improvements we saw from both home visits and telephone support were exciting.**"*

\* Kathryn Plonka, UQ School of Dentistry PhD candidate and Senior Oral Health Therapist at Logan-Beaudesert Public Oral Health Service

# Protect the ones we love



**Don't put a neurotoxin in their drinking water**

# TAKE HOME MESSAGE

**Minimal Benefits, If Any, For Children And Adults**

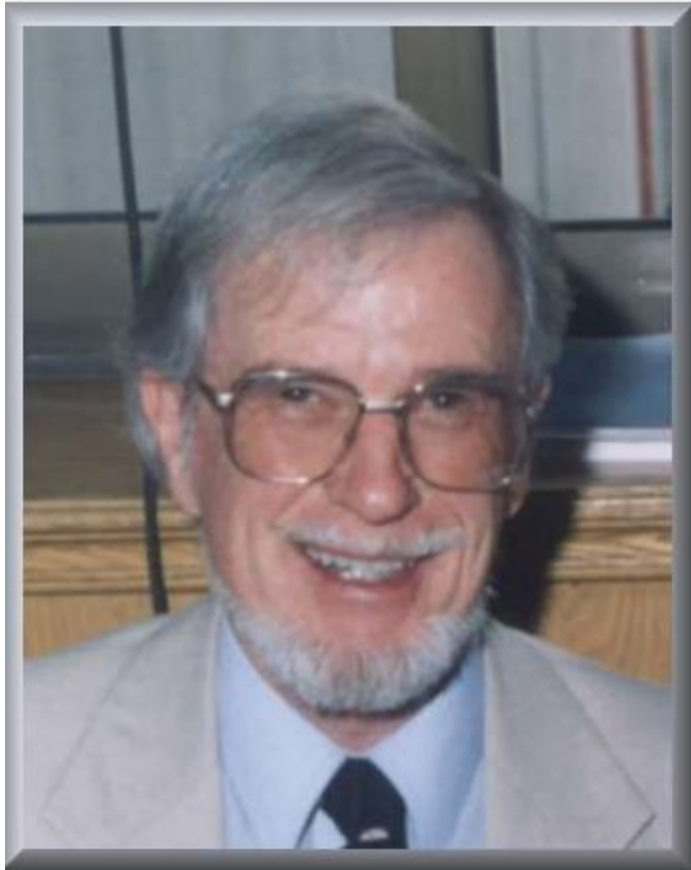
- Decay rates in Queensland similar to other states with high fluoride

**Clearly Constitutes Mass Medication**

- NO CHOICE, no consent of a toxic chemical in a controlled dose, regardless of individuality, **For Life!**

**Has Never Been Shown To Be Safe**

- **Infants don't need fluoride and should not be exposed to it**
- **Harvard studies reveal lowered IQ at levels not much different to those used in Queensland. Thyroid defects and other harm in many studies**



## ***Dr. John Colquhoun (DDS)***

***Principal Dental Officer Auckland NZ***

***&***

***Auckland City Councillor***

***Instigator of fluoridation in Auckland***

***Gave evidence against fluoridation to Lord  
Mayors Fluoridation Taskforce 1997***

**"I had been taught and I believed, that there was really no scientific case against fluoride and that **only misinformed lay people** and a **few crackpot professionals were foolish enough to oppose it**".**

Why I changed my mind about water fluoridation

BUT ANNA SAID  
FLUORIDE WAS  
PERFECTLY SAFE!

AND IT IS .....  
FOR THE GOVERNMENT

FLUORIDE  
OVERDOSE  
VICTIMS  
CAN'T SUE

  
16-5-09